Buscar: fuzzy sets civil engineering {Sin términos relacionados}
RESULTADOs: 1-200

RESULTADO <1>
Score
  *****
Accession Number
  3919584
Author
  Ayyub BM.
Author/Editor Affiliation
  Dept. of Civil Eng., Maryland Univ., College Park, MD, USA.
Title
  Systems framework for fuzzy sets in civil engineering.
Source
  Fuzzy Sets and Systems, vol.40, no.3, 15 April 1991, pp. 491-508. Netherlands.
Abstract
  Civil engineering projects and designs are commonly developed in a systems framework that includes different types of uncertainty. The theory of fuzzy sets and systems have been used in civil engineering to model the vagueness type of uncertainty in many civil engineering applications. In this paper, the role of fuzzy sets in civil engineering systems is described using several example applications, e.g., quality assessment of wildlife habitat, construction engineering and management, structural reliability, and damage assessment of existing structures (100 References).

RESULTADO <2>
Score
  *****
Accession Number
  3002563
Author
  Brown CB. Yao JTP.
Author/Editor Affiliation
  Dept. of Civil Eng., Washington Univ., Seattle, WA, USA.
Title
  Recent civil engineering applications of fuzzy sets.
Source
  Mathematical Modelling, vol.9, no.6, 1987, pp. 491-2. USA.
Abstract
  Since Brown et al. (1984) reported on the state-of-the-art of fuzzy sets in civil engineering, much progress has been made. In this paper, an attempt is made to summarize and discuss more recent civil engineering applications of fuzzy sets (14 References).

RESULTADO <3>
Score
  *****
Accession Number
  4214653
Author
  Rewinski S.
Author/Editor Affiliation
  Highway Data Process. Centre, Warsaw, Poland.
Editor
  Topping BHV.

Title
  The fuzzy algorithm in bridge and pavement management systems.
Source
  Artificial Intelligence and Civil Engineering. Civil-Comp Press. 1991, pp. 77-81. Edinburgh, UK.
Conference Information
  Artificial Intelligence and Civil Engineering. Oxford, UK. 3-5 Sept. 1991.
Abstract
  A description is given of an intelligent algorithm based on fuzzy algebra. The basic purpose of this algorithm is realization of the optimization actions in bridge and pavement management systems. A series of relationship functions of fuzzy sets describing bridge structure condition are quoted (4 References).

RESULTADO <4>

Score
  *****
Accession Number
  4613619
Author
  Meslin JM. Zhou J. Coiffet P.
Author/Editor Affiliation
  Lab. de Robotique de Paris, France.
Editor
  Beheshti MR; Zreik K.
Title
  Fuzzy control of robots.
Source
  Advanced Technologies: Architecture - Planning - Civil Engineering. Fourth EuropIA International Conference on the Application of Artificial Intelligence, Robotics and Image Processing to Architecture, Building Engineering, Civil Engineering, and Urban Design and Urban Planning. Elsevier. 1993, pp. 349-54. Amsterdam, Netherlands.
Conference Information
  Advanced Technologies: Architecture - Planning - Civil Engineering. Fourth EuropIA International Conference on the Application of Artificial Intelligence, Robotics and Image Processing to Architecture, Building Engineering, Civil Engineering, and Urban Design and Urban Planning. Delft, Netherlands. 21-24 June 1993.
Abstract
  This paper deals with the application aspect of fuzzy sets theory to the robot control domain, ie., servoing, kinematic control and dynamic control. The principles of fuzzy controllers are presented and applications in kinematic control or dynamic control are exposed (18 References).

RESULTADO <5>

Score
  *****
Accession Number
  3513337
Author
  Shiraishi N. Furuta H. Umano M. Kawakami K.
Author/Editor Affiliation
  Dept. of Civil Eng., Kyoto Univ., Uji, Japan.
Editor
  Topping BHV.
Title
  Knowledge-based expert system for damage assessment based on fuzzy reasoning.
Source
  Artificial Intelligence Techniques and Applications for Civil and Structural Engineers. Civil-Comp Press. 1989, pp. 211-16. Edinburgh, UK.

Abstract

  The authors develop a knowledge-based expert system for assessing the damage states of bridge structures where the focus is put on reinforced concrete bridge decks, because their failures have been occasionally reported. Similar to the usual expert systems, this system consists of a rule-base, working memory and interpreter. However, this system has a remarkable feature in that it includes a fuzzy set manipulation system which can treat fuzzy sets in the process of data handling, rule representation and inference. Using this system, it is possible to deal with various kinds of uncertainties and ambiguities involved inherently in the data, rules and inference processes in a unified and simple manner. An illustrative example is presented to demonstrate the applicability of the system (8 References).

RESULTADO <6>

Score
  ****-

Accession Number
  10206691
Author
  Cong-Man Wang. Hua-Feng Jiang. Chen-Xia Jin.
Author/Editor Affiliation
  Sch. of Econ. & Manage., Hebei Univ. of Sci. & Technol., Shijiazhuang, China.
Title
  Application of fuzzy synthetic evaluation on the civil servants performance.
Source
  2008 International Conference on Machine Learning and Cybernetics (ICMLC). IEEE. Part vol.2, pp. 665-9. Piscataway, NJ, USA.
Conference Information
  2008 International Conference on Machine Learning and Cybernetics (ICMLC). Kunming, China. 12-15 July 2008.
Abstract
  The civil servant performance appraisal is an appraisal of official quality and working result. It is an important measure which realizes systematized management. Through the analysis on some drawbacks in civil servant performance appraisal and based on the principle of fuzzy sets, in this paper, we adopt the methods of qualitative and quantitative, establish the model of fuzzy synthetic evaluation and analyze the model through a concrete example. The result indicates that the model posses the features of easy operation, strong explanation and so on, and it can effectively realize the performance examination of the civil servant. So it is convenient for further analysis. (12 References).

RESULTADO <7>

Score
  ****-

Accession Number
  4750342
Author
  Sun K.
Author/Editor Affiliation
  Dept. of Civil Eng., Nat. Univ. of Singapore, Singapore.
Editor
  Topping BHV; Khan AI.
Title
  Assessment of project performance by fuzzy reasoning models.
Source
  Information Technology for Civil and Structural Engineers. Civil-Comp Press. 1993, pp. 195-204. Edinburgh, UK.

Conference Information
  Proceedings of Artificial Intelligence CIVIL-COMP 93. The Third International Conference on the Applications of Artificial Intelligence to Civil and Structural Engineering. Edinburgh, UK. 17-19 Aug. 1993.
Abstract

  A methodology for assessment and evaluation of project performance is presented. The proposed approach is based on angular fuzzy set models and fuzzy approximate reasoning. In this method, the factors affecting the project performance are considered as linguistic fuzzy sets and they are subjectively evaluated based on experts' judgment with respect to certain defined production rules and the relative importance. A procedure of fuzzy approximate reasoning with fuzzy modus ponens deduction and a multi-antecedents' decision proposition are introduced to determine the consequences of the production rules. This approach can be implemented during the planning, design and construction phases of a project. It can also help project managers to modify existing project operations for a more reliable and cost effective project performance (12 References).

RESULTADO <8>
Score
  ****-
Accession Number
  3524000
Author
  Roberts MEC.
Title
  Knowledge representation for instructors' aids in civil flight simulators.
Source
  Proceedings of the IEEE 1989 National Aerospace and Electronics Conference NAECON 1989 (Cat. No.89CH2759-9). IEEE. 1989, pp. 1061-8. New York, NY, USA.
Conference Information
  Proceedings of the IEEE 1989 National Aerospace and Electronics Conference NAECON 1989 (Cat. No.89CH2759-9). Dayton, OH, USA. IEEE. 22-26 May 1989.
Abstract

  The author investigates the suitability of fuzzy sets and rules for monitoring and assessing flight and pilot control during a simulator exercise through the intelligent interpretation of instrument readings. The emphasis is on instrument-landing-system approaches as used by civil pilots. The set and rules developed represent the knowledge required to predict critical situations, recognize the intention to correct for these, and describe the aircraft handling. A software demonstration system runs at speed comparable with real-life approaches and contains descriptions and predictions displayed linguistically. The applicability of a critiquing technique using fuzzy reasoning is investigated. This technique requires the specification of limits outside which acceptable performance is unlikely to be achieved, thus simplifying knowledge acquisition (7 References).

RESULTADO <9>
Score
  ****-
Accession Number
  6461520
Author
  Bouvet D. Garcia G.
Author/Editor Affiliation
  Inst. de Recherche en Cybern. de Nantes , France.
Title
  Performance evaluation of proprioceptive sensor sets for civil-engineering articulated vehicle localisation.
Source
  Proceedings 1999 IEEE International Symposium on Computational Intelligence in Robotics and Automation. CIRA'99 (Cat. No.99EX375) . IEEE. 1999, pp. 282-7. Piscataway, NJ, USA.
Conference Information

Proceedings 1999 IEEE International Symposium on Computational Intelligence in Robotics and Automation CIRA'99. Monterey, CA, USA. IEEE Robotics & Autom. Soc. 8-9 Nov. 1999.

Abstract

In order to localise civil-engineering vehicles, an extended Kalman filter is used, which combines the exteroceptive data given by a real-time kinematic GPS with proprioceptive measures issued by internal sensors. The main problem of this application is that the potential users of the system are reluctant to use additional encoder wheels. This paper proposes different sets of internal sensors and compares their respective performances so as to determine the best (and cheapest) alternative to odometry. Experimental results are presented from data obtained during trials carried out on an instrumented compactor (9 References).

RESULTADO <10>

Score

 ****-

Accession Number

 3702373

Author

 Arciszewski T. Ziarko W.

Author/Editor Affiliation

 Wayne State Univ., Detroit, MI, USA.

Title

 Inductive learning in civil engineering: rough sets approach.

Source

 Microcomputers in Civil Engineering, vol.5, no.1, March 1990, pp. 19-28. USA.

Abstract

The paper discusses several potential civil engineering applications of inductive systems based on the theory of rough sets. This theory is discussed briefly. An inductive system is proposed for applications in knowledge acquisition for expert systems, for problem-solving, shallow modeling, learning about different domains, and in learning expert systems (24 References).

RESULTADO <11>

Score

 ****-

Accession Number

 7533937

Author

 Davey-Wilson I.

Author/Editor Affiliation

 Sch. of Comput. & Math. Sci., Oxford Brookes Univ., UK.

Editor

 Topping BHV.

Title

 Geotechnical parameter prediction from large data sets.

Source

 Proceedings of the Eighth International Conference on Civil and Structural Engineering Computing. Civil-Comp Ltd. 2001, pp. 255-6. Stirling, UK.

Conference Information

 Proceedings of Eighth International Conference on Civil and Structural Engineering Computing. Vienna, Austria. 19-21 Sept. 2001.

Abstract

Geotechnical laboratory testing of soils produces two main categories of results: soil identification (classification) parameters and soil behaviour parameters. Although no two soils are the same, there are similarities in behaviour for similar types of soil. From a large database of geotechnical test results it is likely that a knowledge of the soil identification parameters will suggest a certain range of behaviour parameters for similar soils. When presented with a new soil from a site investigation, an engineer would

be interested in knowing which other soils have similar parameters. With a large database of results, soils with similar properties to a new soil can be found. Also, preliminary site investigation results (classification parameters) could be used to suggest unknown parameters of the new soil. This paper describes research into a spreadsheet-based parameter analysis system. The system runs on a standard Excel spreadsheet

RESULTADO <12>

Score
 ****-

Accession Number
 6000860

Author
 Kurashima T. Usu T. Tanaka K. Nobiki A. Sato M. Nakai K.

Author/Editor Affiliation
 NTT Access Network Syst. Labs., Ibaraki-ken , Japan.

Title
 Application of fiber optic distributed sensor for strain measurement in civil engineering.

Source
 SPIE-Int. Soc. Opt. Eng. Proceedings of the SPIE - The International Society for Optical Engineering, vol.3241, 1997, pp. 247-58. USA.

Conference Information
 Smart Materials, Structures, and Integrated Systems. Adelaide, SA, Australia. SPIE. Univ. South Australia. MEC-Microelectron. Centre Australia. DSTO Australia. 11-13 Dec. 1997.

Abstract
 We report on civil engineering applications of a fiber optic distributed strain sensor. It consists of a sensing fiber and a high performance optical time domain reflectometer (OTDR), for measuring both strain and optical loss distribution along optical fibers by accessing only one end of the fiber. The OTDR can measure distributed strain with an accuracy of better than $+/-6010^{-6}$ and a high spatial resolution of up to 1 m over a 10 km long fiber. In model experiments using the OTDR, we measured the strain changes in fibers attached to the surface of a concrete test beam. The performance of the fiber strain sensor was tested by measuring the strain distribution in optical fibers and comparing the results with resistance strain gage measurements for several loads. We found that the two sets of results were similar, and in addition, we demonstrated experimentally that the sensor was able to measure an induced strain change of less than 10010^{-6}, which is !
 nearly the elastic limit of the concrete material. These results show the potential of the OTDR to extend the application of monitoring systems to such areas as large building diagnostics for civil engineering (38 References).

RESULTADO <13>

Score
 ****-

Accession Number
 5996795

Author
 Hammersley GP. Dill MJ.

Author/Editor Affiliation
 Fac. of Sci. Technol. & Design, Luton Univ., UK.

Title
 The long-term monitoring of civil engineering and building structures-developments in techniques for monitoring corrosion in reinforced and post-tensioned concrete.

Source
 Proceedings of the Institution of Mechanical Engineers, Part I (Journal of Systems and Control Engineering), vol.212, no.I3, 1998, pp. 175-88. Publisher: Mech. Eng. Publications for IMechE, UK.

Abstract
 An important step in the progress towards smart structures is the development of reliable systems for the long-term monitoring of performance. Data obtained from monitoring can provide an early warning system

to maximize the safe use of structures, contribute towards planned maintenance by giving advanced notice of durability or structural problems and provide information on actual performance, which can be fed back into the design process. This paper sets out to describe some developments in permanent in situ monitoring systems which have achieved practical use on civil engineering and building structures constructed from concrete, concentrating on the key area of corrosion of reinforced and post-tensioned concrete. The techniques are illustrated with case histories (13 References).

RESULTADO <14>
Score
  ****-
Accession Number
  5986605
Author
  Ogunlana S. Lim J. Saeed K.
Author/Editor Affiliation
  Sch. of Civil Eng., Asian Inst. of Technol., Bangkok, Thailand.
Title
  Desman: a dynamic model for managing civil engineering design projects.
Source
  Computers and Structures, vol.67, no.5, 1998, pp. 401-19. Publisher: Elsevier, UK.
Abstract

  Traditional project management tools are useful in managing design projects. However, incorporating "soft data" into tools like the critical part method (CPM) and bar charts is problematic. They are also best used for bottoms to top management and are, therefore, not very effective for macro managing projects. A system dynamic model can improve the current practices and reduce the problems in design projects when used as a tool for macro management. A model was developed for the management of detailed design process of a civil engineering project. The model consists of four interrelated subsystems: human resources, design production, controlling and planning. Two sets of data were used to test the model. Some policies and scenarios were then explored to gain insight into the model's behaviour and to seek alternatives for better management. The experimentation showed the following policy hierarchy. In terms of meeting scheduled time, the effectiveness of policies is in the !
 order: (1) progress control, (2) manpower allocation, (3) estimation of workload and (4) realization of underestimated work. If the goal is to minimize labour-days expended or to reduce the cost of design, the effectiveness of policies is in the order: (1) manpower allocation, (2) progress control, (3) estimation of workload and (4) realization of underestimated work. As such, good project control and early perception of real progress are needed to ensure efficient resource allocation and on-time completion. This requires creation of a project organization which is able to recognize and process changing information on those issues (32 References).

RESULTADO <15>
Score
  ****-
Accession Number
  5465731
Author
  Ogunlana S. Lim J. Saeed K.
Author/Editor Affiliation
  Sch. of Civil Eng., Asian Inst. of Technol., Bangkok, Thailand.
Editor
  Kumar B; Retik A.
Title
  A dynamic model for civil engineering design management.
Source
  Information Representation and Delivery in Civil and Structural Engineering Design. Civil-Comp Press. 1996, pp. 47-56. Edinburgh, UK.

Conference Information

International Conference on Information Technology in Civil and Structural Engineering Design. Information Representation and Delivery in Civil and Structural Engineering Design. Glasgow, UK. 14-16 Aug. 1996.

Abstract

In an attempt to improve the current practices and reduce the problems in design projects, a system dynamics model was developed for the management of detailed design process of a civil engineering project. The model took an integrative approach, consisting of four interrelated subsystems: human resources, design production, controlling and planning. Two sets of data were used to initialise and test the model. Some policies and scenarios were then explored to gain insight into the model's behaviour and to seek alternatives for better management. The experimentation showed the following policy hierarchy; in terms of meeting scheduled time, the effectiveness of policies is in the order: (1) progress control, (2) manpower allocation, (3) estimation of workload and (4) realisation of underestimated work. In terms of man-days expended or cost reduction, the effectiveness of policies is in the order: (1) manpower allocation, (2) progress control, (3) estimation of workload and (!
4) realisation of underestimated work. As such, good estimation of workload, though essential, is not sufficient to bring the project to finish on schedule. Good project control and early perception of real progress are needed to ensure adequate resource allocation and on-time completion. This requires creation of a project organisation which is able to recognise and process changing information on those issues (10 References).

RESULTADO <16>

Score
****-

Accession Number
5205113

Author
Evbuomwan NFO. Sivaloganathan S.

Author/Editor Affiliation
Eng. Design Centre, City Univ., London, UK.

Editor
Topping BHV.

Title
Views on the concurrent engineering paradigm in civil and structural engineering.

Source
Developments in Computer Aided Design and Modelling for Civil Engineering. Civil-Comp Press. 1995, pp. 107-13. Edinburgh, UK.

Conference Information
Developments in Computer Aided Design and Modelling for Civil Engineering. Cambridge, UK. 28-30 Aug. 1995.

Abstract

Concurrent engineering, a rational and progressive paradigm for design and product development, is fast becoming established as a new way of thinking in the manufacturing industry. However, within the civil/structural and construction industry, it is still relatively a very new concept. This paper hence sets the scene with a close examination of the status quo of the design and project development process in the civil/structural industry and the attendant problems. It then discusses in a concise manner, the principles, concepts, goals and benefits of concurrent engineering. The paper concludes with discussions on the fundamental issues that need to be addressed in implementing concurrent engineering in the civil/structural and construction industry, in order to realise its attendant benefits and improve the business processes in the industry (25 References).

RESULTADO <17>

Score
****-

Accession Number

4750232

Author
  Davis JP. Vann AM.
Author/Editor Affiliation
  Dept. of Civil Eng., Bristol Univ., UK.
Editor
  Grierson DE; Rzevski G; Adey RA.

Title
  Intelligent monitoring of civil engineering systems.

Abstract
  Monitoring civil engineering structures and systems is a time consuming process. Large sets of complex data are produced and these often require a significant processing effort driven by a domain expert. Even then the process of interpreting the data is not straightforward. A knowledge based system is proposed to assist in this process of data handling and interpretation. The system uses the facilities of the Windows environment on a PC to link together a Windows based KBS with a signal processing package so that the user can order very complex data processing procedures from high level descriptions. The system also contains the knowledge required to trace and diagnose instrumentation faults and other significant events. The development of the system is illustrated by reference to the monitoring of a large cable stayed bridge in Scotland (9 References).

RESULTADO <18>
Score
  ****-
Accession Number
  2797337

Author
  Smyrell AG.
Author/Editor Affiliation
  Dept. of Civil Eng., Teesside Polytech., Middlesborough, UK.
Editor
  Topping BHV.

Title
  The use of computers and computer graphics in the teaching of structural analysis.

Abstract
  Once it is understood that the proper use of computers can enhance the teaching ability of any lecturer and the learning capacity of any student, it becomes necessary to introduce them into the curriculum in an orderly fashion. This paper sets out to review the various aspects of this task which the educator involved in the teaching of structural analysis must consider. Various recommendations are made with regard to hardware and software requirements. The teaching strategy is then considered under the headings of computer programming, computer assisted learning, and computer aided design. It is shown that all of these areas must be integrated into a successful strategy. The use of computer graphics is then given special consideration, and it is demonstrated that screen and plotter graphics must be considered as incompatible, due to the great differences of operation between them. Finally, the implementation of these

proposals is illustrated with reference to the author's !
 own experience in the Department of Civil Engineering at Teesside Polytechnic (3 References).

RESULTADO <19>
Score
 ****-
Accession Number
 2188511
Author
 Bell WT. Plank RJ.
Author/Editor Affiliation
 Dept. of Civil & Structural Engng., Univ. of Sheffield, Sheffield, UK.
Title
 Civil engineering design programs for microcomputers.
Source
 Engineering Software III. Proceedings of the 3rd International Conference. Computational Mechanics Centre. 1983, pp. 337-46. Southampton, UK.
Conference Information
 Engineering Software III. Proceedings of the 3rd International Conference. London, UK. 11-13 April 1983.
Abstract
 The use of the new generation of microcomputers in civil and structural engineering is now well established and this paper sets out to review the various types of applications, their relative successes and drawbacks, and seeks to draw some basic conclusion on the main areas requiring development in the future (7 References).

RESULTADO <20>
Score
 ****-
Accession Number
 1936284
Author
 Ludescher H. Wuster K.
Author/Editor Affiliation
 Osterreichische Draukraftwerke AG, Klagenfurt, Austria.
Title
 Design and layout of the major civil engineering items of the Annabrucke power station.
Source
 Oesterreichische Zeitschrift fur Elektrizitaetswirtschaft, vol.35, no.1-2, Jan.-Feb. 1982, pp. 42-8. Austria.
Abstract
 Describes the principal features of the main civil engineering and constructional work associated with dam, spillway, machine hall and foundations of the Annabrucke power station which contains two 54 MW Kaplan turbine driven sets operating at a gross head of 25.6 m. Technical data are given, some of the solutions chosen are discussed and compared with the civil engineering work of the generally similar but technically easier Ferlach power station. Reference is made to the scale of the civil engineering design and drawing work involved (4 References).

RESULTADO <21>
Score
 ****-
Accession Number
 1791646
Author
 Orton MF.
Title
 Civil engineering aspects of Castle Peak power station at Tap Shek Kok.

Abstract
  In December 1977 instructions were given to L.G. Mouchel and Partners by Kowloon Electricity Supply Company Limited to investigate the feasibility of forming a site and developing civil engineering proposals for a power station development at Tap Shek Kok on the south west coast of the New Territories. The Power Station was to be dual coal/oil fired with four generating sets each of 350 MW capacity. The site to be developed to provide space for a further B Station which is projected to be 4660 MW capacity. At a later date, during progress of site formation the area was further extended to form a site for a cement production plant for China Cement Co. Ltd. This plant will take pulverised fuel ash from the Power Station for use in cement production (0 References).

RESULTADO <22>

Score
  ****-
Accession Number
  1475183
Author
  Culver R. Walker DJ.
Author/Editor Affiliation
  Dept. of Civil Engng., Univ. of Adelaide, Adelaide, SA, Australia.
Title
  The use of computer graphics in the civil engineering laboratory.
Abstract
  Describes the use of interactive graphics in a real time date acquisition system at the Civil Engineering Laboratories of the University of Adelaide. Current research is described to illustrate application of the system and its ability to graphically edit and present concisely large sets of experimental data (0 References).

RESULTADO <23>

Score
  ****-
Accession Number
  447266
Author
  Morris CJE.
Editor
  Vine-Lott KM.
Title
  Case study one-the terminal.
Abstract
  This paper sets out the role of teletype terminals in the civil engineering field. A description is given of their use in design and analysis and in connection with an information storage and retrieval system. The

way in which they can be the means for the cooperation of specialists in widely differing fields is illustrated. Mention is made of the programme of training and education that has been required to endeavour to obtain the greatest advantage of the system. The closer client and inter-company cooperation that can result from their use is shown and, with information made more readily available, the need for that information to be of high quality is emphasised. Finally, the problems of program verification and the question of professional responsibilities are discussed

RESULTADO <24>

Score
 ****-
Accession Number
 1106916
Author
 Dalgarno J.
Author/Editor Affiliation
 Engine Dept., Bowmaker Ltd., Cannock, UK.
Title
 Diesel sets for the civil contractor.
Source
 Electrical Review, vol.201, no.6, 5 Aug. 1977, pp. 25-6, 29. UK.
Abstract
 One major industrial use of diesel generating plant is in civil contracting. This article provides guidance for those involved in this particular application (0 References).

RESULTADO <25>

Score
 ****-
Accession Number
 6644604
Author
 Bull JW. Woodford CH.
Author/Editor Affiliation
 Dept. of Civil Eng., Newcastle upon Tyne Univ., UK.
Editor
 Topping BHV; Kumar B.
Title
 The effect on the fatigue life of an airfield runway when a large void beneath a runway is left unfilled, or is filled.
Source
 Computer Techniques for Civil and Structural Engineering. Civil-Comp Press. 1999, pp. 165-74. Edinburgh, UK.
Conference Information
 Computer Techniques for Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.
Abstract
 We assume an explosive is detonated under a runway such that a large void, a camouflet, is formed. We consider the effects of an aircraft wheel loading moving along the length of the runway that overlays the void and determine the displacement of the runway surface both with the void and with the void filled with polystyrene. We also consider the effects of the resulting subgrade stresses on the runway's fatigue life. We found that filling the void made little difference to the displacement or to the fatigue life of the runway and the subgrade and for certain material sets, the fatigue life of the apparently undisturbed subgrade could be significantly reduced. Once a camouflet has been identified, it should be dug out and refilled (39 References).

RESULTADO <26>

Score

****

Accession Number
 5465738
Author
 Roddis WMK. Melber DL. Pasley GP.
Author/Editor Affiliation
 Dept. of Civil & Environ. Eng., Kansas Univ., Lawrence, KS, USA.
Editor
 Kumar B; Retik A.
Title
 CONMIX: integrating specifications, data and models.
Source
 Information Representation and Delivery in Civil and Structural Engineering Design. Civil-Comp Press. 1996, pp. 99-104. Edinburgh, UK.
Conference Information
 International Conference on Information Technology in Civil and Structural Engineering Design. Information Representation and Delivery in Civil and Structural Engineering Design. Glasgow, UK. 14-16 Aug. 1996.

Abstract
 Concrete design and construction employ a broad and deep range of knowledge based on: specifications, codes, and standards of practice; sets of numeric data and their statistical manipulation; and models both empirical and theoretical. Knowledge based systems provide a mechanism for integrating disparate information from specifications, databases, and models into one cohesive tool. A concrete mix design knowledge based system, CONMIX, has been developed as a research prototype focusing on integrating specifications, data, and models. The system was developed using Level5 Object running under Windows on a 486 PC. CONMIX allows the disparate tools of 1) rule based knowledge of trial mix design, durability, and constructability, 2) statistically manipulated databases, and 3) algorithmic material models to be brought to bear on the solution of a single concrete mix problem (15 References).

RESULTADO <27>
Score
 ****

Accession Number
 5465733
Author
 Schwartz DI. Chen SS.
Author/Editor Affiliation
 Dept. of Civil Eng., State Univ. of New York, Buffalo, NY, USA.
Editor
 Kumar B; Retik A.
Title
 Interval methods for qualitatively uncertain models in structural design.
Source
 Information Representation and Delivery in Civil and Structural Engineering Design. Civil-Comp Press. 1996, pp. 63-7. Edinburgh, UK.
Conference Information
 International Conference on Information Technology in Civil and Structural Engineering Design. Information Representation and Delivery in Civil and Structural Engineering Design. Glasgow, UK. 14-16 Aug. 1996.

Abstract
 At different stages of designing a structure, various parameters have uncertain values-especially when the structural configuration is not yet finalized. Intermediate models, defined as assumed structural configurations with tentatively defined materials and geometry, can have both numerical and qualitative uncertainty of behavior. While parametric studies are traditional, techniques such as Interval Methods significantly streamline the analysis of intermediate models. It is shown that modeling with intervals

provides a link between design and analysis where uncertainty may be represented by bounded sets of parameters. While other current interval methods assume limited uncertainty or given qualitative behaviors, a revised algorithm for matrix structural analysis methods developed herein is applicable for a generalized interval uncertainty solution without restricting the method to any given qualitative solution. This method is demonstrated and compared to other techniques!
  with respect to computation and feasibility (18 References).

RESULTADO <28>
Score
 ****-
Accession Number
 5205108
Author
 Jergeas GE. Hartman FT.
Author/Editor Affiliation
 Dept. of Civil Eng., Calgary Univ., Alta. , Canada.
Editor
 Topping BHV.
Title
 Method of allocating risks on construction contracts.
Source
 Developments in Computer Aided Design and Modelling for Civil Engineering. Civil-Comp Press. 1995, pp. 69-74. Edinburgh, UK.
Conference Information
 Developments in Computer Aided Design and Modelling for Civil Engineering. Cambridge, UK. 28-30 Aug. 1995.
Abstract
 Today's computer technology creates interesting opportunities for innovation. This paper investigates a new contracting approach and risk allocation with a view toward reducing risk premiums and dispute resolution costs. The process described can be further developed and more effectively implemented through the use of computers as outlined in the conclusions. The paper concludes with a recommended process aimed at slightly modifying existing contract documents to incorporate a better way of allocating risks. These recommendations could be applied to any existing construction contract as an add on document. The recommended process will provide a clear understanding of responsibility for risks from the outset. This article sets the stage for the future introduction of an expert system that develops the contract documents pursuant to the risk(s) assumed or agreed to by the contracting parties (9 References).

RESULTADO <29>
Score
 ****-
Accession Number
 4751016
Author
 Liong SY. Chan WT.
Author/Editor Affiliation
 Dept. of Civil Eng., Nat. Univ. of Singapore, Singapore.
Editor
 Topping BHV; Khan AI.
Title
 Runoff volume estimates with neural networks.
Source
 Neural Networks and Combinatorial Optimization in Civil and Structural Engineering. Civil-Comp Press. 1993, pp. 67-70. Edinburgh, UK.
Conference Information
 Neural Networks and Combinational Optimization in Civil and Structural Engineering. Edinburgh, UK. 17-

19 Aug. 1993.

Abstract

This paper presents a study of the application of catchment, the Upper Bukit Timah (UBT) catchment, in Singapore. A widely used catchment model, SWMM, was applied to generate 3 sets of 273 runoff volume data from the UBT catchment. Each set of the 273 data was simulated for one storm event at various values of the calibration parameters. This data set was required in the catchment calibration method suggested by Ibrahim and Liong (1992) to construct a response surface relating an objective function and the calibration parameters. A backpropagation neural forecaster with a non-linear Sigmoid activation function was trained to mimic the SWMM simulations. After training, the forecaster was tested on SWMM's simulation results of seven other storms. The comparisons show that the trained neural forecaster not only can predict the runoff volumes in a much shorter time but also results in low prediction errors (11 References).

RESULTADO <30>

Score

   ****-

Accession Number

  4732121

Author

  Platt DG. Blockley DI.

Author/Editor Affiliation

  Dept. of Civil Eng., Bristol Univ., UK.

Title

  Process modelling in civil engineering design.

Source

  Design Studies, vol.15, no.3, July 1994, pp. 317-31. UK.

Abstract

The ongoing work reported is aimed at producing an integrated computer-based system to support engineers and business managers to provide measurable business benefits. The work derives from the Integrated Process Support Environment (IPSE 2.5) Alvey project. In this paper, processes are analysed using cultural theory. It is demonstrated that construction industry processes are quite different from those previously modelled. A new approach based on roles as sets of responsibilities contained within a self-replicating interacting role object is described. Workshop trials are currently being undertaken (10 References).

RESULTADO <31>

Score

   ****-

Accession Number

  5206542

Author

  Slicher AWR. Vakalis P. Singh G.

Author/Editor Affiliation

  Dept. of Civil Eng., Leeds Univ., UK.

Editor

  Topping BHV.

Title

  An innovative approach to training neural networks for strategic management of construction firms.

Source

  Developments in Neural Networks and Evolutionary Computing for Civil and Structural Engineering. Civil-Comp Press. 1995, pp. 87-93. Edinburgh, UK.

Conference Information

  Developments in Neural Networks and Evolutionary Computing for Civil and Structural Engineering. Cambridge, UK. 28-30 Aug. 1995.

Abstract

Decision support systems have become very popular and they have been used in a wide variety of applications. More recently, efforts have been concentrating on using them for strategic decision-making. The authors are developing a strategic decision support system (SDSS) for consulting engineering firms. This is being achieved by combining the two popular technologies of neural networks and expert systems to create a hybrid system. This paper focuses on the problem that often presents itself when training a neural network, namely the lack of adequate training sets, and proposes an innovative approach for overcoming this problem. A method for artificially generating the training sets is outlined, and its use in training the neural network is described. Finally, the usefulness of this simulated set of training data for testing the validity and robustness of the SDSS is assessed, followed by a discussion on how this approach can be extended to other applications (17 References!
).

RESULTADO <32>
Score
 ****-
Accession Number
 4751039
Author
 Khasnabis S. Arciszewski T. Hoda SK. Ziarko W.
Author/Editor Affiliation
 Dept. of Civil & Environ. Eng., Wayne State Univ., Detroit, MI, USA.
Editor
 Topping BHV.
Title
 Urban rail corridor control through machine learning: an IVHS approach.
Source
 Knowledge Based Systems for Civil and Structural Engineering . Civil-Comp Press. 1993, pp. 97-104. Edinburgh, UK.
Conference Information
 Knowledge Based Systems for Civil and Structural Engineering. Edinburgh, UK. 17-19 Aug. 1993.
Abstract
 Traffic control along an urban rail corridor with closely spaced stations can be considered as a sequence of decision-making stages. The objective of this paper is to develop decision rules for driving scenarios along an urban rail corridor which can optimize travel time, energy consumption and passenger comfort, using the concept of machine learning. The concept of knowledge acquisition through inductive learning as an IVHS approach is explored to establish decision rules. A computer simulation model REGIME was developed for the estimation of values of evaluation criteria, which included travel time, energy consumption and passenger comfort levels. REGIME was used to estimate these values for a hypothetical rail corridor for various driving scenarios. Next, a commercial learning system ROUGH was used in conjunction with the examples created through REGIME to develop decision rules. The learning algorithm used in ROUGH is based on the theory of rough sets. The study demons!
 trates the feasibility of machine learning in automated knowledge acquisition to develop decision rules for complex engineering problems such as urban rail corridor control. The technique of machine learning appears to complement the emerging IVHS area. Further research is needed to verify the rules developed before these rules can be applied (13 References).

RESULTADO <33>
Score
 ****-
Accession Number
 5464718
Author
 Hansen KL. MacLeod IA. McGregor DR. Tulloch IM.
Author/Editor Affiliation
 Sci. Policy Res. Unit, Sussex Univ., Brighton, UK.

Editor
  Kumar B; Macleod I-A; Retik A.
Title
  Briefmaker: a design briefing tool developed on the Internet.
Source
  Information Technology in Civil and Structural Engineering Design. Inverleith Spottiswoode. 1996, pp. 69-73. Edinburgh, UK.
Conference Information
  Proceedings of International Conference on Information Technology in Civil and Structural Engineering Design - Taking Stock and Future Directions. Glasgow, UK. 14-16 Aug. 1996.

Abstract
  This research was motivated by the desire to provide consulting engineers, design build contractors, clients, and academics with an improved design methodology. It serves as a link between the latest thinking on computer support systems and an urgent industry problem. Specifically, the project involves using the Internet and the WWW (World Wide Web) to develop an interface to a system that assists in the creation of design briefs. The design brief establishes what advisors clients will need and anticipates functionality, project costs, construction schedule, quality, etc. It also sets the tone for communication among project participants (9 References).

RESULTADO <34>

Score
  ****-
Accession Number
  4474278
Author
  Morgan DR.
Author/Editor Affiliation
  Wright Res. & Dev. Center, Wright Patterson AFB, OH, USA.
Title
  Integrated avionic sensor systems: a proposed architecture for the future.
Source
  Advances in Systems Engineering for Civil and Military Avionics. Conference Proceedings (ERA 91-0634). ERA Technol. 1991, pp. 10.2/1-17. Leatherhead, UK.
Conference Information
  Advances in Systems Engineering for Civil and Military Avionics. Conference Proceedings (ERA 91-0634). London, UK. 20-21 Nov. 1991.

Abstract
  Significant advances in systems integration for military avionics in the US have mostly occurred in the areas of digital avionics, where an orderly structure for data communications, programming languages, computer instruction sets and modular form, fit and function standards have been developed. However, military avionics sensors (e.g. radar, CNI, FLIR) have not benefitted from the application of the same types of concepts. This paper discusses the rationale for integrated sensors, provides a candidate design along with projected benefits and describes issues that must be addressed before this concept becomes reality (5 References).

RESULTADO <35>

Score
  ****-
Accession Number
  434321
Author
  Tedeschi C.
Title
  Civil engineering works for the first two sections in the Brindisi Thermoelectric Power Station.
Source

Energia Elettrica, vol.49, no.5, May 1972, pp. 309-39. Italy.
Abstract
  After an account on the general feature of the station, the soils and the foundation works, the main structures, in reinforced concrete and in steel, accomplished for the totality of buildings and for the machinery and other devices relating to the first two turbogenerator sets in the Brindisi Thermoelectric Power Station are described. The Station stands on the right shore of the sea, on the southern coast of the gulf in the locality of Costa Morena. A brief account is also made on the main marine and hydraulic works performed for: the intake of the condenser cooling water from the sea and the outlet into the same; the industrial and drinking water supply and distribution; and the sewage works (5 References).

RESULTADO <36>
Score
  ****-
Accession Number
  10245115
Author
  Balmes E. Basseville M. Bourquin F. Mevel L. Nasser H. Treyssede F.
Author/Editor Affiliation
  LMSSMAT, Ecole Centrale Paris, Paris, France.
Title
  Merging sensor data from multiple temperature scenarios for vibration monitoring of civil structures.
Source
  Structural Health Monitoring, vol.7, no.2, June 2008, pp. 129-42. Publisher: Sage Publications, UK.
Abstract
  The ambient temperature effect may result in limitations of vibration-based SHM approaches for civil engineering structures. This paper addresses the issue of discriminating changes in modal parameters due to damages and changes in modal parameters due to temperature effects. A nonparametric damage detection algorithm is proposed, which only assumes that several data sets are recorded on the safe structure at different and unknown temperatures, and smoothes out the temperature effect using an averaging operation. (35 References).

RESULTADO <37>
Score
  ****-
Accession Number
  6196395
Author
  Krasteva DT. Baker C. Watson LT. Grossman B. Mason WH. Haftka RT.
Author/Editor Affiliation
  Center for Adv. Vehicles, Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA.
Title
  Distributed control parallelism for multidisciplinary design of a high speed civil transport.
Source
  Proceedings. Frontiers '99. Seventh Symposium on the Frontiers of Massively Parallel Computation. IEEE Comput. Soc. 1999, pp. 166-73. Los Alamitos, CA, USA.
Conference Information
  Proceedings. Frontiers '99. Seventh Symposium on the Frontiers of Massively Parallel Computation. Annapolis, MD, USA. IEEE Comput. Soc. Tech. Committee on Comput. Archit.. USRA/CESDIS. NASA Goddard Space Flight Center. 21-25 Feb. 1999.
Abstract
  Large scale multidisciplinary design optimization (MDO) problems often involve massive computation over vast data sets; Regardless of the MDO problem solving methodology, advanced computing technologies and architectures are indispensable. The data parallelism inherent in some engineering problems makes massively parallel architectures a natural choice, but efficiently harnessing the power of massive parallelism requires sophisticated algorithms and techniques. This paper presents an effort to

apply massively scalable distributed control and dynamic load balancing techniques to the reasonable design space identification phase of a variable complexity approach to the multidisciplinary design optimization of a high speed civil transport (HSCT). The scalability and performance of two dynamic load balancing techniques, random polling and global round robin with message combining, and two termination detection schemes, token passing and global task count, are studied. The exten!
 t to which such techniques are applicable to other MDO paradigms, and to the potential for parallel multidisciplinary design with current large-scale disciplinary codes, is of particular interest (22 References).

RESULTADO <38>
Score
 ****-
Accession Number
 9896035
Author
 Hirokane M. kouno S. Nomura Y.
Author/Editor Affiliation
 Kansai Univ., Osaka, Japan.
Title
 Extraction of minimum decision algorithm using rough sets and genetic algorithms.
Source
 2007 International Conference on Machine Learning and Applications. IEEE Computer Society. pp. 44-9. Los Alamitos, CA, USA.
Conference Information
 2007 International Conference on Machine Learning and Applications. Cincinnati, OH, USA. 13-15 Dec. 2007.
Abstract
  In civil engineering, it is crucial to reuse knowledge which has been accumulated through the experience of engineers, etc. For this purpose, it is necessary to establish a method for knowledge acquisition and a method for explicit representation of the acquired knowledge. This paper applies the genetic algorithm to the process of deriving a decision algorithm from instances by using rough sets, and proposes a method of deriving a simple and useful decision algorithm with a relatively small amount of computation. A decision algorithm is actually derived from the data on accident instances at actual construction sites, and the recognition rate and other performance measures are investigated by the k-fold cross validation method. (5 References).

RESULTADO <39>
Score
 ****-
Accession Number
 9436391
Author
 Hirokane M. Konishi H. Miyamoto A. Nishimura F.
Author/Editor Affiliation
 Fac. of Informatics, Kansai Univ., Takatsuki, Japan.
Title
 Extraction of minimal decision algorithm using rough sets and genetic algorithm.
Source
 Systems and Computers in Japan, vol.38, no.4, April 2007, pp. 39-51. Publisher: Scripta Technica, USA.
Abstract
  With the performance improvement of computers in recent years, the amount of stored available data is rapidly increasing. But it is also required that the computer fully utilize the stored resources and perform higher-level intelligent jobs. In civil engineering, it is crucial to reuse knowledge which has been accumulated through the experience of engineers, etc. For this purpose, it is necessary to establish a method for knowledge acquisition and a method for explicit representation of the acquired knowledge. This paper applies the genetic algorithm to the process of deriving a decision algorithm from instances by using

rough sets, and proposes a method of deriving a simple and useful decision algorithm with a relatively small amount of computation. A decision algorithm is actually derived from the data on accident instances at actual construction sites, and the recognition rate and other performance measures are investigated by the k-fold cross validation method (22 Refe!
 rences).

RESULTADO <40>
Score
 ****-
Accession Number
 140799
Author
 Uspenskii BS.
Title
 A cost-effectiveness analysis of the use of bulb-type horizontal sets on high-power low-head hydro-electric power stations.
Source
 Elektricheskie Stantsii, vol.40, no.8, Aug. 1969, pp. 33-40. USSR.

Abstract
 The author examines the main advantages and drawbacks of bulb- type horizontal sets together with the civil-engineering works associated with them. Taking the Lower Kama and Cheboksary river-power stations as examples, the deleterious effects that the electromechanical parameters of the bulb-type set have on the rest of the power system is clearly shown. These same power stations are used as a basis for a complete technical and cost comparison between the bulb-type set and the vertical-shaft set of normal design, taking their effects on the power system into account. On the basis of this analysis, it is shown that the main drawbacks to the use of bulb-type sets on high-power hydro-electric power stations are as follows: higher capital expenditure; reduced reliability; greater difficulty in maintenance; increased operating costs and lower productivity of the maintenance staff

RESULTADO <41>
Score
 ****-
Accession Number
 44674
Author
 Mongellas S. Bonnet J-C. Dorf E. Toureau J.
Title
 Power station at Nantes Chevire, sets V and VI, unit power 250 MW.
Source
 La Technique Moderne, vol.60, no.12, Dec. 1968, pp. 521-31. France.

Abstract
 The civil engineering, mechanical and electrical construction and controls are described and the similarity between these sets and the contemporary set at Le Havre is pointed out. The differences between the sets are also described, the main one being that the auxiliary pump at Nantes is driven by an independant turbine

RESULTADO <42>
Score
 ****-
Accession Number
 9648380
Author
 Haselbach LM. Maher M.
Author/Editor Affiliation
 Univ. of South Carolina, Columbia, USA.

Title
  Engineering education and a field journal at construction sites.
Source
  International Journal of Engineering Education, vol.23, no.3, 2007, pp. 591-7. Publisher: Tempus Publications, Ireland.
Abstract
  Civil engineering graduates report that exposure to actual construction sites during their undergraduate training may be beneficial to their career development. This research describes the incorporation of a field journal assignment at construction sites into a land development engineering course. The authors sought to determine if student observation of active construction would result in self-reported increased proficiency in two areas: field journal skills and construction engineering skills. Results suggest that this assignment does facilitate students' proficiency in these two skills sets and can increase students' understanding of the complexity involved in active construction sites. (12 References).

RESULTADO <43>
Score
  ****-
Accession Number
  7798470
Author
  Hatakeyama K.
Author/Editor Affiliation
  Centro Fed. de Educacao Tecnologica do Parana, Curitiba, Brazil.
Title
  Women into engineering.
Source
  Engineering Education 2003 Access, Retention and Standards (Ref.No.2003/10027). IEE. 2003, pp. 27/1-2. London, UK.
Conference Information
  Third Conference on Engineering Education - Access, Retention and Standards. Southampton, UK. 6-7 Jan. 2003.
Abstract
  Nowadays, because of women's rights to seek equal opportunities in the workplace, more and more young women in the age range to study in higher education apply for the professional courses that a few decades ago were for the male population such as civil engineering courses. This paper intends to present the strategic plan being carried out in an academic institution that offers the production engineering course with effort in civil engineering. The survey carried out among over 300 associates showed the needs to improve the acceptance of female engineers in the civil engineering, whereby by the preference for male engineers is around 8 out of 10. The population of female students in engineering have experienced an increase in last decade reaching the ratio nearly one to one. Thus, in the near future, the female graduates in engineering will face difficulties for job placements. The proactive action should be devised by the academic institutions and the associations concer!
 ned to work towards an adequate information strategy to explain about the achievement of skill sets by female engineers to perform tasks properly, as much as male engineers (3 References).

RESULTADO <44>
Score
  ****-
Accession Number
  6696462
Author
  Krasteva DT. Watson LT. Baker CA. Grossman B. Mason WH. Haftka RT.
Author/Editor Affiliation
  Dept. of Multidisciplinary Anal. & Design, Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA.
Editor

Yang T.
Title
 Distributed control parallelism for multidisciplinary design of a high speed civil transport.
Source
 Parallel Numerical Computation with Applications. Kluwer Academic Publishers. 1999, pp. 119-40. Norwell, MA, USA.
Conference Information
 Proceedings of Workshop on Frontiers of Parallel Numerical Computations. Annapolis, MD, USA. 20-25 Feb. 1999.

Abstract
 Large scale multidisciplinary design optimization (MDO) problems often involve massive computation over vast data sets. Regardless of the MDO problem solving methodology, advanced computing technologies and architectures are indispensable. The data parallelism inherent in some engineering problems makes massively parallel architectures a natural choice, but efficiently harnessing the power of massive parallelism requires sophisticated algorithms and techniques. The paper presents an effort to apply massively scalable distributed control and dynamic load balancing techniques to the reasonable design space identification phase of a variable complexity approach to the multidisciplinary design optimization of a high speed civil transport (HSCT). The scalability and performance of two dynamic load balancing techniques, random polling and global round robin with message combining, and two termination detection schemes, token passing and global task count, are studied. The extent!
 to which such techniques are applicable to other MDO paradigms, and to the potential for parallel multidisciplinary design with current large-scale disciplinary codes, is of particular interest (34 References).

RESULTADO <45>
Score
 ****-
Accession Number
 1917087
Author
 Etienne J. Chadenson P.
Title
 Mini hydroelectric sets (100 to 1000 kW).
Source
 La Houille Blanche, vol.36, no.4-5, 1981, pp. 269-74. France.

Abstract
 Mini hydroelectric sets sometimes differ substantially from larger units. Financial constraints are a much more important consideration for mini sets, because existing civil engineering has to be reused. Low-head equipment, which is relatively expensive and whose installation determines the civil engineering work, are those most influenced in their design and construction. This is demonstrated with a series of examples (0 References).

RESULTADO <46>
Score
 ****-
Accession Number
 690498
Author
 Bochet JG.
Title
 Recent progress in generating sets.
Source
 La Technique Moderne, vol.66, no.3, March 1974, pp. 45-7. France.

Abstract
 The use of mobile and fixed auxiliary motor-generating sets, for emergency stand by use and for avoiding high peak-load charges, is becoming increasingly important. Such units are also required for plant in

public works and civil engineering contracts. Some examples of sets up to 300 kVA are described, together with their special requirements of starting, stopping, coupling etc. Some reference is made to static-frequency converters for computer operation

RESULTADO <47>
Score
  ****-
Accession Number
  2066071
Author
  de Maublanc H.
Title
  Recent developments in French engineering relating to hydroelectric generation.
Source
  La Houille Blanche, vol.37, no.5-6, 1982, pp. 393-401. France.
Abstract
  After a short review of the development potential of hydroelectric power in the world and in France, as well as of the available hydroelectric facilities developed by French engineering, the author discusses: the originality of civil engineering projects including dams, water intake structures, boring of shafts and galleries, design of underground plants, and some thought on the prospects for tidal energy; and the most notable characteristics of sets, mainly linked to their increased unit power and their operating mode (0 References).

RESULTADO <48>
Score
  ****-
Accession Number
  2343449
Author
  Castelbou C.
Title
  Modern weather radars for civil aircraft.
Source
  Navigation, vol.32, no.127, July 1984, pp. 284-90. France.
Abstract
  The evolution of the technology is covered by a consideration of the parameters involved in the radar analysis. The function of the sensitivity time control and its optimisation in determining the variable gain necessary is looked at. The effects of engineering advances, such as the use of other microwave sources and colour TV displays, are also examined. The use of Doppler in detecting rainstorms and ways of suppressing ground returns are discussed. The advances in engineering result in smaller, lighter and cheaper sets. The more advanced schemes such as frequency sweep radars and the analysis of the polarisation of reflected signals are suggested (0 References).

RESULTADO <49>
Score
  ****-
Accession Number
  1917088
Author
  Rabaud J. Picollier G.
Title
  Sets for small hydroeletric plants (1000 to 8000 kW).
Source
  La Houille Blanche, vol.36, no.4-5, 1981, pp. 275-82. France.
Abstract

The increased cost of certain forms of energy is once more making this type of installation advantageous, but this favourable situation is not enough to ensure satisfactory cost-effectiveness automatically. New thinking on the design, manufacture, siting and assembly of these plants is necessary; so is study of the possibilities of standardizing certain parts of the civil engineering structures and machine components. The article discusses some cases (0 References).

RESULTADO <50>
Score
 ****-
Accession Number
 7069208
Author
 Allenby K. Kelly T.
Author/Editor Affiliation
 Dept. of Comput. Sci., York Univ., UK.
Title
 Deriving safety requirements using scenarios.
Source
 Proceedings Fifth IEEE International Symposium on Requirements Engineering. IEEE Comput. Soc. 2000, pp. 228-35. Los Alamitos, CA, USA.
Conference Information
 Proceedings Fifth IEEE International Symposium on Requirements Engineering. Toronto, Ont., Canada. IEEE Comput. Soc. Tech. Council on Software Eng.. ACM SIGSOFT. IFIP Working Group 2.9 (Software Requirements Engineering). INCOSE Requirements Working Group. 27-31 Aug. 2001.

Abstract
 Elicitation of requirements for safety critical aero-engine control systems is dependent on the capture of core design intent and the systematic derivation of requirements addressing hazardous deviations from that intent. Derivation of these requirements is inextricably linked to the safety assessment process. Conventional civil aerospace practice (as advocated by guidelines such as ARP4754 and ARP4671) promotes the application of Functional Hazard Assessment (FHA) to sets of statements of functional intent. Systematic hazard analysis of scenario-based requirements representations is less well understood. This paper discusses the principles and problems of hazard analysis and proposes an approach to conducting hazard analysis on use case requirements representations. Using the approach, it is possible to justifiably derive hazard-mitigation use cases as first class requirements from systematic hazard analysis of core design intent scenarios. An industrial example is used t!
 o illustrate the technique (14 References).

RESULTADO <51>
Score
 ****-
Accession Number
 9952026
Author
 Rajesh M. Sheeba M. Nampoori VPN.
Author/Editor Affiliation
 Northampton square, City Univ., London, UK.
Title
 POF based smart sensor for studying the setting dynamics of cement paste.
Source
 Journal of Physics: Conference Series, vol.85, no.1, 2007, pp. 012016-1-8. Publisher: IOP Publishing Ltd., UK.

Abstract
 Fiber optic smart sensors are used to monitor the civil structures. One of the important parameters in civil engineering is the setting characteristics of concrete made of cement. The paper discusses how a simple polymer optical fiber can be used to characterise the setting dynamics of various grades of cement. The

results explain the comparative performance of polymer fiber over silica fiber. The basic principle underlying the sensor is that as the cement sets, it exerts a stress on the sensing fiber, which is laid within the cement paste. This stress induces strain on the optical fiber, which can be thought of as a series of aperiodic microbends on the surface of the fiber. This in turn changes the characteristics of the light signal transmitted through the fiber and can be viewed as stress induced modulation of light in the fiber. By monitoring the intensity variation of transmitted light signal with time we can determine the cement setting rate. This can be used as an !

effective tool for quality testing of commercially available cements of different grades. (18 References).

RESULTADO <52>

Score
 ****-
Accession Number
 9810535
Author
 Humo E. Vejzovic Z.
Author/Editor Affiliation
 Univ. of Mostar, Mostar, Bosnia-Herzegovina.
Title
 A mathematical model for classroom-period schedule defragmentation.
Source
 EUROCON 2007. International Conference on "Computer as a Tool". IEEE. pp. 2030-3. Piscataway, NJ, USA.
Conference Information
 EUROCON 2007. International Conference on "Computer as a Tool". Warsaw, Poland. 9-12 Sept. 2007.
Abstract
 Engineering studies (mechanical, electrical, civil, chemical etc.) it is of great importance to efficiently use available space particulary labs with expensive equipment according to the given time schedule. In order to accomplish this demanding condition this paper propose a mathematical approach to classroom-period schedule optimization. This paper proposes a heuristic mathematical approach to a better use of the available classroom space for a given time table of courses at a university. Model building starts with a definition of two dimensional matrix consisting of of two ordered sets: classroom set and daily period set. In each row (classroom) of the matrix we allocate one, two and three period fragments or the corresponding one, two and three subsets of the considered daily periods set. Then, we introduce the classroom occupation parameter defined for each classroom as ratio of its occupied periods and total available periods. In the paper the defragmentation procedu!

re is defined as relocation of the one, two and three period fragments from their current classroom location to some other classroom location, mantaining always the given courses time table. The defragmentation procedure begins from the classroom with the smallest classroom occupation parameter value moving first three, then two and finally one period fragments to the respective free classroom location with the largest occupation paremeter value. The relocation process continoues until all free classroom location are found. In the paper " A Software Solution For A Mathematical Model of Classroom-Period Schedule Defragmentation ", which should be considered and rewiewed as the second part of this paper, the authors have developed the corresponding computer software for the model. The model and the software are illustrated by applying them to the University of Mostar. (4 References).

RESULTADO <53>

Score
 ****-
Accession Number
 9661022
Author
 Tan Hongxia. Chen Zhengqing.
Author/Editor Affiliation
 Xiangtan Univ., Xiangtan, China.

Title
  Research on the design of cantilever shoulder of cement concrete pavement.
Source
  Journal of Wuhan University of Technology (Transportation Science & Engineering), vol.31, no.4, Aug. 2007, pp. 749-52. Publisher: Wuhan University of Technology (Transportation Science & Engineering), China.
Abstract
  Building high classified highway is developed rapidly in our country. It brings immense economy benefit, at the same time, a great of farm is tied up, and nature environment is destroyed. Making reference to the structure of bridge engineering and house building engineering in civil engineering, a cantilever structure shoulder of cement concrete pavement can be made, it can reduce not only engrossed ground, diffluent water and soil, but also can saving mass fund and mend construction pace. This paper sets forth the design of cantilever shoulder through carcass, rigid frame, joining and cast in place on spot wholly, and analyzes the structure of reinforced concrete cantilever shoulder. Its feasibility is verified. (6 References).

RESULTADO <54>
Score
  ****-
Accession Number
  9103630
Author
  Streicher D. Kohl C.
Author/Editor Affiliation
  BAM Fed. Inst. for Mater. Res. & Testing, Berlin, Germany.
Title
  Results of reconstructed and fused NDT-data measured in the laboratory and on-site at bridges.
Source
  Cement and Concrete Composites, vol.28, no.4, April 2006, pp. 402-13. Publisher: Elsevier, UK.
Abstract
  Non-destructive testing (NDT) of concrete structures plays an increasing role in civil engineering. This paper presents the results of measurements carried out in the laboratory at BAM and on-site at several bridges using reconstructed and fused radar and ultrasonic echo data sets. In this context different scanning systems, developed for the on-site application of NDT-methods (e.g. reinforced concrete bridges) are introduced. The main object was the demonstration of the improved effectiveness of radar and ultrasonic pulse echo technique due to the automated measurements and the application of new software for the data processing and data visualisation. The results of these measurements show the high potential of reconstruction and data fusion for the improvement and simplification of the interpretability of large data sets measured with impulse-echo methods. [All rights reserved Elsevier] (21 References).

RESULTADO <55>
Score
  ****-
Accession Number
  8631672
Author
  Allport R.
Author/Editor Affiliation
  MRT Planning, Halcrow, UK.
Title
  Operating risk: the Achilles' heel of major infrastructure projects.
Source
  Proceedings of the Institution of Civil Engineers, Civil Engineering, vol.158, no.3, Aug. 2005, pp. 130-3. Publisher: Inst. Civil Eng, UK.
Abstract
  The civil engineering profession has significantly improved its ability to deliver major infrastructure

projects on time and within budget. However, the operating performance of such projects leaves more to be desired. This paper examines the nature and scale of operating risks and sets out to explain why operating performance seldom matches expectations. It looks in particular at new-build urban rail schemes, where operating outcomes are found to differ significantly and systemically from expectations, usually for the worse. It concludes that a radical change in approach for such schemes is needed (15 References).

RESULTADO <56>

Score
   ****-
Accession Number
   8179959
Author
   Yelf R. Al-Nuaimy W.
Author/Editor Affiliation
   Georadar Res. Pty Ltd, Coffs Harbour, NSW , Australia.
Editor
   Slob E; Yarovoy A; Rhebergen J.
Title
   Classification system for GPR parameters.
Source
   Proceedings of the Tenth International Conference on Ground Penetrating Radar (IEEE Cat. No.04EX855). IEEE. Part Vol.1, 2004, pp. 407-10 Vol.1. Piscataway, NJ, USA.
Conference Information
   Proceedings of the Tenth International Conference on Ground Penetrating Radar. Delft, Netherlands. TNO-FEL. Geophysical Survey Syst., Inc.. -/+D Radar-AS. Allied Associates. Ingegneria dei Sistemi-SPA. Mala Geoscience. Radar Syst. Inc.. Roadscanners. Sensors & Software. T&A Survey. 21-24 June 2004.
Abstract
   This paper addresses a problem commonly encountered in the processing and interpretation of GPR data for civil engineering and geotechnical applications. These projects typically involve large data sets composed of multivariate parameters, which need to be interpreted and coded in such a manner as to provide practical solutions to the site engineer. In this paper we propose a system for approaching this problem that has been field tested on many projects. This system uses two numerical descriptors for classifying complex geotechnical parameters derived from GPR field measurements. The first parameter, called GPR class, is used to code the relative difficulty of excavation, or danger from instability. The second parameter, the GPR rock type descriptor, is used to code the local soil or rock type and to describe the attributes of the material, such as its weathering condition or degree of cementation. The system is a highly efficient for coding large transects of GPR data. T!
 he coding system is also suitable for training artificial neural networks. Neural networks are being used with increasing frequency for high dimensional problems of regression or classification. These networks, combined with second-order statistical image descriptors, can then be combined to visualise the data in 3 dimensions in a format readily comprehensible to persons without specialist GPR technical knowledge (8 References).

RESULTADO <57>

Score
   ****-
Accession Number
   6812294
Author
   Baker CA. Watson LT. Grossman B. Haftka RT. Mason WH.
Author/Editor Affiliation
   Center for Adv. Vehicles, Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA.
Editor
   Tentner A.

Title
  Parallel global aircraft configuration design space exploration.
Source
  Proceedings of the High Performance Computing Symposium - HPC 2000. SCS. 2000, pp. 101-6. San Diego, CA, USA.
Conference Information
  Proceedings of High Performance Computing Symposium. Washington, DC, USA. SCS. 16-20 April 2000.

Abstract
  The preliminary design space exploration for large, interdisciplinary engineering problems is often a difficult and time-consuming task. General techniques are needed that efficiently and methodically search the design space. This work focuses on the use of parallel load balancing techniques integrated with a global optimizer to reduce the computational time of the space exploration. The method is applied to the multidisciplinary design of a High Speed Civil Transport (HSCT). A modified Lipschitzian optimization algorithm generates large sets of design points that are evaluated concurrently using a variety of load balancing schemes. The load balancing schemes implemented in this study are: static load balancing, dynamic load balancing with a master-slave organization, fully distributed dynamic load balancing and fully distributed dynamic load balancing via threads. All of the parallel computing schemes have high parallel efficiencies. However, when the variation in the des!
 ign evaluation times is small, as in the design problem presented, the computational overhead needed for dynamic load balancing is substantial enough that it is more efficient to use static load balancing (13 References).

RESULTADO <58>

Score
  ****-
Accession Number
  4894320
Author
  Jubete F. Castillo E.
Author/Editor Affiliation
  Dept. of Appl. Math. & Comput. Sci., Cantabria Univ., Santander, Spain.
Title
  Linear programming and expert systems.
Source
  Microcomputers in Civil Engineering, vol.9, no.5, 1994, pp. 335-45. USA.

Abstract
  The paper describes an expert system shell based on linear programming. The knowledge base consists of the parametric equations of the feasible set, which is obtained from upper and lower bounds of probabilities of given sets. The inference engine consists of an algorithm that gives the parametric equations of the feasible set and works in an incremental manner; any previously calculated feasible set is modified when new information becomes available, using all previous calculations. This allows for rapid updating of the knowledge base and permits a very quick solution of the optimization problems (finding of lower and upper bounds of the probability of any set) to be obtained. Finally, three civil engineering examples are included (12 References).

RESULTADO <59>

Score
  ****-
Accession Number
  3787566
Author
  Brittle W. Daye M.
Author/Editor Affiliation
  Bechtel Power Corp., Gaithersburg, MD, USA.

Title
  Simplification of specifications for power facilities.
Source
  Proceedings of the American Power Conference. American Power Conference. 1989, pp. 966-8.
Chicago, IL, USA.
Conference Information
  Proceedings of the American Power Conference. Chicago, IL, USA. Illinois Inst. Technol. 24-25 April
1989.

Abstract
  The emphasis in nuclear power plant construction and engineering has shifted in the past ten years from
new plant construction to plant retrofit and upgrade. The original sets of construction specifications for civil
structures are often not appropriate for current, smaller scale, limited scope work which is routinely being
performed at facilities which have been operating. Here, the authors describe how the development of
standard specifications by the utility or its consultants which fit the scope of work at a power generating
facility and are maintained in a current database may decrease the effort required by both consultants and
contractors when specific projects are undertaken while maintaining quality and control of the final product
(1 Reference).

RESULTADO <60>
Score
  ****-
Accession Number
  2225682
Author
  Schaufelberger W. Adelmann N.
Author/Editor Affiliation
  Suiselectra Ingenieurunternehmung AG, Basel , Switzerland.
Title
  Construction and erection work at the Weinzodl hydroelectric power station.
Source
  Oesterreichische Zeitschrift fur Elektrizitaetswirtschaft, vol.36, no.11, Nov. 1983, pp. 400-5. Austria.

Abstract
  The power station is in a groundwater area of great importance to the Andritz Water Works and great
care had to be taken in the design and particularly the construction stage to avoid undue disturbance to
the groundwater flow. The technical features of the coffer dam, excavation, civil engineering and
construction work are described, the procedures adopted are detailed and reference is made to difficulties
encountered. The various stages in the erection of the STRAFLO sets are explained (0 References).

RESULTADO <61>
Score
  ****-
Accession Number
  307687
Author
  Ivanov IN. Busel' NA. Kalenov VP.
Title
  Economic efficiency and some questions of 15-years operating experience of the first stage of the
Angara project: the Irkutsk hydro-electric station.
Source
  Gidrotekhnicheskoe Stroitel'stvo, no.7, 1971, pp. 5-8. USSR.

Abstract
  Construction of the 660 MW Irkutsk hydro-electric station, the first of a series of stations on the Angara
river in Eastern Siberia, was commenced in 1950; two sets were completed in 1956, four in 1957 and the
remaining two in 1958. The cost of the station was 160 roubles/kW and at the present time the Irkutsk,
Bratsk and the Krasnoyarsk stations are running in parallel producing energy at a cost of 0.229

kopecks/kWh. The flow of water is controlled by the water level in Lake Baikal. Operating statistics are tabulated for the years 1957-1970 (average head of water, output kWh, hours of operation, water flow, operating costs, etc.) Maintenance of the civil engineering works and turbines is discussed

RESULTADO <62>
Score
 ****-
Accession Number
 226638
Author
 Boryaev FI. Golubnichenko PG. Yuzhakov VS.
Title
 Operational experience of the Kamsk hydro-electric installations.
Source
 Gidrotekhnicheskoe Stroitel'stvo, no.11, Nov. 1970, pp. 5-9. USSR.
Abstract
 The Kamsk hydro-electric complex on the river Kama (a tributary of the Volga) consists of a spillway hydro-electric station, river-bed and flood-land earth dams and a six-lock, two-lane ship canal. The hydro-electric station was commissioned in 1954-1956 with 23 vertical sets, and experimental horizontal set was added in 1958. The installed capacity of 504 MW plays an important role in supplying autumn and winter peak loads and as reserve capacity during planned outages (for maintenance) of thermal power stations. The civil engineering works and geological formations are described in detail and the investigations and actions taken to keep the dams in a reliable and satisfactory condition with regard to drainage and settlement up to the present time are discussed (10 References).

RESULTADO <63>
Score
 ****-
Accession Number
 130843
Author
 Kiessling H.
Title
 Design and construction of the Fraqant hydro-electric installation.
Source
 Oesterreichische Zeitschrift fur Elektrizitaetswirtschaft, vol.22, no.10, Oct. 1969, pp. 449-61. Austria.
Abstract
 The physical features of the Goldberg mountain range in Carinthia are described and illustrated. An account is given of the Fraqant hydro-electric scheme in that region. There are two main generating stations, equipped with 2-29 MW sets to which a third set may be added later. The arrangement of the pipe lines and the civil engineering works required to control the water are discussed, and illustrated by 4 photographs, two profiles of the pipe lines and plan of the scheme

RESULTADO <64>
Score
 ****-
Accession Number
 44672
Author
 Venouil R. Lassiaille R.
Title
 Thermal power station at Vitry-sur-Seine. I.
Source
 La Technique Moderne, vol.60, no.12, Dec. 1968, pp. 501-10. France.
Abstract

Describes the general construction of the station. The construction has been effected in five stages; sets 1 and 2 are classical coal burning steam generators driving turbo alternators, and were commissioned in 1966. Sets 3 and 4 consist, for the first time in France, of a gas turbine operating in a mixed cycle in which the combustion gases from the turbine serve as combustive air for the steam generator. In this way power is increased from 280 MW to 320 MW. Sections are devoted to the location, civil engineering, services for fuel and exhaust gas control and a general description of the mechanical and thermal installations

RESULTADO <65>
Score
 ****-
Accession Number
 9615619
Author
 Justo JL. Durand P. Justo E.
Author/Editor Affiliation
 Univ. of Seville, Seville, Spain.
Title
 Development of hairshine method for design of L-shaped walls.
Source
 Proceedings of the Institution of Civil Engineers, Civil Engineering, vol.160, no.GE3, July 2007, pp. 161-7. Publisher: Institution of Civil Engineers, UK.
Abstract
 Hairsine published a paper in 1972 in the Proceedings of the Institution of Civil Engineers entitled 'A design chart for determining the optimum base proportions of free standing retaining walls', which has been used ever since for designing L-shaped walls. For small surcharge pressures, the author provides only an approximate method. Hairsine suggests a complicated procedure when surcharge loading represents a large proportion of the wall loading: if this procedure is used, the method loses its effectiveness. This paper sets out to show how, by introducing simple equivalent coefficients, the Hairsine chart may be accurately employed when there is uniform surcharge. In addition, instead of interpolating Hairsine curves, a suggestion is made to draw the curves for the particular design parameters and obtain the envelope directly through the use of a spreadsheet. (2 References).

RESULTADO <66>
Score
 ****-
Accession Number
 9477614
Author
 Livingston RA. Shuang Jin.
Author/Editor Affiliation
 Office of Infrastruct. R&D, Turner-Fairbank Highway Res. Center, McLean, VA, USA.
Title
 Application of a maximum entropy method to estimate the probability density function of nonlinear or chaotic behavior in structural health monitoring data.
Source
 SPIE-Int. Soc. Opt. Eng. Proceedings of the SPIE - The International Society for Optical Engineering, vol.5765, no.1, 2005, pp. 749-57. USA.
Conference Information
 Smart Structures and Materials 2005: Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems. San Diego, CA, USA. 7 March 2005.
Abstract
 Bridges and other civil structures can exhibit nonlinear and/or chaotic behavior under ambient traffic or wind loadings. The probability density function (pdf) of the observed structural responses thus plays an important role for long-term structural health monitoring, LRFR and fatigue life analysis. However, the actual pdf of such structural response data often has a very complicated shape due to its fractal nature.

Various conventional methods to approximate it can often lead to biased estimates. This paper presents recent research progress at the Turner-Fairbank Highway Research Center of the FHWA in applying a novel probabilistic scaling scheme for enhanced maximum entropy evaluation to find the most unbiased pdf. The maximum entropy method is applied with a fractal interpolation formulation based on contraction mappings through an iterated function system (IFS). Based on a fractal dimension determined from the entire response data set by an algorithm involving the inf!

ormation dimension, a characteristic uncertainty parameter, called the probabilistic scaling factor, can be introduced. This allows significantly enhanced maximum entropy evaluation through the added inferences about the fine scale fluctuations in the response data. Case studies using the dynamic response data sets collected from a real world bridge (Commodore Barry Bridge, PA) and from the simulation of a classical nonlinear chaotic system (the Lorenz system) are presented in this paper. The results illustrate the advantages of the probabilistic scaling method over conventional approaches for finding the unbiased pdf especially in the critical tail region that contains the larger structural responses (12 References).

RESULTADO <67>

Score
 ****-
Accession Number
 9414600
Title
 Energy method for analysis of measured airspeed change in landing airborne manoeuvre.
Source
 Engineering Sciences Data Unit, vol.2006, no.E04, 14 Nov. 2006, pp. 1-21. Publisher: IHS ESDU International plc, UK.

Abstract
 ESDU 92020 gives a method that correlates measurements of airspeed changes in the airborne manoeuvre on the basis of energy considerations to yield changes in lift and in drag-minus-thrust between screen and touch-down. The method applies to fixed wing aircraft and can be applied to any set of flight test measurements although it is most effective when the landings have a common "style". Examples would be those flown for civil certification purposes, or those representative of operational practice. The use of the correlation to calculate touch-down speed from a knowledge of the airborne time and the screen speed is explained, and methods of calculating the airborne time are suggested. The prediction of the airborne distance from the speeds and airborne time is straightforward in still air, but the effect of a steady wind and a wind gradient, is considered. A worked example illustrates the use of the method, and the scatter on some points is investigated in relation to the !
 "style". Examples of the application of the method to particular sets of test data are shown for jet-, fan- and propeller-driven civil and military aeroplanes and to an unpowered aircraft. They contain large ranges of approach angle, speed, power-cut height and landing "style"

RESULTADO <68>

Score
 ****-
Accession Number
 8842440
Author
 Mattson SG. Pandit SM.
Author/Editor Affiliation
 Great Lakes Sound & Vibration Inc., Houghton, MI, USA.
Title
 Statistical moments of autoregressive model residuals for damage localisation.
Source
 Mechanical Systems and Signal Processing, vol.20, no.3, April 2006, pp. 627-45. Publisher: Academic Press, UK.

Abstract
 Monitoring structural health is a problem with significant importance in the world today. Aging civil

infrastructure and aircraft fleets have made non-destructive evaluation an important research topic. Non-destructive techniques based on dynamic signatures have struggled to gain widespread acceptance due to the perceived difficulty in applying these methods, as well as the mixed results they can produce. A simple and reliable method that is useful without in-depth knowledge of the structure is necessary to transition dynamic response-based health monitoring into the industrial mainstream. Modal parameters, including shifting frequencies, damping ratios, and mode shapes have received considerable attention as damage indicators. The results have been mixed and require an expert to carry out the testing and interpretation. Detailed knowledge of the structure before it becomes damaged is required, either in the form of experimental data or an analytical model. A method based !

 on vector autoregressive (ARV) models is proposed. These models accurately capture the predictable dynamics present in the response. They leave the unpredictable portion, including the component resulting from unmeasured input shocks, in the residual. An estimate of the autoregressive model residual series standard deviation provides an accurate diagnosis of damage conditions. Additionally, a repeatable threshold level that separates damaged from undamaged is identified, indicating the possibility of damage identification and localisation without explicit knowledge of the undamaged structure. Similar statistical analysis applied to the raw data necessitates the use of higher-order moments that are more sensitive to disguised outliers, but are also prone to false indications resulting from overemphasising rarely occurring extreme values. Results are included from data collected using an eight-degree of freedom damage simulation test-bed, built and tested at Los Alamos Nation!

 al Laboratory (LANL). Confidence bounds on each moment are computed fo

r the available data sets and are included to illustrate "significant" differences. [All rights reserved Elsevier] (19 References).

RESULTADO <69>
Score
  ****-
Accession Number
  8468301
Author
  Irish V.
Title
  Keeping mum [trade secrets].
Source
  Engineering Management, vol.15, no.3, June-July 2005, pp. 28-9. Publisher: IEE, UK.
Abstract
  Whatever country one lives in and works in as an employed engineer, there is almost certainly a law that relates to the way one should deal with confidential information that one has access to by reason of one's employment. The existing laws vary widely. In countries which apply a civil law procedure, there is probably a specific written law that applies. The title may include the words "unfair competition" or "unfair business practice" or be about "marketing practices". The wording of the law sets out what an employee can and cannot do

RESULTADO <70>
Score
  ****-
Accession Number
  8167408
Author
  Min Han. Jianhui Xi.
Author/Editor Affiliation
  Sch. of Electron. & Inf. Eng., Dalian Univ. of Technol., China.
Title
  Efficient clustering of radial basis perceptron neural network for pattern recognition.
Source
  Pattern Recognition, vol.37, no.10, Oct. 2004, pp. 2059-67. Publisher: Elsevier, UK.

Abstract

This paper studies how to train a new feed-forward neural network, radial basis perceptron (RBP) neural network, for distinguishing different sets in R^L. RBP neural network is based on radial basis function (RBF) neural network and perceptron neural network. It has two hidden layers where the nodes are not fully connected but use selective connection. A training algorithm corresponding to the structure of RBP network is presented. It adopts the input-output clustering (IOC) method to provide an efficient and powerful procedure for constructing an RBP network that generalizes very well. First, during the learning procedure, RBP neural network adopts IOC method to define the number of units of hidden layers and select centers. Second, the width parameter sigma of centers is self-adjustable according to the information included in the learning samples. The effectiveness of this network is illustrated using an example taken from applications for component analysis o!
f civil building materials. Simulation shows that RBP neural network can be used to predict the components of civil building materials successfully and gets good generalization ability (28 References).

RESULTADO <71>
Score
****-
Accession Number
7661816
Author
Ridikas D. Bletzacker L. Deruelle O. Fadil M. Fioni G. Letourneau A. Marie F. Plukiene R.
Author/Editor Affiliation
DSM/DAPNIA/SPhN, CE.A. Saclay, Gif-sur-Yvette, France.
Title
Comparative analysis of ENDF, JEF and JENDL data libraries by modelling high temperature reactors and plutonium based fuel cycles.
Source
Atomic Energy Soc. Japan. Journal of Nuclear Science and Technology, suppl.2, vol.2, Aug. 2002, pp. 1167-70. Japan.
Conference Information
International Conference on Nuclear Data for Science and Technology . Tsukuba, Ibaraki, Japan. 7-12 Oct. 2001.
Abstract

The gas turbine modular helium-cooled reactor (GT-MHR) is known probably as the best option for the maximum plutonium destruction in once-through cycle, even though the industrial fabrication of coated particle fuel still has to be proved. We perform detailed simulations along these lines by comparing different sets of data libraries in terms of k_{eff} eigenvalues, the length of the fuel cycle, neutronic characteristics and the evolution of fuel composition in particular. In all cases the same Monteburns code system is used making our results dependent only on the evaluated data tables. We show that in general the performance of GT-MHR is not considerably influenced by the choice of the data libraries employed. Nevertheless, a number of major differences among ENDF, JENDL and JEF data files are identified and quantified in terms of the averaged one-group cross sections both for military (MPu) and civil (CPu) plutonium based fuel cycles (13 References).

RESULTADO <72>
Score
****-
Accession Number
3643568
Author
Ould MA.
Author/Editor Affiliation
Praxis plc, Bath, UK.
Title
Software development under Def Stan 00-55: a guide.

Abstract
  In May 1989 the UK Ministry of Defence (MoD) issued Interim Defence Standard 00-55 `requirements for the procurement of safety critical software in defence equipment' for comment. The standard sets stiff requirements on the development of safety-critical software, requirements that have major implications for developers of such software in the defence arena. Activities at the international level, including the publication of a draft IEC standard on the same topic, could possibly cause 00-55 to find its way into the civil arena too, with corresponding implications for the rigour with which systems for the medical, transport and power industries are developed, to name but three. The author looks at the scope of the new standard and examines its methodological implications (12 References).

RESULTADO <73>

Score
  ****-
Accession Number
  10340157
Author
  O'Neill A. Campbell T. Matsuoka T.
Author/Editor Affiliation
  DownUnder GeoSolutions, Perth, WA, Australia.
Title
  Lateral resolution and lithological interpretation of surface-wave profiling.
Abstract
  In civil engineering, geological hazards can be in the form of both soft and hard zones. Soft zones, notably sinkholes, can lead to collapse structures reaching the surface and expensive damages during or after construction. Hard zones might be an impediment to excavation or, if they are to be used as foundations, it is desirable to know the thickness and strength. Surface waves are becoming increasingly popular for geological mapping in severely contrasting geology. One issue with active-source surface-wave profiling is the trade-off between lateral and vertical resolution. Longer arrays are required to record lower frequencies, to image deeper layers, but at the expense of increased lateral smearing. Conversely, short arrays can achieve higher lateral resolution but with poor depth penetration. A second issue is the interpretability of surface-wave data and the worthwhile contribution they add to a project. Shear-wave velocity is probably more indicative of material stre!
 ngth than P-wave velocity in unconsolidated sediments, especially if near full saturation. It is also a vital parameter in site amplification modeling, but apparently quantitative interpretation of shear-wave velocity to known lithologies in general engineering is not practiced. We try to shed light on these two issues through field and synthetic data sets. Numerical modeling of a "sinkhole" of various widths in a buried hard layer is used to simulate standard surface-wave profiling, and the strong dependency of the final images on the acquisition parameters. Field data are then used to illustrate the added lithological discrimination when both surface-wave and resistivity methods are combined. (0 References).

RESULTADO <74>

Score
  ****-
Accession Number
  9785994
Author
  Nakamura M. Kusumi H.
Author/Editor Affiliation
  NEWJEC Inc., Osaka, Japan.
Title

Monitoring of groundwater behavior with the rainfall on a rock slope by combination geophysical prospecting.
Source
  Journal of the Society of Materials Science, Japan, vol.56, no.9, Sept. 2007, pp. 828-32. Publisher: Society of Materials Science, Japan.

Abstract
  Generally, the groundwater flow in rock slope depends on the direction for the development of rock joints sets, those are very complicated. It is a very important problem on civil and disaster prevention engineering to grasp the groundwater behavior included to the flow conditions in rock slope. In particular, the groundwater flow in a rock slope which has random joint sets is very complicated, and the specific methods which to monitor this flow don't have been developed. The electric resistivity methods have been mainly used to make a survey of the aquifer. However, the investigations in associate with the continuous monitoring of the groundwater flow in rock slope are very few. In this paper, the continuous change of electric resistivity are measured in order to monitor the movement of groundwater flow in rock slope site by dipole-dipole electric resistivity technique on the period of rainfall, and the proposed analysis of groundwater flow in this slope based on the meas!
 ured resistivity data are tried out. As the results, it is shown the possibility that proposed technique is very useful for the monitoring of groundwater flow in rock slope, and the groundwater conditions through the fracture zone and the rock joints in this site are monitored by this technique. (7 References).

RESULTADO <75>
Score
  ****-
Accession Number
  9668417
Author
  Arnst M. Clouteau D. Bonnet M.
Author/Editor Affiliation
  Ecole Centrale Paris, Chatenay-Malabry, France.
Title
  Inversion of probabilistic structural models using measured transfer functions.
Source
  Computer Methods in Applied Mechanics and Engineering, vol.197, no.6-8, 15 Jan. 2008, pp. 589-608. Netherlands.

Abstract
  This paper addresses the inversion of probabilistic models for the dynamical behaviour of structures using experimental data sets of measured frequency-domain transfer functions. The inversion is formulated as the minimization, with respect to the unknown parameters to be identified, of an objective function that measures a distance between the data and the model. Two such distances are proposed, based on either the loglikelihood function, or the relative entropy. As a comprehensive example, a probabilistic model for the dynamical behaviour of a slender beam is inverted using simulated data. The methodology is then applied to a civil and environmental engineering case history involving the identification of a probabilistic model for ground-borne vibrations from real experimental data. [All rights reserved Elsevier]. (68 References).

RESULTADO <76>
Score
  ****-
Accession Number
  8792266
Author
  Currie A.
Title
  Keeping in tune with genset harmonics.
Source

Electrical Review, vol.238, no.9, Sept. 2005, pp. 16-17. Publisher: Reed Business Publishing, UK.

Abstract
  Generator sets come in various forms, so it is essential the end user chooses a set with the correct power rating. Transportable diesel generator-sets have become an indispensable item of plant for almost every kind of civil engineering project, providing temporary mains-independent power to operate all types of electrical equipment. This can range from fluorescent lighting, computers and commercial equipment in the site offices to security systems, electrically powered tower cranes, mixers and a wide variety of heavy-duty industrial power tools and on-site equipment

RESULTADO <77>

Score
  ****-
Accession Number
  8319063
Author
  Bollinger T.
Author/Editor Affiliation
  Software Eng. Center, Mitre Corp., McLean, VA, USA.
Title
  Software in the year 2010.
Source
  IT Professional, vol.6, no.6, Nov.-Dec. 2004, pp. 11-15. Publisher: IEEE, USA.

Abstract
  In 2010, it is safer because software technologies provide protections. However, the world has also become more dangerous because the atmosphere of mutual trust that was the basis of the early Internet has been largely obliterated. In the peer sets of 2010, each member of a peer set has its own internal model of what its environment is supposed to look like. The infamous Spyware Debacle of 2005 is long past. As a discipline, software engineering in 2010 has changed in some rather striking ways, although some might argue that it has simply returned to its roots. Outsourcing of both the private and the open-source varieties has removed most of the more mundane programming tasks from the main job market. Sophisticated automation of simpler programming tasks has led to a further reduction in the need for traditional programmers. A particularly popular approach has been to use interactive wizards in household appliances and entertainment devices. The fact that vendors sell many!
  such software packages as integral parts of small, dedicated hardware appliances (rather than bits) further enhances software development's growing resemblance to traditional forms of engineering, such as civil and electrical. Such packaging dramatically increases the provable levels of many desirable system properties by resolving the physical-access bypass problem that has plagued software security since its origins. The creativity programming market uses many of the same languages as the late 1990s and early 2000s, of course, but with several surprises. Ada, once given up for dead by the US Department of Defense community that created it, has become the darling of the commercial-properties-composition industry. XML has continued to expand. Open source software has ceased to be controversial after businesses began to interpret it as an effective way to control the long-term support costs of the shared software infrastructure. The result is a much more stratified use of of o!
 pen source and proprietary software, with the widely shared infrastruc
ture typically being open source. Finally, one of the more-interesting ongoing news items of 2010 has been the partial collapse of the international patent system, centering around claims of "patent feudalism" in software and biotechnology industries

RESULTADO <78>

Score
  ****-
Accession Number
  7907055
Author
  Yokoi K. Nakashima K. Kobayashi M. Mihune H. Hasunuma H. Yanagihara Y. Ueno T. Gokyuu T.

Endou K.
Author/Editor Affiliation
 Intelligent Syst. Inst., Nat. Inst. of Adv. Ind. Sci. & Technol., Tsukuba, Japan.
Title
 A tele-operated humanoid robot drives a backhoe in the open air.
Source
 Proceedings 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2003) (Cat. No.03CH37453). IEEE. Part vol.2, 2003, pp. 1117-22. Piscataway, NJ, USA.
Conference Information
 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems. Las Vegas, NV, USA. IEEE Robotics & Autom. Soc.. IEEE Ind. Electron. Soc.. Robotics Soc. Japan. Soc. Instrum. & Control Eng.. New Technol. Found. 27-31 Oct. 2003.

Abstract
 This is the first successful trial in the world to remotely control a humanoid robot so as to drive an industrial vehicle (backhoe) outdoors in lieu of human operator. Furthermore, the robot's operation was controlled while having it wear protective clothing to protect it against the rain and dust outside. This is too marks a world-first success demonstrating the humanoid robot's capability of performing outdoor work even in the rain. These results were achieved thanks to the development of the following three technologies: (1) the "remote control technology" for instructing the humanoid robot to perform total body movements under remote control and the "remote control system" for executing the remote control tasks; (2) the "protection technology" for protecting the humanoid robot against shock and vibrations of its operating sets and against the influences of the natural environment such as rain and dust; and (3) "full-body operation control technology" for controlling th!
 e humanoid robot's total capability to prevent the robot from falling over. The humanoid robot has a promising application potential for restoration work in environments struck by catastrophes and in civil engineering and construction project sites where it can "work" safely and smoothly (21 References).

RESULTADO <79>

Score
 ****-
Accession Number
 6583892

Author
 Novaes AGN. De Cursi JES. Graciolli OD.
Author/Editor Affiliation
 Dept. of Ind. Eng., Fed.. Univ. of Santa Catarina, Brazil.
Title
 A continuous approach to the design of physical distribution systems.
Source
 Computers & Operations Research, vol.27, no.9, Aug. 2000, pp. 877-93. Publisher: Elsevier, UK.

Abstract
 The optimization model presented sets the district boundaries and seeks the best fleet of vehicles so as to minimize total daily transport costs. Both vehicle time and vehicle load are treated probabilistically. Each district is related to a characteristic function that takes into account distribution costs, time and capacity constraints, distribution effort, and shape considerations (district slenderness). In a previous work (A.G. Novaes and O.D. Graciolli), the region under analysis was represented by a rectangular grid structure. A continuous approach, however, provides more accurate results and reduces the data preparing effort. The mathematical model developed to solve this problem is a combination of a gradient method with random perturbations, and a hybrid genetic algorithm. This method was reported in the literature and has been applied successfully to solve topological design problems in civil and mechanical engineering. The results of the model, applied to a parc!
 el delivery problem in the city of Sao Paulo, Brazil, are compared with previous findings (22 References).

RESULTADO <80>

Score

****-
Accession Number
  6368359
Author
  Krasteva DT. Watson LT. Baker C. Grossman B. Mason WH. Haftka RT.
Author/Editor Affiliation
  Multidisciplinary Anal. & Design Center for Adv. Vehicles, Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA.
Title
  Distributed control parallelism in multidisciplinary aircraft design.
Source
  Concurrency: Practice and Experience, vol.11, no.8, July 1999, pp. 435-59. Publisher: Wiley, UK.

Abstract
  Multidisciplinary design optimization (MDO) for large-scale engineering problems poses many challenges (e.g. the design of an efficient concurrent paradigm for global optimization based on disciplinary analyses, expensive computations over vast data sets, etc.). This work focuses on the application of distributed schemes for massively parallel architectures to MDO problems, as a tool for reducing computation time and solving larger problems. The specific problem considered here is configuration optimization of a high speed civil transport (HSCT), and the efficient parallelization of the embedded paradigm for reasonable design space identification. Two distributed dynamic load balancing techniques (random polling and global round robin with message combining) and two necessary termination detection schemes (global task count and token passing) were implemented and evaluated in terms of effectiveness and scalability to large problem sizes and a thousand processors. The effec!
 t of certain parameters on execution time was also inspected. Empirical results demonstrated stable performance and effectiveness for all schemes, and the parametric study showed that the selected algorithmic parameters have a negligible effect on performance (36 References).

RESULTADO <81>
Score
  ****-
Accession Number
  6074992
Author
  Mayfield ME. Millman GC.
Author/Editor Affiliation
  Office of Nucl. Regulatory Res., US Nucl. Regulatory Comm., Washington, DC, USA.
Editor
  McBride AE.
Title
  NRC's material aging research program.
Source
  Proceedings of the American Power Conference. 58th Annual Meeting 1996. Technology for Competition and Globalization. Illinois Inst. Technol. Part vol.1, 1996, pp. 136-40. Chicago, IL, USA.
Conference Information
  Proceedings of 58th American Power Conference Annual Meeting. Chicago, IL, USA. Illinois Inst. Technol. 9-11 April 1996.

Abstract
  The US Nuclear Regulatory Commission (NRC) is conducting a program of research to evaluate the potential effects of plant aging on the integrity and reliability of key systems, structures, and components. The research results contribute to NRC evaluations of a variety of issues related to operating plants and to license renewal. The overall aging research program includes research that addresses materials aging considerations, aging of various electrical and mechanical components, and other structures and components, including the containment and civil structures. This paper focuses on the materials aging research program which addresses degradation of materials due to the plant operating environment, and the impact of that degradation on the structural integrity of the primary pressure boundary and other critical

structures and components, e.g., reactor internals. Additionally, the materials aging research program includes research to evaluate the capabilities of current !

nondestructive examination systems. The materials aging research program is a vital part of NRC's overall regulatory program. The research provides the technical bases for many of the current-day regulatory decisions, and provides longer term confirmation of broader policies and regulations promulgated based on engineering judgement or limited data sets. The research program also includes some "exploratory" research wherein research is conducted to better evaluate the safety significance of an issue, or to increase NRC's understanding in an area of potential safety significance (4 References).

RESULTADO <82>

Score
  ****-
Accession Number
  5461689
Author
  Malkawi AIH. Liang RY. Nusairat JH. Al-Homoud AS.
Author/Editor Affiliation
  Dept. of Civil Eng., Jordan Univ. of Sci. & Technol., Irbid, Jordan.
Title
  Probabilistic seismic hazard zonation of Syria.
Source
  Natural Hazards, vol.12, no.2, Sept. 1995, pp. 139-51. Publisher: Kluwer Academic Publishers, Netherlands.

Abstract
  Earthquake hazard maps for Syria are presented. The peak ground acceleration (PGA) and the modified Mercalli intensity (MMI) on bedrock, both with 90% probability of not being exceeded during a life time of 50, 100 and 200 years, respectively are developed. The probabilistic PGA and MMI values are evaluated assuming linear sources (faults) as potential sources of future earthquakes. A new attenuation relationship for this region is developed. Ten distinctive faults of potential earthquakes are identified in and around Syria. The pertinent parameters of each fault, such as the b-parameter in the Gutenberg-Richter formula, the annual rate $lambda_4$ and the upper bound magnitude m_1 are determined from two sets of seismic data: the historical earthquakes and the instrumentally recorded earthquake data (AD 1900-1992). The seismic hazard maps developed are intended for preliminary analysis of new designs and seismic check of existing civil engineering structu!
 res (18 References).

RESULTADO <83>

Score
  ****-
Accession Number
  3536231
Author
  Frankhauser J.
Title
  Small hydraulic power stations for alpine requirements.
Source
  Elektrotechnik, vol.40, no.10, Oct. 1989, pp. 51-6. Switzerland.

Abstract
  Such stations are directed principally to such equipment as milking machines, refrigeration and lighting in remote mountain areas and are intended to take the place of uneconomic connections to the grid. The energy requirement necessary volume of water and vertical fall are quantified. This is also presented in an equation using parameters for electrical output, volume of water and net fall. Consumption of all electrical equipment and appliances (including TV sets) are listed individually. All aspects of planning and engineering (civil, mechanical and electrical) in setting up a plant are discussed (0 References).

RESULTADO <84>

Score
  ****-
Accession Number
  3364834
Author
  Kroger S.
Title
  Unchained: OS/2.
Source
  Chip, no.2, Feb. 1989, pp. 206-9. West Germany.

Abstract
  The author discusses how OS/2 has set free modern microprocessors by allowing several tasks to be performed at once and by improving memory management. He sets out a questionnaire to help a user decide whether he needs OS/2 and then touches on the following: the evolution of OS/2, the difference between OS/2 and MS-DOS, multitasking, computing speed, method of working, word processing, printing, LANs, LAN-Manager, networking and software availability. He reports comments of three users of OS/2 in data processing, civil engineering and software development, and mentions the hardware and software they employ (0 References).

RESULTADO <85>

Score
  ****-
Accession Number
  3358244
Author
  Bachofner P.
Author/Editor Affiliation
  Suiselectra Ingenieurunternehmung AG, Basel , Switzerland.
Title
  Description of the Lebring hydroelectric power station.
Source
  Oesterreichische Zeitschrift fur Elektrizitaetswirtschaft, vol.41, no.12, Dec. 1988, pp. 451-60. Austria.

Abstract
  The Lebring, low-pressure, run of the river power station on the river Mur, approximately 25 km south of Graz is now the largest station on the Mur and replaces the oldest station on the Mur, the power house of which has been refurbished as a modern switching station. The two tubular turbine/generator sets operate at a gross head of 10.2 m, a speed of 150 rev/m and have a unit rating of 9.7 MW. The station layout and the principal architectural, civil engineering and hydraulic aspects are discussed. Reference is made to environmental protection measures adopted (6 References).

RESULTADO <86>

Score
  ****-
Accession Number
  3064943
Author
  Kacena J.
Author/Editor Affiliation
  Pragoprojekt, Prague, Czechoslovakia.
Title
  DIDI-a generator for sub-programs for the DIALIB.
Source
  Mechanizace Automatizace Administrativy, vol.27, no.10, 1987, pp. 389-91. Czechoslovakia.
Abstract

The DIALIB system enables data inputs from keyboards to older computers to which data was submitted by punched cards. The paper describes DIDI, a sub-program for generating the programs needed to input specific sets of data with DIALIB. DIDI is written in FORTRAN and considerably reduces programming efforts in the author's environment, where numerous civil engineering projects are processed by computers (4 References).

RESULTADO <87>

Score
 ****-
Accession Number
 795820
Author
 Richter E.
Author/Editor Affiliation
 Power Generation & Distribution Div., Siemens AG, Erlangen, West Germany.
Title
 Waldeck II underground pumped-storage station.
Source
 Siemens Review, vol.42, no.6, June 1975, pp. 249-54. West Germany.
Abstract
 In November 1974, after a construction period of five years, the first generating set of the Waldeck II pumped-storage station went into service. Siemens AG were responsible for the entire design and planning scheme, for the consulting service and also for construction supervision. The civil engineering work-in particular the cavern structures-and the single-shaft sets with pump, synchronous generator and turbine are of remarkable size. The author describes the construction and the electrical features of the pumped storage station (7 References).

RESULTADO <88>

Score
 ****-
Accession Number
 704796
Author
 Schlotterbeck A. Meier R.
Author/Editor Affiliation
 Brown Boveri Co. Ltd., Baden, Switzerland.
Title
 RT 24-A field radio for temporary communications.
Source
 Brown Boveri Review, vol.61, no.6, June 1974, pp. 261-3. Switzerland.
Abstract
 Increasing significance is being paid to the use of mobile field radio stations for temporary communication at large civil engineering works, in disaster areas, and the like. Brown Boveri have developed and marketed radio sets which meet the requirements of such applications. This contribution describes, in general terms, the equipment with respect to purpose and circuitry. A radio communications system is used as an example to illustrate typical applications (0 References).

RESULTADO <89>

Score
 ****-
Accession Number
 562682
Author
 Armbruster TF. Haboeck A. Brueckl H.
Title

Static converter starting gives economy to pumped storage.
Source
  Energy International, vol.10, no.9, Sept. 1973, pp. 12-14. USA.
Abstract

  To minimise disturbances in a utility system during start-up of large pumped-storage sets, static converter starting systems have been developed using a d.c. link. Application of the system achieves significant economies in components and civil engineering costs (0 References).

RESULTADO <90>

Score
  ****-
Accession Number
  383868
Author
  Salgado J.
Title
  Americo Thomas hydroelectric station at Faja da Nogueira.
Source
  Electricidade, vol.15, no.74, Nov. 1971, pp. 331-6. Portugal.
Abstract

  The present paper is the third in a series describing recent hydroelectric installations in Madeira and Porto Santo. Maximum output from the present station is 2.3 MW; this is supplied by two turbo-alternator sets, each comprising: a 1740 HP, 1000 r.p.m. Pelton turbine, a 1440 kVA alternator, and 1440 kVA, 6.6 kV/300kV three-phase transformer. Some account is also included of the associated civil engineering works, and of the historical development of the region

RESULTADO <91>

Score
  ****-
Accession Number
  121183
Author
  Vaillant J.
Title
  Bouchain power station.
Source
  La Technique Moderne, vol.61, no.7, July 1969, pp. 257-68. France.
Abstract

  The station, between Valenciennes and Douai, is to have two 250-MW sets with boilers burning low-grade fines of 8-11% volatile content. The article deliberately ignores the generating sets and the civil engineering aspects, to give a detailed description, with photographs, drawings and schematics, of the installations for handling, drying (by the indirect `bin and feeder' method) and pulverising the fuel. The burners and the flame configuration are discussed, also the reheat and superheat systems, and their control. Fly-ash is returned to the boilers into a zone at about 1400degreesC; its content of unconsumed carbon would otherwise be 5 times greater

RESULTADO <92>

Score
  ****-
Accession Number
  9921743
Author
  Ozbulut OE. Mir C. Moroni MO. Sarrazin M. Roschke PN.
Author/Editor Affiliation
  Texas A&M Univ., College Station, USA.

Title
  A fuzzy model of superelastic shape memory alloys for vibration control in civil engineering applications.
Source
  Smart Materials and Structures, vol.16, no.3, June 2007, pp. 818-29. Publisher: IOP Publishing Ltd., UK.
Abstract
  Two experimental test programs are conducted to collect data and simulate the dynamic behavior of CuAlBe shape memory alloy (SMA) wires. First, in order to evaluate the effect of temperature changes on superelastic SMA wires, a large number of cyclic, sinusoidal, tensile tests are performed at 1 Hz. These tests are conducted in a controlled environment at 0, 25 and 50degreesC with three different strain amplitudes. Second, in order to assess the dynamic effects of the material, a series of laboratory experiments is conducted on a shake table with a scale model of a three-story structure that is stiffened with SMA wires. Data from these experiments are used to create fuzzy inference systems (FISs) that can predict hysteretic behavior of CuAlBe wire. Both fuzzy models employ a total of three input variables (strain, strain-rate, and temperature or pre-stress) and an output variable (predicted stress). Gaussian membership functions are used to fuzzify data for each of the inp!
 ut and output variables. Values of the initially assigned membership functions are adjusted using a neural-fuzzy procedure to more accurately predict the correct stress level in the wires. Results of the trained FISs are validated using test results from experimental records that had not been previously used in the training procedure. Finally, a set of numerical simulations is conducted to illustrate practical use of these wires in a civil engineering application. The results reveal the applicability for structural vibration control of pseudoelastic CuAlBe wire whose highly nonlinear behavior is modeled by a simple, accurate, and computationally efficient FIS. (26 References).

RESULTADO <93>

Score
  ****-
Accession Number
  6026056
Author
  Moller B. Beer M.
Editor
  Steele N.
Title
  Application of fuzzy modeling in civil engineering.
Source
  ISFL'97. Second International ICSC Symposium on Fuzzy Logic and Applications. ICSC Academic Press. 1997, pp. 345-51. Zurich, Switzerland.
Conference Information
  Proceedings of Second International ICSC Symposium on Fuzzy Logic and Applications. Zurich, Switzerland. 12-14 Feb. 1997.
Abstract
  Fuzzy modeling in civil engineering comprises fuzzification, fuzzy analysis, defuzzification and safety assessment. It offers a tremendous potential for analyzing structures with non-stochastic imprecise input information. Non-stochastic input information arises in both existing and new structures. The imprecise results of fuzzy modeling permit an improved assessment of structural behaviour and provide a starting point for a new type of safety assessment based on possibility theory. We shall discuss all four steps of fuzzy modeling with special emphasis on the problems of fuzzy analysis. It will be shown that a-discretization may be advantageously applied in structural analysis. Taking into account the nonlinearity and nonmonotonicity of the deterministic computations, the ensuing fuzzy problems are solved using optimization algorithms. Two examples will be discussed which include the solution of a transcendental eigenvalue problem and a linear system of equations. The res!
 ults are described and a structural safety assessment is carried out (6 References).

RESULTADO <94>

Score

****-
Accession Number
  10301755
Author
  Jianjun Meng. Zeqing Yang.
Author/Editor Affiliation
  Inst. of Mech-Electron. Technol, Lanzhou Jiaotong Univ., Lanzhou, China.
Title
  Civil aviation passenger traffic volume forecasting based on fuzzy diagonal regression neural networks.
Source
  Proceedings of the Multiconference on "Computational Engineering in Systems Applications". IEEE. pp. 1771-5. Piscataway, NJ, USA.
Conference Information
  Multiconference on "Computational Engineering in Systems Applications". Beijing, China. 4-6 Oct. 2006.
Abstract
  In view of the characteristics of our civil aviation, a fuzzy diagonal regression neural networks recurrent forecast model was proposed based on analyzing influential factors of passenger traffic volume. This model deals with the uncertain factors fuzzily and certainty factors using normalization in the front network layer, which solved the problem for inconsistent of importing dimension effectively. At the same time, Example proves the validity of the model. Practice proves that applying fuzzy diagonal regression neural networks recurrent forecast model to civil aviation passenger traffic volume is practicable, precise and universal, compared with the other methods such as the support vector regression, BP neural networks etc. (9 References).

RESULTADO <95>
Score
  ****-
Accession Number
  6644594
Author
  Cristea G.
Author/Editor Affiliation
  Tech. Univ. of Civil Eng., Bucharest, Romania.
Editor
  Topping BHV; Kumar B.
Title
  Fuzzy nonlinear analysis of reinforced concrete existing structures.
Source
  Computer Techniques for Civil and Structural Engineering. Civil-Comp Press. 1999, pp. 65-78. Edinburgh, UK.
Conference Information
  Computer Techniques for Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.
Abstract
  Existing R/C structures having uncertain properties are analyzed using the fuzzy set theory. The uncertain properties are defined by fuzzy values. Each fuzzy value consists of a crisp value and its membership degree. The membership degree is assimilated to the degree of confidence. The degree of confidence is estimated by specific methods. The uncertainty and the fuzziness of the data are estimated by specific measures. They are used to estimate the quality of the data and to find out the influence of the input data uncertainties over the uncertainty of the structure behavior. Fuzzy constitutive laws describe the structure behavior. The structural analysis is performed using a fuzzy algebra, adequate to structural engineering problems. This algebra is implemented in a library of functions for the fuzzy operations of the class FUZZY. The library is built in C++ language, on the principles of object-oriented programming. During the computation flow, the degrees of confidence!
  of the properties are combined and propagate from the input data until the final results. The method has a broad applicability for static and dynamic, linear and nonlinear analysis. It can be used for the

nondeterministic analysis of R/C structures having uncertain properties, for the improvement of deterministic methods, or for the development of case studies for checking the code provisions (4 References).

RESULTADO <96>
Score
 ****-
Accession Number
 7535750
Author
 Amin HK. El Zahaby KM. Taha MA. Bazaraa AS.
Author/Editor Affiliation
 Housing & Building Res. Center, Cairo , Egypt.
Editor
 Topping BHV; Kumar B.
Title
 Using fuzzy set theory (FST) in selecting a suitable foundation type.
Source
 Proceedings of the Sixth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Civil-Comp Ltd. 2001, pp. 15-16. Stirling, UK.
Conference Information
 Proceedings of the Sixth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Einsenstadt, Vienna, Austria. 19-21 Sept. 2001.
Abstract
 Summary form only given. In this paper, fuzzy set analysis is used as a tool to find a suitable foundation type for a given site with known characteristics. Fuzzy set theory is introduced through presenting the definitions of its basic concepts. Furthermore, the mathematical definitions of fuzzy arithmetic, as well as defuzzification, used in this paper, are explained. The pi-curve is used as a tool for the transforming the linguistic terms into fuzzy numbers

RESULTADO <97>
Score
 ****-
Accession Number
 6629873
Author
 Yang HM. Anumba CJ.
Author/Editor Affiliation
 Dept. of Civil & Building Eng., Loughborough Univ. of Technol., UK.
Editor
 Kumar B; Topping BHV.
Title
 An approach to a fuzzy-based decision support system for construction project teams.
Source
 Artificial Intelligence Applications in Civil and Structural Engineering. Civil-Comp Press. 1999, pp. 53-9. Edinburgh, UK.
Conference Information
 Artificial Intelligence Applications in Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.
Abstract
 Describes a study that exploits the potential of fuzzy systems in construction through the development of a decision support system which is capable of handling fuzziness in the collaborative decision-making process. The proposed system is expected to provide an objective and rational framework within which collaborative decisions can be made by virtual construction project teams. Given the often linguistic nature of the weightings ascribed by individual disciplines to decision criteria, the proposed system utilises the analytic hierarchy process (AHP) and fuzzy systems theory to rank criteria/sub-criteria. Finally, the system

recommends an optimal decision alternative and explains the rationale for its output (11 References).

RESULTADO <98>
Score
 ****-
Accession Number
 6628720
Author
 Simoes LMC.
Author/Editor Affiliation
 Dept. of Civil Eng., Coimbra Univ., Portugal.
Editor
 Topping BHV; Kumar B.
Title
 Fuzzy optimization of structures by the two-phase method.
Source
 Optimization and Control in Civil and Structural Engineering . Civil-Comp Press. 1999, pp. 55-62. Edinburgh, UK.
Conference Information
 Proceedings of Fifth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.
Abstract
 This paper presents a two-phase method for the fuzzy optimization of structures. In the first phase, a fuzzy solution is obtained by using the "level cuts method", and in the second phase, the crisp solution, which maximizes the membership function of fuzzy decision-making, is found by using the "bound search method". Illustrative numerical examples involving skeletal structures and reinforced concrete slabs are solved (9 References).

RESULTADO <99>
Score
 ****-
Accession Number
 5364266
Author
 Rajasekaran S. Febin MF. Ramasamy JV.
Author/Editor Affiliation
 Dept. of Civil Eng., PSG Coll. of Technol., Coimbatore, India.
Title
 Artificial fuzzy neural networks in civil engineering.
Source
 Computers and Structures, vol.61, no.2, 1996, pp. 291-302. Publisher: Elsevier, UK.
Abstract
 A close relationship exists between neural and fuzzy systems since they both work with degrees of imprecision in a space that is not defined by sharp deterministic boundaries. Fuzzy neural technologies can be fused into a unified methodology known as fuzzy neural networks. A neural network with the proposed architecture maps a fuzzy input vector to fuzzy output. A learning algorithm is derived from the fuzzy actual output and the fuzzy target output. The fuzzy neural networks have been applied to PCP diagnosis, concrete mix design and for the design of industrial roofs (33 References).

RESULTADO <100>
Score
 ****-
Accession Number
 5205134
Author

Vamvakeridou-Lyroudia LS.
Author/Editor Affiliation
  Dept. of Civil Eng., Nat. Tech. Univ. of Athens, Greece.
Editor
  Topping BHV.
Title
  Fuzzy reasoning in water supply network design optimization.
Source
  Developments in Computer Aided Design and Modelling for Civil Engineering. Civil-Comp Press. 1995, pp. 255-62. Edinburgh, UK.
Conference Information
  Developments in Computer Aided Design and Modelling for Civil Engineering. Cambridge, UK. 28-30 Aug. 1995.

Abstract
  Fuzzy reasoning, an artificial intelligence technique, is used for the optimal design of pressure water distribution networks under multiple loadings. Non-linear fuzzy membership functions are introduced as velocity and pressure constraints. Optimization is carried out by an original extension of the dynamic programming scheme for networks, in two stages, using a heuristic algorithm to obtain initial solutions. An original mathematical approach to the problem is presented. A discussion of the selection of partial membership functions and aggregation operators is also presented (8 References).

RESULTADO <101>
Score
  ****-
Accession Number
  7542164
Author
  Yang HM. Anumba CJ. Carrillo PM.
Author/Editor Affiliation
  Dept. of Civil & Building Eng., Loughborough Univ., UK.
Editor
  Topping BHV; Kumar B.
Title
  Implementation of a Web-based collaborative decision-making system using fuzzy logic.
Source
  Proceedings of the Sixth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Civil-Comp Ltd. 2001, pp. 17-18. Stirling, UK.
Conference Information
  Proceedings of the Sixth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Einsenstadt, Vienna, Austria. 19-21 Sept. 2001.

Abstract
  Summary form only given. With the adoption and implementation of concurrent engineering (CE) in the construction industry, more effective IT tools are needed particularly those facilitating collaboration at a virtual environment. This paper addresses one of the important areas of collaboration within virtual construction project teams - collaborative decision-making - and presents an enabling system for it. The Web-based prototype system this paper presents is designed to cope with the difficulty that geographically distributed project team members have in collaborative decision-making

RESULTADO <102>
Score
  ****-
Accession Number
  6635194
Author
  Faravelli L. Rossi R. Torelli G.

Author/Editor Affiliation
  Dept. of Struct. Mech., Pavia Univ., Italy.
Editor
  Topping BHV; Kumar B.
Title
  Implementation of an electronic integrator to convert accelerations to velocities for a fuzzy logic controller.
Source
  Optimization and Control in Civil and Structural Engineering . Civil-Comp Press. 1999, pp. 203-8. Edinburgh, UK.
Conference Information
  Proceedings of Fifth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.
Abstract
  This paper reports the results of a research activity conceived toward the realisation of stand-alone semi-active control devices. The goal is to avoid the need for a data acquisition which would require the presence of a computer. On the other side, in most practical situations as in earthquake engineering, one must monitor the system response by accelerometers, while control algorithms are based on the current velocities. An analog device able to directly perform the integration of the measured time history is conceived and implemented. Its behaviour is compared with the true velocity in a numeric example, and with a software estimation alternative during a laboratory test (13 References).

RESULTADO <103>

Score
  ****-
Accession Number
  7535754
Author
  Kawamura K. Miyamoto A.
Author/Editor Affiliation
  Dept. of Comput. & Syst. Eng., Yamaguchi Univ., Japan.
Editor
  Topping BHV; Kumar B.
Title
  Concrete bridge rating expert system with neuro-fuzzy hybrid system and its application.
Source
  Proceedings of the Sixth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Civil-Comp Ltd. 2001, pp. 27-8. Stirling, UK.
Conference Information
  Proceedings of the Sixth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Einsenstadt, Vienna, Austria. 19-21 Sept. 2001.
Abstract
  Summary form only given. The authors have for some time been developing an expert system, which can be used to evaluate the performance of existing concrete bridges on the basis of knowledge and experience acquired from domain experts. The proposed expert system is called the concrete Bridge Rating Expert system (BREX). The objective of the expert system is to evaluate the present performance of target bridge members in terms of factors such as load-carrying capability and durability. The input data for rating a concrete bridge are technical specifications of the target bridge, environmental conditions, traffic volume, and other information that can be obtained through simple visual inspection. In the present study, load-carrying capability is defined as the aspect of bridge performance that is based on the load-carrying capacity of a bridge member, and durability is defined as the ability of a bridge member to resist material deterioration and is based on the rate of mate!
 rial deterioration of the member. These two aspects of bridge performance are applied as indices for considering the necessity of performing maintenance on deteriorated bridges. Specifically, load-carrying capability is applied as an index for estimating the necessity of strengthening, and durability is applied as

an index for estimating the necessity of repair (3 References).

RESULTADO <104>
Score
 ****-
Accession Number
 6644582
Author
 Vamvakeridou-Lyroudia LS. Giovanopoulos H.
Author/Editor Affiliation
 Fac. of Civil Eng., Nat. Tech. Univ. of Athens, Greece.
Editor
 Kumar B; Topping BHV.
Title
 An original real time expert model for the operation and control of the water supply aqueduct of the greater Athens area, using fuzzy reasoning and computer assisted learning.
Source
 Novel Design and Information Technology Applications for Civil and Structural Engineering. Civil-Comp Press. 1999, pp. 205-13. Edinburgh, UK.
Conference Information
 Novel Design and Information Technology Applications for Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.
Abstract
 The telecontrol-telecommand system of the water supply aqueduct for the greater Athens area (Mornos aqueduct) is presented and in particular, the real time expert model DANAIS for system operation on-demand. Extensive measurements under controlled flow conditions have been carried out for the estimation of the hydraulic parameters of the model, but it operates satisfactorily even if there are missing or erroneous data, due to complex signal conflict patterns and the implementation of fuzzy aggregators leading to fuzzy expert rules. Moreover linguistic variables have been added to describe desired operation conditions and hydraulic parameter autocorrective procedures have been included so that that the model can autocorrect itself, in case there are changes of hydraulic parameters in time (7 References).

RESULTADO <105>
Score
 ****-
Accession Number
 5206551
Author
 Jiaping Yang. Chee Kiong Soh.
Author/Editor Affiliation
 Sch. of Civil & Structural Eng., Nanyang Technol. Univ., Singapore.
Editor
 Topping BHV.
Title
 An integrated shape optimization approach using genetic algorithms and fuzzy rule-based system.
Source
 Developments in Neural Networks and Evolutionary Computing for Civil and Structural Engineering. Civil-Comp Press. 1995, pp. 171-7. Edinburgh, UK.
Conference Information
 Developments in Neural Networks and Evolutionary Computing for Civil and Structural Engineering. Cambridge, UK. 28-30 Aug. 1995.
Abstract
 Structural optimization, in the classic sense, is the minimization of mass by varying or determining the different design variables. Shape optimization, however, is the maximization of the use of materials under the allowable design performances. It plays a significant part in the preliminary design stage and has been

considered as the most challenging and economically the most rewarding task in structural design. During the past few years, genetic-based optimization approaches have been applied to many structural design problems with great success. A new approach integrating genetic algorithms with fuzzy rule-based system for structural shape optimization is investigated. An automated optimization procedure based upon the proposed approach is developed and used in the least-weight shape design of truss structures, which include their geometry as a design variable to be optimized. The approach uses a fuzzy control strategy to guide the genetic algorithm based search to get!

the maximum optimization improvement in as few search steps as possible. A representative example is presented to verify the applicability and effectiveness of the proposed approach to structural shape optimization (17 References).

RESULTADO <106>

Score
 ****-
Accession Number
 5099798
Author
 Chou KC. Hoffman PC. Yao JTP.
Author/Editor Affiliation
 Dept. of Civil & Environ. Eng., Tennessee Univ., Knoxville, TN, USA.
Title
 Teaching of uncertainty analysis and risk assessment in civil engineering.
Source
 Proceedings of ISUMA - NAFIPS '95 The Third International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society (Cat. No.95TB8082). IEEE Comput. Soc. Press. 1995, pp. 346-9. Los Alamitos, CA, USA.
Conference Information
 Proceedings of 3rd International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society. College Park, MD, USA. Univ. Maryland. North American Fuzzy Inf. Process. Soc.. IEEE Comput. Soc. 17-20 Sept. 1995.
Abstract
 There have been many research results related to uncertainty analysis and risk assessment during the past several decades. However, practical applications of these results remain scarce. The slow growth in interest, both in academic and among practicing engineers, in rigorous risk assessment and uncertainty analysis signals a need to reexamine our current means and practice of delivering the risk assessment education to our students. In this paper, a discussion on various techniques in teaching uncertainty analysis and its applications to engineering decision-making are presented. In addition, steps are recommended to develop a decision making framework for the environmental and infrastructure systems (12 References).

RESULTADO <107>

Score
 ****-
Accession Number
 5222642
Author
 Faravelli L. Yao T.
Author/Editor Affiliation
 Dept. of Structural Mech., Pavia Univ., Italy.
Title
 Use of adaptive networks in fuzzy control of civil structures.
Source
 Microcomputers in Civil Engineering, vol.11, no.1, Jan. 1996, pp. 67-76. Publisher: Blackwell Publishers, USA.
Abstract

The guidelines for implementing a fuzzy active control strategy for civil engineering structures are discussed. The paper focuses attention on the gap between a successful numerical example and the technical design of the device. Several subjective steps are identified in the design process, and an optimization of the design is attempted using an adaptive network (17 References).

RESULTADO <108>
Score
 ****-
Accession Number
 8619021
Author
 Sanchez M. Prats F. Agell W. Ormazabal G.
Author/Editor Affiliation
 Dept. MA2, Univ. Politecnica de Catalunya, Barcelona, Spain.
Title
 Multiple-criteria evaluation for value management in civil engineering.
Source
 Journal of Management in Engineering, vol.21, no.3, July 2005, pp. 131-7. Publisher: American Soc. Civil Eng, USA.
Abstract
This paper presents a fuzzy set-based approach for representing and synthesizing information about the different kinds of variables involved in the evaluation of a project's value. The variables considered can be quantitative crisp or fuzzy as well as qualitative ordinal. The information is given either by a single expert or by a team of experts. The proposed methodology for summarizing and normalizing values aims at contributing to decision-making analysis in the context of multiple-criteria evaluation and group decision making. The conditions that the aggregation function to be used must satisfy are also discussed. The weighted sum is characterized under quite restrictive assumptions, presenting a theorem based on Cauchy's functional equation. The aggregation function proposed is the weighted sum, with weights computed by a well-known analytic hierarchy process. A design is given of a fuzzy system for evaluating a project's value in the context of construction in civil e!
 ngineering (13 References).

RESULTADO <109>
Score
 ****-
Accession Number
 6653005
Author
 Fetz T. Oberguggenberger M. Pittschmann S.
Author/Editor Affiliation
 Inst. fur Tech. Math., Geometrie und Bauinf., Innsbruck Univ., Austria.
Title
 Applications of possibility and evidence theory in civil engineering.
Source
 International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, vol.8, no.3, June 2000, pp. 295-309. Publisher: World Scientific, Singapore.
Abstract
This article is devoted to applications of fuzzy set theory, possibility theory and evidence theory in civil engineering, presenting current work of a group of researchers at the University of Innsbruck. We argue that these methods are well suited for analyzing and processing the parameter uncertainties arising in soil mechanics and construction management. We address two specific applications: finite element computations in foundation engineering, and a queueing model in earth work (32 References).

RESULTADO <110>
Score

Accession Number
  9451520
Author
  Faruque AS. Ananth R.

Author/Editor Affiliation
  Dept. of Civil Eng., IISc, Bangalore, India.
Title
  Semi active fuzzy logic control of stay cable vibration.
Source
  Responding to Tomorrow's Challenges in Structural Engineering. IABSE Symposium. ETH Honggerberg. pp. 52-3. Zurich, Switzerland.
Conference Information
  Responding to Tomorrow's Challenges in Structural Engineering. IABSE Symposium. Budapest, Hungary. 13-15 Sept. 2006.

Abstract
  Stay cables are important structural element for many civil engineering structures and are extensively used in the field in applications ranging from long span bridges to marine cables, transmission tower to temporary structures. Their importance in civil structures is increasing due to their immense tensile strength. They are the main load carrying members in long-span bridges and temporary structures. Long-span bridge cables are susceptible to vibration under wind, and earthquake due to their high flexibility, relatively small mass and very low inherent damping. Present study uses fuzzy rule base to control the voltage of MR damper. Thereby, one can not only make use of full voltage range available, but also eliminate slight uncertainty present in modelling cable parameters and input excitation. Fuzzy rule base takes cable velocity and acceleration as input parameters and damper voltage required to control is obtained as output (0 References).

RESULTADO <111>
Score
Accession Number
  7306802
Author
  Gad A. Farooq M.

Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., R. Mil. Coll. of Canada, Kingston, Ont., Canada.
Title
  Application of fuzzy logic in engineering problems.
Source
  IECON'01. 27th Annual Conference of the IEEE Industrial Electronics Society (Cat. No.37243). IEEE. Part vol.3, 2001, pp. 2044-9. Piscataway, NJ, USA.
Conference Information
  IECON'01. 27th Annual Conference of the IEEE Industrial Electronics Society. Denver, CO, USA. IEEE Ind. Electron. Soc.. SICE. Auburn Univ.. Bradley Univ.. Univ. Colorado at Denver. Univ. Idaho. Univ. Wyoming. 29 Nov.-2 Dec. 2001.

Abstract
  In today's fast paced world of increasing and innovative new technology, fuzzy logic is a practical mathematical addition to classic Boolean logic. We can see its applications in many fields of science and engineering. This paper gives a general overview with a large bibliography, on many such applications to target tracking, pattern recognition, robotics, power systems, controller design, chemical engineering, biomedical engineering, vehicular technology, economy management as well as decision making, communications and networking, electronic engineering, civil engineering, sensor technology, and industry (211 References).

RESULTADO <112>

Score
 ****-
Accession Number
 6217196
Author
 Fetz T. Oberguggenberger M. Jager J. Koll D. Krenn G. Lessmann H. Stark RF.
Author/Editor Affiliation
 Inst. fur Math. und Geometrie, Innsbruck Univ., Austria.
Title
 Fuzzy models in geotechnical engineering and construction management.
Source
 Computer-Aided Civil and Infrastructure Engineering, vol.14, no.2, March 1999, pp. 93-106. Publisher: Blackwell Publishers, USA.
Abstract

 This article is devoted to a variety of applications of fuzzy models in civil engineering, presenting the current work of a group of researchers at the University of Innsbruck. With fuzzy methods and possibility theory as an encompassing framework, the following areas are addressed: uncertainties in geotechnical engineering, fuzzy finite-element computation of a foundation raft, fuzzy dynamic systems, and processing uncertainty in project scheduling and cost planning (18 References).

RESULTADO <113>
Score
 ****-
Accession Number
 5595378
Author
 Casciati F. Faravelli L.
Author/Editor Affiliation
 Dept. of Structural Mech., Pavia Univ., Italy.
Editor
 Rogers CA; Tani J; Breitbach EJ.
Title
 Application of adaptive fuzzy controllers to structural engineering systems.
Source
 Sixth International Conference on Adaptive Structures. Technomic Publishing. 1996, pp. 393-403. Lancaster, PA, USA.
Conference Information
 Sixth International Conference on Adaptive Structures. Key West, FL, USA. Sandia Nat. Lab.. Adv. Res. Projects Agency. Office of Naval Res.. Center for Intelligent Mater. Syst. & Structures. 15-18 Nov. 1995.
Abstract

 The control of both microvibrations in aerospace structures and dynamic response of civil engineering systems under environmental aggression is often demanded of hybrid (i.e. passive and active) devices. When the passive component presents a large hysteretic behaviour, the governing equations are nonlinear and a nonlinear control problem arises. In addition, the sensor measurements are contaminated with noise and there is uncertainty in determining the structure parameters. A traditional active controller is sensitive to this uncertainty and noise, especially in the case of small feedback (since the response is controlled). Attention is focused on building a fuzzy controller for driving such a hybrid control scheme. The actual mechanical behaviour of the actuator is incorporated into the governing equations (27 References).

RESULTADO <114>
Score
 ****-
Accession Number
 9822310

Author
  Yan wen-zhou. Niu Jia. Su hui-yong.
Author/Editor Affiliation
  Xi'an Univ. of Arch. & Tech., Xi'an, China.
Title
  The fuzzy-entropy approach for techno-economic analysis of the Green construction energy-saving structure system.
Abstract
  Multistoreyed civil buildings usually adopt brick-concrete or reinforced concrete (RC) frame structure. However, both of these structures have obvious defects. Green structure is a new kind of construction energy-saving structure system. By applying information entropy theory and fuzzy math method, this paper proposed the techno-economic compare and comprehensive evaluation about the three structures above-mentioned, and illustrated the notable techno-economic and society environmental benefits which are brought by the application of Green structure system. The research provided the solid academic foundation for the popularization and application of this kind of energy-saving structure system. (9 References).

RESULTADO <115>

Score
  ****-
Accession Number
  6842063
Author
  Adeli H.
Author/Editor Affiliation
  Dept. of Civil & Environ. Eng. & Geodetic Sci., Ohio State Univ., Columbus, OH, USA.
Title
  Neural networks in civil engineering: 1989-2000.
Abstract
  The first journal article on neural network application in civil/structural engineering was published in 1989. This article reviews neural network articles published in archival research journals since then. The emphasis of the review is on the two fields of structural engineering and construction engineering and management. Neural network articles published in other civil engineering areas are also reviewed, including environmental and water resources engineering, traffic engineering, highway engineering and geotechnical engineering. The great majority of civil engineering applications of neural networks are based on the simple backpropagation algorithm. Applications of other recent, more powerful and efficient neural networks models are also reviewed. Recent works on integration of neural networks with other computing paradigms such as genetic algorithm, fuzzy logic, and wavelet to enhance the performance of neural network models are presented (231 References).

RESULTADO <116>

Score
  ****-
Accession Number
  6628712
Editor

Topping BHV; Kumar B.
Title
  Optimization and Control in Civil and Structural Engineering.
Source
  Civil-Comp Press. 1999, pp. vi+244. Edinburgh, UK.
Conference Information
  Proceedings of Fifth International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.

Abstract
  The following topics were dealt with: genetic algorithms in civil and structural engineering; CAD; simulated annealing; optimization for fuzzy problems; structural optimization; civil engineering optimization; and control in structural engineering

RESULTADO <117>
Score
  ****-
Accession Number
  4230692
Author
  Topping BHV. Kumar B. Jadid M.
Author/Editor Affiliation
  Dept. of Civil Eng., Heriot-Watt Univ., Riccarton, Edinburgh, UK.
Editor
  Topping BHV.
Title
  Artificial intelligence and civil engineering: a bibliography.
Source
  Artificial Intelligence and Civil Engineering. Civil-Comp Press. 1991, pp. 293-313. Edinburgh, UK.
Conference Information
  Artificial Intelligence and Civil Engineering. Oxford, UK. 3-5 Sept. 1991.

Abstract
  Consists of bibliography of papers concerned with the application of artificial intelligence techniques to civil engineering. Aspects of AI include expert system shells, logic programming, knowledge acquisition, machine learning, neural nets and fuzzy logic. Environmental engineering, traffic, building design and nuclear engineering are also included (0 References).

RESULTADO <118>
Score
  ****-
Accession Number
  3513346
Author
  Topping BHV. Kumar B.
Author/Editor Affiliation
  Dept. of Civil Eng., Heriot-Watt Univ., Riccarton, UK.
Editor
  Topping BHV.
Title
  The application of artificial intelligence to civil and structural engineering. A bibliography.
Source
  Artificial Intelligence Techniques and Applications for Civil and Structural Engineers. Civil-Comp Press. 1989, pp. 285-303. Edinburgh, UK.
Conference Information
  Artificial Intelligence Techniques and Applications for Civil and Structural Engineers. London, UK. 19-21 Sept. 1989.

Abstract

   Presents a bibliography of papers concerned with the application of artificial intelligence techniques to civil and structural engineering. The topics covered include: expert systems shells, logic programming, interfaces and knowledge elicitation; uncertainty and fuzzy logic systems; graphics; water engineering; environmental engineering; geotechnical engineering; materials engineering; pavement engineering; transport and traffic engineering; surveying and road layout; architecture, layout, space and building layout; building design and assessment; construction engineering; construction planning, management and control; structural analysis and design; constraints, codes, rules and design; database systems; bridge engineering; structural loading; offshore engineering; dynamics and earthquake engineering; structural optimization; finite element analysis, modelling and idealisation; and education (436 References).

RESULTADO <119>
Score
   ****_
Accession Number
   5093986
Author
   Casciati F. Faravelli L.
Author/Editor Affiliation
   Dept. of Structural Mech., Pavia Univ., Italy.
Title
   Designing a fuzzy controller for civil structures.
Source
   Proceedings of ISUMA - NAFIPS '95 The Third International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society (Cat. No.95TB8082). IEEE Comput. Soc. Press. 1995, pp. 64-9. Los Alamitos, CA, USA.
Conference Information
   Proceedings of 3rd International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society. College Park, MD, USA. Univ. Maryland. North American Fuzzy Inf. Process. Soc.. IEEE Comput. Soc. 17-20 Sept. 1995.
Abstract
   An adaptive controller differs from an ordinary controller in that the controller parameters are variable, and there is a mechanism for adjusting these parameters based on system performance. This paper investigates the possibility of allowing for hysteretic constructive laws by an adaptive scheme instead of a augmenting the control phase space dimension. The final goal is the optimization of a fuzzy controller for nonlinear structural systems under seismic excitation (16 References).

RESULTADO <120>
Score
   ****_
Accession Number
   5093984
Author
   Faravelli L. Yao T.
Author/Editor Affiliation
   Pavia Univ., Italy.
Title
   Self-learning fuzzy control of civil structures.
Source
   Proceedings of ISUMA - NAFIPS '95 The Third International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society (Cat. No.95TB8082). IEEE Comput. Soc. Press. 1995, pp. 52-7. Los Alamitos, CA, USA.
Conference Information
   Proceedings of 3rd International Symposium on Uncertainty Modeling and Analysis and Annual

Conference of the North American Fuzzy Information Processing Society. College Park, MD, USA. Univ. Maryland. North American Fuzzy Inf. Process. Soc.. IEEE Comput. Soc. 17-20 Sept. 1995.

Abstract

The application of ANFIS (Adaptive Network-based Fuzzy Inference System) to the fuzzy control of structures was investigated by the authors in a earlier paper (L. Faravelli and T. Yao, 1994). Through neural network learning, ANFIS can be trained to replace an existing fuzzy controller. The resulting controller makes use of the more efficient Takagi-Sugeno inference scheme instead of COG (center of gravity) and is inherently computationally faster. The next logical step accomplished in this paper is to implement the trajectory adaptive networks (TAN) and stage adaptive networks (SAN) that were proposed to be used with temporal back propagation to achieve a self learning fuzzy controller. This approach should result in a fuzzy controller that is optimized to handle loads of the type used in the self learning training. Because the learning process is goal directed (i.e., a zero vector is the desired displacement behavior), some optimization is introduced (28 References).

RESULTADO <121>

Score
  ****-

Accession Number
  4750340

Author
  Nakao M.

Author/Editor Affiliation
  Center of Inf. Syst., Obayashi Corp., Tokyo , Japan.

Editor
  Topping BHV; Khan AI.

Title
  Development of fuzzy swing control system for a stationary cableway.

Source
  Information Technology for Civil and Structural Engineers. Civil-Comp Press. 1993, pp. 183-7. Edinburgh, UK.

Conference Information
  Proceedings of Artificial Intelligence CIVIL-COMP 93. The Third International Conference on the Applications of Artificial Intelligence to Civil and Structural Engineering. Edinburgh, UK. 17-19 Aug. 1993.

Abstract
  An automatic system for a stationary cableway for dam construction has yet to be reported. This paper deals with the application of fuzzy logic in the development of such a system. This system can operate a stationary cableway as well as skilled operators can. Consequently one can improve the efficiency of transporting and placing concrete by this system. One can also improve safety in construction (3 References).

RESULTADO <122>

Score
  ****-

Accession Number
  5206574

Author
  Cabrera JG. Kim KS. Dixon R.

Author/Editor Affiliation
  Dept. of Civil Eng., Leeds Univ., UK.

Editor
  Topping BHV.

Title
  COBDA: an expert system for the assessment of deterioration of concrete bridges.

Source
  Developments in Artificial Intelligence for Civil and Structural Engineering. Civil-Comp Press. 1995, pp.

151-7. Edinburgh, UK.
Conference Information
  Developments in Artificial Intelligence for Civil and Structural Engineering. Cambridge, UK. 28-30 Aug. 1995.

Abstract
  In recent years there has been growing concern regarding the safety of existing concrete bridges due to deterioration mainly caused by frequent use of de-icing salts and an increase in highway bridge loading. The problems of bridge assessment and the requirements for repair, strengthening and replacement are issues which have become increasingly important, not only in the UK., but also in other countries. Concrete bridge engineers recommending implementation of repair work are increasingly under severe time and budget limitation. Furthermore, the existing bridge assessment methodologies present a considerable problem due to the qualitative and subjective nature of the assessments which can be inconsistent and lead to a fuzzy situation. This paper describes and discusses the development of COBDA an expert system which includes three methods to deal with the uncertainty problems in the evaluation of concrete bridges. The structure of the expert system is given and the method!
 ology for decision making for deteriorated concrete bridges is discussed. COBDA is configured by PROLOG for use in a personal computer. It comprises 3 different methodologies: performance index, fuzzy logic and Bayesian subjective probability (11 References).

RESULTADO <123>
Score
  ****-
Accession Number
  4214660
Author
  Hadipriono FC. Wolfe WE.
Author/Editor Affiliation
  Dept. of Civil Eng., Ohio State Univ., Columbus, OH, USA.
Editor
  Topping BHV.
Title
  Repairability assessment of damaged foundations.
Source
  Artificial Intelligence and Civil Engineering. Civil-Comp Press. 1991, pp. 137-41. Edinburgh, UK.
Conference Information
  Artificial Intelligence and Civil Engineering. Oxford, UK. 3-5 Sept. 1991.

Abstract
  Repairability assessment of foundations is often performed by experts through the use of linguistic expressions. Despite the qualitative nature of these expressions, the Fuzzy Modus Ponens Deduction (FMPD) technique can be used to quantify graphically solved foundation repairability problems. This technique can be used to partially match an evidence concerning failure mechanisms of damaged foundations to an established production rule. The authors employ the newly developed angular fuzzy set models to assess the repairability of damaged foundations and an illustration is presented (8 References).

RESULTADO <124>
Score
  ****-
Accession Number
  6623410
Editor
  Topping BHV; Kumar B.
Title
  Computer Techniques for Civil and Structural Engineering.
Source
  Civil-Comp Press. 1999, pp. vi+278. Edinburgh, UK.

Conference Information
  Computer Techniques for Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.

Abstract
  The following topics were dealt with: professional and educational issues; structural analysis; analysis of steel structures; analysis and design of connections; fuzzy analysis of reinforced concrete structures; analysis and design of structures subject to special loading conditions; earthquake and seismic problems; analysis of complex structures and materials; analysis of fluid flow problems; construction engineering; and robotics

RESULTADO <125>

Score
  ****-

Accession Number
  5212976

Author
  Smith HA. Masri S. Beck JL. Tsugawa T.
Author/Editor Affiliation
  Dept. of Civil Eng., Stanford Univ., CA , USA.

Editor
  Topping BHV.

Title
  Knowledge-based assistance for the analysis, design and optimization of civil structures.

Source
  Developments in Artificial Intelligence for Civil and Structural Engineering. Civil-Comp Press. 1995, pp. 183-96. Edinburgh, UK.

Conference Information
  Developments in Artificial Intelligence for Civil and Structural Engineering. Cambridge, UK. 28-30 Aug. 1995.

Abstract
  An on-going project is described which has as its goal the development of an AI-based software package to assist in structural analysis and optimal design while explicitly treating uncertain risks. For preliminary design of a proposed structural system, it is desirable to search through a large design space to evaluate possible choices on the basis of multiple criteria, so that the most promising choice can be selected for detailed design. The goal of this project is to increase efficiency, fully integrate, and partially automate the design/build decision process by using AI-based methodologies such as knowledge-base expert systems, object-oriented programming, fuzzy reliability, multi-criteria decision theory and stochastic optimization. The methodology developed in this study allows the user to rapidly evaluate and improve a proposed conceptual design while taking into account the major factors affecting decisions related to design, construction, and operation in the pre!
 sence of uncertain risk. These factors include not only structural engineering criteria, but also social, political, legal, and economic considerations. The first stage of this on-going project involved the development of a working prototype of an interfaced suite of knowledge-base expert systems consisting of analysis, design and optimization tools with user interactive features. The second stage of tile project involves extending the capabilities of the software tools and introducing an explicit treatment of risk (5 References).

RESULTADO <126>

Score
  ****-

Accession Number
  4740381

Editor
  Topping BHV; Khan AI.

Title
  Proceedings of Artificial Intelligence CIVIL-COMP 93. The Third International Conference on the

Applications of Artificial Intelligence to Civil and Structural Engineering.
Source
 Civil-Comp Press. 1993, pp. vi+300. Edinburgh, UK.
Conference Information
 Proceedings of Artificial Intelligence CIVIL-COMP 93. The Third International Conference on the Applications of Artificial Intelligence to Civil and Structural Engineering. Edinburgh, UK. 17-19 Aug. 1993.

Abstract
 The following topics were dealt with: water resource management; design strategies; information management and databases; construction engineering; systems analysis in construction; decision support systems; hypertext; product modelling; computer aided structural design; computer graphics; fuzzy control; parallel and distributed processing; robotics; and computer aided instruction

RESULTADO <127>

Score
 ****-
Accession Number
 7048767
Author
 Sohn H. Farrar CR.
Author/Editor Affiliation
 Los Alamos Nat. Lab., NM, USA.
Editor
 Dagli CH; Buczak AL; Ghosh J; Embrechts M; Ersoy O; Kercel S.
Title
 A statistical pattern recognition paradigm for vibration-based structural health monitoring.
Source
 Smart Engineering System Design: Neural Networks, Fuzzy Logic, Evolutionary Programming, Data Mining, and Complex Systems. Vol.10. Proceedings of the Artificial Neural Networks in Engineering Conference (ANNIE 2000). ASME. 2000, pp. 1001-6. New York, NY, USA.
Conference Information
 ANNIE 2000. Smart Engineering Systems Design Conference. St. Louis, MO, USA. 5-8 Nov. 2000.

Abstract
 The process of implementing a damage detection strategy for aerospace, civil and mechanical engineering systems is often referred to as structural health monitoring. Vibration-based damage detection is a tool that is receiving considerable attention from the research community for such monitoring. In this paper, the structural health monitoring problem is cast in the context of a statistical pattern recognition paradigm. This pattern recognition process is composed of four portions; (1) operational evaluation, (2) data acquisition and cleansing, (3) feature selection and data compression, and (4) statistical model development. A general discussion of each portion of the process is presented, and the application of this statistical paradigm to two different real-world structures (a bridge column and a fast surface-effect boat) is studied, focusing on the issues of data normalization and feature extraction (5 References).

RESULTADO <128>

Score
 ****-
Accession Number
 6644576
Author
 Carr V. Tah JHM.
Author/Editor Affiliation
 Sch. of Constr., South Bank Univ., London , UK.
Editor
 Kumar B; Topping BHV.
Title
 Developing a construction project risk knowledge management software environment.

Source
  Novel Design and Information Technology Applications for Civil and Structural Engineering. Civil-Comp Press. 1999, pp. 153-62. Edinburgh, UK.
Conference Information
  Novel Design and Information Technology Applications for Civil and Structural Engineering. Oxford, UK. 13-15 Sept. 1999.

Abstract
  The construction industry is plagued by risk, and poor performance has often been the result. Although risk management techniques have been applied, the lack of a formalised approach has produced inconsistent results. A hierarchical risk breakdown structure is described to represent a formal model for qualitative risk assessment. The relationships between risk factors, risks, and their consequences are represented on cause and effect diagrams. Risk descriptions and their consequences can be defined using descriptive linguistic variables. Using fuzzy approximation and composition, the relationships between risk sources and the consequences on project performance measures can be identified and quantified consistently (26 References).

RESULTADO <129>

Score
  ****-
Accession Number
  2797292
Author
  Blockley DI.
Author/Editor Affiliation
  Dept. of Civil Eng., Bristol Univ., UK.
Editor
  Topping BHV.
Title
  Logical inference from uncertain knowledge in civil engineering.
Source
  CIVIL-COMP 85. Proceedings of the Second International Conference on Civil and Structural Engineering Computing. Civil-Comp Press. 1985, pp. 185-8. Edinburgh, UK.
Conference Information
  CIVIL-COMP 85. Proceedings of the Second International Conference on Civil and Structural Engineering Computing. London, UK. 3-5 Dec. 1985.

Abstract
  Fuzzy and probability logics are entirely compatible; they have a common set of axioms. If in addition the law of the excluded middle is assumed then the (plus, times) interpretation of (OR, AND) probability logic is obtained. If however an assumption of strong truth functionality is assumed then the (max, min) interpretation of fuzzy logic is obtained. Both of these are special cases of an interval analysis. Some problems with PROLOG are indicated and a Fuzzy Relational Inference Language (FRII) is described. A preliminary analysis in FRI of risk and cost benefit for various treatment strategies of a mining problem is briefly described (7 References).

RESULTADO <130>

Score
  ****-
Accession Number
  9804222
Author
  Escamilla-Ambrosio PJ. Lieven N.
Author/Editor Affiliation
  Bristol Univ., Bristol, UK.
Title
  Soft computing feature extraction for health monitoring of rotorcraft structures.

Source
  IEEE International Fuzzy Systems Conference, 2007. FUZZ-IEEE 2007. IEEE. pp. 1239-44. Piscataway, NJ, USA.
Conference Information
  IEEE International Fuzzy Systems Conference, 2007. FUZZ-IEEE 2007. London, UK. 23-26 July 2007.
Abstract

  Structural health monitoring (SHM) is the process of implementing a damage identification strategy for aerospace, civil and mechanical engineering infrastructure. Under this context, feature extraction is the process of identifying damage-sensitive information from measured data. Feature extraction is an essential component of a SHM system needed to convert raw sensor data into useful information about the structural health condition. The need for robust health monitoring and prognosis of components in remote or difficult-to-access locations is driving the advancement of sensing hardware and processing algorithms. In this paper a feature extraction algorithm, referred to as soft computing feature extraction algorithm, is developed to extract damage-sensitive information from measured response data of helicopter rotor-head components. The proposed feature extraction algorithm is based on a combination of discrete wavelet transform theory and fuzzy logic theory. The results !
 of applying the proposed feature extraction approach to tie bar data are presented. Results show that the proposed algorithm is capable of extracting features sensitive to the degradation of tie bar systems. (11 References).

RESULTADO <131>
Score
  ****-
Accession Number
  9785813
Author
  Topcu IB. Saridemir M.
Author/Editor Affiliation
  Eskisehir Osmangazi Univ., Eskisehir, Turkey.
Title
  Prediction of mechanical properties of recycled aggregate concretes containing silica fume using artificial neural networks and fuzzy logic.
Source
  Computational Materials Science, vol.42, no.1, March 2008, pp. 74-82. Publisher: Elsevier Science B.V., Netherlands.
Abstract

  Artificial neural networks and fuzzy logic have been widely used in many areas in civil engineering applications. In this study, the models in artificial neural networks and fuzzy logic systems for predicting compressive and splitting tensile strengths of recycled aggregate concretes containing silica fume have been developed at the age of 3, 7, 14, 28, 56 and 90 days. For purpose of constructing these models, experimental results for 210 specimens produced with 35 different mixture proportions were gathered from the literature. The data used in the artificial neural networks and fuzzy logic models are arranged in a format of eight input parameters that cover the age of specimen, cement, water, sand, aggregate, recycled aggregate, superplasticizer and silica fume. According to these input, in the artificial neural networks and fuzzy logic models are predicted the compressive and splitting tensile strengths values from mechanical properties of recycled aggregate concretes c!
 ontaining silica fume. In the models of the training and testing results have shown that artificial neural networks and fuzzy logic systems have strong potential for predicting 3, 7, 14, 28, 56 and 90 days compressive and splitting tensile strengths values of recycled aggregate concretes containing silica fume.[All rights reserved Elsevier]. (24 References).

RESULTADO <132>
Score
  ****-
Accession Number

9578986
Author
  Lin PY. Roschke PN. Loh CH.
Author/Editor Affiliation
  National Center for Res. on Earthquake Eng., Taipei, Taiwan.
Title
  Hybrid base-isolation with magnetorheological damper and fuzzy control.
Source
  Structural Control & Health Monitoring, vol.14, no.3, April 2007, pp. 384-405. Publisher: Wiley, UK.
Abstract

  A series of large-scale experimental tests is conducted on a mass equipped with a base-isolation system that consists of high damping rubber bearings (HDRB) and a 300 kN magnetorheological (MR) damper. The 21,772 kg mass and its hybrid isolation system are subjected to various intensities of near- and far-fault earthquakes on a large shake table. Three proposed fuzzy controllers use feedback from displacement, velocity, or acceleration transducers attached to the structure to modulate resistance of the semi-active damper to motion. Results from various types of passive and semi-active control strategies are summarized and compared. The study shows that a combination of HDRB isolators and an adjustable MR damper can provide robust control of vibration for large civil engineering structures that need protection from a wide range of seismic events. Low power consumption, direct feedback, high reliability, energy dissipation, and fail-safe operation are validated in this study!
  . (18 References).

RESULTADO <133>
Score
  ****-
Accession Number
  9236694
Author
  Fonseca ET. de Andrade SAL. Vellasco PCGdS. Vellasco MMBR.
Author/Editor Affiliation
  Struct. Eng. Dept., UERJState Univ. of Rio de Janeiro, Brazil.
Title
  A parametric analysis of the patch load behaviour using a neuro-fuzzy system.
Source
  Journal of Constructional Steel Research, vol.63, no.2, Feb. 2007, pp. 194-210. Publisher: Elsevier, UK.
Abstract

  This work presents a parametric analysis to evaluate the behaviour of steel beams subjected to concentrated loads. A neuro-fuzzy system was trained and tested [Fonseca ET. Comportamento de Vigas de Aco Sujeitas a Cargas Concentradas Atraves de Tecnicas de Inteligencia Computacional. D.Sc. thesis. Civil Eng. Dept., PUC-Rio. 2003 [in Portuguese]; Fonseca ET, da S. Vellasco PCG, de Andrade SAL, Vellasco MMBR. A neuro-fuzzy system for patch load prediction. In: 7th international conference on the application of artificial intelligence to civil and structural engineering. Egmond aan Zee; 2003 [published in CD-ROM - 18 pages]] to predict patch load results and classify this behaviour. In preceding studies [Fonseca ET, Vellasco MMBR, da S. Vellasco PCG, de Andrade SAL, Pacheco MAC. A neural network system for patch load prediction. Journal of Intelligent and Robotic Systems 2001;31:185-200; Fonseca ET, da S. Vellasco PCG, de Andrade SAL, Vellasco MMBR. A patch load parametric ana!
 lysis using neural networks. Journal of Constructional Steel Research 2003;59(2):251-67; Fonseca ET, da S. Vellasco PCG, de Andrade SAL, Vellasco MMBR. Neural network evaluation of steel beam patch load capacity. Advances in Engineering Software 2003;34(8):680-705] the performance of neural networks was significantly more accurate than patch load prediction formulae [Lyse 1, Godfrey HJ. Investigation of web buckling in steel beams. In: ASCE Transactions, vol. 100, 1935, p. 675-95 [paper 1907]; Bergfelt A. Patch loading on slender web. Influence of horizontal and vertical web stiffeners on the load carrying capacity, Chalmers University of Technology, Publication. S79:1, Goteborg, 1979, p. 1-143; CISC, Canadian Institute of Steel Construction. Limit states design of steel structures. CAN/CSA -S16-01; 2001; Eurocode 3, ENV-1993-1-1. Design of steel structures. CEN, European Committee for Standardisation; 1997 [Doc.

CEN/TC 250/SC3-N419E]; Roberts TM, Newark ACB. Strength of we!
 bs subjected to compressive edge loading. Journal of Structural Engine
ering, American Society of Civil Engineers 1997; 123 (2):176-83], although the system did not consider the difference in the beam ultimate limit state. Therefore this paper applies a neuro-fuzzy system to evaluate the ultimate load physical phenomena (yielding, buckling or crippling) as well as the critical load related to each collapse type. (40 References).

RESULTADO <134>
Score
 ****-
Accession Number
 8858984
Author
 Moller B. Beer M. Graf W. Sickert J-U.
Author/Editor Affiliation
 Dept. of Civil Eng., Tech. Univ. Dresden , Germany.
Title
 Time-dependent reliability of textile-strengthened RC structures under consideration of fuzzy randomness.
Source
 Computers & Structures, vol.84, no.8-9, March 2006, pp. 585-603. Publisher: Elsevier, UK.
Abstract
The reliability of civil engineering structures is time-dependent. By means of strengthening it is possible to improve the load-bearing capacity and serviceability of structures and simultaneously to increase structural reliability. In this paper, we focus on the time-dependent reliability assessment of RC structures strengthened by textile-reinforced fine-grade concrete layers. The paper starts with a short introduction concerning textile strengthening of RC structures and the underlying mechanical model. The uncertain material parameters of textile-strengthened structures are then investigated. The uncertain parameters are quantified as fuzzy variables or fuzzy random variables. In order to take account of the latter in the assessment of the time-dependent reliability a new fuzzy probabilistic safety concept is presented. The fuzzy adaptive importance sampling (FAIS) method is introduced. The algorithm is demonstrated with an example. The uncertainty of the input paramet!
 ers is comprehensively reflected in the uncertainty of the computed fuzzy reliability index. The assessment of the uncertain results is discussed. (20 References).

RESULTADO <135>
Score
 ****-
Accession Number
 8770280
Author
 Yousheng Cheng. Melhem HG.
Author/Editor Affiliation
 Dept. of Civil Eng., Kansas State Univ. , USA.
Title
 Monitoring bridge health using fuzzy case-based reasoning.
Source
 Advanced Engineering Informatics, vol.19, no.4, Oct. 2005, pp. 299-315. Publisher: Elsevier, UK.
Abstract
Case-based reasoning (CBR), one of the artificial intelligence (AI) learning approaches, is drawing the attention of many researchers in Civil Engineering. However, due to vagueness and uncertainties in knowledge representation, attribute description, and similarity measures in CBR-especially when dealing with similarity assessment-it is difficult to find the cases from a case base which exactly match the query case. Therefore, fuzzy theories have been incorporated into CBR allowing for more robust, flexible, and accurate models. In this study, two fuzzy membership functions (trapezoidal and step-wise) and fuzzy

numbers are used to measure the similarity between attribute values. They are integrated into CBR to develop a model used to monitor highway bridge health. This model's learning capabilities have been validated using five different error-metrics, based on the cross-validation method. The code is implemented using the programming language C++, and all the cases used!

for both training and testing are extracted from the electronic bridge database of the Kansas Department of Transportation. It is shown from the experimental results that it is feasible to apply fuzzy case-based reasoning to monitor bridge health. [All rights reserved Elsevier] (26 References).

RESULTADO <136>
Score
  ****-
Accession Number
  7405578
Author
  Savoia M.
Author/Editor Affiliation
  Fac. of Eng., Bologna Univ., Italy.
Title
  Structural reliability analysis through fuzzy number approach, with application to stability.
Source
  Computers & Structures, vol.80, no.12, May 2002, pp. 1087-102. Publisher: Elsevier, UK.
Abstract
  Structural reliability analysis in the presence of scarce or uncertain data is performed in the framework of possibility theory. Fuzzy numbers are used to define an equivalence class of probability distributions compatible with available data and corresponding upper and lower cumulative density functions. A procedure is then proposed to perform reliability analysis using extended fuzzy operations. It gives estimates of small and large fractiles of output variables which are conservative with respect to probability. A criterion to define the membership functions of fuzzy numbers starting from available information is also described. The method is used to perform reliability analysis against buckling. In civil engineering problems, usually very few data are available to define structural imperfections; often, normative requirements only are available in structural design stages. The results presented confirm the theoretical predictions described in Ref. [Comput. Meth. Appl. !
 Mech. Eng. 160 (1998) 205], i.e., reliability analysis using fuzzy number theory gives conservative bounds of small/large fractiles with respect to probability (43 References).

RESULTADO <137>
Score
  ****-
Accession Number
  6217200
Author
  Ribeiro RA.
Author/Editor Affiliation
  Dept. of Inf., Nova Lisboa Univ., Portugal.
Title
  Fuzzy evaluation of the thermal quality of buildings.
Source
  Computer-Aided Civil and Infrastructure Engineering, vol.14, no.2, March 1999, pp. 155-62. Publisher: Blackwell Publishers, USA.
Abstract
  This article presents an application relevant to civil engineering that deals with the classification of the thermal quality of buildings using a fuzzy multiple-attribute decision support tool. The aim of the article is to demonstrate the potential and flexibility of using these types of tools in the civil engineering arena. The application selected follows the Portuguese standards for classifying building insulation construction projects (12 References).

RESULTADO <138>
Score
 ****-
Accession Number
 5549621
Author
 Casciati F.
Author/Editor Affiliation
 Dept. of Structural Mech., Pavia Univ., Italy.
Title
 Checking the stability of a fuzzy controller for nonlinear structures.
Source
 Microcomputers in Civil Engineering, vol.12, no.3, May 1997, pp. 205-15. Publisher: Blackwell Publishers, USA.
Abstract
  Standard strategies of active control were applied to civil engineering structures excited by environmental loads such as wind and earthquake. Attempts to overcome some technical inconvenience by the exploitation of suitable nonlinearities are considered. Fuzzy controllers are potential candidates to drive the control in the presence of these structural nonlinearities. This paper pursues the identification of the stability checks to be conducted within the design process of such a fuzzy controller (29 References).

RESULTADO <139>
Score
 ****-
Accession Number
 5506161
Author
 Asano M. Iwasaki K. Koyama K.
Author/Editor Affiliation
 Dept. of Civil Eng., Shinshu Univ., Nagano , Japan.
Title
 On the estimation of the consolidation yield stress of soil based on fuzzy possibilistic regression.
Source
 Japanese Journal of Fuzzy Theory and Systems, vol.7, no.6, 1995, pp. 845-56. Publisher: Allerton Press, USA.
Abstract
  The estimation of consolidation yield stress of soils is significant in the design process of civil engineering structures. The consolidation settlements occur gradually with time when structures are build on soil foundations. The total amount of settlement is related to the stress of soil foundations. To estimate the stress appropriately is generally very hard, because limited lab data would be available compared to the width and depth of the site where the structures are built. To inspect the whole characteristic data on soil foundations is very expensive and therefore it is impossible for economic reasons. Civil engineering is dependent upon the public economies and investments. It is, therefore, very useful to use the fuzzy possibilistic regression estimating the consolidation yield stress properly in civil engineering design (7 References).

RESULTADO <140>
Score
 ****-
Accession Number
 5101927
Author
 Casciati F. Faravelli L. Yao T.
Author/Editor Affiliation

Dept. of Structural Mech., Pavia Univ., Italy.
Title
  Application of fuzzy logic to active structural control.
Source
  Proceedings of the SPIE - The International Society for Optical Engineering, vol.2361, 1994, pp. 206-9. USA.
Conference Information
  Second European Conference on Smart Structures and Materials. Glasgow, UK. SPIE. Glasgow Dev. Agency. Univ. Strathclyde. U.S. Army Eur. Res. Office. U.S. Eur. Office of Aerosp. Res. & Dev.. et al. 12-14 Oct. 1994.

Abstract
  The authors discuss some aspects of the application of fuzzy control to civil engineering problems and present results from the control of linear, two-degree-of-freedom systems that are subjected to simulated seismic excitation (11 References).

RESULTADO <141>

Score
  ****-
Accession Number
  5058182
Author
  Reinhorn AM. Subramaniam RS. Nagarajaiah S. Riley MA.
Author/Editor Affiliation
  Dept. of Civil Eng., State Univ. of New York, Buffalo, NY, USA.
Title
  Implementation of hybrid structural control using fuzzy logic.
Source
  Proceedings of the 1995 American Control Conference (IEEE Cat. No.95CH35736). American Autom Control Council. Part vol.3, 1995, pp. 2354-8. Evanston, IL, USA.
Conference Information
  Proceedings of 1995 American Control Conference - ACC'95. Seattle, WA, USA. American Autom. Control Council. US. Nat. Member Organ. IFAC. 21-23 June 1995.

Abstract
  The use of a controller based on fuzzy set theory, to control a hybrid isolated structure is considered in this work. The objective of the hybrid system is to obtain an ideal sliding system with "complete" base isolation for structures subjected to earthquakes. As the hybrid system approaches a state of "complete" isolation, the effects of imperfections, measurement noise, model limitations, and compensation errors start to play a dominant role in the system performance. Fuzzy logic provides a simple framework to capture the effects of nonlinearities and uncertainties in a real problem, without an explicit model of the plant or controller. The applicability of this approach is investigated on a benchmark experimental model consisting of a 1:4 scale sliding base isolated system complemented at its base by a servo controlled actuator, with a digital computer to provide real-time control. The results of this experimental and analytical study show the feasibility of the implem!
 entation of fuzzy logic based control to highly nonlinear civil engineering structures (10 References).

RESULTADO <142>

Score
  ****-
Accession Number
  4881410
Author
  Sayed T. Navin F. Abdelwahab W.
Author/Editor Affiliation
  Dept. of Civil Eng., British Columbia Univ., Vancouver, BC, Canada.
Title

The highway safety expert system: accident prone locations identification as a fuzzy pattern.
Source
  AI '94. Fourteenth International Avignon Conference. Proceedings . EC2. Part vol.2, 1994, pp. 77-88. Nanterre, France.
Conference Information
  AI '94. Fourteenth International Avignon Conference. Paris, France. AFIA. 30 May-3 June 1994.

Abstract
  There is a recognized need for an efficient method of determining civil engineering improvements to accident prone locations. Current methods for identifying accident prone locations make no distinction between accidents which occur due to road and non-road related factors, combining accidents that are treatable and not treatable by road improvements. The results of these methods can be misleading and may consequently lead to misallocation of funds by road authorities. Accidents occur due to factors related to three highway system components: the driver, the vehicle and the road environment. The method proposed considers that, from a highway agency perspective, road environment related accidents should have bigger influence in the identification of accident prone locations. Fuzzy pattern recognition techniques are used to assess the degree to which each accident belongs to the three highway system components. Accidents that clearly do not belong to the road environment gro!
 up are excluded from the identification of accident prone locations. The rest of the accidents are used in the diagnosis and remedy phases to choose the appropriate countermeasures to alleviate the safety problems. The classification method is tested using data from the accident data base at the British Columbia Ministry of Transportation and Highways. The method and the results are described (15 References).

RESULTADO <143>

Score
  ****-
Accession Number
  4875447
Author
  Casciati F. Faravelli L. Yao T.
Author/Editor Affiliation
  Dept. of Structural Mech., Pavia Univ., Italy.
Editor
  Hall L; Hao Ying; Langari R; Yen J.
Title
  Fuzzy logic in active structural control.
Source
  NAFIPS/IFIS/NASA '94. Proceedings of the First International Joint Conference of the North American Fuzzy Information Processing Society Biannual Conference. The Industrial Fuzzy Control and Intelligent Systems Conference, and the NASA Joint Technology Workshop on Neural Networks and Fuzzy Logic (Cat. No.94TH8006). IEEE. 1994, pp. 268-72. New York, NY, USA.
Conference Information
  NAFIPS/IFIS/NASA '94. Proceedings of the First International Joint Conference of The North American Fuzzy Information Processing Society Biannual Conference. The Industrial Fuzzy Control and Intelligent Systems Conference, and the NASA Joint Technology Workshop on Neural Networks and Fuzzy Logic. San Antonio, TX, USA. North American Fuzzy Inf. Process. Soc.. Center for Fuzzy Logic and Intelligent Syst. Res.. Texas A&M Univ.. NASA. IEEE Neural Networks Council. 18-21 Dec. 1994.

Abstract
  The potential of fuzzy control as applied to a civil engineering problem is investigated. Three fuzzy subsets are used to describe each input variable; five fuzzy subsets describe the output variable in the control (15 References).

RESULTADO <144>

Score
  ****-

Accession Number
  4226167
Author
  Haldar A. Reddy RK.
Author/Editor Affiliation
  Dept. of Civil Eng. & Eng. Mech., Arizona Univ., Tucson, AZ, USA.
Title
  A random-fuzzy analysis of existing structures.
Source
  Fuzzy Sets and Systems, vol.48, no.2, 10 June 1992, pp. 201-10. Netherlands.
Abstract
  Two approaches are proposed to estimate the reliability of existing structures by considering both the randomness in some of the design parameters and the fuzzy imprecision in some other parameters representing the in-place condition of the aged structures. In the first approach, the fuzzy imprecision is transformed into random uncertainty using the entropy concept, and the reliability of existing structures is estimated using well-established theories of probability. In the second approach, a hybrid approach in the random-fuzzy domain is used to evaluate the reliability using an a-level concept. The multiple fuzzy variables case is also considered. Both discrete and continuous fuzzy variables are considered. The results obtained from the proposed approaches are compared with other techniques available in the literature whenever possible. Both methods are applied to civil structural engineering problems. The results obtained are very encouraging and demonstrate the applica!
 bility and robustness of the algorithms (15 References).

RESULTADO <145>
Score
  ****-
Accession Number
  3365573
Author
  Alim S. Smith DL.
Author/Editor Affiliation
  Nat. Eng. Services Pakistan Ltd., Karachi , Pakistan.
Title
  Fuzzy set-theoretic models for interpretation of seismic design codes.
Source
  Fuzzy Sets and Systems, vol.29, no.3, 24 Feb. 1989, pp. 277-91. Netherlands.
Abstract
  Formal models of inexact inference are highly relevant to the interpretation of seismic parameters. Application of such techniques becomes even more relevant if it is envisaged that, in future, provisions for the seismic design of civil engineering structures may be more effectively represented by encoding them as fuzzy expert systems. Imprecisely defined seismic parameters can be expressed as fuzzy variables. Values of fuzzy seismic variables can be inferred using fuzzy set-theoretic models in a rule-based inference scheme. Such inference schemes however have one major drawback-as more and more information becomes available for inferring the value of the fuzzy variable, the less restrictive the value tends to become. Modifications are proposed in order to make the inferred conclusions more meaningful for decision-making purposes. The proposal for modifying the fuzzy set-theoretic models has been influenced by the evidence-based models of inexact inference such as the cert!
 ainty factor method and the Dempster-Shafer theory of evidence (21 References).

RESULTADO <146>
Score
  ****-
Accession Number
  6281556
Editor

Rzevski G; Adey RA; Nolan P.
Title
  Thirteenth International Conference on Applications of Artificial Intelligence in Engineering AIENG XIII.
Source
  Computational Mechanics Publications. 1998, pp. 182. Southampton, UK.
Conference Information
  Proceedings of AIENG 98 Applications of Artificial Intelligence in Engineering. Galway, Ireland. 7-9 July 1998.

Abstract
  The following topics were covered: all the main branches of engineering including civil and environmental engineering, hydrology, architecture, manufacturing and process and control engineering. The AI techniques cover topics such as neural networks, fuzzy logic, genetic algorithms, machine learning, distributed intelligence, and rule-based systems. The printed publication contains abstracts of the papers and the accompanying CD-ROM contains the full text articles

RESULTADO <147>

Score
  ****-
Accession Number
  4897145
Editor
  Rzevski G; Adey RA; Russell DW.
Title
  Proceedings of Ninth International Conference on Applications of Artificial Intelligence in Engineering. AIENG 94.
Source
  Comput. Mech. Publications. 1994, pp. 618. Southampton, UK.
Conference Information
  Proceedings of Ninth International Conference on Applications of Artificial Intelligence in Engineering. AIENG 94. Malvern, PA, USA. 19-21 July 1994.

Abstract
  The following topics were dealt with: neural networks; knowledge-based and expert systems; object-oriented design; real time; simulation and process control; genetic algorithms; fuzzy logic; civil engineering; CIM and manufacturing; scheduling; logic and reasoning; and engineering design

RESULTADO <148>

Score
  ****-
Accession Number
  5225440
Author
  Nerves AC. Krishnan R.

Author/Editor Affiliation
  Bradley Dept. of Electr. Eng., Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA.

Title
  Active control strategies for tall civil structures.
Source
  Proceedings of the 1995 IEEE IECON. 21st International Conference on Industrial Electronics, Control, and Instrumentation (Cat. No.95CH35868). IEEE. Part vol.2, 1995, pp. 962-7. New York, NY, USA.
Conference Information
  Proceedings of IECON '95 - 21st Annual Conference on IEEE Industrial Electronics. Orlando, FL, USA. Ind. Electron. Soc. IEEE. Soc. Instrum. & Control Eng. Japan. 6-10 Nov. 1995.

Abstract
  Environmental forces, like wind and earthquakes, induce motion in tall civil structures. To mitigate these vibrations, an active control scheme is built into the structure. In this paper, various control strategies are

compared with respect to their effectiveness, efficiency, and implementability. The control techniques that are considered include proportional control, optimal LQR control, variable-structure control, neural network control, and adaptive fuzzy control. The effect of using a linear and a nonlinear model of the system is also investigated. Numerical simulations are performed for a building equipped with a tuned mass damper. Both wind and earthquake excitations are considered in the study (6 References).

RESULTADO <149>

Score
 ****-
Accession Number
 9866077
Author
 Fonseca ET. da S Vellasco PCG. Vellasco MMBR. de Andrade SAL.
Author/Editor Affiliation
 UERJ - State Univ. of Rio de Janeiro, Rio de Janeiro, Brazil.
Title
 A neuro-fuzzy evaluation of steel beams patch load behaviour.
Source
 Advances in Engineering Software, vol.39, no.7, July 2008, pp. 558-72. Publisher: Elsevier Science Ltd., UK.
Abstract

 This work presents a neuro-fuzzy system developed to predict and classify the behaviour of steel beam Web panels subjected to concentrated loads. A good performance was obtained with a previously developed neural network system [Fonseca ET, Vellasco MMBR, Vellasco PCGdaS, de Andrade SAL, Pacheco MAC. A neural network system for patch load prediction. J Intell Robot Syst 2001;31(1/3):185-200; Fonseca ET, Vellasco PCGdaS, de Andrade SAL, Vellasco MMBR. A patch load parametric analysis using neural networks. J Constr Steel Res 2003;59(2):251-67; Fonseca ET, Vellasco PCGdaS, de Andrade SAL, Vellasco MMBR. Neural network evaluation of steel beam patch load capacity. Adv Eng Software 2003;34(11-12):763-72] when compared to available experimental data. The neural network accuracy was also significantly better than existing patch load prediction formulae [Lyse I, Godfrey HJ. Investigation of web buckling in steel beams. ASCE Trans 1935;100:675-95, paper 1907; Bergfelt A. Patch loa!
 ding on slender Web. Influence of horizontal and vertical Web stiffeners on the load carrying capacity, S79:1. Goteborg: Chalmers University of Technology, Publication; 1979, p. 1-143; Skaloud M, Drdacky M. Ultimate load design of Webs of steel plated structures - Part 3 webs under concentrated loads. Staveb Cas 1975;23(C3):140-60; Roberts TM, Newark ACB. Strength of webs subjected to compressive edge loading. J Struct Eng Am Soc Civil Eng 1997;123(2):176-83]. Despite this fact, the system architecture did not explicitly considered the fundamental different structural behaviour related to the beam collapse (Web and flange yielding, web buckling and Web crippling). Therefore this paper presents a neuro-fuzzy system that takes into account the patch load ultimate limit state. The neuro-fuzzy system architecture is composed of one neuro-fuzzy classification model and one patch load prediction neural network. The neuro-fuzzy model is used to classify the beams according to its !
 pertinence to a specific structural response. Then, a neural network u
ses the pertinence established by the neuro-fuzzy classification model, to finally determine the beam patch load resistance.[All rights reserved Elsevier]. (31 References).

RESULTADO <150>

Score
 ****-
Accession Number
 9771638
Author
 Lu Zhong. Sun Youchao.
Author/Editor Affiliation
 Nanjing Univ. of Aeronaut. & Astronaut., Nanjing, China.

Title
  Research on maintainability evaluation model based on fuzzy theory.
Source
  Chinese Journal of Aeronautics, vol.20, no.5, 2007, pp. 402-7. Publisher: AAAS Press, China.
Abstract
  Maintainability influencing attributes are analyzed, their weight and value calculating methods are given, and the maintainability fuzzy evaluation method is proposed based on the relative closeness. According to the maintenance task simulation operated in virtual environment, the maintainability virtual evaluation model is built by analyzing the maintenance task for each replaceable unit of product. At last, a case study is given based upon the main landing gear system of a certain type civil aircraft, and the result indicates that the model is suitable for maintainability qualitative evaluation and can support maintainability concurrent design. (9 References).

RESULTADO <151>
Score
  ****-
Accession Number
  8664565
Author
  Kang-Min Choi. Sang-Won Cho. Dong-Ok Kim. In-Won Lee.
Author/Editor Affiliation
  Dept. of Civil & Environ. Eng., Korea Adv. Inst. of Sci. & Technol., Daejeon, South Korea.
Title
  Active control for seismic response reduction using modal-fuzzy approach.
Source
  International Journal of Solids and Structures, vol.42, no.16-17, Aug. 2005, pp. 4779-94. Publisher: Elsevier, UK.
Abstract
  An active modal-fuzzy control method using hydraulic actuators is presented for seismic response reduction. In the proposed control system, a new fuzzy controller designed in the modal space produces the desired active control force. This type controller has all advantages of the fuzzy control algorithm and modal approach. Since it is very difficult to select input variables used in fuzzy controller among numerous state variables in the active fuzzy control system, the presented algorithm adopts the modal control algorithm to be able to consider information of all state variables in civil structures that are usually dominated by first few modes. In other words, all information of the whole structure can be considered in the control algorithm evaluated to reduce seismic responses and it can be efficient for civil structures especially. In addition, the presented algorithm is expected to magnify utility and performance caused by efficiency that the fuzzy algorithm can handle!
  complex model more easily. An active modal-fuzzy control scheme is applied together with a Kalman filter and a low-pass filter to be applicable to real civil structures. A Kalman filter is considered to estimate modal states and a low-pass filter was used to eliminate spillover problem. The results of the numerical simulations for a wide amplitude range of loading conditions and for historic earthquake show that the proposed active modal-fuzzy control system can be beneficial in reducing seismic responses of civil structures. [All rights reserved Elsevier] (16 References).

RESULTADO <152>
Score
  ****-
Accession Number
  8455319
Author
  Meyyappan L. Jose M. Dagli C. Silva P. Pottinger H.
Author/Editor Affiliation
  Dept. of Eng. Manage., Missouri Univ., Rolla, MO, USA.
Editor

Walker EL.
Title
  Fuzzy-neuro system for bridge health monitoring.
Source
  NAFIPS'2003. 22nd International Conference of the North American Fuzzy Information Processing Society - NAFIPS Proceedings (Cat. No.03TH8693). IEEE. 2003, pp. 8-13. Piscataway, NJ, USA.
Conference Information
  NAFIPS'2003: Conference of the North American Fuzzy Information Processing Society. Chicago, IL, USA. IEEE Syst., Man & Cybernetics Soc. 24-26 July 2003.
Abstract
  Many civil and mechanical systems are in continuous use despite aging and associated potential risk for damage accumulation. Hence, the ability to monitor the structural health of these systems on a real-time basis is becoming very important. This paper describes a practical real-time structural health monitoring system using soft computing tools and its application to the structural health monitoring of a steel bridge located in Missouri. Vibration data collected from this bridge was processed and fed to the fuzzy logic decision system. The fuzzy logic decision system makes use of fuzzy clustering to determine the possible presence of damage in the bridge. A neural network prediction system which makes use of backpropagation algorithm predicts the amount of actual damage in the members which were predicted damaged by the fuzzy logic (15 References).

RESULTADO <153>
Score
  ****_-_
Accession Number
  9582707
Author
  Song G. Gu H. Mo YL.
Author/Editor Affiliation
  Dept. of Mech. Eng., Houston Univ., TX, USA.
Title
  Smart aggregates: a distributed intelligent multi-purpose sensor network (DIMSN) for civil structures.
Source
  2007 IEEE/ACS International Conference on Computer Systems and Applications (IEEE Cat No. 07EX1688). IEEE. pp. 6. Piscataway, NJ, USA.
Conference Information
  2007 IEEE/ACS International Conference on Computer Systems and Applications. Amman, Jordan. 13-16 May 2007.
Abstract
  Early-age strength monitoring, impact detection, and structural health monitoring are important issues for concrete structures, especially concrete infrastructures such as bridges. A distributed intelligent multi-purpose sensor network (DIMSN) using innovative piezoelectric-based smart aggregates is proposed in this paper to address these important issues. The smart aggregate is fabricated by embedding a water-proofed piezoelectric patch into a small concrete block. The smart aggregates are then placed at the desired locations in concrete structures before casting to form a distributed intelligent multipurpose sensor network. In this paper, a two-story concrete frame is used as the object to test the multi-functionality of smart aggregates and the DIMSN. The early-age strength monitoring is performed by monitoring the harmonic response amplitude of smart aggregates. Experimental results show that the predicted concrete strength matches the experimental results obtained in !
 the compressive test. Impact tests are by performed by impacting the concrete frame at different locations. Experimental results show that the impact response is captured by the distributed smart aggregates and the energy of the impact response is related to the distance between the smart aggregate and the impact location. After the concrete strength is fully developed, structural health monitoring is conducted on the concrete frame through a destructive push-over test. Experimental results show that the proposed damage index matrix reveals the time history of health status of different locations. The proposed smart aggregate-based health monitoring approach is more sensitive than the traditional

approaches that use microscopes and LVDTs. The proposed distributed intelligent multi-purpose sensor network has the potential to be implemented to the comprehensive performance evaluation of concrete civil structures. (9 References).

RESULTADO <154>
Score
  ****-
Accession Number
  8281707
Author
  Lin J.
Author/Editor Affiliation
  Dept. of Mech. Eng., Ching Yun Univ., Jung-Li City, Taiwan.
Title
  Design of a hierarchical fuzzy vibration absorber for a continuum with a moving oscillator.
Source
  Proceedings of the 2004 IEEE International Conference on Control Applications (IEEE Cat. No.04CH37596). IEEE. Part Vol.1, 2004, pp. 189-94 Vol.1. Piscataway, NJ, USA.
Conference Information
  Proceedings of the 2004 IEEE International Conference on Control Applications. Taipei, Taiwan. IEEE Control Syst. Soc. 2-4 Sept. 2004.
Abstract
  The aim of this work is to design a multi-time scale fuzzy vibration controller by taking a singular perturbation approach that involves an elastic continuum, carries a moving mass-sprung-damper oscillator. The proposed design of the controller involves a composite control strategy elucidated by the singular perturbation approach. A fuzzy logic compensator (FLC) is applied to the controller to solve the problem of the lack of full-state availability. Using this compensator, the vibration amplitude of an elastically supported continuum can be reduced and the performance of the dynamic system improved. A hierarchical fuzzy logic structure of a multi-input FLC is derived, leading to the implementation of faster controllers with a reduced memory demand. The broad range of problems associated with oscillators with moving loads, considered herein, arise in civil, mechanical, transport, marine, offshore, aviation and astronautical engineering (8 References).

RESULTADO <155>
Score
  ****-
Accession Number
  8222910
Author
  Lin J.
Author/Editor Affiliation
  Dept. of Mech. Eng., Ching Yun Univ., Jung-Li City, Taiwan.
Title
  Multi-timescale fuzzy controller for a continuum with a moving oscillator.
Source
  IEE Proceedings-Control Theory and Applications, vol.151, no.3, 23 May 2004, pp. 310-18. Publisher: IEE, UK.
Abstract
  The design of a multi-time scale fuzzy controller using a singular perturbation approach that involves an elastic continuum carrying a moving mass-sprung-damper oscillator is presented. The proposed design of the controller involves a composite control strategy elucidated by the singular perturbation approach. A fuzzy logic compensator (FLC) is applied to the controller to solve the problem of the lack of full-state availability. Using this compensator, the vibration amplitude of an elastically supported continuum can be reduced and the performance of the dynamic system improved. A hierarchical fuzzy logic structure of a multi-input FLC is derived, leading to the implementation of faster controllers with a reduced memory

demand. The considered problem of oscillation with moving loads, arises in civil, mechanical, transport, marine, offshore, aviation and aeronautical engineering (26 References).

RESULTADO <156>
Score
 ****-
Accession Number
 7152580
Author
 Rajasekaran S. Suresh D. Vijayalakshmi Pai GA.
Author/Editor Affiliation
 Dept. of Civil Eng., PSG Coll. of Technol., Coimbatore, India.
Title
 Sequential learning artificial fuzzy neural networks (SLAFNN) with single hidden layer.
Source
 Neurocomputing, vol.42, Jan. 2002, pp. 287-310. Publisher: Elsevier, Netherlands.
Abstract
 In this paper, a sequential orthogonal approach to the building and training of a single hidden layer fuzzy neural net is presented. Sequential learning artificial neural net model proposed by Zhang and Morris (1998) is modified to tackle fuzzy inputs and crisp outputs and a sequential learning artificial fuzzy neural net model is developed and used. This model can tackle the common problem encountered by conventional fuzzy back propagation neural net in the determination of the net structure in the numbers of hidden layers and of neurons per layer. Nonlinear mapping between fuzzy input vectors and crisp output is performed. Left and right (LR) type representation is used to reduce the net complexity. A simple defuzzification process is proposed. The procedure starts with a single hidden neuron and sequentially increases in the number of hidden neurons until the model error is sufficiently small. The classical Gram-Schmidt orthogonalization method is used to form a set of !
 orthogonal bases for the space spanned by output vectors. The architecture has been trained and tested on civil engineering problems such as determination of allowable stress limits for a beam subjected to lateral loads, earthquake damage and the evaluation of wind pressure predictions (12 References).

RESULTADO <157>
Score
 ****-
Accession Number
 5087450
Title
 Proceedings of 3rd International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society.
Source
 IEEE Comput. Soc. Press. 1995, pp. xx+810. Los Alamitos, CA, USA.
Conference Information
 Proceedings of 3rd International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society. College Park, MD, USA. Univ. Maryland. North American Fuzzy Inf. Process. Soc.. IEEE Comput. Soc. 17-20 Sept. 1995.
Abstract
 The following topics were dealt with: risk management and reliability; uncertainty analysis; fuzzy control; fuzzy data analysis; civil engineering applications; structural engineering applications; patterns and fuzzy reasoning; uncertainty in engineering design; fuzzy decision analysis; uncertainty models and measures; neural networks; genetic methods; fuzzy logic; approximate reasoning; fuzzy set theory and optimisation; fuzzy information processing; transportation and scheduling; signal processing aplications; numerical methods; uncertainty in databases; and uncertainty in knowledge bases

RESULTADO <158>
Score

Accession Number
  4335788
Title
  IEEE International Conference on Fuzzy Systems (Cat. No.92CH3073-4).
Source
  IEEE. 1992, pp. xxii+1438. New York, NY, USA.
Conference Information
  . San Diego, CA, USA. IEEE. 8-12 March 1992.

Abstract
  The following topics are dealt with: image synthesis and understanding; data processing and fuzzy measures; neuro-fuzzy control; computer vision: fuzzy set concepts; image processing; approximate reasoning; decision analysis; fuzzy logic control and analysis; clustering; adaptive fuzzy control; fuzzy hardware and software; learning; fuzzy logic and artificial intelligence; controller tuning; fuzzy relations; knowledge processing in information systems; knowledge engineering systems; fuzzy logic and neural networks in control systems: industrial applications; rule-based systems; fuzzy constraints; fuzzy self-organizing network algorithms; pattern recognition; possibility theory; fuzzy tracking; fuzzy models of nonlinear systems; civil engineering applications; aggregation and choice rules with valued binary relations; robotics; reasoning under uncertainty: and fuzzy systems

RESULTADO <159>
Score
Accession Number
  3284268
Author
  Hirota K.
Title
  Fuzzy theory and its application to hardware systems.
Source
  Instrumentation and Control Engineering, vol.31, no.5, 1988, pp. 6-10. Japan.

Abstract
  Fuzzy theory was initiated from the proposal of concepts `fuzzy set' by professor L.A. Zadeh, University of California in Berkeley in 1965, paying attention to the importance of processing of ambiguous information. Fuzzy control theory and its development have been studied in Japan by Hitachi Corp. and Fuji FACOM Control Co., and followed by the speech recognition system by Ricoh, PID controller parameter adjuster by Mitsubishi Electric and Fuzzy control shell by Toshiba Corp. Japanese manufacturers are taking a lead in its application fields of expert systems, pattern recognition, robots, civil engineering, economic models, operations research, cognition science, etc. including a big `Fuzzy' project by the Science and Technology Agency (4 References).

RESULTADO <160>
Score
Accession Number
  8501915
Author
  Zhang Kai. Xiong Qian-xing.
Author/Editor Affiliation
  Sch. of Comput. Sci. & Technol., Wuhan Univ. of Technol., China.
Title
  A software engineering quality supervising metrics model.
Source
  Journal of Wuhan University of Technology (Information & Management Engineering), vol.25, no.6, Dec. 2003, pp. 50-3. Publisher: Editorial Board J. Wuhan Univ. Technol, China.

Abstract

  Engineering construction supervision is the common technology for controlling quality in the field of civil engineering and is not used in the process of developing software according to the EI index searching system and the Chinese journal index searching system. Firstly, the prior work of software quality metrics and software engineering supervision are introduced. Secondly, from the three-tier software quality metrics model designed by Walters and McCall, a software engineering quality supervising metrics model is designed using fuzzy theory. An evaluation formula is deduced from hierarchical fuzzy comprehensive evaluation. Finally, the example of multimedia CAI is presented to show how to use this formula (5 References).

RESULTADO <161>

Score
  ****-
Accession Number
  10108665
Author
  Allen JE. Self A.
Author/Editor Affiliation
  Kingston Univ., London, UK.
Title
  Analysis of the integration of knowledge and novelty in creative engineering design.
Source
  Proceedings of the Institution of Mechanical Engineers, Part G (Journal of Aerospace Engineering), vol.222, no.G1, Feb. 2008, pp. 127-67. Publisher: Published for the Institution of Mechanical Engineers by Professional Engineering Publishing Ltd., UK.

Abstract

  The general creative process is incapable of strict analysis but for engineering it is correctly identified with the design function that combines knowledge, derived from science, technology, and past experience, with the novelty of an invention or development. Engineering achievements range from projects of vast scale, such as the elements of the NASA space programme, to minute devices of great ingenuity such as human joint replacements. As Professor Jones remarked in his 1974 paper to the IMechE, 'Koestler's book 'The Act of Creation' did not mention engineering and the word creativity was not in the Oxford English Dictionary of 1973!' The nature of creative thinking is chaotic and many significant breakthroughs seem to have arisen by accident. The current paper concentrates on the early stages of the evolution of a new engineering entity and studies the blending of rigorous scientific knowledge (materials, dynamics, systems etc.) with the much more 'fuzzy' process of ta!
 king the first concepts through the process of preliminary design to a viable product. The work makes a contribution to engineering education. In seeking the heart of the creative engineering process examples are examined mainly from large-scale projects, as typically found in aerospace. This experience is compared briefly with civil, mechanical, and systems engineering to seek for differences and similarities in method and, in contrast with the modern 'enterprise function', i.e. the process from the inventor to a new business. The last of these is of considerable economic significance today. (0 References).

RESULTADO <162>

Score
  ****-
Accession Number
  5630965
Author
  Prascevic Z. Petrovic-Lazarevic S.
Author/Editor Affiliation
  Fac. of Civil Eng., Belgrade Univ., Serbia.
Title
  Determination of optimal bidding profit rate by fuzzy set theory.
Source

Cybernetics and Systems, vol.28, no.4, June 1997, pp. 337-43. Publisher: Taylor & Francis, USA.

Abstract
  This paper deals with the problem of application of the utility theory by a probabilistic-possibilistic approach in the civil engineering industry. The procedure for determination of the optimal financial result in a case of bidding by a contractor is presented. The utility function is defined as a maximum expected utility. The example given in the paper illustrates the problem (10 References).

RESULTADO <163>

Score
  ****-
Accession Number
  5099762
Author
  Leggett MA.
Author/Editor Affiliation
  USAE Waterways Exp. Station, Vicksburg, MS , USA.
Title
  Using reliability-based models to assess rehabilitation needs.
Source
  Proceedings of ISUMA - NAFIPS '95 The Third International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society (Cat. No.95TB8082). IEEE Comput. Soc. Press. 1995, pp. 139-44. Los Alamitos, CA, USA.
Conference Information
  Proceedings of 3rd International Symposium on Uncertainty Modeling and Analysis and Annual Conference of the North American Fuzzy Information Processing Society. College Park, MD, USA. Univ. Maryland. North American Fuzzy Inf. Process. Soc.. IEEE Comput. Soc. 17-20 Sept. 1995.

Abstract
  Due to increasing budget constraints, funding available to maintain, rehabilitate, improve, or replace aging US Army Corps of Engineers (USACE) structures is declining with respect to funding requirements. Therefore, the available funds must be selectively invested to achieve maximum benefits. To compete for scarce appropriation resources, USACE districts are now required to justify civil works rehabilitation project funding by demonstrating a need for improvement in reliability or efficiency. A risk-based benefit-cost model is utilized to establish funding justification. This analysis model requires input to assess the current condition of a structure and its degradation rate. This methodology incorporating both reliability and economic aspects would aid in forming a nationwide planning system (4 References).

RESULTADO <164>

Score
  ****-
Accession Number
  7053973
Author
  Suzuki Y. Itakura K. Saga S. Maeda J.
Author/Editor Affiliation
  Dept. of Comput. Sci. & Syst. Eng., Muroran Inst. of Technol., Hokkaido, Japan.
Title
  Signal processing and pattern recognition with soft computing.
Source
  Proceedings of the IEEE, vol.89, no.9, Sept. 2001, pp. 1297-317. Publisher: IEEE, USA.

Abstract
  We describe the overall role of soft computing (SC) in signal processing and pattern recognition (SPPR) with specific applications to biomedical engineering, geoscience for mining and civil engineering human interfaces, and image processing. Detection of characteristic points in an electrocardiogram to implement an advanced ECG analyzer is presented which is carried out using both conventional SPPR techniques and self-organizing neural networks. Successful technologies for monitoring a geostructure by supervised

and self-organizing neural networks are described. Identification of a freehand drawing by a combination of fuzzy logic and neural networks is also described. Moreover, application of fuzzy logic to image segmentation is presented. Finally, innovation of SPPR using SC technologies is discussed (105 References).

RESULTADO <165>

Score
  ****-
Accession Number
  6866218
Author
  Reusch D.
Author/Editor Affiliation
  Inst. for Constr. Manage. & Machinery, Karlsruhe Univ., Germany.
Editor
  Wang M-T; Chern J-C; Tserng HP; Hsieh S-H; Wu T-S; Wei Y.
Title
  Automatic controlled vibratory pile driving with shock-stress limitation.
Source
  Proceedings of the 17th IAARC/CIB/IEEE/IFR International Symposium on Automation and Robotics in Construction. 17th ISAREC 2000 . Nat. Taiwan Univ.. 2000, pp. 905-10. Taipei, Taiwan.
Conference Information
  Proceedings of IAARC/CIB/IEEE/IFAC/IFR International Symposium Automation and Robotics in Construction - ISARC. Taipei, Taiwan. Int. Assoc. Autom. & Robotics in Constr. (IAARC). Int. Council for Res. & Innovation in Building & Constr. (CIB). et al. 18-20 Sept. 2000.

Abstract
  For several decades vibratory pile driving has been extensively applied in civil engineering, e.g. in the construction of bulkheads. On urban construction sites shock waves occur which could damage nearby building structures and annoy humans. State-of-the-art machinery provides three control inputs (frequency, excitation force and surcharge force) to achieve two almost contradictory goals: fast pile penetration and shock stress below given limits (e.g. by DIN 4150). A nonlinear model explains the impact of all three control inputs on the quasi-stationary pile movement, such as penetration rate and oscillation amplitude. A fuzzy controller based on quantitative model-derived relations between control inputs and penetration rate is designed and implemented. In a second step the fuzzy controller is extended by an shock-stress limiting component (16 References).

RESULTADO <166>

Score
  ****-
Accession Number
  5960851
Author
  Shiraishil N. Furuta H.
Author/Editor Affiliation
  Dept. of Civil Eng., Kyoto Univ., Japan.
Title
  Reliability assessment and assurance of infrastructure systems.
Source
  Computers and Structures, vol.67, no.1-3, 1998, pp. 147-55. Publisher: Elsevier, UK.

Abstract
  The Hanshin earthquake (the Hyogaken-Nanbu earthquake) caused tremendous losses of life and property mainly due to the failure of civil engineering facilities. The near-field ground motions derived some catastrophic or multiple failures in the infrastructure systems which had not been observed with previous earthquakes. The disaster provided us with a valuable lesson to re-recognize the importance of reliability assessment and assurance infrastructure systems. Some consideration and discussion is

presented on the role and effect of structural redundancy for the reliability assurance of infrastructure systems. Two kinds of system reliability evaluation methods are presented: one is based on fuzzy probability and the other is based on genetic algorithms (14 References).

RESULTADO <167>

Score
 ****-
Accession Number
 4954113
Author
 Scott W. Berrios I. Boles W.
Author/Editor Affiliation
 Dept. of Civil Eng., Texas A&M Univ., College Station, TX, USA.
Title
 An educational mobile robot.
Source
 Microcomputers in Civil Engineering, vol.10, no.3, May 1995, pp. 223-9. USA.
Abstract
 The need for construction automation instruction in the civil engineering curriculum is reviewed. A mobile robot suitable for use as a laboratory teaching device was developed. Obstacle sensing and avoidance were performed using ultrasonic sensors and a fuzzy logic controller. Experiences of the students who developed the robot are discussed. It is concluded that a class project provides valuable hands-on experience that reinforces the students' understanding of theory. A background on microcontrollers is provided (16 References).

RESULTADO <168>

Score
 ****-
Accession Number
 9156989
Author
 Li Changzheng. Lei Yong.
Author/Editor Affiliation
 Sch. of Engine & Energy, Northwestern Polytech. Univ., Xi'an, China.
Title
 Fault diagnosis for an aircraft engine based on information fusion.
Source
 2006 IEEE International Conference on Mechatronics. IEEE. 2006, pp. 4. Piscataway, NJ, USA.
Conference Information
 2006 IEEE International Conference on Mechatronics. Budapest, Hungary. 3-5 July 2006.
Abstract
 Accurate aircraft engine fault detection and diagnosis is vitally important reducing operating costs and improving safety. Various data and knowledge could be collected from manufacture, test bed measurement systems, on-board measurement systems, maintenance history and experts' experience. Integrating and fusing these data and information to provide intelligent fault diagnosis and maintenance schedules are essentially to both civil and military engines. Information fusion strategies and architectures have been developed over the last several years for improving upon the accuracy, robustness and overall effectiveness of diagnostic and prognostic technologies. Fusion of relevant sensor data, maintenance database information, and various diagnostic and prognostic technologies has been proven effective in reducing false alarm rates, increasing confidence levels in early fault detection, and predicting time to failure or degraded condition requiring maintenance action. In this!
 paper, we researched on the architectures of fusion systems. A four-level model was presented to fit the usage in aircraft engines fault detection and diagnosis. To generate the deviations for gas path fault detection, baseline values should be chosen firstly. We analyzed choosing baseline values and generating deviations in detail. Then, the fuzzy set was introduced to descript the degree of symptoms belonging to

fault patterns. A method based on fuzzy set to isolate fault and quantify the deterioration of performance of components was presented. We also demonstrated the method with an example. For this method, it is not necessary to have more measurements than fault patterns. The fault diagnosis system based on it is very easy to construct and extend too (8 References).

RESULTADO <169>
Score
 ****-
Accession Number
 8317547
Author
 Casciati F. Casciati S. Faravelli L. Rossi R.
Author/Editor Affiliation
 Dept. of Struct. Mech., Pavia Univ., Italy.
Title
 Hybrid wireless sensor network.
Source
 SPIE-Int. Soc. Opt. Eng. Proceedings of the SPIE - The International Society for Optical Engineering, vol.5391, no.1, 2004, pp. 308-13. USA.
Conference Information
 Smart Structures and Materials 2004. Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems. San Diego, CA, USA. 15-18 March 2004.
Abstract
 Wireless networks allow monitoring systems to be made non-invasive. This is required when solving the problem of monitoring cultural heritage and is also very convenient on other civil structures such as bridges and buildings. This paper examines a viable architecture for a wireless sensor network and shows the results of some tests carried out on a wireless fuzzy control system at the authors' laboratory (13 References).

RESULTADO <170>
Score
 ****-
Accession Number
 4356693
Author
 Reed DA.
Author/Editor Affiliation
 Dept. of Civil Eng., Washington Univ., Seattle, WA, USA.
Title
 Treatment of uncertainty in structural damage assessment.
Source
 Reliability Engineering & System Safety, vol.39, no.1, 1993, pp. 55-64. UK.
Abstract
 Structural damage assessment is a process that involves decision-making under uncertainty. Reasoning with or about uncertainty has ben the focus of research in many fields in addition to civil engineering, such as decision analysis, philosophy, statistics and psychology. Several methods for the representation of reasoning under uncertainty have been developed. These methods, which the artificial intelligence community refers to as uncertain inference schemes, are briefly discussed. One particular scheme, the causal network approach, is examined in detail. Its application to post-earthquake damage assessment is given. This particular application represents an approach that has not been used in the structural engineering field before (27 References).

RESULTADO <171>
Score
 ****-

Accession Number
  9615081
Author
  Rajasekaran S. David VK.
Author/Editor Affiliation
  PSG Coll. of Technol., Chennai, India.
Title
  MicroARTMAP for pattern recognition problems.
Source
  Advances in Engineering Software, vol.38, no.10, Oct. 2007, pp. 698-709. Publisher: Elsevier Science Ltd., UK.

Abstract
  Pattern recognition is an important aspect of a dominant technology such as machine intelligence. Domain specific fuzzy-neuro models particularly for the &dasia;black box&psila; implementation of pattern recognition applications have recently been investigated. In this paper, Sanchez&psila;s MicroARTMAP has been discussed as a pattern recognizer/classifier for the image processing problems. The model inherently recognizes only noise free patterns and in case of noise perturbations (rotations/scaling/translation) misclassifies the images. To tackle this problem, a conventional Hu&psila;s moment based rotation/scaling/translation invariant feature extractor has been employed. The potential of this model has been demonstrated on two problems, namely, recognition of alphabets and words and prediction of load from yield pattern of elasto-plastic analysis. The second example concerns with color images dealing with colored patterns. MicroARTMAP is also applied to other two civil !
 engineering problems, namely (a) Indian Standard (IS) classification of soil and (b) prediction of earthquake parameters from the response spectrum in which no feature extractor step is necessary. [All rights reserved Elsevier]. (21 References).

RESULTADO <172>
Score
  ****-
Accession Number
  9783191
Author
  Gu ZQ. Oyadiji SO.
Author/Editor Affiliation
  Manchester Univ., Manchester, UK.
Title
  Application of MR damper in structural control using ANFIS method.
Source
  Computers and Structures, vol.86, no.3-5, Feb. 2008, pp. 427-36. Publisher: Elsevier Science Ltd., UK.

Abstract
  Protection of civil engineering structures from excessive vibration due to uncontrollable events such as earthquake has increasingly been of importance for the purpose of maintaining structural integrity and serviceability. This paper presents the development of an adaptive neuro-fuzzy inference system (ANFIS) controller for reduction of environmentally induced vibration in multiple-degree-of-freedom (MDOF) building structure with MR damper. The LQG control method was used to obtain the training data for the ANFIS controller. A force-feedback control scheme was employed in order to overcome the difficulty of commanding the MR damper to output an arbitrary force. In this approach, force-feedback loops were used to induce a MR damper to produce approximately a desired control force. To establish a context for assessing the effectiveness of the semi-active control scheme, responses to earthquake excitation are compared with passive system response. Simulation results show tha!
 t the performance of the developed control scheme in structural vibration suppression is satisfactory. (17 References).

RESULTADO <173>
Score

****-
Accession Number
 9357506
Author
 Alterman D. Kasperkiewicz J.
Author/Editor Affiliation
 Inst. of Fundamental Technol. Res., Polish Acad. of Sci., Warsaw, Poland.
Title
 Evaluating concrete materials by application of automatic reasoning.
Source
 Bulletin of the Polish Academy of Sciences, Technical Sciences, vol.54, no.4, Dec. 2006, pp. 353-61.
Publisher: Polish Acad. Sci, Poland.

Abstract
 There were two aims of the research. One was to enable more or less automatic confirmation of the known associations-either quantitative or qualitative-between technological data and selected properties of concrete materials. Even more important is the second aim-demonstration of expected possibility of automatic identification of new such relationships, not yet recognized by civil engineers. The relationships are to be obtained by methods of artificial intelligence, (AI), and are to be based on actual results from experiments on concrete materials. The reason of applying the AI tools is that in civil engineering the real data are typically non perfect, complex, fuzzy, often with missing details, which means that their analysis in a traditional way, by building empirical models, is hardly possible or at least can not be done quickly. The main idea of the proposed approach was to combine application of different AI methods in a one system, aimed at estimation, prediction, d!
 esign and/or optimization of composite materials. The paradigm of the approach is that the unknown rules concerning the properties of concrete are hidden in experimental results and can be obtained from the analysis of examples. Different AI techniques like artificial neural networks, machine learning and certain techniques related to statistics were applied. The data for the analysis originated from direct observations and from reports and publications on concrete technology. Among others it has been demonstrated that by combining different AI methods it is possible to improve the quality of the data, (e.g. when encountering outliers and missing values or in clustering problems), so that the whole data processing system will be giving better prediction, (when applying ANNs), or the newly discovered rules will be more effective, (e.g. with descriptions more complete and-at the same time-possibly more consistent, in case of ML algorithms) (16 References).

RESULTADO <174>
Score
 ****-
Accession Number
 8615998
Title
 2005 IEEE International Symposium on Intelligent Control and 13th Mediterranean Conference on Control and Automation (IEEE Cat. No. 05CH37647).
Source
 IEEE. Part Vol. 1, 2005, pp. 2 vol. (xliv+1596). Piscataway, NJ, USA.
Conference Information
 2005 IEEE International Symposium on Intelligent Control and 13th Mediterranean Conference on Control and Automation. Limassol, Cyprus. 27-29 June 2005.

Abstract
 The following topics were dealt with: optimal control; switched linear systems; mobile robotic system; fuzzy inference systems; unsupervised learning; nonlinear control system; neural networks; temperature control; nanostructured materials and technology; laser micromachining; materials processing; computer-aided control system design; adaptive control; discrete time system; neurocontrollers; control applications on civil engineering structures; discrete event system; manufacturing system; estimation and identification; space and aerospace control applications; vehicle control applications; autonomous mechanisms and cooperative control; and application of control in communication and sensor networks

RESULTADO <175>
Score
  ****-
Accession Number
  7026544
Author
  Sadoun B.
Author/Editor Affiliation
  Coll. of Eng., Al-Balqa' Appl. Univ., Al-Salt, Jordan.
Title
  An efficient simulation scheme for testing materials in a nondestructive manner.
Source
  Information Sciences, vol.137, no.1-4, Sept. 2001, pp. 43-51. Publisher: Elsevier, USA.
Abstract
  Nondestructive testing (NDT) of materials and systems is becoming more and more important these days due to the progress in the enabling technologies used in such tests and the nature of materials and systems that should be tested without any kind of disturbance or damage. Detecting defects in materials is an important process in the quality control process of engineering systems. NDT can be applied to many systems in many disciplines including civil engineering, architectural engineering, material engineering and science, city planning, physics, mechanical engineering, and aeronautical engineering. Enabling technologies such as modeling and simulation, pattern recognition, neural networks, fast Fourier transform, Wigner distribution, genetic algorithms, fuzzy set theory, and wavelet transforms are some of the recent technologies that are being applied to this problem. In this paper, we present a simulation-based methodology using neural networks to characterize ultrasonic!
  transducers (10 References).

RESULTADO <176>
Score
  ****-
Accession Number
  6721408
Author
  Sadoun B.
Author/Editor Affiliation
  Coll. of Eng., Appl. Sci. Univ., Amman, Jordan.
Editor
  Obaidat MS; Nisanci A; Sadoun B.
Title
  Simulation methodology for nondestructive testing of materials.
Source
  Proceedings of the 1999 Summer Computer Simulation Conference . SCS. 1999, pp. 54-60. San Diego, CA, USA.
Conference Information
  Proceedings of 31st Annual Summer Computer Simulation Conference . Chicago, IL, USA. 11-15 July 1999.
Abstract
  Nondestructive testing of materials and systems is becoming more and more important these days due to the progress in the enabling technologies used in such tests and the nature of materials and systems that should be tested without any kind of disturbance or damage. Detecting defects in materials is an important process in the quality control process of engineering systems. Nondestructive testing can be applied to many systems in many disciplines including civil engineering, architectural engineering, material engineering and science, city planning, physics, mechanical engineering and aeronautical engineering. Enabling technologies such as modeling and simulation, pattern recognition, neural networks, fast Fourier transform, Wigner distribution, genetic algorithms, fuzzy set theory, and Wavelet transforms are some of

the recent technologies that are being applied to this problem. We present a simulation-based methodology using neural networks to characterize ultrasonic tr!
 ansducers (10 References).

RESULTADO <177>

Score
 ****-
Accession Number
 5027260
Title
 Proceedings of 1995 American Control Conference - ACC'95.
Source
 American Autom Control Council. Part vol.1, 1995, pp. 6 vol.lxxii+4483. Evanston, IL, USA.
Conference Information
 Proceedings of 1995 American Control Conference - ACC'95. Seattle, WA, USA. American Autom. Control Council. US. Nat. Member Organ. IFAC. 21-23 June 1995.

Abstract
 The following topics were dealt with: estimation; control education; adaptive control; fault detection; IVHS; aircraft control; process control; plant-wide control; biomedical systems; nonlinear control; delay systems; neural nets; robots; flexible structure control; mu and scaled $H_{}$ computation; robust and optimal control; digital signal processors; filtering; tracking; identification; statistical process monitoring; chaos; learning and approximation based control; vibration control; digital control; variable structure control; vehicle control; aerospace applications; microelectronics; discrete time sliding mode control; intelligent control; multiobjective control; sampled data control; energy systems; multisensor fusion; nonlinear dynamics; civil engineering; $H_{}$ control; stochastic control; automotive applications; missiles; fuzzy control systems; linear systems; model validation; engine and power train control; tracking manoeuvring targets; decentral!
 ised control; unmanned vehicles; cruise control; discrete event systems; supervisory control; friction compensation; air traffic automation; flight control; motor control; queueing issues; mechanical actuators; quantitative feedback theory; numerical issues; smart structures; neural control; HVAC systems; and uncertain systems

RESULTADO <178>

Score
 ****-
Accession Number
 7086228
Title
 Proceedings of the 2001 American Control Conference. (Cat. No.01CH37148).
Source
 IEEE. Part vol.1, 2001, pp. 6 vol. (lxxv+xxii+xix+xx+5069). Piscataway, NJ, USA.
Conference Information
 Proceedings of American Control Conference. Arlington, VA, USA. American Autom. Control Council. IFAC. 25-27 June 2001.

Abstract
 The following topics are dealt with: vehicle control; stochastic systems; motor control; optimization techniques; hybrid systems; neural and biomechanical modelling; vibration control; discrete event systems; polymer processing; constrained control; civil structures; fault detection; guidance and control; classical analysis; servo control systems; neural control; adaptive control; robotic systems; power systems; learning control; flexible structures; reliable control; fault diagnosis and accommodation; control education; identification; microelectromechanical systems; powertrain control and diagnostics; aerospace control; robust control; stability; disturbance rejection methods; discontinuous and relay control systems; adaptive estimation; nonlinear modelling; estimation applications; pole placement control; control of mechanical systems; automotive systems; switched linear systems; neural network-based estimation and control; distributed parameter systems; chemical proces!

s control; discrete time systems; PID control; precision positioning systems; nonlinear systems; vehicle scheduling; model-predictive control; nonlinear control; observers; industrial control; automotive suspension systems; fault tolerance; H control; control theory topics; control of disk drives; feedback; knowledge-based control; descriptor systems; computer systems; large-scale LMI problems; predictive control; decentralized control; linear control; time-delay systems; software technology for control systems; techniques of system analysis; multi-model techniques; variable structure and relay control; particle filtering; communication networks; bioengineering; fuzzy control; parameter-varying systems; fluid power control systems; controller synthesis; data uncertainties; sliding-mode control; sensors; hydraulic systems; discrete delay systems; modelling and estimation of engines and motors; teleoperation and vision; real-time decision systems; model reduction;!
manufacturing applications; and set membership estimation and model v
alidation

RESULTADO <179>

Score
****-
Accession Number
6769961
Title
Proceedings of the 2000 American Control Conference. ACC (IEEE Cat. No.00CH36334).
Source
American Autom. Control Council. Part vol.1, 2000, pp. 6 vol. 4445. Danvers, MA, USA.
Conference Information
Proceedings of 2000 American Control Conference (ACC 2000). Chicago, IL, USA. American Autom. Control Council. IFAC. 28-30 June 2000.
Abstract

The following topics were covered: civil infrastructure predictive control; automotive systems; underwater vehicles; vehicle modelling and control; power systems; nonlinear control; sampled data systems; stability of hybrid systems; nonlinear system identification; model predictive control; nonlinear factorisations and H-infinity control; linear matrix inequalities; decentralised and adaptive control; cooperative control of multi-agent systems; linear systems; extremum seeking control; genetic algorithms; nonminimumphase systems; structural control; hybrid-electric vehicle drivetrains; control applications; vehicle handling and stability; induction motor control; sliding mode control; discrete time systems; observers; controller saturation; differential algebraic equations; chaos; filtering and estimation; decentralised control methods; formation flight control; eigen assignment; controller design; neural networks and wavelets for identification; time delay systems; cranes!
; electric motor control; digital systems; fault detection and control; relay control systems; dissipativity based control; robust control; guidance; linear control; neural control; optimisation; robotic systems; manufacturing control systems; adaptive control; particulate systems; closed loop modelling; descriptor systems; fuzzy control; balancing and vibration isolation; optical systems; chemical processes; distributed parameter systems; propulsion control; model reduction; fuzzy neural networks; friction compensation; disk drive storage systems; switching systems; stochastic systems; trajectory tracking; sensor validation and fusion; flexible learning; biomedical applications; active noise control; flexible structures; electro-mechanical systems; Petri nets; adaptive estimation; process control; nonholonomic systems; control education; intelligent vehicle control; discrete events; output feedback; parameter varying systems; trajectory optimisation; optimal control; micro!
electronic applications; active suspension control; discrete filters;
fluid flow control; and target tracking

RESULTADO <180>

Score
****-
Accession Number
7206455
Author

Rao VS. Sana S.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Missouri Univ., Rolla, MO, USA.
Title
  Overview of control design methods for smart structural system.
Source
  SPIE-Int. Soc. Opt. Eng. Proceedings of the SPIE - The International Society for Optical Engineering, vol.4326, 2001, pp. 1-13. USA.
Conference Information
  Smart Structures and Materials 2001: Modeling, Signal Processing, and Control in Smart Structures. Newport Beach, CA, USA. SPIE. 5-8 March 2001.

Abstract
  Smart structures are a result of effective integration of control system design and signal processing with the structural systems to maximally utilize the new advances in materials for structures, actuation and sensing to obtain the best performance for the application at hand. The research in smart structures is constantly driving towards attaining self adaptive and diagnostic capabilities that biological systems possess. This has been manifested in the number of successful applications in many areas of engineering such as aerospace, civil and automotive systems. Instrumental in the development of such systems are smart materials such as piezo-electric, shape memory alloys, electrostrictive, magnetostrictive and fiber-optic materials and various composite materials for use as actuators, sensors and structural members. The need for development of control systems that maximally utilize the smart actuators and sensing materials to design highly distributed and highly adaptab!
 le controllers has spurred research in the area of smart structural modeling, identification, actuator/sensor design and placement, control systems design such as adaptive and robust controllers with new tools such a neural networks, fuzzy logic, genetic algorithms, linear matrix inequalities and electronics for controller implementation such as analog electronics, microcontrollers, digital signal processors (DSPs) and application specific integrated circuits (ASICs) such field programmable gate arrays (FPGAs) and Multichip Modules (MCMs) etc. In this paper, we give a brief overview of the state of control in smart structures. Different aspects of the development of smart structures such as applications, technology and theoretical advances especially in the area of control systems design and implementation are covered (58 References).

RESULTADO <181>
Score
  ****-
Accession Number
  2854968
Editor
  Hamza MH.
Title
  Proceedings of the IASTED International Symposium on Modelling and Simulation.
Source
  Acta Press. 1985, pp. iv+470. Anaheim, CA, USA.
Conference Information
  . Lugano, Switzerland. 24-26 June 1985.

Abstract
  The following topics were dealt with: criticality; spline approximation; spark ignition; optimization; filters; Banyan networks; inertia; FMS; modelling; routing; ecohydrodynamics; reliability; wave loads; plasmas; electric power systems; discrete event simulation; computer reaction; drugs; interface problems; management; stability; motors; optimal control; sampling; heat pumps; GPSS; crops; back pain; linear rational expectations; feedforward control; vehicles; flow; bearings; group technology; drying; fault simulation; reactor plants; circuits; distributed parameter systems; environmental modelling; transportation; land use; freight; stochastic systems; aquifers; civil engineering; security; sheep ages; forests; identification; elasticity; computer networks; libraries; economic policy; grinding; logistics; similarity; fuzzy relations; forging; industrial plants; and fault tolerance. Abstracts of individual papers can be found under

the relevant classification codes in th!
is or other issues

RESULTADO <182>
Score
****-
Accession Number
 9055201
Author
 Wang ZY. Guo CX. Cao YJ.
Author/Editor Affiliation
 Coll. of Electr. Eng., Zhejiang Univ., Hangzhou, China.
Title
 A new method for short-term load forecasting integrating fuzzy-rough sets with artificial neural network.
Source
 2005 International Power Engineering Conference (IEEE Cat. No. 05EX1109). IEEE. 2005, pp. 168-73. Piscataway, NJ, USA.
Conference Information
 2005 International Power Engineering Conference. Singapore. 29 Nov.-2 Dec. 2005.

Abstract
 Short term load forecasting (STLF) has an essential role in the operation of electric power systems. In recent years, artificial neural networks (ANN) are more commonly used for load forecasting. However, there still exist some difficulties in choosing the input variables and selecting an appropriate architecture of the networks. This paper presents a novel fuzzy-rough sets based ANN for STLF. The fuzzy-rough sets theory is first employed to perform input selection and determine the initial weights of ANN. In the sequel, an improved k-nearest neighbor (K-NN) method is used for the selection of similar days in history as the training set of ANN. Then ANN module is trained using historical daily load and weather data selected to perform the final forecast. To demonstrate the effectiveness of the approach, short-term load forecasting was performed on the Hang Zhou Electric Power Company in China, and the testing results show that the proposed model is feasible and promising f!
 or load forecasting (28 References).

RESULTADO <183>
Score
****-
Accession Number
 8805724
Author
 Anoop MB. Rao KB. Gopalakrishnan S.
Author/Editor Affiliation
 Struct. Eng. Res. Centre, Chennai, India.
Title
 Conversion of probabilistic information into fuzzy sets for engineering decision analysis.
Source
 Computers & Structures, vol.84, no.3-4, Jan. 2006, pp. 141-55. Publisher: Elsevier, UK.

Abstract
 To carry out seismic hazard analysis in the framework of fuzzy set theory, it may become necessary to convert probabilistic information regarding some of the variables into triangular or trapezoidal fuzzy sets. In this paper, three approaches for converting probabilistic information, represented by a probability distribution, into an equivalent triangular or trapezoidal fuzzy set are discussed. In all the three approaches, the probability distribution is first converted into a probabilistic fuzzy set, which is then converted into the equivalent triangular or trapezoidal fuzzy set. The first approach is based on the method of least-square curve fitting, the second approach is based on the conservation of uncertainty (represented by the entropy) associated with the probabilistic fuzzy set in a mean square sense, and the third approach is based on the minimisation of Hausdorff distance (HD) between the probabilistic and the

equivalent fuzzy sets. The effectiveness of these ap!
 proaches in preserving the entropy as well as in preserving the elements of the fuzzy set and their corresponding grades of membership are also discussed with the help of a numerical example of obtaining equivalent fuzzy set for peak ground acceleration. It is found that the approach based on minimisation of Hausdorff distance provides a simple and efficient way for converting the probabilistic information into an equivalent fuzzy set. (34 References).

RESULTADO <184>

Score
 ****-
Accession Number
 7217300
Author
 Juite Wang.
Author/Editor Affiliation
 Dept. of Ind. Eng., Feng Chia Univ., Taichung, Taiwan.
Title
 Improved engineering design concept selection using fuzzy sets.
Source
 International Journal of Computer Integrated Manufacturing, vol.15, no.1, Jan.-Feb. 2002, pp. 18-27. Publisher: Taylor & Francis, UK.
Abstract
Conceptual design is important in producing a successful product, because a poor design concept can rarely be compensated for at the later design stages. S. Pugh's (1991) concept selection method has been widely used in industries to help designers to select promising design concepts. However, experience shows that many designers feel uncomfortable with adopting the highest-scoring result, because Pugh's concept selection method does not provide enough information to allow designers to put faith in the obtained result. The objective of this paper is to extend Pugh's concept selection method with fuzzy set theory to measure the quality of a chosen concept. The performance ratings of a design concept are represented with linguistic terms that can be further characterized with fuzzy sets. The proposed concept selection model produces a partial order of design concepts based on the valued preference relations between different design concepts. The best design concepts can be i!
 dentified for continuous improvement or further development in the next design stage. In addition, three measures (the non-domination index, the imbalance index and the optimality index) are developed to help designers evaluate the quality of the candidate concepts and to determine possible ways for further improvement. An outpatient syringe example is used to illustrate the approach developed (16 References).

RESULTADO <185>

Score
 ****-
Accession Number
 6684613
Author
 Sylvie J. Denis G.
Author/Editor Affiliation
 Lab. d'Autom., CNRS, Besancon, France.
Editor
 Morel G; Vernadat FB.
Title
 An approach based on fuzzy sets to model design quality.
Source
 Information Control in Manufacturing 1998. (INCOM'98). Advances in Industrial Engineering. A Proceedings volume from the 9th IFAC Symposium. Elsevier Science. Part vol.2, 1999, pp. 631-6. Kidlington, UK.
Conference Information

Proceedings of Symposium on Information Control in Manufacturing . Nancy-Metz, France. IFAC. 24-26 June 1998.

Abstract
  Product or process design is managed from uncertain, imprecise and/or vague information. This paper presents a formalism based on fuzzy logic for taking account of data and propagating information into the activities of solution research and evaluation. First related works and specially those which integrate fuzzy or qualitative parameters are presented. Then design quality and our approach are defined. Both user's needs and manufacturing constraints are represented by fuzzy sets. Operational techniques to compare result with objective are proposed. An application example consisting in mechanical system design is shown (22 References).

RESULTADO <186>

Score
  ****-
Accession Number
  3557153
Author
  Diaz AR.
Author/Editor Affiliation
  Michigan State Univ., East Lansing, MI, USA.
Title
  A strategy for optimal design of hierarchical systems using fuzzy sets.
Source
  Preprints. NSF Engineering Design Research Conference. Univ. Massachusetts. 1989, pp. 537-47. Amherst, MA, USA.
Conference Information
  Preprints. NSF Engineering Design Research Conference. Amherst, MA, USA. NSF. 11-14 June 1989.

Abstract
  A strategy for the application of fuzzy optimization to some hierarchically decomposed design problems is discussed. The optimization problem is decomposed into a series of hierarchically arranged subproblems defined on small design subspaces. The solution strategy uses convex approximations of performance functions to take care of the coupling terms and fuzzy sets to define the objective function. Different modifications of the basic hierarchical structure and their effect on the solution strategy are discussed (21 References).

RESULTADO <187>

Score
  ****-
Accession Number
  9909294
Author
  Huicheng Zhou. Wei Li. Chi Zhang.
Title
  Optimizing schemas of flood control and disaster reduction engineering based on variable fuzzy sets theory.
Source
  2007 International Conference on Fuzzy Systems and Knowledge Discovery. IEEE. pp. 591-6. Piscataway, NJ, USA.
Conference Information
  2007 International Conference on Fuzzy Systems and Knowledge Discovery. Haikou, China. 24-27 Aug. 2007.

Abstract
  Due to significance of engineering schemas for flood control and disaster reduction (FCDR), the variable fuzzy sets (VFS) theory is presented and the river network models (MIKE11 and MIKE21) are introduced to calculate and analyze the flood submerging process for certain river basin and to set up its optimization

model for FCDR engineering schemas. It's proved that the proposed model can scientifically and reasonably determine relative membership degrees (RMDs) and relative membership function of schema index at its feature value interval, and it also can properly select schema with high optimal membership degree by varying the model and its parameters, so that the reliability of optimizing schema can be improved. The established method is applied to optimize flood control and disaster mitigation engineering projects of Biliuhe reservoir's lower river course for a case. The case study shows the proposed method is feasible and effective, and the optimization result is reaso!
 nable. (9 References).

RESULTADO <188>

Score
 ****-
Accession Number
 9250568
Author
 Zeshui Xu.
Author/Editor Affiliation
 Dept. of Manage. Sci. & Eng., Tsinghua Univ., Beijing, China.
Editor
 Corchado E; Yin H; Botti V; Fyfe C.
Title
 On correlation measures of intuitionistic fuzzy sets.
Source
 Intelligent Data Engineering and Automated Learning - IDEAL 2006. 7th International Conference. Proceedings (Lecture Notes in Computer Science Vol. 4224). Springer-Verlag. 2006, pp. 16-24. Berlin, Germany.
Conference Information
 Intelligent Data Engineering and Automated Learning - IDEAL 2006. 7th International Conference. Proceedings. Burgos, Spain. 20-23 Sept. 2006.
Abstract
 The intuitionistic fuzzy set, developed by Atanassov (1986), is a useful tool to deal with vagueness and uncertainty. Correlation analysis of intuitionistic fuzzy sets is an important research topic in the intuitionistic fuzzy set theory and has great practical potential in a variety of areas, such as engineering, decision making, medical diagnosis, pattern recognition, etc. In this paper, we propose a new method for deriving the correlation coefficients of intuitionistic fuzzy sets, which has some advantages over the existing methods. Furthermore, we extend the developed method to the interval-valued intuitionistic fuzzy set theory, and show its application in medical diagnosis (19 References).

RESULTADO <189>

Score
 ****-
Accession Number
 7927439
Author
 Sonmez H. Gokceoglu C. Ulusay R.
Author/Editor Affiliation
 Geol. Eng. Dept., Hacettepe Univ., Ankara , Turkey.
Title
 An application of fuzzy sets to the geological strength index (GSI) system used in rock engineering.
Source
 Engineering Applications of Artificial Intelligence, vol.16, no.3, April 2003, pp. 251-69. Publisher: Elsevier, UK.
Abstract
 Characterization of rock masses is one of the fundamental aspects of rock engineering. Particularly, as a rock mass characteristic, determination of the strength of closely jointed rock masses is difficult since the

size of representative specimens including discontinuities is too large for laboratory testing. This difficulty can be overcome by using the Hoek-Brown empirical failure criterion in conjunction with the geological strength index (GSI) classification system. However, characterization of rock masses and determination of their strength may involve some uncertainties due to their complex nature. The fuzzy set theory is one of the tools to handle such uncertainties. We describe the application of fuzzy set theory to the GSI system by incorporating judgement and experience of practising engineers. For the purpose, the original GSI system and its modified form were defined by fuzzy sets, and Mamdani fuzzy algorithm was constructed using 22 "if-then" rules for evaluat!
 ing discontinuity parameters and their ratings considered in the GSI system. In addition, slope instabilities in heavily jointed rock masses selected from two open pit mines in Turkey were back analysed and the results were evaluated to demonstrate and to check the performance of this approach (35 References).

RESULTADO <190>
Score
 ****-
Accession Number
 6698486
Author
 Dubois D. Prade H.
Author/Editor Affiliation
 Inst. de Recherche en Inf., Univ. Paul Sabatier, Toulouse, France.
Title
 Fuzzy sets in information science and engineering: background and applications.
Source
 Technique et Science Informatiques, vol.19, no.1-3, Jan.-March 2000, pp. 203-15. Publisher: Editions Hermes, France.
Abstract
 We claim that information has become a matter of scientific investigation of its own. The aim of this position paper is to show that fuzzy sets play an important role in information sciences and engineering for bridging the gap between man and computers, through a major contribution to data and knowledge representation (18 References).

RESULTADO <191>
Score
 ****-
Accession Number
 4750903
Author
 Yu Wenxian. Lu Jun. Wu Jianhui. Guo Guirong.
Author/Editor Affiliation
 Dept. of Syst. & Eng., Nat. Univ. of Defense Technol., Hunan, China.
Editor
 Yuan Baozong.
Title
 Fuzzy sets-based neural network for pattern understanding.
Source
 Proceedings TENCON '93. 1993 IEEE Region 10 Conference on `Computer, Communication, Control and Power Engineering' (Cat. No.93CH3286-2). IEEE. Part vol.2, 1993, pp. 834-40. New York, NY, USA.
Conference Information
 Proceedings of TENCON '93. IEEE Region 10 International Conference on Computers, Communications and Automation. Beijing, China. 19-21 Oct. 1993.
Abstract
 A fuzzy classification process model and a rational neural network topology are suggested and studied. A new method of constructing membership functions is proposed by using a self-organizing feature map network, kernel estimation of the probability distribution, and a consistent transformation between

probability and possibility. Sugeno's (1974) fuzzy integral is briefly reviewed. Then, an improved fuzzy integral, which is based on double set measures, is proposed. The corresponding classification neural network is underlined and analyzed. This fuzzy set-based neural network can combine fact-level information with knowledge-level information consistently, and its classification process is almost identical to the human cognitive process. The given test results show that simultaneously high levels of robustness and accuracy for radar ship classification have been reached by using the proposed fuzzy set-based neural network (8 References).

RESULTADO <192>

Score
  ****-
Accession Number
  10301773
Author
  Peng Xue. Bo Liu. Xuejun Zhang. Fan Wu.
Author/Editor Affiliation
  Sch. of Inf. Sci. & Technol., Tsinghua Univ., Beijing, China.
Title
  Practical algorithm platform design for fuzzy sets ranking.
Source
  Proceedings of the Multiconference on "Computational Engineering in Systems Applications". IEEE. pp. 1925-30. Piscataway, NJ, USA.
Conference Information
  Multiconference on "Computational Engineering in Systems Applications". Beijing, China. 4-6 Oct. 2006.

Abstract
  This paper investigates a general algorithm to achieve the automation of fuzzy sets ranking. Current methods of finding the maximizing and minimizing fuzzy sets and calculating their difference are manually operated with a large computational complexity, and a universal analytic algorithm is hard to realize. With the inspiration of principles of computer graphics technologies, a novel algorithm of ranking fuzzy sets automatically is proposed, which transforms complex analytic analysis to simple judgments and counting of pixels. Then, a library of fuzzy sets ranking functions is established in the C++ environment, by utilizing the proposed technique in various frequently used ranking methods. Several ranking schemes are illustrated to describe the overall algorithm and its detailed processing procedures. The functionalities of the platform and its applications are explained as well. (14 References).

RESULTADO <193>

Score
  ****-
Accession Number
  10291240
Author
  Zhang Bide. Fang Chunen. Zhang Houxuan. Zhou Aihua. Chen Ting.
Author/Editor Affiliation
  Sch. of Electr. Eng. & Inf., Xihua Univ., Chengdu, China.
Title
  A method of diagnosing steam turbogenerator set's vibration multi-fault based on multi-layer fuzzy model.
Source
  Proceedings of the Multiconference on "Computational Engineering in Systems Applications". IEEE. pp. 1731-5. Piscataway, NJ, USA.
Conference Information
  Multiconference on "Computational Engineering in Systems Applications". Beijing, China. 4-6 Oct. 2006.

Abstract
  Vibration multi-fault often occur for the steam turbogenerator set. Up to now, the method of diagnosing multi-fault isn't well-rounded. In this paper, a new method based on multi-layer fuzzy model is put forward. The method thinks that multi-fault can be diagnosed correctly if some predominant symptoms are known.

It overcomes the limitation of traditional fuzzy generalization judgment. The experimental results show that the method is available to diagnose steam turbogenerator set's vibration multi-fault and it can be used extensively in future. (6 References).

RESULTADO <194>
Score
 ****-
Accession Number
 10048403
Author
 Davarzani H.
Author/Editor Affiliation
 Tarbiat Modares Univ., Tehran, Iran.
Title
 A new approach for Bacillus colonies recognition: application of intuitionistic fuzzy sets theory.
Source
 2008 International Conference on Biomedical Engineering and Informatics. IEEE. pp. 811-15. Piscataway, NJ, USA.
Conference Information
 2008 International Conference on Biomedical Engineering and Informatics. Sanya, China. 27-30 May 2008.
Abstract
 This paper proposes a new approach for medical diagnosis based on laboratory empirical data using fuzzy set theory. The presented approach is based on intuitionistic fuzzy set (IFSs) theory as a special kind of fuzzy set using two new distance measures between intuitionistic fuzzy sets as a tool in pattern recognition. We will apply them in a part of progress of medical diagnosis in order to recognize Bacillus colonies and then we compare its results with similar measures in regular fuzzy. Numerical results show that the proposed measures are more applicable in medical diagnosis than the similar measures in regular fuzzy ones. (13 References).

RESULTADO <195>
Score
 ****-
Accession Number
 9965941
Author
 Takacs M.
Author/Editor Affiliation
 John von Neumann Fac. of Inf., Budapest Tech, Budapest, Hungary.
Title
 Uninorm operations on type-2 fuzzy sets.
Source
 2008 12th International Conference on Intelligent Engineering Systems (INES '08). IEEE. pp. 277-80. Piscataway, NJ, USA.
Conference Information
 2008 12th International Conference on Intelligent Engineering Systems (INES '08). Miami, FL, USA. 25-29 Feb. 2008.
Abstract
 Type-2 fuzzy set theory is a possibility to eliminate the paradox of the type-1 fuzzy sets, that the membership grades are themselves precise real numbers. This fuzzy-fuzziness approach together with new types of fuzzy operators opens new horizons in the fuzzy systems applications. In the paper a short review of the basic notations of type-2 fuzzy sets and the representation of uninorm operation on those sets is given. (15 References).

RESULTADO <196>

Score
 ****-
Accession Number
 9822437
Author
 Huei-Fu Lu.
Author/Editor Affiliation
 Aletheia Univ., Taipei, Taiwan.
Title
 Incorporating probabilistic fuzzy sets into the newsvendor model with hybrid data.
Source
 2007 IEEE International Conference on Industrial Engineering and Engineering Management. IEEE. pp. 773-7. Piscataway, NJ, USA.
Conference Information
 2007 IEEE International Conference on Industrial Engineering and Engineering Management. Singapore, Singapore. 2-4 Dec. 2007.
Abstract
  This paper is to apply a fuzzy newsvendor inventory management approach to analyze optimal order policy based on probabilistic fuzzy sets with hybrid data so that the expected total cost is minimized. We will find that, after defuzzification, the ordering quantity and the expected total cost have slightly different between the fuzzy model and the crisp model when the variation of demand is small. As a result, we verify that the fuzzy newsvendor model is one extension of the crisp models. Most importantly, one may conclude that the fuzzy methodology leads to a better result than using a single point estimate of the unknown demand under the example of exponential distribution. (15 References).

RESULTADO <197>
Score
 ****-
Accession Number
 9219431
Author
 Hassan NMH. Barriga A.
Author/Editor Affiliation
 Instituto de Microclectronica de Sevilla , Spain.
Editor
 Gabrys B; Howlett RJ; Jain LC.
Title
 Modelling coarseness in texture images by means of fuzzy sets.
Source
 Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part II (Lecture Notes in Artificial Intelligence Vol. 4252). Springer-Verlag. 2006, pp. 348-54. Berlin, Germany.
Conference Information
 Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part II. Bournemouth, UK. 9-11 Oct. 2006.
Abstract
  In this paper we model the concept of "coarseness", typically used in texture image descriptions, by means of fuzzy sets. Specifically, we relate representative measures of this kind of texture with its presence degree. To obtain these "presence degrees", we collect assessments from polls filled by human subjects, performing an aggregation of these assessments by means of OWA operators. Using this collected data, and some statistics as reference set, the membership function corresponding to the fuzzy set "coarseness" is modelled (7 References).

RESULTADO <198>
Score

****-
Accession Number
  8244106
Author
  Azmi-Murad M. Martin TP.
Author/Editor Affiliation
  Dept. of Eng. Math., Bristol Univ., UK.
Editor
  Yang ZR; Everson R; Yin H.
Title
  Using fuzzy sets in contextual word similarity.
Source
  Intelligent Data Engineering and Automated Learning - IDEAL 2004. 5th International Conference. Proceedings (Lecture Notes in Comput. Sci. Vol.3177). Springer-Verlag. 2004, pp. 517-22. Berlin, Germany.
Conference Information
  Intelligent Data Engineering and Automated Learning - IDEAL 2004. 5th International Conference. Proceedings. Exeter, UK. 25-27 Aug. 2004.

Abstract
  We propose an algorithm for computing asymmetric word similarity (AWS) using mass assignment based on fuzzy sets of words. Words in documents are considered similar if they appear in similar contexts. However, these similar words do not have to be synonyms, or belong to the same lexical category. We apply AWS in measuring document similarity. We evaluate the effectiveness of our method against a typical symmetric similarity measure, TF.IDF. The system has been evaluated on real world documents, and the results show that this method performs well (6 References).

RESULTADO <199>
Score
  ****-
Accession Number
  8082825
Author
  Itradat A. Ahmad MO. Shatnawi A.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Concordia Univ., Montreal, Que., Canada.
Title
  Scheduling of DSP data flow graphs with processing times characterized by fuzzy sets.
Source
  Canadian Conference on Electrical and Computer Engineering 2004 (IEEE Cat. No.04CH37513). IEEE. Part Vol.3, 2004, pp. 1245-8 Vol.3. Piscataway, NJ, USA.
Conference Information
  Canadian Conference on Electrical and Computer Engineering 2004. Niagara Falls, Ont., Canada. Cisco Syst.. General Elec.. Ryerson Univ.. AVFX Audio Visual. Bell Canada. Dofasco. Dye & Durham. Gennum Corp.. IEEE Canada Found.. Univ. of Toronto. Niagara College of Appl. Arts and Technol. 2-5 May 2004.

Abstract
  In recent years a great deal of research has been conducted in the area of scheduling DSP data flow graphs onto multiprocessing systems. Most of the static scheduling techniques assume the worst case or the best case computational delay of the functional units used in the target architecture. This assumption is not realistic, since some of the computational times of the DSP tasks may be imprecise due to the fact that during early design phases, the characteristics of the final implementation of the functional units are not be known. In this paper, the impreciseness of the processing times of the functional units is taken into consideration by considering them as fuzzy sets, and then using fuzzy arithmetic to build the time schedule. The range of control steps (mobility) which represents the possible firing times of a task is determined, and a fuzzy rule base is employed to infer the degree of acceptability in selecting a certain control step within this range (7 References).

RESULTADO <200>
Score
  ****-
Accession Number
  8080575
Author
  Baldwin JF. Karale SB.
Author/Editor Affiliation
  Dept. of Eng. Math., Univ. of Bristol, Bristol, UK.
Editor
  Palade V; Howlett RJ; Jain L.
Title
  Asymmetric triangular fuzzy sets for classification models.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. (Lecture Notes in Comput. Sci. Vol.2773). Springer-Verlag. Part Vol.1, 2003, pp. 364-70 Vol.1. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. Oxford, UK. 3-5 Sept. 2003.

Abstract
  Decision trees have already proved to be important in solving classification problems in various fields of application in the real world. The ID3 algorithm by Quinlan is one of the well-known methods to form a classification tree. Baldwin introduced probabilistic fuzzy decision trees in which fuzzy partitions were used to discretize continuous feature universes. Here, we have introduced a way of fuzzy partitioning in which we can have asymmetric triangular fuzzy sets for mass assignments approach to fuzzy logic. In this paper we have shown with example that the use of asymmetric and unevenly spaced triangular fuzzy sets will reduce the number of fuzzy sets and will also increase the efficiency of probabilistic fuzzy decision tree (4 References).

Buscar: fuzzy sets civil engineering {Sin términos relacionados}
RESULTADOs: 201-400

RESULTADO <1>
Score
  ****-
Accession Number
  7736329
Author
  Xijin Zhou. Yong Zhou. Dunwei Gong.
Author/Editor Affiliation
  Coll. of Inf. & Electr. Eng., China Univ. of Min. & Technol., Jiangsu, China.
Editor
  Baozong Y; Xiaofang T.
Title
  Optimization of fuzzy sets of fuzzy control system based on hierarchical genetic algorithms.
Source
  2002 IEEE Region 10 Conference on Computer, Communications, Control and Power Engineering (Cat. No.02CH37368). IEEE. Part vol.3, 2002, pp. 1463-6. Piscataway, NJ, USA.
Conference Information
  IEEE TENCOM'02. 2002 IEEE Region 10 Conference on Computer, Communications, Control and Power Engineering. Beijing, China. IEEE Region 10. IEEE Comput. Soc. Beijing Chapter. IEEE Commun.

Soc. Beijing Chapter. IEEE Control Syst. Soc. Beijing Chapter. IEEE Power Eng. Soc. Beijing Chapter. IEEE Power Electron. Soc. Beijing Chapter. IEEE Signal Process. Soc. Biejing Chapter. 28-31 Oct. 2002.
Abstract

   Because the number of the fuzzy sets in input and output variable fields directly affects the completeness of fuzzy rules and decides the performance of control system, an approach optimizing fuzzy sets based on hierarchical genetic algorithms is proposed in this paper, which optimizes the number and shape of fuzzy sets in fields currently, makes fuzzy sets distribution orderly and reduces the rule's redundancy. The simulation results of second ordered system show that the approach presented in this paper is effective (3 References).

RESULTADO <2>
Score
 ****-
Accession Number
 7502863
Author
 Shon Min-Kyu. Murata J. Hirasawa K.
Author/Editor Affiliation
 Dept. of Electr. & Electron. Syst. Eng., Kyushu Univ., Fukuoka, Japan.
Editor
 Baba N; Jain LC; Howlett RJ.
Title
 Function approximation using LVQ and fuzzy sets.
Source
 Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.2, 2001, pp. 829-33. Amsterdam, Netherlands.
Conference Information
 Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.
Abstract

   Neural networks with local activation functions (e.g. radial basis function networks) have a merit of excellent generalization abilities. When this type of network is used in function approximation, it is very important to determine the proper division of the input space into local regions, to each of which a local activation function is assigned. In RBFNs, this is equivalent to determination of the locations and numbers of its RBFs, which is generally done based on the distribution of input data. However, in function approximation, the output information (the value of the function to be approximated) must be considered in the determination of the local regions. A new method is proposed that uses LVQ network to approximate the functions based on the output information. It divides the input space into regions with a prototype vector at the center of each region. The ordinary LVQ, however, outputs discrete values only, and therefore can not approximate continuous functions. !
 In this paper, fuzzy sets are employed in both the learning and output calculation. Finally, the proposed method uses the backpropagation algorithm for fine adjustment. An example is provided to show the effectiveness of the proposed method (4 References).

RESULTADO <3>
Score
 ****-
Accession Number
 6559524
Author
 Buckley JP. Seitzer J.
Author/Editor Affiliation
 Dept. of Comput. Sci., Dayton Univ., OH , USA.
Title
 A paradigm for detecting cycles in large data sets via fuzzy mining.

Source
  Proceedings 1999 Workshop on Knowledge and Data Engineering Exchange (KDEX'99) (Cat. No.PR00453). IEEE Comput. Soc. 2000, pp. 68-74. Los Alamitos, CA, USA.
Conference Information
  Proceedings 1999 Workshop on Knowledge and Data Engineering Exchange (KDEX'99). Chicago, IL, USA. IEEE Comput. Soc. 7 Nov. 1999.
Abstract
  Traditional data mining algorithms identify associations in data that are not explicit. Cycle mining algorithms identify meta-patterns of these associations depicting inferences forming chains of positive and negative rule dependencies. This paper describes a formal paradigm for cycle mining using fuzzy techniques. To handle cycle mining of large data sets, which are inherently noisy, we present the a-cycle and beta-cycle, the underlying formalism of the paradigm. Specifically, we show how a-cycles, desirable cycles, can be reinforced such that complete positive cycles are created, and how beta-cycles can be identified and weakened. To accomplish this, we introduce the concept of Omega nodes that employ an alterability quantification, as well as using standard rule and node weighting (with associated thresholds) (10 References).

RESULTADO <4>

Score
  ****-
Accession Number
  6552135
Author
  Ficzko J. Zimic N. Virant J.
Author/Editor Affiliation
  Univ. Coll. of HC, Ljubljana Univ., Slovenia.
Editor
  Mohammadian M.
Title
  A model of fuzzy automata with variable input sets.
Source
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval (Concurrent Systems Engineering Series Vol.55). IOS Press. 1999, pp. 260-4. Amsterdam, Netherlands.
Conference Information
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval. Vienna, Austria. 17-19 Feb. 1999.
Abstract
  A model of fuzzy automata that could be applied to pattern recognition problems is proposed. By definition of the membership functions of input sets (their shape and position) the designer determines what difference between given and expected input could be tolerated. A modification of membership functions of input sets depends on previous input and is recorded in automata state(s). This enables automata supervised adaptation to differences between given and expected input. An algorithm of the automata and an example using the simulation software package MATLAB is presented (13 References).

RESULTADO <5>

Score
  ****-
Accession Number
  6488681
Author
  Ada Wai-chee Fu. Man Hon Wong. Siu Chun Sze. Wai Chiu Wong. Wai Lun Wong. Wing Kwan Yu.
Author/Editor Affiliation
  Dept. of Comput. Sci. & Eng., Chinese Univ. of Hong Kong, Shatin, Hong Kong.

Editor
  Xu L; Chan LW; King I; Fu A.
Title
  Finding fuzzy sets for the mining of fuzzy association rules for numerical attributes.
Source
  Intelligent Data Engineering and Learning. Perspectives on Financial Engineering and Data Mining. 1st International Symposium. IDEAL'98. Springer-Verlag. 1998, pp. 263-8. Singapore, Singapore.
Conference Information
  Proceedings of International Symposium on Intelligent Data Engineering and Learning (IDEAL'98). Hong Kong. 14-16 Oct. 1998.

Abstract
  Fuzzy association rules were introduced in Kuok et al., (1998). However, the algorithms proposed by Kuok et al., for mining fuzzy association rules assume that fuzzy sets are given. Here we propose a method to find the fuzzy sets based on clustering techniques. We have implemented our proposed method and shown that it is feasible and produces desirable results (7 References).

RESULTADO <6>

Score
  ****-
Accession Number
  6421969
Author
  Wong GYC. Hon Wai Chun.
Author/Editor Affiliation
  Dept. of Electron. Eng, City Univ. of Hong Kong, Kowloon, Hong Kong.
Editor
  Imam I; Kodratoff Y; El-Dessouki A; Ali M.
Title
  Modelling fuzzy sets using object-oriented techniques.
Source
  Multiple Approaches to Intelligent Systems. 12th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems. IEA/AIE-99. Proceedings. Springer-Verlag. 1999, pp. 23-32. Berlin, Germany.
Conference Information
  Proceedings of 12th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems . Cairo, Egypt. Int. Soc. Appl. Intelligence. ACM. American Assoc. Artificial Intelligence. et al. 31 May-3 June 1999.

Abstract
  This paper describes a new approach to model fuzzy sets using object-oriented programming techniques. Currently, the most frequently used method to model fuzzy sets is by using a pair of arrays to represent the set of ordered pairs, elements and their grades of membership. For continuous fuzzy sets, it is impossible to use an infinite number of elements to model, therefore a limited number of array elements are used. Because the grade of membership can be calculated by a membership function, we introduced an approach that models fuzzy set using membership functions directly. Our new approach reduces memory required to model fuzzy sets. Furthermore, grades of membership are calculated dynamically only when needed. Compare with the approach mentioned before, our approach seems to offer advantages in memory space and computation time when modelling systems with complex continuous fuzzy sets (9 References).

RESULTADO <7>

Score
  ****-
Accession Number
  6096759
Author

Rolka L. Mieszkowicz-Rolka A.
Author/Editor Affiliation
  Politech. Rzeszowska, Rzeszow, Poland.
Editor
  Bubnickiego Z; Grzecha A.
Title
  Rough sets theory in the analysis of information systems with fuzzy attributes.
Source
  Inzynieria Wiedzy I Systemy Ekspertowe (Knowledge Engineering and Expert Systems). Oficyna Wydawnicza Politech. Wroclawskiej. Part vol.1, 1997, pp. 218-24. Wroclaw, Poland.
Conference Information
  Inzynieria Wiedzy I Systemy Ekspertowe (Knowledge Engineering and Expert Systems). Wroclaw, Poland. 10-12 June 1997.

Abstract
  The measures defined in rough set theory help to estimate the quality of decision rules systems by computing the dependency between groups of attributes. This can be done in the analysis of rules systems with crisp attributes. The paper presents a generalisation of concepts given in the original rough set theory, allowing us to apply them in the analysis of information systems with fuzzy attributes. Upper and lower approximation of fuzzy sets, and the usage of fuzzy similarity or tolerance relations permits us to define a modified accuracy of classification. A proposition of a compatibility relation, which allows a comparison of terms with fuzzy attributes is also given. The presented approach can be used in the design of fuzzy control systems (4 References).

RESULTADO <8>
Score
  ****-
Accession Number
  6083805
Author
  Peters JF. Ziaei K.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Manitoba Univ., Winnipeg, Man., Canada.
Editor
  Hornsey R.
Title
  Generating rules in selecting controller gains: a combined rough sets/fuzzy sets approach.
Source
  Conference Proceedings. IEEE Canadian Conference on Electrical and Computer Engineering (Cat. No.98TH8341). IEEE. Part vol.1, 1998, pp. 233-6. New York, NY, USA.
Conference Information
  Conference Proceedings. IEEE Canadian Conference on Electrical and Computer Engineering. Waterloo, Ont., Canada. 24-28 May 1998.

Abstract
  The combined application of approximate time windows (ATW) and rough sets in deriving rules for tuning controllers is discussed. The approach is to build an approximate reasoning system based approximate measures of controller performance, namely, overshoot, rise time, and settling time. Overshoot is the biggest deviation of step response from a particular steady state after the step response has reached a tolerance band for the first time. Rise time r_t is the time when a step response reaches 90% of its steady-state value for the first time, and settling time s_t is measured relative to rise time (i.e. the clock for s_t is reset at $t=r_t$). In this paper, the clocks used to measure durations required to achieve controller objectives are modeled as ATWs. An ATW partitions time relative to granules (clumps of similar timing measurements) such as early, ontime, late. An ATW determines the degree of membership of each observed duration !
 in each of its temporal partitions. Based on observations of the degree of overshoot, rise time, and settling time during the operation of a control system, the architecture of an approximate time rough control

system is established. The rough controller is guided by rules derived from a real-time decision-making system. The focus of this paper is a description of how rough control rules derived from a real-time decision system table have been used in fine-pointing for attitude control of a small satellite. The contribution of this paper is the application of rough sets, fuzzy sets and approximate time windows in the design of approximate time rough control systems (11 References).

RESULTADO <9>
Score
 ****-
Accession Number
 5787063
Author
 El-Sayed MAH.
Author/Editor Affiliation
 Dept. of Electr. & Comput. Eng., Kuwait Univ., Safat, Kuwait.
Editor
 Rudas IJ.
Title
 Fuzzy clustering and fuzzy sets for reliability analysis of recent distribution systems.
Source
 INES'97. 1997 IEEE International Conference on Intelligent Engineering Systems. Proceedings (Cat. No.97TH8224). IEEE. 1997, pp. 277-82. New York, NY, USA.
Conference Information
 Proceedings of IEEE International Conference on Intelligent Engineering Systems. Budapest, Hungary. IEEE Ind. Electron. Soc.. IEEE Hungary Sect.. Banki Donat Polytech., Hungary. Nat. Committee for Technol. Dev., Hungary. IEEE Robotics & Autom. Soc. 15-17 Sept. 1997.

Abstract
 This paper presents the application of fuzzy clustering to reduce the large system states into few representative clusters, which are sufficient for reliability analysis of recent distribution networks containing local photovoltaic generation. For each cluster the failure effect analysis and minimal cut-set techniques, based on outage simulation of system components, are applied to compute the different reliability indices. The uncertainties of failure and repair rates for the components of the obtained cut sets are taken into consideration by applying fuzzy set theory. The computed indices are then multiplied by the corresponding cluster weight to obtain the overall system indices. The developed algorithm is applied to a 66-kV distribution network and the resulting improvement of system reliability is estimated and discussed in the paper (13 References).

RESULTADO <10>
Score
 ****-
Accession Number
 5760383
Author
 Nejatali A. Ciric IR.
Author/Editor Affiliation
 Dept. of Electr. & Comput. Eng., Manitoba Univ., Winnipeg, Man., Canada.
Editor
 Thorburn P; Quaicoe J.
Title
 Preserving internal contrast in image fusion using fuzzy sets theory.
Source
 CCECE '97. Canadian Conference on Electrical and Computer Engineering. Engineering Innovation: Voyage of Discovery. Conference Proceedings (Cat. No.97TTH8244). IEEE. Part vol.2, 1997, pp. 611-13. New York, NY, USA.
Conference Information

CCECE '97. Canadian Conference on Electrical and Computer Engineering. Engineering Innovation: Voyage of Discovery. Conference Proceedings. St. Johns, Nfld., Canada. Newfoundland & Labrador Hydro. Oper. ONLINE. Nat. Res. Council Inst. Marine Dynamics. Newtech Instrum.. Corner Brook Pulp & Paper. Newfoundland Light & Power Company. GEC Alsthom Int. Canada. Schneider Canada. ABB. GE Canada. 25-28 May 1997.

Abstract

A new method for the multimodality image fusion, in presence of noise, without compromising the internal contrast, based on fuzzy sets theory, is presented. A simulation has been performed to demonstrate the application and the main features of the proposed method (4 References).

RESULTADO <11>

Score
  ****-
Accession Number
  5099060
Author
  Cohen KP. Webster JG. Northern J. Hu YuH. Tompkins WJ.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Wisconsin Univ., Madison, WI, USA.
Editor
  Sheppard NF Jr; Eden M; Kantor G.
Title
  Breath detection using fuzzy sets and sensor fusion.
Source
  Proceedings of the 16th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Engineering Advances: New Opportunities for Biomedical Engineers (Cat. No.94CH3474-4). IEEE. Part vol.2, 1994, pp. 1067-8. New York, NY, USA.
Conference Information
  Proceedings of 16th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Baltimore, MD, USA. 3-6 Nov. 1994.
Abstract

We developed a breath detection algorithm which uses fuzzy sets to classify signals from multiple noninvasive sensing technologies. We tested our algorithm using simultaneous recordings from impedance and inductance plethysmographs, while healthy adults performed several different combinations of ventilation and motion. For 4 subjects, the average rates of false positive and false negative detection were 0.6% and 2.2%, respectively (5 References).

RESULTADO <12>

Score
  ****-
Accession Number
  5051218
Author
  Fukushima S. Minoh M.
Author/Editor Affiliation
  Lab. for Int. Fuzzy Eng. Res., Yokohama , Japan.
Title
  3-D object model description using fuzzy sets.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.3, 1995, pp. 1255-60. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint

Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract

We present a method of describing 3-D object model by fuzzy sets, used in our object recognition system. The system converts a user's linguistic descriptions into an image, and this "visual feedback" enables users to recognize the interpretation of the system. On the other hand, the system can obtain the user's idea. We are using this concept to construct a 3-D model description for object recognition. This paper outlines our object recognition system, proposes a novel method for 3-D modeling using fuzzy sets, and shows the results of experimental object recognition using the proposed method (6 References).

RESULTADO <13>

Score

****-

Accession Number

5044744

Author

Uehara K.

Author/Editor Affiliation

Commun. & Inf. Syst. Res. Lab., Toshiba Corp., Kawasaki, Japan.

Title

Fuzzy inference based on a weighted average of fuzzy sets and its learning algorithm for fuzzy exemplars.

Source

Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 2253-60. New York, NY, USA.

Conference Information

Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract

This paper proposes a fuzzy inference method based on a weighted average of fuzzy sets. This method has the property of always obtaining the inference consequence in the form of convex fuzzy sets as long as the then-parts of conditional propositions are defined with normal and convex fuzzy sets. This property is quite useful in introducing learning functions to a fuzzy inference scheme, in particular, when fuzzy-input/fuzzy-output pairs are given by convex fuzzy sets as its exemplar patterns. Moreover, the proposed method can clarify the maximum value of the fuzziness in the inference consequences in advance of its inference operations. In multistage-parallel fuzzy-inference form, it can solve the problem of increasing the fuzziness of the inference consequences in every stage, which possibly results in fuzziness explosion. Reflecting the properties mentioned above, a learning algorithm is derived for multistage-parallel fuzzy-inference with fuzzy exemplar patterns given b!
y convex fuzzy sets (11 References).

RESULTADO <14>

Score

****-

Accession Number

5039448

Author

Turksen IB.

Author/Editor Affiliation

Dept. of Ind. Eng., Toronto Univ., Ont. , Canada.

Title
  Knowledge representation and approximate reasoning with Type II fuzzy sets.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1911-17. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  Type II fuzzy sets are considered with the perspective of fuzzy normal forms for fuzzy knowledge representation and inference. In this perspective all of the classical laws are reinterpreted to hold as "a matter of degree". A particular version of Type II fuzzy sets are the interval-valued fuzzy sets. Furthermore, when knowledge is represented with the interval-valued Type II fuzzy sets, fuzzy reasoning generates consequences that are interval-valued Type II fuzzy sets. A new non-specificity measure helps us assess the uncertainty content associated with interval valued Type II fuzzy sets (20 References).

RESULTADO <15>
Score
  ****-
Accession Number
  4874981
Author
  Zhao J. Tan M. Price WG. Wilson PA.
Author/Editor Affiliation
  Dept. of Ship Sci., Southampton Univ., UK.
Title
  DCPA simulation model for automatic collision avoidance decision making systems using fuzzy sets.
Source
  OCEANS 94. Oceans Engineering for Today's Technology and Tomorrow's Preservation. Proceedings (Cat. No.94CH3472-8). IEEE. Part vol.2, 1994, pp. II/244-9. New York, NY, USA.
Conference Information
  Proceedings of OCEANS'94. Brest, France. Oceanic Eng. Soc. IEEE. Soc. Electr. Electron. France. Communaute Urbaine de Brest. 13-16 Sept. 1994.

Abstract
  Decision making in collision avoidance is one of the major problems in ship manoeuvring. The basis of ships collision avoidance decision making at sea is the Collision Regulations which prescribe that two encountered vessels should pass at a safe distance. In this paper, several fuzzy sets are introduced to simulate the mariners' collision avoidance decision making behaviour and their psychology. Simulation models are established on an action to avoid collision in head-on, creasing and overtaking situations, in restricted waters in traffic separation schemes, in restricted visibility and with obstacles. This work lays a theoretical foundation on for the development of marine traffic simulation and automatic collision avoidance systems. Finally, an investigation on the mariners' behaviour is reviewed, and a simulation conducted to compare with other studies (11 References).

RESULTADO <16>
Score
  ****-
Accession Number
  4418172
Author
  Takagi T. Yamaguchi T. Sugeno M.

Author/Editor Affiliation
  Lab. for Int. Fuzzy Eng. Res., Yokohama , Japan.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Conceptual fuzzy sets.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 261-72. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.

Abstract
  Denotative description is generally used to define a fuzzy set. This notation is not capable of representing a variety of meaning depending on various conditions. In order to represent the context dependent meaning, the authors propose conceptual fuzzy sets which are connotatively defined with activation values of linked labels of other fuzzy sets. They are realized using associative memories and the properties are discussed concerning their utilizations and the differences with ordinary knowledge representation methods (6 References).

RESULTADO <17>
Score
  ****-
Accession Number
  4418162
Author
  Ralescu DA. Ralescu A.
Author/Editor Affiliation
  Dept. of Math. Sci., Cincinnati Univ., OH , USA.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Fuzzy sets in statistical decision-making.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 153-62. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.

Abstract
  The authors investigate the role of fuzzy sets concepts in statistical inference. First they show that a classical testing of hypothesis problems can be naturally stated by using fuzzy sets as critical regions. Then they introduce the concept of Bayes estimator with respect to a fuzzy probability measure (16 References).

RESULTADO <18>
Score
  ****-
Accession Number
  3405885
Author
  Menhardt W.
Author/Editor Affiliation
  Philips GmbH Forschunglab. Hamburg, West Germany.
Editor
  Harris G; Walker C.
Title

Image analysis using iconic fuzzy sets.
Source
  Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.88CH2566-8) . IEEE. 1988, pp. 351-3. New York, NY, USA.
Conference Information
  Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.88CH2566-8) . New Orleans, LA, USA. IEEE. 4-7 Nov. 1988.
Abstract
  A formalism is presented for the iconic representation of knowledge in a semantic net. Nodes are represented as fuzzy sets, relations as functions over fuzzy sets. Moreover, the author demonstrates a consistent framework for the transition from the symbolic to the iconic level. He also defines a procedure for the explication, fuzzyfication and operationalization of natural language description predicates. This concept has successfully been used for a model-driven image analysis approach in the domain of MRI (magnetic resonance imaging) brain slices. The concept also has the potential for a data-driven approach. Measurements of features of fuzzy image structures can be represented in the semantic net as fuzzy assertions. Possible faults (pathologies) can be incorporated by using information form other sources (neurological studies) as (fuzzy) assertions (9 References).

RESULTADO <19>
Score
  ****-
Accession Number
  2716605
Author
  Karwowski W. Mital A.
Author/Editor Affiliation
  Dept. of Ind. Eng., Louisville Univ., KY , USA.
Title
  Potential applications of fuzzy sets in industrial safety engineering.
Source
  Fuzzy Sets and Systems, vol.19, no.2, June 1986, pp. 105-20. Netherlands.
Abstract
  Discusses potential applications of fuzzy set theory to risk analysis in the area of industrial safety engineering. Vagueness and imprecision in mathematical quantification of risk are equated with fuzziness rather than randomness. The concept of risk evaluation, using linguistic representation of the likelihood of the occurrence of a hazardous event, exposure, and possible consequences of that event, is proposed. The approximate reasoning technique based on fuzzy logic is used to derive fuzzy values of risk (39 References).

RESULTADO <20>
Score
  ****-
Accession Number
  5005216
Author
  Marks RJ II. Laybourn L. Lee S. Oh S.
Author/Editor Affiliation
  Dept. of Electr. Eng., Washington Univ., Seattle, WA, USA.
Title
  Fuzzy and extra crisp alternating projection onto convex sets (POCS).
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 427-35. New York, NY, USA.

Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  Alternating projections onto convex sets (POCS) is a powerful tool for signal and image restoration and
synthesis. Convex sets of signals obeying desired constraints are first specified. Then, by repeated
projection onto these sets, convergence is to a signal obeying all desired constraints. The method
assumes, however, that there is a nonempty intersection of the sets. If the intersection is empty, the result
of POCS is not unique and, if the sets are not `close', generally considered to be of little use. To construct
sets that are closer, one or more of the convex sets is fuzzified. The a-cuts of the fuzzified sets, also
convex, will eventually result in constraints with a nonempty intersection. Using a fuzzification of the
convex constraint set allows approximate satisfaction of inconsistent constraints. Example applications are
presented for computer tomography and optical diffraction synthesis (35 References).

RESULTADO <21>
Score
  ****-
Accession Number
  9945439
Author
  Guang-ming Xian. Bi-qing Zeng.
Author/Editor Affiliation
  South China Normal Univ., Foshan, China.
Title
  A novel hybrid model for information processing basing on rough sets and fuzzy SVM.
Source
  2008 2nd International Conference on Multimedia and Ubiquitous Engineering (MUE '08). IEEE. pp. 320-
3. Piscataway, NJ, USA.
Conference Information
  2008 2nd International Conference on Multimedia and Ubiquitous Engineering (MUE '08). Busan, South
Korea. 24-28 April 2008.
Abstract
  Rough set theory (RST) is a new effective tool in dealing with vagueness and uncertainty information
from a large number of data. Fuzzy support vector machine (FSVM) has become the focus of research in
machine learning. And it greatly improves the capabilities of fault-tolerance and generalization of standard
support vector machine. The hybrid model of RS-FSVM inherits the merits of RS and FSVM, and is
applied into fused image quality evaluation in this paper. RST is used as preprocessing step to improve
the performances of FSVM. A large number of experimental results show that when the number training
samples are enough RS-SVM can achieve higher precision of classification than methods of FSVM and
SVM. (16 References).

RESULTADO <22>
Score
  ****-
Accession Number
  9273443
Author
  Maji P. Kundu MK. Chanda B.
Author/Editor Affiliation
  Center for Soft Comput. Res., Indian Stat. Inst., Kolkata, India.
Title
  Segmentation of brain MR images using fuzzy sets and modified co-occurrence matrix.
Source

IET Visual Information Engineering (VIE 2006). Inst. of Eng. and Technol. 2006, pp. 6. Stevenage, UK.
Conference Information
  IET Visual Information Engineering (VIE 2006). Bangalore, India. 26-28 Sept. 2006.
Abstract

  Image segmentation is an indispensable process in the visualization of human tissues, particularly during clinical analysis of magnetic resonance (MR) images. A robust segmentation technique based on fuzzy set theory for brain MR images is proposed in this paper. The histogram of the given image is thresholded according to the similarity between gray levels. The similarity is assessed through second order fuzzy correlation. To calculate the second order fuzzy correlation, a modified co-occurrence matrix is used to extract the local information more accurately. Two parameters - ambiguity and the strength of ambiguity, are introduced to determine the thresholds of the given histogram. The effectiveness of the proposed algorithm, along with a comparison with other methods, has been demonstrated on a set of brain MR images (16 References).

RESULTADO <23>
Score
  ****-
Accession Number
  9163518
Author
  Shouyu Chen. Yu Guo. Dagang Wang.
Author/Editor Affiliation
  Sch. of Civil Eng. & Archit., Dalian Univ. of Technol., China.
Title
  Use of engineering fuzzy sets, BP neural network and genetic algorithm for intelligent decision-making.
Source
  Sixth World Congress on Intelligent Control and Automation (IEEE Cat. No. 06EX1358C). IEEE. 2006, pp. 5. Piscataway, NJ, USA.
Conference Information
  Sixth World Congress on Intelligent Control and Automation. Dalian, China. 21-23 June 2006.
Abstract

  On the ground of fuzzy optimum selection of BP neural network model, the paper introduces genetic algorithm to the model and presents an intelligent decision-making model based on fuzzy optimum selection of BP neural network model and mixed with genetic algorithm. A case proved that the intelligent decision-making model is efficient and robust in determining network topologic structure, accelerating convergence velocity and enhancing the global optimum ability. The intelligent decision-making model is further development of the fuzzy optimum selection of BP neural network model (7 References).

RESULTADO <24>
Score
  ****-
Accession Number
  9036222
Author
  Hui-Yu Wang. Shyi-Ming Chen.
Author/Editor Affiliation
  Dept. of Educ., Nat. Chengchi Univ., Taipei , Taiwan.
Editor
  Ali M; Dapoigny R.
Title
  New methods for evaluating the answerscripts of students using fuzzy sets.
Source
  Advances in Applied Artificial Intelligence. 19th International Conference on Industrial, Engineering and other Applications of Applied Intelligent Systems, IEA/AIE 2006. Proceedings (Lecture Notes in Artificial Intelligence Vol.4031). Springer-Verlag. 2006, pp. 442-51. Berlin, Germany.

Conference Information
  Advances in Applied Artificial Intelligence. 19th International Conference on Industrial, Engineering and other Applications of Applied Intelligent Systems, IEA/AIE 2006. Proceedings. Annecy, France. 27-30 June 2006.

Abstract
  In this paper, we present new methods for evaluating the answer scripts of students, where the evaluating values are represented by fuzzy numbers, and an optimism index lambda determined by the evaluator is used to indicate the degree of optimism of the evaluator for evaluating the answer scripts of students, where the value of lambda is between zero and one. The universe of discourse is formed by a set of satisfaction levels. The fuzzy mark awarded to the answer of each question of the answerscript of a student is represented by a type-2 fuzzy set. The proposed methods can overcome the drawbacks of the existing methods. It can evaluate the answerscripts of students in a more flexible and more intelligent manner (20 References).

RESULTADO <25>
Score
  ****-
Accession Number
  8632548
Author
  Jiacheng Zheng. Yongchuan Tang.
Author/Editor Affiliation
  Coll. of Econ., Coll. of Econ., Hangzhou , China.
Editor
  Mira J; Alvarez JR.
Title
  One generalization of the naive Bayes to fuzzy sets and the design of the fuzzy naive Bayes classifier.
Source
  Artificial Intelligence and Knowledge Engineering Applications: A Bioinspired Approach. First International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2005. Proceedings, Part II (Lecture Notes in Computer Science Vol. 3562) . Springer-Verlag. 2005, pp. 281-90. Berlin, Germany.
Conference Information
  Artificial Intelligence and Knowledge Engineering Applications: A Bioinspired Approach. First International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2005. Proceedings, Part II. Las Palmas, Canary Islands, Spain. 15-18 June 2005.

Abstract
  Despite its unrealistic independence assumption, the naive Bayes classifier is remarkably successful in practice. In the naive Bayes classifier, all variables are assumed to be nominal variables, it means that each variable has a finite number of values. But in large databases, the variables often take continuous values or have a large number of numerical values. So many researchers discussed the discretization (or partitioning) for domain of the continuous variables. In this paper, we generalize the naive Bayes classifier to the situation in which the fuzzy partitioning for the variable domains instead of discretization is taken. Therefore each variable in the fuzzy naive Bayes classifier can take a linguistic value represented by a fuzzy set. One method for estimating the conditional probabilities in the fuzzy naive Bayes classifier is proposed. This generalization can decrease the complexity for learning optimal discretization, and increase the power for dealing with im!
 precise data and the large databases. Some well-known classification problems in machine learning field have been tested, the results show that the fuzzy naive Bayes classifier is an effective tool to deal with classification problem which has continuous variables (14 References).

RESULTADO <26>
Score
  ****-
Accession Number

8332060
Author
  Radojevic D.
Author/Editor Affiliation
  Mihajlo Pupn Inst., Belgrade, Serbia.
Editor
  Reljin B; Stankovic S.
Title
  From fuzzy to real sets.
Source
  2004 Seventh Seminar on Neural Network Applications in Electrical Engineering (IEEE Cat. No.04EX871). IEEE. 2004, pp. 209-14. Piscataway, NJ, USA.
Conference Information
  2004 Seventh Seminar on Neural Network Applications in Electrical Engineering. Belgrade, Serbia. 23-25 Sept. 2004.
Abstract
  Real set theory is presented. Real set theory is a consistent generalization of classical set theory, contrary to fuzzy set theory (8 References).

RESULTADO <27>
Score
  ****-
Accession Number
  7535550
Author
  Bilalis N. Lolos D. Antoniadis A. Emiris D.
Author/Editor Affiliation
  Tech. Univ. Crete, Chania, Greece.
Title
  A fuzzy sets approach to new product portfolio management.
Source
  2002 IEEE International Engineering Management Conference. Proceedings (Cat. No.02CH37329). IEEE. Part vol.1, 2002, pp. 485-90. Piscataway, NJ, USA.
Conference Information
  2002 IEEE International Engineering Management Conference. Cambridge, UK. IEEE Eng. Manage. Soc. 18-20 Aug. 2002.
Abstract
  The evaluation of R&D projects in a high technology firm is very important. A lot of them quite often do not lead to new products as management did not take into consideration indexes such as probability of commercial success, technological success, strategic fit, etc which cannot be expressed in a quantitative form. An efficient and reliable approach for evaluating R&D projects capable of handling simultaneously the quantitative and qualitative criteria involved based on the theory of fuzzy logic is presented and a software model of the approach has been developed and tested in a real environment. It is a multiple criteria decision-making method where all projects are rated according to a number of quantitative and qualitative criteria capturing possibilities of technical and commercial success and the consistency of the projects with business strategy. We report on the criteria used for the evaluation of the projects and on the operation of the software model (15 Referen!
 ces).

RESULTADO <28>
Score
  ****-
Accession Number
  6513374
Author

Grohman WM. Dhawan AP.
Author/Editor Affiliation
  Dept. of Bioeng., Toledo Univ., OH, USA.
Title
  Classification of difficult-to-diagnose microcalcifications using fuzzy neural network with convex sets.
Source
  Proceedings of the First Joint BMES/EMBS Conference. 1999 IEEE Engineering in Medicine and Biology 21st Annual Conference and the 1999 Annual Fall Meeting of the Biomedical Engineering Society (Cat. No.99CH37015). IEEE. Part vol.2, 1999, pp. 1132. Piscataway, NJ, USA.
Conference Information
  Proceedings of the First Joint BMES/EMBS Conference. Atlanta, GA, USA. Medtronic. Johnson & Johnson. Baxter Cardio Vascular Group. Becton Dickinson & Co.. Georgia Biomed. Partnership. Guidant Found.. Kilpatrick Stockton LLP. King & Spaulding. Troutman Sanders LLP. Adv. Tissue Sci.. AVL Biosense Corp.. CUH2A. Ernst & Young LLP. State of Georgia. Dept. Ind.. Trade & Tourism. Healthdyne Companies. Long Aldrige & Norman. Porex Corp.. Sulzer Innotec. Turner Constr. Company. 13-16 Oct. 1999.
Abstract

  A novel convex set based neuro-fuzzy algorithm for classification of difficult-to-diagnose instances of breast cancer is described. The new approach offers rational advantages over the leading neural algorithm backpropagation. The comparative results obtained using receiver operating characteristic (ROC) analysis show that the ability of the convex set based method to infer knowledge is better than that of backpropagation, making it more suitable for use in real diagnostic systems (2 References).

RESULTADO <29>
Score
  ****-
Accession Number
  6505416
Author
  Dansereau R. Kinsner W. Peters JF.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Manitoba Univ., Winnipeg, Man., Canada.
Editor
  Meng M.
Title
  Fuzzy clocks as observers in communication networks with chaos: a fuzzy sets approach.
Source
  Engineering Solutions for the Next Millennium. 1999 IEEE Canadian Conference on Electrical and Computer Engineering (Cat. No.99TH8411). IEEE. Part vol.2, 1999, pp. 1092-7. Piscataway, NJ, USA.
Conference Information
  Engineering Solutions for the Next Millennium. 1999 IEEE Canadian Conference on Electrical and Computer Engineering. Edmonton, Alta., Canada. 9-12 May 1999.
Abstract

  The design of a fuzzy clock as an observer of changing duration during routing of packets in a network with chaos is given. A fuzzy Petri net model of an approximate time window (ATW) is used to model a fuzzy clock. The results of a simulation of the operation of a fuzzy clock in an agent network application is given (7 References).

RESULTADO <30>
Score
  ****-
Accession Number
  5991710
Author
  Losch B.

Author/Editor Affiliation
  Dept. of Ophthalmology, West Virginia Univ., Morgantown, WV, USA.
Editor
  Boom H; Robinson C; Rutten W; Neuman M; Wijkstra H.
Title
  Application of fuzzy sets to the diagnosis of glaucoma.
Source
  Proceedings of the 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. `Bridging Disciplines for Biomedicine' (Cat. No.96CH36036). IEEE. Part vol.4, 1997, pp. 1550-2. New York, NY, USA.
Conference Information
  Proceedings of 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Amsterdam, Netherlands. Int. Federation of Med. & Biol. Eng.. Eur. Soc. Eng. & Med. 31 Oct.-3 Nov. 1996.

Abstract
  Glaucoma is one of the leading causes of blindness in the world. There are several methods of treatment which can impede glaucoma's progression, but there is no way to reverse the damage already done. For this reason, if is important to diagnose glaucoma as early as possible to minimize the damage to the optic nerve. While there are many different tests used to detect the damage caused by glaucoma, there is no one test that looks at all of the possible effects. A methodology for using fuzzy set theory to combine these results into one diagnosis was developed. The methodology included two variations of three different techniques resulting in six different algorithms. The algorithms were verified with a set of patient data and the accompanying physician's diagnosis. The results of the algorithms were compared to determine the ones with a higher degree of correlation to the physician's diagnosis (2 References).

RESULTADO <31>

Score
  ****-
Accession Number
  5665984
Author
  Shraim M. Jaraiedi M.
Editor
  Curry GL; Bidanda B; Jagdale S.
Title
  Development of cost-based control chart for defects using fuzzy sets.
Source
  6th Industrial Engineering Research Conference Proceedings . Inst. Ind. Eng. 1997, pp. 501-6. Norcross, GA, USA.
Conference Information
  6th Industrial Engineering Research Conference Proceedings. Miami Beach, FL, USA. Council of Ind. Eng. 17-18 May 1997.

Abstract
  Traditional attribute control charts for nonconformities or defects, such as c or u charts, assume that all defect types are binary in nature. In this paper, a control chart that addresses the ambiguity (fuzziness) in classifying the observations of the nonbinary or linguistic defect types is developed. This ambiguity resulting from human judgement in attribute inspection is modeled using fuzzy set principles. This control chart will also incorporate the rework cost incurred by all defect types by utilizing Taguchi's quality loss function (QLF). An example showing the superiority of the proposed chart when compared to traditional control charts is given (14 References).

RESULTADO <32>

Score
  ****-
Accession Number

4422853
Author
  Esogbue AO.
Author/Editor Affiliation
  Sch. of Ind. & Syst. Eng., Georgia Inst. of Technol., Atlanta, GA, USA.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Fuzzy sets modelling and optimization as an aid to disaster control systems planning.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 863-76. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  Various forms of disasters, natural and man-made, abound. Although, to some extent, some of these have been exacerbated by modern civilization, various technologies have been involved to control or mitigate their adverse effects. Modeling and optimization based techniques have also been employed. The author outlines some efforts based on fuzzy set theory which are utilized in conjunction with classical methods to enhance the reliability and utility of these efforts. In particular, disasters caused by floods and storm water pollution are used as examples (9 References).

RESULTADO <33>
Score
  ****-
Accession Number
  4363753
Author
  Dubois D. Prade H.
Author/Editor Affiliation
  Inst. de Recherche en Inf., Univ. Paul Sabatier, Toulouse, France.
Title
  Fuzzy sets: a survey of engineering applications.
Source
  Computers & Chemical Engineering, vol.17, suppl.issue, 1993, pp. S373-80. UK.
Conference Information
  ESCAPE-2. European Symposium on Computer Aided Process Engineering-2. Toulouse, France. 5-7 Oct. 1992.
Abstract
  Presents the main facets of the fuzzy set methodology which offers tools both for modelling the partial satisfaction of constraints or criteria and for representing incomplete information. The authors especially emphasize fuzzy control techniques, and their capabilities for interpolation, fuzzy expert systems for reasoning and decision purposes, and qualitative modelling applications (58 References).

RESULTADO <34>
Score
  ****-
Accession Number
  9250953
Author
  Seising R. Bradley J.
Author/Editor Affiliation
  Core Unit for Med. Stat. & Informatics, Med. Univ. of Vienna, Austria.
Editor
  Gabrys B; Howlett RJ; Jain LC.

Title
  From vague or loose concepts to hazy and fuzzy sets - human understanding versus exact science.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part III (Lecture Notes in Artificial Intelligence Vol. 4253). Springer-Verlag. 2006, pp. 374-82. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part III. Bournemouth, UK. 9-11 Oct. 2006.

Abstract
  In this paper we examine important research carried out on vagueness, haziness, and fuzziness in 20th century philosophy, logic, and science. Whereas vagueness was avidly discussed in the fields of logic and philosophy during the first decades of the century - particularly in Vienna and at Cambridge - haziness and fuzziness were concepts of interest in mathematics and engineering during the second half of the 1900s. Our logico-philosophical history covers the work of Bertrand Russell, Max Black, and Ludwig Wittgenstein. The mathematical-technical history deals with the theories founded by Karl Menger and Lotfi Zadeh. We note interesting connections between these two protagonists and their findings as well as their preparatory work for the establishment of human-friendly technology (18 References).

RESULTADO <35>
Score
  ****-
Accession Number
  8715305
Author
  Bukowski L. Feliks J.
Author/Editor Affiliation
  AGH Univ. of Sci. & Technol., Poland.
Editor
  Selvaraj H; Muthukumar V.
Title
  Application of fuzzy sets in evaluation of failure likelihood.
Source
  Proceedings. 18th International Conference on Systems Engineering. IEEE Comput. Soc. 2005, pp. 170-5. Los Alamitos, CA, USA.
Conference Information
  Proceedings. 18th International Conference on Systems Engineering . Las Vegas, NV, USA. 16-18 Aug. 2005.

Abstract
  Estimation of failure likelihood for technical objects is a very difficult process because the information about the process is often uncertain and imprecise. Assessment of risk related in catastrophic damages is very difficult, particularly in systems where damage causes threat of human life or serious economic losses. Methods like FMEA and FMECA applied to evaluation of risk of designed systems do not give the full information about meaning of results of possible failure. Therefore the risk evaluation method, when risk is a product of failure likelihood and degree of failure, was proposed (3 References).

RESULTADO <36>
Score
  ****-
Accession Number
  3129055
Author
  Zimmermann H-J.
Author/Editor Affiliation
  Lehrstuhl fur Unternehmensforschung, Aachen , West Germany.

Editor
  Menges G; Hovelmanns N; Baur E.
Title
  Fuzzy sets in expert systems-present status and future developments.
Source
  Expert Systems in Production Engineering. Proceedings of the International Workshop. Springer-Verlag. 1987, pp. 47-59. Berlin, West Germany.
Conference Information
  Expert Systems in Production Engineering. Proceedings of the International Workshop. Spa, Belgium. 18-22 Aug. 1986.
Abstract

  It is obvious that expert systems are aimed at ill-structured problems. Ill-structured normally indicates uncertainty with respect to the prevailing structure. The author considers the term `uncertainty' as the label of a generic category which includes nondichotomous structures, i.e. structures of the more-or-less type rather than of the yes-or-no type. Before discussing ways to model uncertainty the author briefly discusses sources, appearances and types of uncertainties in expert systems (38 References).

RESULTADO <37>

Score
  ****-
Accession Number
  5577697
Author
  Wojcik ZM. Wojcik BE.
Author/Editor Affiliation
  Smart Machines, San Antonio, TX, USA.
Title
  Intelligence of rough sets inferences vs. statistics, neural nets and fuzzy sets - a methodological viewpoint.
Source
  Symposium on Modelling, Analysis and Simulation. CESA '96 IMACS Multiconference. Computational Engineering in Systems Applications . Gerf EC Lille - Cite Scientific. Part vol.2, 1996, pp. 954-7. Lille, France.
Conference Information
  Proceedings of International Conference on Computational Engineering in Systems Applications. Lille, France. 9-12 July 1996.
Abstract

  The paper reveals some drawbacks of data processing using statistical approaches. The underlying assumption of the randomness of the sample elements causes each element of the population to lose its specific details and thus identity, if it is described in terms of statistical parameters. Assignment of estimated population parameters to each data element (e.g., replacement of each datum by a mean or median) causes blurring of data. Statistical context blurs specific information about objects in question. In contrast, rough sets enhance each object identity by looking for its contexts in available data. Rough sets examine each context and add specific information to each object in question from the context by using the so called "upper approximation". Information about each object is sharpened by the context. Several examples of data processing are presented showing advantages of rough sets over pure statistical approaches. A new neural network is described using the rough !
 sets approach for faster and more accurate data processing (21 References).

RESULTADO <38>

Score
  ****-
Accession Number
  8864864
Author

Tai-hoon Kim. Chang-hwa Hong. Myoung-sub Kim.
Editor
 Slezak D; Yao JT; Peters JF; Ziarko W; Hu X.
Title
 Towards new areas of security engineering.
Source
 Rough Sets, Fuzzy Sets, Data Mining, and Granular Computing. 10th International Conference, RSFDGrC 2005. Proceedings, Part II (Lecture Notes in Artificial Intelligence Vol. 3642). Springer-Verlag. 2005, pp. 568-74. Berlin, Germany.
Conference Information
 Rough Sets, Fuzzy Sets, Data Mining, and Granular Computing. 10th International Conference, RSFDGrC 2005. Proceedings, Part II. Regina, Sask., Canada. 31 Aug.-3 Sept. 2005.
Abstract
Nowadays, computer systems consist of many components such as servers and clients, protocols, services, and so on. Systems connected to network have become more complex, with research focused on performance and efficiency. While most of the attention in system security has been paid to encryption technology and protocols for securing data transactions, a weakness (security hole) in any component may comprise the whole system. Security engineering is needed for eliminating such holes. This paper outlines some novel challenges of security engineering, as well as their relations to other areas of scientific research (10 References).

RESULTADO <39>

Score
 ****-
Accession Number
 9125673
Author
 Ferracuti B. Elishakoff I.
Author/Editor Affiliation
 Dipt. di Ingegneria delle Strutture, Univ. of Bologna, Italy.
Title
 Fuzzy sets based interpretation of the safety factor.
Source
 Fuzzy Sets and Systems, vol.157, no.18, 16 Sept. 2006, pp. 2495-512. Publisher: Elsevier, Netherlands.
Abstract
Safety factor is a universally utilized concept in several branches of engineering. On one hand, most engineers, as it were, neglect uncertainty, but on the other hand, the allowable stress level was introduced long time ago as a ratio of the yield stress to the so-called safety factor to provide the region for the safe utilization of the structure. Thus the uncertainty is introduced into practice by the "back door". This observation led to a considerable literature dedicated to the probabilistic interpretation of the safety factor. The present paper deals with the novel aspect of elucidation of the concept of safety factor through the theory of fuzzy sets, apparently for the first time in the literature. The aim of the paper is to present the safety factor that is uniformly employed by engineers, but in the new light. The safety factor in the fuzzy setting is introduced. The ideas are illustrated on two strength of material problems; simple examples are chosen so as to al!
 low for clearer illustration of ideas. [All rights reserved Elsevier] (23 References).

RESULTADO <40>

Score
 ****-
Accession Number
 8758079
Author
 Seising R.
Author/Editor Affiliation

Dept. of Medizinische Stat. und Informatik, Medizinische Univ. Wien, Austria.
Title
  Fuzzy sets - the 40th anniversary of the fuzzy set theory.
Source
  Elektrotechnik und Informationstechnik, vol.122, no.10, 2005, pp. 355-60. Publisher: Springer-Verlag, Austria.

Abstract
  In this historical contribution on the occasion of the 40th anniversary of the fuzzy set theory we show the roots of fuzzy sets in electrical engineering in the USA in the middle of the 20th century. In that time, information theory, cybernetics, and digital computers prepared the ground for new areas of electrical engineering. Another scientific discipline that established in that time was system theory. The theory of fuzzy sets came into being when its founder, Lotfi Zadeh, intended to generalize system theory to complex systems (19 References).

RESULTADO <41>
Score
  ****-
Accession Number
  8169028
Author
  Seising R.
Author/Editor Affiliation
  Med. Informatics & Stat., Vienna Med. Univ., Austria.
Editor
  Dick S; Kurgan L; Musilek P; Pedrycz W; Reformat M.
Title
  Noninferiority, adaptivity, fuzziness in pattern separation: remarks on the genesis of fuzzy sets.
Source
  NAFIPS 2004. 2004 Annual Meeting of the North American Fuzzy Information Processing Society (IEEE Cat. No.04TH8736). IEEE. Part Vol.2, 2004, pp. 1002-7 Vol.2. Piscataway, NJ, USA.
Conference Information
  NAFIPS 2004. 2004 Annual Meeting of the North American Fuzzy Information Processing Society. Banff, Alta., Canada. IEEE. IEEE Syst., Man, and Cybernetics Soc.. Univ. of Alberta, Faculty of Eng., Dept. of Elec. & Comput. Eng.. Alberta Innovation & Sci.. ASERC. iCORE. Alberta Ingenuity (AI) Fund. Nat. Res. Council (NRC). Pearson Educ. Canada. J. Wiley. McGraw Hill. Elsevier BV. Inst. of Phys.. Res. Studies Press. SUN Microsystems. Springer-Verlag. Login Brothers Canada. 27-30 June 2004.

Abstract
  This paper is a contribution to the history of the theory of fuzzy sets. It results from the author's original research work in the last five years. Basing on studies of many scientific articles, newspapers, letters, etc., and interviews with protagonists and exponents of the theory of fuzzy sets in its first years, the author accrued facts of the history of this mathematical theory. The presented interpretation of this history is a reconstruction of the theory of fuzzy sets as an integral part of the development of system theory in the late 1950s and the first half of the 1960s. It delineates a specific path through the eventful history of this new field of research in the area of electrical engineering (16 References).

RESULTADO <42>
Score
  ****-
Accession Number
  6798728
Author
  Jianping Wu. Brackstone M. McDonald M.
Author/Editor Affiliation
  Dept. of Civil & Environ. Eng., Southampton Univ., UK.
Title

Fuzzy sets and systems for a motorway microscopic simulation model.
Source
  Elsevier. Fuzzy Sets and Systems, vol.116, no.1, 16 Nov. 2000, pp. 65-76. Netherlands.
Conference Information
  Fuzzy Sets in Traffic and Transport Systems. 9th Mini EURO Conference. Budva, Yugoslavia. Sept. 1997.

Abstract
  Microscopic simulation modelling has recently become attractive to researchers in traffic engineering as it appears to offer a cost effective and `safe' way of investigating intelligent vehicle-highway system (IVHS) at a fundamental level, However, the deterministic approach used assumes a consistency of behaviour which may severely detract from model validity. This may be overcome by using a `fuzzy' approach to describe drivers' decisions. This paper describes the development of the fuzzy logic motorway simulation model (FLOWSIM). Emphasis is placed on the research undertaken to establish fuzzy sets and systems for motorway driving behaviour models, the collection of data on appropriate motorway driving behaviour, fuzzy sets and systems calibration, and model validation, Model validation results have shown that the fuzzy model (FLOWSIM) can closely replicate real systems and in test cases have performed better than some common deterministic models such as the `GHR', `Gipp!
 s' and `MISSION' models (14 References).

RESULTADO <43>
Score
  ****-
Accession Number
  6320016
Author
  Perrot N. Bonazzi C. Trystram G. Guely F.
Editor
  Dave RN; Sudkamp T.
Title
  Estimation of the food product quality using fuzzy sets.
Source
  18th International Conference of the North American Fuzzy Information Processing Society - NAFIPS (Cat. No.99TH8397). IEEE. 1999, pp. 487-91. Piscataway, NJ, USA.
Conference Information
  Proceedings of NAFIPS-99: 18th International Conference of the North American Fuzzy Information Processing Society. New York, NY, USA. NAFIPS - North American Fuzzy Inf. Process. Soc.. IEEE Neural Networks Council. IEEE Syst., Man & Cybernetics Soc. 10-12 June 1999.

Abstract
  The estimation of food product quality using fuzzy sets is discussed in this paper through two specific examples: (i) prediction of the luminance of biscuits during a baking process, and (ii) prediction of wet-milling quality of maize during a drying process. Two fuzzy approaches are validated: a black-box approach and a knowledge-based approach to modeling. The results are good and coherent in both cases and the models are robust. Nevertheless, the fuzzy knowledge-based modeling approach is particularly pertinent and adaptable to food process engineering research (15 References).

RESULTADO <44>
Score
  ****-
Accession Number
  5695240
Author
  Magele Ch. Furntratt G. Brandstatter B. Richter KR.
Author/Editor Affiliation
  Inst. of Fundamental & Theory in Electr. Eng, Tech. Univ. Graz, Austria.
Title

Self-adaptive fuzzy sets in multi objective optimization using genetic algorithms.
Source
  Appl. Comput. Electromagnetics Soc. Applied Computational Electromagnetics Society Journal, vol.12, no.2, July 1997, pp. 26-31. USA.
Conference Information
  7th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering. Graz, Austria. Sept. 1996.

Abstract
  Optimization in electrical engineering has attracted an increasing attention over the last few years. Various strategies to solve electromagnetic optimization problems have been introduced, amongst them stochastic, deterministic and hybrid ones. Most of today's real world applications, however, invoke multiple conflicting objectives which should be considered simultaneously. The aim of this paper is to introduce self-adaptive fuzzy sets to treat vector optimization problems (7 References).

RESULTADO <45>
Score
  ****-
Accession Number
  2609858
Author
  Gazdik I.
Author/Editor Affiliation
  IG Innovation, Spanga, Sweden.
Title
  Fault diagnosis and prevention by fuzzy sets.
Source
  IEEE Transactions on Reliability, vol.R-34, no.4, Oct. 1985, pp. 382-8. USA.

Abstract
  Fault diagnosis and prevention in engineering systems are associated with imprecision, which can often be overcome by fuzzy-set theoretic techniques. One such technique is based on the concept of conditioned fuzzy sets: a set of fuzzified influences acting on a system conditions a fuzzy relation existing between those influences and the symptoms of the state of the system. The conditioning materializes as a fuzzy intersection (here extended to cover real phenomena), and a partial ordering of the influence parameters by their importance for each symptom of the state of the system. The application of the conditioning fuzzy technique to a real engineering device is explained. In particular, the author focuses on how to use pertinent fuzzy-set theoretic concepts for creating a fault diagnosis and prevention model of an engineering system, and how to develop the application induced fuzzy intersection formula. A step-by-step summary of the computational procedure, including a sa!
 mple calculation, is included (8 References).

RESULTADO <46>
Score
  ****-
Accession Number
  6306567
Author
  Zimmermann H-J.
Author/Editor Affiliation
  Tech. Hochschule Aachen, Germany.
Editor
  Ruan D; Abderrahim HA; Dihondt P.
Title
  Computational intelligence and nuclear engineering.
Source
  Fuzzy Logic and Intelligent Technologies for Nuclear Science and Industry. Proceedings of the 3rd

International FLINS Workshop. World Scientific. 1998, pp. 1-18. Singapore, Singapore.
Conference Information
  Proceedings of 3rd International FLINS Workshop. Fuzzy Logic and Intelligent Technologies for Nuclear Science and Industry. Antwerp, Belgium. 14-16 Sept. 1998.

Abstract
  Nuclear engineering as well as fuzzy set theory has matured considerably during the last 10 years. While fuzzy set theory has joined forces with neural nets and genetic algorithms in the framework of computational intelligence or soft computing in nuclear engineering new application potentials for computational intelligence have been discovered. Originally fuzzy sets have primarily been used to model nonstochastic uncertainties. In the meantime other facets of computational intelligence have been applied in nuclear engineering. This contribution tries to survey some of the recent developments in this area (46 References).

RESULTADO <47>

Score
  ****-
Accession Number
  5412240
Author
  Dubois D. Prade H. Yager RR.
Author/Editor Affiliation
  IRIT, Univ. Paul Sabatier, Toulouse, France.
Title
  Information engineering and fuzzy logic.
Source
  Proceedings of the Fifth IEEE International Conference on Fuzzy Systems. FUZZ-IEEE '96 (Cat. No.96CH35998). IEEE. Part vol.3, 1996, pp. 1525-31. New York, NY, USA.
Conference Information
  Proceedings of IEEE 5th International Fuzzy Systems. New Orleans, LA, USA. IEEE Neural Networks Council. 8-11 Sept. 1996.

Abstract
  Information engineering constitutes a variety of tasks related to: 1) information processing (data clarification, enhancing, classification, fusion, summarization, and modelling); 2) information retrieving (through querying and reasoning); and 3) information exploitation (for making decision, designing and optimizing). These tasks are becoming increasingly important with the confluence of computer and communication technologies, e.g. on the Internet. Fuzzy set methods offer useful tools for handling these tasks due to their ability to provide a qualitative interface with data and to model graded notions such as uncertainty, preference and similarity, which play a key role in reasoning and decision. We discuss how fuzzy set techniques can contribute to most of the information engineering tasks due to the fuzzy set representation capabilities and their computational facilities. The paper emphasizes the centrality of information and points out the role of fuzzy sets in differ!
 ent information engineering tasks and application areas (5 References).

RESULTADO <48>

Score
  ****-
Accession Number
  4915092
Author
  Mendel JM.
Author/Editor Affiliation
  Signal & Image Process. Inst., Univ. of Southern California, Los Angeles, CA, USA.
Title
  Fuzzy logic systems for engineering: a tutorial.
Source

Proceedings of the IEEE, vol.83, no.3, March 1995, pp. 345-77. USA.

Abstract
  A fuzzy logic system (FLS) is unique in that it is able to simultaneously handle numerical data and linguistic knowledge. It is a nonlinear mapping of an input data (feature) vector into a scalar output, i.e., it maps numbers into numbers. Fuzzy set theory and fuzzy logic establish the specifics of the nonlinear mapping. This tutorial paper provides a guided tour through those aspects of fuzzy sets and fuzzy logic that are necessary to synthesize an FLS. It does this by starting with crisp set theory and dual logic and demonstrating how both can be extended to their fuzzy counterparts. Because engineering systems are, for the most part, causal, we impose causality as a constraint on the development of the FLS. After synthesizing a FLS, we demonstrate that it can be expressed mathematically as a linear combination of fuzzy basis functions, and is a nonlinear universal function approximator, a property that it shares with feedforward neural networks. The fuzzy basis function!
  expansion is very powerful because its basis functions can be derived from either numerical data or linguistic knowledge, both of which can be cast into the forms of IF-THEN rules (87 References).

RESULTADO <49>

Score
  ****-

Accession Number
  4834517

Author
  Law WS. Antonsson EK.

Author/Editor Affiliation
  Eng. Design Res. Lab., California Inst. of Technol., Pasadena, CA, USA.

Title
  Implementing the method of imprecision: an engineering design example.

Source
  Proceedings of the Third IEEE Conference on Fuzzy Systems. IEEE World Congress on Computational Intelligence (Cat. No.94CH3430-6). IEEE. Part vol.1, 1994, pp. 358-63. New York, NY, USA.

Conference Information
  Proceedings of 1994 IEEE 3rd International Fuzzy Systems Conference . Orlando, FL, USA. IEEE Neural Networks Council. IEEE Orlando Sect. 26-29 June 1994.

Abstract
  The imprecise design tool (IDT) presented in this paper implements the method of imprecision, which incorporates the designer's uncertainty in choice into design calculations, using a mathematics derived from fuzzy sets. IDT is intended to be a computational tool for preliminary engineering design (9 References).

RESULTADO <50>

Score
  ****-

Accession Number
  4704904

Author
  Kumar S. Krishna BA. Satsangi PS.

Author/Editor Affiliation
  Dept. of Phys. & Comput. Sci., Dayalbagh Educ. Inst., Agra, India.

Title
  Fuzzy systems and neural networks in software engineering project management.

Source
  Applied Intelligence: The International Journal of Artificial Intelligence, Neural Networks, and Complex Problem-Solving Technologies, vol.4, no.1, March 1994, pp. 31-52. Netherlands.

Abstract
  This article opens up the possibility of applying fuzzy estimation theory and neural networks for the purpose of software engineering project management and control, using Putnam's manpower buildup

index (MBI) estimation model as an example. It is shown that the MBI selection process can be based upon 64 different fuzzy associative memory (FAM) rules. The same rules are used to generate 64 training patterns for a feedforward neural network. The fuzzy associative memory and neural network approaches are compared qualitatively through estimation surfaces. The FAM estimation surfaces are stepped, whereas those from the neural system are smooth. Also, the FAM system sets up much faster than the neural system. FAM rules obtained from logical antecedent-consequent pairs are maintained distinct, giving the user the ability to determine which FAM rule contributed how much membership activation to a "concluded" output (29 References).

RESULTADO <51>
Score
 ****-
Accession Number
 4422856
Author
 Wang Fang-An. Chen Tong.
Author/Editor Affiliation
 Huangshi Inst. of Archit. Design & Res., Hubei, China.
Editor
 Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
 Membership functions related to time effects and their applications in analysis of structural reliability.
Source
 Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 901-9. Amsterdam, Netherlands.
Conference Information
 Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
 Since L.A. Zadeh presented fuzzy sets in 1965 mathematics has entered the blurred fields of human society and technical engineering and has solved the many blurred problems. Fuzzy set are perfectly determined by membership functions. The membership functions presented by Zadeh are not considered to be related to time effects. They are constant at any time. The authors analyse many fuzzy problems and conclude that membership functions are time variable. Membership functions with time effects are applied in the analysis of structural reliability. The theory make the analysis of structural reliability more accurate (6 References).

RESULTADO <52>
Score
 ****-
Accession Number
 10293792
Author
 Ho GTS. Lau HCW. Chung SH. Fung RYK. Chan TM. Lee CKM.
Author/Editor Affiliation
 Dept. of Ind. & Syst. Eng., Hong Kong Polytech. Univ., Hong Kong, China.
Title
 Fuzzy rule sets for enhancing performance in a supply chain network.
Source
 Industrial Management + Data Systems, vol.108, no.7, 2008, pp. 947-72. Publisher: Emerald, UK.
Abstract
 Purpose - This paper aims to develop a genetic algorithm (GA)-based process knowledge integration system (GA-PKIS) for generalizing a set of nearly optimal fuzzy rules in quality enhancement based on the extracted fuzzy association rules in a supply chain network. Design/methodology/approach - The proposed methodology provides all levels of employees with the ability to formulate nearly optimal sets of fuzzy rules to identify possible solutions for eliminating the number of defect items. Findings - The

application of the proposed methodology in the slider manufacturer has been studied. After performing the spatial analysis, the results obtained indicate that it is capable of ensuring the finished products with promising quality. Research limitations/implications - In order to demonstrate the feasibility of the proposed approach, only some processes within the supply chain are chosen. Future studies can advance this research by applying the proposed approach in different in!
 dustries and processes. Originality/value - Because of the complexity of the logistics operations along the supply chain, the traditional quality improvement approaches cannot address all the quality problems automatically and effectively. This newly developed GA-based approach can help to optimize the process parameters along the supply chain network. (15 References).

RESULTADO <53>
Score
 ****-
Accession Number
 10221790
Author
 Ting-Yu Chen. Cing-Chan Chou. Che-Wei Tsui.
Author/Editor Affiliation
 Dept. of Bus. Adm., Chang Gung Univ., Taoyuan, Taiwan.
Title
 Conceptualizing product involvement using fuzzy automata and intuitionistic fuzzy sets.
Source
 2008 IEEE 16th International Conference on Fuzzy Systems (FUZZ-IEEE). IEEE. pp. 805-11. Piscataway, NJ, USA.
Conference Information
 2008 IEEE 16th International Conference on Fuzzy Systems (FUZZ-IEEE). Hong Kong, China. 1-6 June 2008.
Abstract
 Product involvement has been developed for a long period of time, and has been mature gradually. Intuitionistic fuzzy sets contain the concept of interval that could be used to solve the uncertain problems when respondents have uncertainty in answering questions. The intuitionistic fuzzy automata are mathematical machine for a finite state with a dynamic system operating in discrete time. The operation of the intuitionistic fuzzy automata is similar to the operation of individuals&psila; product involvement. Both of them do have the internal state to transform output state. This research tried to utilize the intuitionistic fuzzy automata to develop an integrated model of product involvement, and search for which one is the most suitable product involvement scale when we discuss product involvement in the intuitionistic fuzzy automata. (31 References).

RESULTADO <54>
Score
 ****-
Accession Number
 10122305
Author
 Wang Ya-lin. Yu Wen-ning. Gui Wei-hua. Yang Chun-hua.
Author/Editor Affiliation
 Coll. of Inf. Sci. & Eng., Central South Univ., Changsha, China.
Title
 Vibration fault on-line diagnosis of hydroelectric generating sets based on fractal theory and fuzzy neural networks.
Source
 Application Research of Computers, vol.24, no.12, Dec. 2007, pp. 231-4. Publisher: Editorial Board of Application Research of Computers, China.
Abstract
 Considering the fuzzy and coupling characteristics of fault diagnosis for hydroelectric generating sets,

this paper proposed a vibration fault on-line diagnosis method based on fuzzy neural networks(FNN) . At first, fractal dimension was applied to extracting structure feature of shaft orbit, which reflected vibration state of rotor, to realize figure quantification for online recognition of FNN. Aiming at six typical vibration faults, including shaft orbit, four categories in all fourteen fault symptoms were summarized, their fuzzy attributes were analyzed and the corresponding fuzzifications were described. Then a six-layer FNN was established to express fuzzy inference from symptom to fault, and its learning algorithm was provided to modify network parameter. By self-learning, FNN could guarantee a higher precision of the on-line diagnosis. The analytical results of cases verify the feasibility of the diagnosis system based on FNN. (10 References).

RESULTADO <55>
Score
  ****-
Accession Number
  9475444
Author
  Achiche S. Balazinski M. Przybylo A. Baron L.
Author/Editor Affiliation
  Dept. of Mech. Eng., Ecole Polytech. de Montreal, Que., Canada.
Title
  Predefining numbers of fuzzy sets for genetically generated fuzzy knowledge bases using clustering techniques: application to tool wear monitoring.
Source
  NAFIPS 2006-2006 Annual Meeting of the North American Fuzzy Information Processing Society (IEEE Cat. No.06TH8882). IEEE. pp. 6. Piscataway, NJ, USA.
Conference Information
  NAFIPS 2006-2006 Annual Meeting of the North American Fuzzy Information Processing Society. Montreal, Que., Canada. 3-6 June 2006.
Abstract
  One of the problems surrounding fuzzy knowledge base generation using genetic algorithms is finding an optimal number of fuzzy sets for each premise. A genetic algorithm developed by the authors for the automatic generation of fuzzy knowledge bases uses a multi-objective method combining error minimization and simplification. This paper proposes solutions based on cluster analysis and validation indices for the numbers of clusters used in predefining the numbers of fuzzy sets. Two different validation indices as well as a combination of one of these with the multi-objective method are compared to the original multi-objective method on both synthetic and experimental data. Results obtained with the proposed techniques showed a considerable improvement over the multiobjective method on both data sets (27 References).

RESULTADO <56>
Score
  ****-
Accession Number
  9022737
Author
  Jiang Yajun. Lou Zhenliang. Li Minghui.
Author/Editor Affiliation
  Dept. of Plasticity Forming Eng., Shanghai Jiao Tong Univ., China.
Title
  Application of fuzzy and rough sets theory in the optimization of machining parameters for mold milling operations.
Source
  International Journal of Advanced Manufacturing Technology, vol.28, no.11-12, 2006, pp. 1071-7. Publisher: Springer-Verlag, UK.
Abstract

NC milling operation has become one of the main means of mold manufacturing in recent years, and the determination of milling conditions is important to assure the quality and minimize the costs of molds. This paper first constructs an optimization model of machining parameters for mold milling operations, focusing on minimizing the production costs. Then, based on the properties of the machining parameters database, it also proposes an extended model of fuzzy and rough sets theory for incomplete information systems, including incomplete continuous attribute values, and applies the model to rules learning from the machining database. Thus, by rule reasoning, the feasible solution space of optimization model can be easily established. At last, an example is presented to detail the optimization of machining parameters in the case of the cavity milling of an injection plastic mold (16 References).

RESULTADO <57>

Score
 ****-
Accession Number
 8966980
Author
 Hongsheng Su. Qunzhan Li.
Author/Editor Affiliation
 Inst. of Electr. Eng., Southwest Jiaotong Univ., Chengdu, China.
Editor
 Cheng M; Lin H.
Title
 Fuzzy neural classifier for fault diagnosis of transformer based on rough sets theory.
Source
 Proceedings of the Eighth International Conference on Electrical Machines and Systems (IEEE Cat. No. 05EX1137). IEEE. Part Vol. 3, 2005, pp. 2223-7 Vol. 3. Piscataway, NJ, USA.
Conference Information
 Proceedings of the Eighth International Conference on Electrical Machines and Systems. Nanjing, China. China Electrotechnical Soc.. Chinese Soc. for Electr. Eng.. Natural Sci. Found. of China. IEEE Beijing Sect.. Korean Inst. of Electr. Eng.. Inst. of Electr. Eng. of Japan. 27-29 Sept. 2005.

Abstract
 Due to enduring more disturbance such as environment varieties and surveying interference and information transmission mistakes as well as arisen error while processing data in surveying and monitoring state information of transformer, thus uncertain and incomplete information and ill data may be produced. So the study how to apply these data to achieve the approving effect is a very significant job for fault diagnosis of transformer. Moreover, real time is another important characteristic so as to meet high-speed diagnosis requirements. Based on points, a fuzzy neural classifier is proposed based on rough sets theory in this paper, the method firstly considers all sorts of gas capacities in transformer oil to form Rogers ratio diagnosis table, then rough sets is applied to implement attributes reduction and a simplified decision table is got, fuzzy algorithm with Gauss subjection function makes attribute values fuzzy, afterwards, fuzzy attributes are connected to input ne!
 urons of neural classifier to make patterns classified, finally, a fuzzy neural classifier is formed for fault diagnosis for transformer. The practical results show the approach can effectively minimize the problem-solving scale and improve real time properties, and owns high anti-inference capabilities, and is an effective method for fault diagnosis of transformer (12 References).

RESULTADO <58>

Score
 ****-
Accession Number
 8887214
Author
 Fu Xiangqian. Jiang Jin. Sun Muqun. Kuang Meizhen.
Author/Editor Affiliation
 Coll. of Power & Mech. Eng., Wuhan Univ., China.

Title
 Application of fuzzy diagnosis to fault diagnosis system of hydraulic generator sets.
Source
 Journal of Huazhong University of Science and Technology, vol.34, no.1, Jan. 2006, pp. 81-3. Publisher: Editorial Board J. Huazhong Univ. of Sci. & Technol, China.

Abstract
 The fuzzy diagnosis system of the hydraulic generator sets was introduced. The fuzzy correlation matrix of fault diagnosis was constructed. The introduced fuzzy information was applied to the diagnosis system of a hydropower station. It was enriched and validated in the process of the fault diagnosis system. In these years of the application of the diagnosis system, some problems as the misalignment of the rotor-bearing and eccentric draft tube surges are diagnosed, which becomes a valuable reference for the maintenance and management. The results of application state that the application of fault diagnosis method in power station sets diagnosis system is effective, and the fuzzy relation matrix is enriched and validated in the process of the diagnosis system was carried into execution (4 References).

RESULTADO <59>
Score
 ****-
Accession Number
 8276815

Author
 Dong Li-xin. Xiao Deng-ming. Wang Qiao-hua. Lu Gan-yun. Liu Yi-lu.
Author/Editor Affiliation
 Inst. of Electron. Inf. & Electr. Eng., Shanghai Jiao Tong Univ., China.
Title
 Fuzzy rough sets method application research for fault diagnosis of power transformer.
Source
 Proceedings of the CSU-EPSA, vol.16, no.5, Oct. 2004, pp. 1-19. Publisher: Editorial Board of the Proceedings of the CSU-EPSA, China.

Abstract
 In this paper, the history fault data of power transformer is processed with fuzzy and scatter method. The processed data is used to structure the fault diagnosis decision-making table which is treated as "knowledge database". This paper introduced rough sets data mining method to take potential diagnosis rule from the fault diagnosis decision-making table of power transformer. These rules can offer effective fault diagnosis service for power transformer (9 References).

RESULTADO <60>
Score
 ****-
Accession Number
 7969436

Author
 Mistakidis ES. Georgiou DN.
Author/Editor Affiliation
 Dept. of Civil Eng., Univ. of Thessaly, Volos, Greece.
Title
 Fuzzy sets in seismic inelastic analysis and design of reinforced concrete frames.
Source
 Advances in Engineering Software, vol.34, no.10, Oct. 2003, pp. 589-99. Publisher: Elsevier, UK.

Abstract
 A new approach to the problem of estimating the structural response of systems with uncertain characteristics is presented. The approach is based on the theory of fuzzy sets, which allow the designers to describe the uncertain variables. The method is presented briefly in the following. First, the uncertain parameters are expressed as fuzzy numbers with specific characteristics. The concurrent effect of the various uncertainties on the structural response is obtained by applying methodologies of the theory of

fuzzy sets. Then the output parameters of the design process as, e.g. the displacements or the stresses of the structure are obtained as new fuzzy numbers expressing the uncertainties of the output parameters. Finally, numerical applications on a number of relatively simple structural systems give an idea of the applicability of the proposed methodology in various aspects of the design process (12 References).

RESULTADO <61>
Score
 ****-
Accession Number
 6798722
Title
 Fuzzy Sets in Traffic and Transport Systems. 9th Mini EURO Conference.
Source
 Elsevier. Fuzzy Sets and Systems, vol.116, no.1, 16 Nov. 2000, Netherlands.
Conference Information
 Fuzzy Sets in Traffic and Transport Systems. 9th Mini EURO Conference. Budva, Yugoslavia. Sept. 1997.
Abstract
 The conference covers various aspects of fuzzy sets in traffic and transport systems, including: traffic signal control; dial-a-ride routing and scheduling; air traffic control; motorway simulation; traffic assignment; and railway routing

RESULTADO <62>
Score
 ****-
Accession Number
 6708969
Author
 Han L. Peters JF. Ramanna S. Zhai R.
Author/Editor Affiliation
 Dept. of Electr. & Comput. Eng., Manitoba Univ., Winnipeg, Man., Canada.
Editor
 Zhong N; Skowron A; Ohsuga S.
Title
 Classifying faults in high voltage power systems: a rough-fuzzy neural computational approach.
Source
 New Directions in Rough Sets, Data Mining, and Granular-Soft Computing. 7th International Workshop, RSFDGrC'99. Proceedings (Lecture Notes in Artificial Intelligence Vol.1711). Springer-Verlag. 1999, pp. 47-54. Berlin, Germany.
Conference Information
 New Directions in Rough Sets, Data Mining, and Granular-Soft Computing. 7th International Workshop, RSFDGrC'99. Yamaguchi, Japan. Kayamori Found. Inf. Sci. Adv.. U.S. Air Force Asian Office of Aerosp. Res. & Dev.. et al. 9-11 Nov. 1999.
Abstract
 This paper introduces an approach to classifying faults in high voltage power system with a combination of rough sets and fuzzy sets in a neural computing framework. Typical error signals important for fault detection in power systems are considered. Features of these error signals derived earlier using fast Fourier transform analysis, amplitude estimation and waveform type identification, provide inputs to a neural network used in classifying faults. A form of rough neuron with memory is introduced. A brief overview of a rough-fuzzy neural computational method is given. The learning performance of a rough-fuzzy and pure fuzzy neural network are compared (8 References).

RESULTADO <63>
Score
 ****-

Accession Number
  6694185
Author
  Dodagoudar GR. Venkatachalam G.
Author/Editor Affiliation
  Dept. of Civil Eng., IIT, Bombay, India.
Title
  Reliability analysis of slopes using fuzzy sets theory.
Source
  Computers and Geotechnics, vol.27, no.2, 2000, pp. 101-15. Publisher: Elsevier, UK.
Abstract
  The stability assessment of slopes is difficult because of many uncertainties. A possibilistic approach using fuzzy sets allows for a logical and systematic analysis of the uncertainties. In this paper an attempt has been made to present a new approach for the stability analysis of slopes incorporating fuzzy uncertainty. Uncertain parameters are expressed as fuzzy sets. A methodology has been presented in the study to process the fuzzy uncertainties in a slope reliability analysis. Fuzzy uncertainty is incorporated in the estimated probability of failure. A numerical example of the finite earth slope problem illustrates the methodology. The approach allows assessment of the likelihood that a particular slope section will have a higher failure probability than the failure probability of the "critical" deterministic failure surface (17 References).

RESULTADO <64>
Score
  ****-
Accession Number
  6606355
Author
  Bucur I. Tatar F.
Author/Editor Affiliation
  FCNE, Cernavoda, Romania.
Title
  The application of fuzzy sets theory in expert systems to nuclear power plant using simulation techniques.
Source
  UPB Buletin Stiintific Politehnica University of Bucharest, Scientific Bulletin Series C (Electrical Engineering), vol.60, no.3-4, 1998, pp. 45-52. Publisher: `Politeh.' Univ. Bucharest, Romania.
Abstract
  One of the most promising application areas for expert systems are as an advisor to process plant operators. This paper investigates the possibility of applying fuzzy sets theory using simulation techniques on a simple model to a nuclear process. This task requires new approaches toward the creation of knowledge bases, the real time use of knowledge for inference and other requirements. The simulation on moderator temperature control revealed that there is a good chance that fuzzy sets theory can be used to improve nuclear process supervision (2 References).

RESULTADO <65>
Score
  ****-
Accession Number
  6412056
Author
  Juang CH. Ni SH. Lu PC.
Author/Editor Affiliation
  Dept. of Civil Eng., Clemson Univ., SC, USA.
Title
  Training artificial neural networks with the aid of fuzzy sets.

Source

  Computer-Aided Civil and Infrastructure Engineering, vol.14, no.6, Nov. 1999, pp. 407-15. Publisher: Blackwell Publishers, USA.

Abstract

  This article presents a technique of training artificial neural networks (ANNs) with the aid of fuzzy sets theory. The proposed ANN model is trained with field observation data for predicting the collapse potential of soils. This ANN model uses seven soil parameters as input variables. The output variable is the collapsibility (whether the soil is collapsible) or the collapse potential (if the soil is judged collapsible). The proposed technique involves a module for preprocessing input soil parameters and a module for postprocessing network output. The preprocessing module screens the input data through a group of predefined fuzzy sets, and the postprocessing module, on the other hand, "defuzzifies" the output from the network into a "nonfuzzy" collapse potential, a single value. The ANN with the proposed preprocessing and post-process techniques is shown to be superior to the conventional ANN model in the present study (19 References).

RESULTADO <66>

Score

  ****-

Accession Number

  5982041

Author

  Wasfy TM. Noor AK.

Author/Editor Affiliation

  Center for Adv. Comput. Technol., NASA Langley Res. Center, Hampton, VA, USA.

Title

  Application of fuzzy sets to transient analysis of space structures.

Source

  Finite Elements in Analysis and Design, vol.29, no.3-4, 15 June 1998, pp. 153-71. Publisher: Elsevier, Netherlands.

Abstract

  An application of fuzzy sets, in conjunction with finite elements, to the transient analysis of a precision-deployable space structure is presented. The structural members are modeled by using beam finite elements, and the structure's latch joint is modeled by using a spring-damper-Coulomb friction element. Two types of transient response simulations are performed: slow transient load-deflection response and transient impulse response. The first simulation is used to evaluate the stiffness and buckling loads at the structure's tip. The second simulation is used to evaluate the structure's natural frequencies, mode shapes and the precision of the final shape. For each simulation the possibility distributions of various response quantities are obtained. Fuzzy sets are used to represent three beam properties, namely: damping coefficient, bending stiffness, and axial stiffness; as well as two joint parameters: Coulomb friction force and damping coefficient. Fuzzy set technique!
 s provide an insight into the range of possible responses associated with the combined selected variations in the system parameters (21 References).

RESULTADO <67>

Score

  ****-

Accession Number

  5840721

Author

  Chan LW. Leung TP.

Author/Editor Affiliation

  Kwun Tong Tech. Inst., Kowloon, Hong Kong.

Title

  Optimization of an electrical interconnect system using axiomatics and fuzzy sets.

Source

Abstract
The application of axiomatics and fuzzy sets in design optimization has been demonstrated by an electrical interconnect system of an inkjet printer. Using the independence axiom, the designer transforms abstract user requirements into practical design solutions. Two alternatives of an interconnect subsystem, leadframe contact geometry, are selected for performance comparison. An objective function and constraints for the subsystem are formulated. The subjective aspects of design margin in the constraints are modelled by fuzzy sets. A mathematical programming technique is used to search the values of the two design parameters, gold-plating thickness and leadframe deflection, that maximize the respective objective functions. When the values are substituted into the objective functions, the results show that a bent leadframe design is preferable to a flat-shape design (17 References).

RESULTADO <68>

Score
 ****-
Accession Number
 5791861
Author
 Alvarenga MAB. Martinez AS. Schirru R.
Author/Editor Affiliation
 Comissao Nacional de Energia Nucl., Rio de Janeiro, Brazil.
Title
 Adaptive vector quantization optimized by genetic algorithm for real-time diagnosis through fuzzy sets.
Source
Abstract
The accurate diagnosis of accidents in a nuclear power plant has fundamental importance for decision making necessary to mitigate their consequences for the power plant as well as for the general public, on the basis of emergency planning. Two main characteristics should be achieved in this kind of diagnostics, namely, real-time features and adaptive capacity. The first characteristic gives the operators the possibility of predicting degraded operations and monitoring critical safety functions related to that specific situation. The second one allows the system to be able to deal with accidents that were not incorporated in the training sample set, in which case the operators are unprepared because they were nor trained to face an event that they did not observe even in simulator training. The Three Mile Island accident is a classic one to demonstrate that these kinds of events are possible. Several methodologies have been tried to match those characteristics. While the fi!
 rst one is achieved through the permanent evolution of new faster processors, the second one can only be achieved through the simulation of human cognitive processes, which show higher adaptive behavior. Our model utilizes a neural network, fuzzy sets, and a genetic algorithm to simulate that behavior (7 References).

RESULTADO <69>

Score
 ****-
Accession Number
 5565549
Author
 De Vita R. Santillo LC. Savino M.
Author/Editor Affiliation
 Dept. of Mater. & Production Eng., Univ. of Naples Federico II, Italy.
Editor
 Bonarini A; Mancini D; Masulli F; Petrosino A.
Title
 Environmental impact assessment for industrial plants: a new approach with fuzzy sets techniques.
Source

Proceedings of the WILF '95. Italian Workshop on Fuzzy Logic 1995. New Trends in Fuzzy Logic. World Scientific. 1996, pp. 215-26. Singapore, Singapore.

Conference Information

Proceedings of the WILF '95 - Italian Workshop on Fuzzy Logic 1995. New Trends in Fuzzy Logic. Naples, Italy. Assoc. Italiana per l'Intelligenza Artificiale. Assoc. Electron., Italiana. et al. 21-22 Sept. 1995.

Abstract

During the last ten-year period the high social awareness in regard to environmental problems and the ever-decreasing level of natural resources, have led to EC laws concerning the introduction of special procedures directed to environmental prevention called environmental impact evaluation (EIE). An EIE procedure, such as has been structured by the EC regulation, can be divided into two fundamental stages: environmental impact analysis, environmental impact evaluation. In order to develop a correct and objective impact evaluation, the most important stage is the environmental impact analysis (EIA). Particularly the development of an EIA for an industrial plant concerns, after the necessary data acquisition regarding project requirements and environmental restriction, the characterisation of the best solution considering design and environment requirements. An EIA method, for industrial plants, using fuzzy sets techniques is proposed. This method is able to go over vaguene!
ss that is due to the evaluation of information not directly quantifiable in a cardinal metric (quantification is made only by a qualitative or ordinal scale) or to the presence of incomplete data (measurement is made with terms such as "about", "nearly", "approximately", etc.). This method has been developed though prototype software and has been tested for the analysis of real applicative cases (10 References).

RESULTADO <70>

Score
 ****-

Accession Number
 5065687

Author
 Antonakopoulos T. Agavanakis K. Makios V.

Author/Editor Affiliation
 Dept. of Electr. Eng., Patras Univ., Greece.

Title
 CASE tools evaluation: an automatic process based on fuzzy sets theory.

Source
 Proceedings. Sixth IEEE International Workshop on Rapid System Prototyping. Shortening the Path from Specification to Prototype (Cat. No.95TB8078). IEEE Comput. Soc. Press. 1995, pp. 140-6. Los Alamitos, CA, USA.

Conference Information
 Proceedings Sixth IEEE International Workshop on Rapid System Prototyping. Shortening the Path from Specification to Prototype. Chapel Hill, NC, USA. IEEE Comput. Soc. Tech. Committee on Design Autom.. IEEE Comput. Soc. Tech. Committee on Test Technol. 7-9 June 1995.

Abstract
 This paper describes the architecture of a software tool for CASE products evaluation. The tool is based on the ISO software product quality evaluation process model, which has been extended using fuzzy sets theory for achieving more reliable results. The evaluation tool can determine which CASE product is the most appropriate for a specific application and can generate the initial models of the system for further processing by the selected CASE tool. This is achieved by using an inference process based on fuzzy rules for mapping user's specifications into software metrics. Fuzzy sets are employed to express concepts such as the strength of each criterion involved in the evaluation, its relative importance, etc. The evaluation tool architecture is modular while the fuzzy rules, the definition of the used fuzzy sets and the tool database can be easily modified by the user for accurately describing his requirements (7 References).

RESULTADO <71>

Score
 ****-

Accession Number
  4719520
Author
  Pham DT. Wu MH.
Author/Editor Affiliation
  Sch. of Electr., Electron. & Syst. Eng., Univ. of Wales Coll. of Cardiff, UK.
Title
  Diagnosis of faults in the fuel injection system of a forging machine using fuzzy sets theory.
Source
  Proceedings of the Institution of Mechanical Engineers, Part I (Journal of Systems and Control Engineering), vol.208, no.I2, 1994, pp. 123-9. UK.
Abstract
  This paper describes a diagnostic system for the fuel injection module in a high-speed forging machine. The system is based on the use of fuzzy sets techniques, with a fuzzy set representing each fault in the module. Empirical membership functions for the different fuzzy sets are employed to locate faults according to conditions observed on the forging machine. Two types of faults can be handled: faults due to one or more values in the fuel injection module remaining in their unenergized state and faults caused by a value being stuck in the energized state. Details of the diagnostic methods for both fault types are presented following a brief review of the operating principle of the forging machine (12 References).

RESULTADO <72>
Score
  ****-
Accession Number
  4554738
Author
  Feng Hongjuan. Wang Shoujue.
Author/Editor Affiliation
  Inst. of Semicond., Acad. Sinica, Beijing , China.
Title
  On the new fuzzy control algorithm with self-optimizing fuzzy sets and self-regulating control rules and the hardware realization of universal fuzzy controller.
Source
  Acta Electronica Sinica, vol.21, no.8, Aug. 1993, pp. 82-5. China.
Abstract
  The authors present a new fuzzy control algorithm with self-optimizing fuzzy sets and self-regulating control rules. They also present the hardware realization of the universal fuzzy controller, whose principle is that the optimal fuzzy sets and control rules are determined by software and the control functions are realized by continuous logic circuits (CLC). Compared with an optimized DDC controller, this fuzzy controller (FC) is simpler and more applicable, and the universality of the hardware design creates some conditions for further implementation of fuzzy control (6 References).

RESULTADO <73>
Score
  ****-
Accession Number
  4398511
Author
  Kasztenny B.
Author/Editor Affiliation
  Wroclaw Tech. Univ., Poland.
Title
  Primary protective relays with elements of fuzzy sets theory.
Source
  Modelling, Measurement & Control A, vol.50, no.1, 1993, pp. 17-28. France.

Abstract

   The performance of digital relays may be substantially improved if the decision making is based on elements of artificial intelligence. The mathematical tool which suits very well the purpose of designing the intelligent relay is the theory of fuzzy sets. It enables one to consider signals and criterial quantities as fuzzy numbers, to introduce the concept of fuzzy settings and to use fuzzy logic for the final decision making (8 References).

RESULTADO <74>

Score
 ****-
Accession Number
 3903325
Author
 Furuta H. Ozaki Y. Shiraishi N.
Author/Editor Affiliation
 Fac. of Eng., Kyoto Univ., Japan.
Title
 Application of fuzzy sets theory to fatigue analysis of RC bridge deck.
Source
 Journal of the Society of Materials Science, Japan, vol.40, no.450, March 1991, pp. 270-5. Japan.

Abstract

   An attempt was made to apply the fuzzy sets theory to the fatigue analysis of reinforced concrete (RC) bridge decks. The <i>S-N</i> curve was modeled through the fuzzy regression theory instead of using probabilistic concepts. This was because the concept of frequency is useless in case of having few data, i.e., about ten samples. By using the fuzzy regression analysis, it was possible to develop a possibility model to draw up an <i>S-N</i> curve and to estimate the fatigue life of RC bridge deck in a more realistic and significant manner (10 References).

RESULTADO <75>

Score
 ****-
Accession Number
 3593522
Author
 Lea RN.
Author/Editor Affiliation
 NASA/Johnson Space Center, Houston, TX, USA.
Title
 Applications of fuzzy sets to rule-based expert system development.
Source
 Telematics and Informatics, vol.6, no.3-4, 1989, pp. 403-6. UK.
Conference Information
 1989 Goddard Conference on Space Applications of Artificial Intelligence. Greenbelt, MD, USA. Bendix Field Eng. Corp.. Comput. Sci. Corp.. Martin-Marietta Data Syst.. Sci. Applications Res. 16-17 May 1989.

Abstract

   Problems of implementing rule-based expert systems using fuzzy sets are considered. A fuzzy logic software development shell is used that allows inclusion of both crisp and fuzzy rules in decision making and process control problems. Results are given that compare this type of expert system and human expert in some specific applications. Advantages and disadvantages of such types are discussed (6 References).

RESULTADO <76>

Score
 ****-
Accession Number

3009685
Author
  Prade H.
Author/Editor Affiliation
  Univ. Paul Sabatier, Toulouse, France.
Title
  The treatment of uncertainty in knowledge-based systems: using fuzzy sets and possibility theory.
Source
  1st International Symposium on Artificial Intelligence and Expert Systems. AMK Berlin. 1987, pp. 45-78. Berlin, West Germany.
Conference Information
  1st International Symposium on Artificial Intelligence and Expert Systems. Berlin, West Germany. 18-22 May 1987.

Abstract
  Knowledge representation issues related to the modelling of imprecision and uncertainty are discussed in the framework of possibility theory. Differences and relations between possibility theory, fuzzy sets, probability theory and Shafer evidence theory are presented. Then patterns of reasoning and inference and control procedures are studied in presence of uncertainty and imprecision using a possibilistic approach. The basic ideas and the main trends are emphasized rather than the mathematical and logical foundations or the technical details of implementation which can be found in the references (61 References).

RESULTADO <77>
Score
  ****-
Accession Number
  2960443
Author
  Dubois D. Prade H.
Author/Editor Affiliation
  Langages et Syst. Inf., Univ. Paul Sabatier, Toulouse, France.
Title
  Twofold fuzzy sets and rough sets-some issues in knowledge representation.
Source
  Fuzzy Sets and Systems, vol.23, no.1, July 1987, pp. 3-18. Netherlands.

Abstract
  Deals with the representation of sets where the membership of some elements may be ill-known rather than just a matter of degree as in a fuzzy set. The notion of a twofold fuzzy set is introduced when the relevant information for determining the membership status is incomplete. A twofold fuzzy set is made of a nested pair of fuzzy sets. Twofold fuzzy sets are compared from a formal and from a semantical point of view with other proposals and particularly with the notion of a rough set recently introduced by Pawlak. Set operations on twofold fuzzy sets are discussed and the cardinality of a twofold fuzzy set is defined. Twofold fuzzy relations are also introduced. Finally, various applications of twofold fuzzy sets in knowledge representation are briefly discussed (28 References).

RESULTADO <78>
Score
  ****-
Accession Number
  2911405
Author
  Li Yue-jing.
Author/Editor Affiliation
  Shanghai Inst. of Mech. Eng., China.
Title

The automatic recognition of mechanical parts on the membership's principle of fuzzy sets.
Source
  Proceedings of the SPIE - The International Society for Optical Engineering, vol.697, 1986, pp. 175-80. USA.
Conference Information
  Applications of Digital Image Processing IX. San Diego, CA, USA. SPIE. 20-22 Aug. 1986.

Abstract
  Explains the principle of using fuzzy mathematics to recognize patterns ad the method of automatic recognition of mechanical parts (such as screws and screw caps) based on the membership's principle of fuzzy sets. The author looks briefly at the recognition system and the recognition classifier designed by the Z-80 microcomputer. The pattern recognition program is presented (12 References).

RESULTADO <79>

Score
  ****-
Accession Number
  2813845
Author
  Hinkle A. Watada J. Yao JTP.
Author/Editor Affiliation
  Sch. of Civil Eng., Purdue Univ., West Lafayette, IN, USA.
Editor
  Bandler W; Kandel A.
Title
  Linguistic assessment of fatigue damage of welded structures.
Source
  Recent Developments in the Theory and Applications of Fuzzy Sets. Proceedings of NAFIPS '86 - 1986 Conference of the North American Fuzzy Information Processing Society. Florida State Univ. 1986, pp. 200-24. Tallahassee, FL, USA.
Conference Information
  Recent Developments in the Theory and Applications of Fuzzy Sets. Proceedings of NAFIPS '86 - 1986 Conference of the North American Fuzzy Information Processing Society. New Orleans, LA, USA. Louisiana State Univ.. Tulane Univ. 2-4 June 1986.

Abstract
  Recently, the practice of joining structural members by the process of welding has become more common in the construction industry. There exist various types of defects such as slag inclusions and voids in welded structures. Although it is possible to detect such defects with the use of X-ray and ultrasonic devices, their size and shape are not easily quantifiable in a precise manner. For complex structures, uncertainties associated with the fatigue phenomena cause difficulties in the development of practical assessment procedures. In this paper, an attempt is made to demonstrate that linguistic assessment techniques (Watada, Fu, and Yao, 1984) are useful for the fatigue damage evaluation of welded joints. Fuzzy sets are used to describe imprecise experimental results (15 References).

RESULTADO <80>

Score
  ****-
Accession Number
  5130815
Author
  Sedelow WA Jr. Sedelow SY.
Author/Editor Affiliation
  Arkansas Univ., Little Rock, AR, USA.
Editor
  Ziarko WP.
Title

Knowledge recognition, rough sets, and formal concept lattices.
Source
  Rough Sets, Fuzzy Sets and Knowledge Discovery. Proceedings of the International Workshop on Rough Sets and Knowledge Discovery (RSKD'93). Springer-Verlag. 1994, pp. 52-61. Berlin, Germany.
Conference Information
  Proceedings of International Workshop on Rough Sets and Knowledge Discovery (RSKD-93). Banff, Alta., Canada. 12-15 Oct. 1993.
Abstract
  The authors present a general discussion of knowledge recognition, rough sets and formal concept lattices. These topics are of importance to knowledge engineering and database theory (23 References).

RESULTADO <81>
Score
  ****-
Accession Number
  4931856
Author
  Wang J. Yang JB. Sen P.
Author/Editor Affiliation
  Eng. Design Centre, Newcastle upon Tyne Univ., UK.
Title
  Safety analysis and synthesis using fuzzy sets and evidential reasoning.
Source
  Reliability Engineering & System Safety, vol.47, no.2, 1995, pp. 103-18. UK.
Abstract
  This paper presents a new methodology for safety analysis and synthesis of a complex engineering system with a structure that is capable of being decomposed into a hierarchy of levels. In this methodology, fuzzy set theory is used to describe each failure event and an evidential reasoning approach is then employed to synthesise the information thus produced to assess the safety of the whole system. Three basic parameters-failure likelihood, consequence severity and failure consequence probability, are used to analyse a failure event. These three parameters are described by linguistic variables which are characterised by a membership function to the defined categories. As safety can also be clearly described by linguistic variables referred to as the safety expressions, the obtained fuzzy safety score can be mapped back to the safety expressions which are characterised by membership functions over the same categories. This mapping results in the identification of the safety!
  of each failure event in terms of the degree to which the fuzzy safety score belongs to each of the safety expressions. Such degrees represent the uncertainty in safety evaluations and can be synthesised using an evidential reasoning approach so that the safety of the whole system can be evaluated in terms of these safety expressions. Finally, a practical engineering example is presented to demonstrate the proposed safety analysis and synthesis methodology (21 References).

RESULTADO <82>
Score
  ****-
Accession Number
  3893379
Author
  David AK. Zhao Rongda.
Author/Editor Affiliation
  Hong Kong Polytech., Kowloon, Hong Kong.
Title
  An expert system with fuzzy sets for optimal planning [of power system expansion].
Source
  IEEE Transactions on Power Systems, vol.6, no.1, Feb. 1991, pp. 59-65. USA.
Abstract

A description is given of a long-range power system expansion planning program which incorporates three significant features. First, it is an optimizing program and uses dynamic programming for tracking an optimal expansion strategy. Second, it contains a rule-based decision making mechanism to incorporate engineering judgment based on design office experience and expert opinions. Third, since some of these considerations have to be cast in qualitative terms and need to balance many conflicting requirements, fuzzy set theory has been used to formulate a portion of the decision making procedure (5 References).

RESULTADO <83>
Score
****-
Accession Number
  10389292
Author
  Zehong Li. Weibo Liang.
Author/Editor Affiliation
  Sch. of Bus. Adm., North China Electr. Power Univ., Baoding, China.
Title
  The contract risk recognition of construction project based on rough set theory and fuzzy support vector machine.
Source
  2008 International Conference on Risk Management & Engineering Management. IEEE. pp. 487-91. Piscataway, NJ, USA.
Conference Information
  2008 International Conference on Risk Management & Engineering Management. Beijing, China. 4-6 Nov. 2008.

Abstract
  This paper is to introduce a model. In the analysis of contract risk recognition, redundant variables in the samples spoil the performance of the SVM classifier and reduce the recognition accuracy. On the other hand, we usually can&psila;t label one risk as absolutely good, or absolutely bad. In order to solve the problems mentioned above, this paper used rough sets (RS) as a preprocessor of SVM to select a subset of input variables and employ fuzzy support vector machine (FSVM), proposed in previous papers, to treat every sample as both positive and negative classes, but with different memberships. Additionally, the proposed RS-FSVM with membership based on affinity is tested on two different datasets. Then we compared the accuracies of proposed RS-FSVM model with other three models. Especially, in application of the proposed method, training sets are selected by increasing proportion. Experimental results showed that the RS-SVM model performed the best recognition accura!
 cy and generalization, implying that the hybrid of RS with fuzzy SVM model can serve as a promising alternative for recognizing contract risk. (11 References).

RESULTADO <84>
Score
****-
Accession Number
  9605540
Author
  Toledo R. Pinzolas M. Cano-Izquierdo JM.
Author/Editor Affiliation
  Tech. Univ. of Cartagena, Cartagena, Spain.
Title
  Supervised dFasArt: a neuro-fuzzy dynamic architecture for maneuver detection in road vehicle collision avoidance support systems.
Source
  Nature Inspired Problem-Solving Methods in Knowledge Engineering. Springer-Verlag. pp. 419-28. Berlin, Germany.
Conference Information

Nature Inspired Problem-Solving Methods in Knowledge Engineering. Second International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2007. La Manga del Mar Menor, Spain. 18-21 June 2007.

Abstract

  A supervised version of dFasArt, a neuronal architecture based method that employs dynamic activation functions determined by fuzzy sets is used for solving support of the problem of inter-vehicles collisions in roads. The dynamic character of dFasArt minimizes problems caused by noise in the sensors and provides stability on the predicted maneuvers. To test the proposed algorithm, several experiments with real data have been carried out, with good results. (16 References).

RESULTADO <85>

Score
  ****-
Accession Number
  9453165
Author
  Svenda GS. Kanjuh S. Konjic T. Miranda V.
Author/Editor Affiliation
  Fac. of Tech. Sci., Novi Sad Univ., Serbia.
Title
  Using a fuzzy modeling in decision making for planning under uncertainty with risk analysis paradigm.
Source
  2006 8th Seminar on Neural Network Applications in Electrical Engineering (IEEE Cat No. 06EX1402C). IEEE. pp. 6. Piscataway, NJ, USA.
Conference Information
  2006 8th Seminar on Neural Network Applications in Electrical Engineering. Serbia. 25-27 Sept. 2006.

Abstract

  The text explains that the fuzzy approaches have the objective to bring the decision process in planning closer to the decision maker, by allowing him to understand better the diversity of aspects that must be considered in planning decisions and helping the decision process while keeping as much information as possible, represented in the definition of fuzzy sets. The paper shows that the qualitative aspects of uncertainty, risk and decision making may be adequately modeled with a fuzzy set approach. It could help the decision maker guiding him towards a decision that takes in account uncertainty in the future, the multiple criteria evaluation of plans, as well as hedging policies (12 References).

RESULTADO <86>

Score
  ****-
Accession Number
  9437791
Author
  Guimaraes ACF. Lapa CMF.
Author/Editor Affiliation
  Reactor Div., Inst. de Engenharia Nucl., Rio de Janeiro, Brazil.
Title
  Fuzzy inference to risk assessment on nuclear engineering systems.
Source
  Applied Soft Computing, vol.7, no.1, Jan. 2007, pp. 17-28. Publisher: Elsevier, Netherlands.

Abstract

  This paper presents a nuclear case study, in which a fuzzy inference system (FIS) is used as alternative approach in risk analysis. The main objective of this study is to obtain an understanding of the aging process of an important nuclear power system and how it affects the overall plant safety. This approach uses the concept of a pure fuzzy logic system where the fuzzy rule base consists of a collection of fuzzy IF-THEN rules. The fuzzy inference engine uses these fuzzy IF-THEN rules to determine a mapping from fuzzy sets in the input universe of discourse to fuzzy sets in the output universe of discourse based on

fuzzy logic principles. The risk priority number (RPN), a traditional analysis parameter, was calculated and compared to fuzzy risk priority number (FRPN) using scores from expert opinion to probabilities of occurrence, severity and not detection. A standard four-loop pressurized water reactor (PWR) containment cooling system (CCS) was used as example case. The!
 results demonstrated the potential of the inference system for subsiding the failure modes and effects analysis (FMEA) in aging studies. [All rights reserved Elsevier] (17 References).

RESULTADO <87>
Score
 ****-
Accession Number
 9133127
Author
 Ziyan Liu. Li Feng.
Author/Editor Affiliation
 Coll. of Inf. Eng., Guizhou Univ., Guiyang , China.
Editor
 Ahmed MM; Qadir MA; Nazir OB; Anwar O; Ali U.
Title
 Fuzzy-rule based load pattern classifier for short-term electrical load forecasting.
Source
 2006 IEEE International Conference on Engineering of Intelligent Systems (IEEE Cat. No. 06EX1417). IEEE. 2006, pp. 6. Piscataway, NJ, USA.
Conference Information
 2006 IEEE International Conference on Engineering of Intelligent Systems. Islamabad, Pakistan. IEEE Islamabad Sect.. Mohammed Ali Jinnah Univ.. Pakistan Inst. of Eng. & Appl. Sci. 22-23 April 2006.
Abstract
 Based on the knowledge of historical data sets, a fuzzy rule-based classifier for electrical load pattern classification is set up. Considering with the accuracy and interpretation of fuzzy rules, multi-objective genetic algorithm are applied to choose the Pareto optimum rules that are used to classify electrical load. In the computation experiments, the generated fuzzy rule-based classifier is used to load forecasting, the computation results show that it leads to high classification performance, and it can supply more sufficient and effective historical data for load forecasting, better performance of load forecasting is gained accordingly (16 References).

RESULTADO <88>
Score
 ****-
Accession Number
 9096591
Author
 Li Feng. Ziyan Liu.
Author/Editor Affiliation
 Dispatch & Transaction Center, Chongqing Electr. Power Corp., China.
Title
 Genetic algorithms and rough fuzzy neural network-based hybrid approach for short-term load forecasting.
Source
 2006 IEEE Power Engineering Society General Meeting. IEEE. 2006, pp. 6. Piscataway, NJ, USA.
Conference Information
 2006 IEEE Power Engineering Society General Meeting. Montreal, Que., Canada. 18-22 June 2006.
Abstract
 This article describes a way of designing a hybrid system for short-term load forecasting, integrating rough sets theory with fuzzy neural networks using a multi-objective genetic algorithm. The multi-objective genetic algorithm is used to automatically learn the knowledge of historical data and find the best factors

that are relevant to electric loads. The concept of entropy is introduced to describe the uncertainty of decision rules with dependency factors, and the crude domain knowledge expressed by decision rules is applied to design the structure and weights of the neural network. Simulation results demonstrate that the rough fuzzy neural network has better precision and convergence than the traditional fuzzy neural network for its simple, transparent network structure and effective inputs (23 References).

RESULTADO <89>
Score
 ****-
Accession Number
  7906850
Author
  Robins ES.
Author/Editor Affiliation
  ESROTECH, Winchester, MA, USA.
Title
  Finding the place your data fits with respect to 'ideal knowledge': a fuzzy process model.
Source
  International Conference on Integration of Knowledge Intensive Multi-Agent Systems. KIMAS'03: Modeling, Exploration, and Engineering (Cat. No.03EX716). IEEE. 2003, pp. 690-702. Piscataway, NJ, USA.
Conference Information
  International Conference on Integration of Knowledge Intensive Multi-Agent Systems. KIMAS'03: Modeling, Exploration, and Engineering . Cambridge, MA, USA. IEEE Boston Sect.. IEEE Robotics & Automation Soc.. IEEE Neural Network Soc.. IEEE Syst. Man & Cybernetics Soc.. INNS. U.S. Air Force. U.S. Army. U.S. Navy. DARPA. 30 Sept.-4 Oct. 2003.
Abstract
  It is not easy to define what we mean by knowledge. The term is used loosely or becomes `defined' often through context and ability to use `information' or an ensemble of lower value elements within a cluster of associated elements to create deeper understanding, and/or new concepts that can lead to high value action. Additionally, semantic identifiers such as data, content, information, and knowledge are often used synonymously, even though there is a sense that there exists a hierarchy of value inherent in the terms. Here we define something we call a data-value chain against which a value scale is mapped in order to conceptualize this value hierarchy and evaluate a data element within it for given input contexts and selection criteria. We further define the position of an element (whether it is a cluster of data or a single atomic datum) in terms of this hierarchy through a value scale, with the added twist that the considered highest apex -knowledge - is not necessaril!
 y the most valued in a given context. In order to determine value, multiattribute fuzzy sets and subsets are defined, and it is shown that one can evaluate, define and redefine the position of an element on the data-value chain using one or more value scales. These value scales may be notional or driven by specific input mechanisms that determine context. The approach enables a number of fuzzy operators to be defined that represent value attributes, contexts and selection operations. It is hoped the method will allow rapid classification with the minimum number of attributes, and avoid taxonomy explosions that can plague meta-tagging, for example, as well as efficient classifiers for given contexts (20 References).

RESULTADO <90>
Score
 ****-
Accession Number
  6867260
Author
  Stemberk P. Bittnar Z.
Author/Editor Affiliation
  Dept. of Struct. Mech., Czech Tech. Univ., Prague, Czech Republic.
Editor

Bittnar Z; Topping BHV.
Title
 Fuzzy model of heat transfer.
Source
 Computational Concrete Structures Technology. Fifth International Conference on Computational Structures Technology and the Second International Conference on Engineering Computational Technology . Civil-Comp Press. 2000, pp. 119-24. Edinburgh, UK.
Conference Information
 Computational Concrete Structures Technology. Fifth International Conference on Computational Structures Technology and the Second International Conference on Engineering Computational Technology. Leuven, Belgium. 6-8 Sept. 2000.

Abstract
 In this paper, we present an application of the theory of fuzzy sets to heat transfer. The application simulates the nonstationary heat flow, and may also be used to simulate the steady case. The results are expressed in the terms of fuzzy numbers and are in accordance with reality. In the case of non-stationary heat flow the phenomenon of the ever growing imprecision of the investigated quantities is apparent, which agrees well with the engineers' presumptions. Nevertheless, the thermal equilibrium is not violated (9 References).

RESULTADO <91>
Score
 ****-
Accession Number
 6763462
Author
 Sano N. Takahashi R.
Author/Editor Affiliation
 Dept. of Commun. & Inf., Shizuoka Sangyo Univ., Japan.
Editor
 Howlett RJ; Jain LC.
Title
 Solutions on fuzzy diagnosis by inverse process with natural language input.
Source
 KES'2000. Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies. Proceedings (Cat. No.00TH8516). IEEE. Part vol.2, 2000, pp. 499-502. Piscataway, NJ, USA.
Conference Information
 Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies/ Proceedings. KES'2000. Brighton, UK. 30 Aug.-1 Sept. 2000.

Abstract
 Several kinds of diagnosis techniques based on the kinetic or statistical model of a nuclear plant have already been utilized in operation. Rule-based approaches have also been proposed to realize a flexible diagnostic method by using fuzzy sets, which consider the rules describing the relationship between the cause and symptom of the failures. These might be able to infer the failure by modus tollens using implications to represent the relation between the cause and symptom. In the first step of a diagnosis, it needs a broad outline of the failure from slight symptoms. The paper attempts to express solutions of fuzzy diagnosis by an inverse process, and the natural language input for fuzzy diagnosis with a dialog box on Visual C++ (6 References).

RESULTADO <92>
Score
 ****-
Accession Number
 6526189
Author

Li Bing. Zhu Meilin. Xu Kai.

Author/Editor Affiliation
  Dept. of Electr. Power Eng., Huazhong Univ. of Sci. & Technol., Wuhan, China.

Title
  A practical engineering method for fuzzy reliability analysis of mechanical structures.

Abstract
  The fuzzy sets theory in reliability analyses is studied. The structure stress is related to several other variables, such as structure sizes, material properties, external loads; in most cases, it is difficult to be expressed in a mathematical formula, and the related variables are not random variables, but fuzzy variables or other uncertain variables which have not only randomness but also fuzziness. In this paper, a novel approach is presented to use the finite element analysis as a "numerical experiment" tool, and to find directly, by a fuzzy linear regression method, the statistical property of the structure stress. Based on the fuzzy stress-random strength interference model proposed in this paper, the fuzzy reliability of the mechanical structure can be evaluated. The compressor blade of a given turbocharger is then introduced as a realistic example to illustrate the approach (13 References).

RESULTADO <93>

Score
  ****-

Accession Number
  5199277

Author
  Jerabek V. Lachiver G.

Author/Editor Affiliation
  Dept. de Genie Electr. et de Genie Inf., Sherbrooke Univ., Que., Canada.

Editor
  Gagnon F.

Title
  Fuzzy logic-based controller of traffic intersection.

Abstract
  The widely used conventional control of traffic intersections is based on classic logic. The strategy of this approach can be divided in two main procedures: fired-time system and on-line system. The fired-time system uses predefined time intervals to control the car-flow through the intersection. The on-line system utilises the proximity sensors and combines the predefined time intervals with changes in the particular cycles. Usually, sets of measurements must be taken to determine the proper adjustment of time cycles. The measurements are based an observations of flow patterns and car counting during different periods of the day. The major inconvenience of the current traffic lights control is the low accuracy, allowing only crude changes in the green-red cycle. Fuzzy logic control can be used as an alternative approach to the traffic environment. A fuzzy controller can provide smoother and more flexible control of the timing of the green-red phases, depending on the flo!
 w density of vehicles. The purpose of the proposed method is to minimize the waiting time of vehicles in an intersection (4 References).

RESULTADO <94>

Score
  ****-

Accession Number

5010871
Author
  Law WS. Antonsson EK.
Author/Editor Affiliation
  Div. of Eng. & Appl. Sci., California Inst. of Technol., Pasadena, CA, USA.
Title
  Hierarchical imprecise design with weights.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 383-8. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  An extension to the method of imprecision that allows the decomposition or aggregation of imprecise design problems with weighted attributes is presented. The method of imprecision uses the preferences of the designer and customer to define fully sets that quantify the imprecision associated with a design attribute. These fuzzy sets, weighted by relative importance, are combined to produce an overall design measure. This paper introduces aggregation operators that can be hierarchically applied to combine weighted design attributes so that the structure of the design problem is appropriately modeled (10 References).

RESULTADO <95>
Score
  ****-
Accession Number
  4840514
Author
  Pham TD.
Author/Editor Affiliation
  Sch. of Civil Eng., New South Wales Univ., Kensington, NSW, Australia.
Title
  Modeling of a fuzzy system in geotechnical engineering.
Source
  Proceedings of the Third IEEE Conference on Fuzzy Systems. IEEE World Congress on Computational Intelligence (Cat. No.94CH3430-6). IEEE. Part vol.3, 1994, pp. 1861-6. New York, NY, USA.
Conference Information
  Proceedings of 1994 IEEE 3rd International Fuzzy Systems Conference . Orlando, FL, USA. IEEE Neural Networks Council. IEEE Orlando Sect. 26-29 June 1994.

Abstract
  The modeling of fuzziness in geotechnical problems is addressed using the finite element method and the theory of fuzzy sets. The operations on fuzzy numbers are introduced in the formulation of finite element calculations. Fuzzy finite element solutions are presented with lower and upper bounds or possibility distributions. These possibility distributions are investigated using fuzzy entropies. The fuzzy measure is also applied to introduce an estimate of uncertainty propagation in the fuzzy geotechnical system (6 References).

RESULTADO <96>
Score
  ****-
Accession Number

4834952

Author

Fayyaz Noor S. McDonald JR.

Author/Editor Affiliation

Centre for Electr. Power Eng., Strathclyde Univ., Glasgow, UK.

Title

Incorporating fuzzy decisions in long term generation expansion planning.

Source

28th Universities Power Engineering Conference. Conference Proceedings. Staffordshire Univ. Part vol.2, 1993, pp. 932-5. Stafford, UK.

Conference Information

Proceedings of Twenty Eighth Universities Power Engineering Conference (UPEC). Stafford, UK. GEC ALSTHOLM Protection & Control. GEC ALSTHOLM Transmission & Distribution Projects. et al. 21-23 Sept. 1993.

Abstract

This paper describes a long range power system expansion planning program. The program incorporates a model of fuzzy multi-attribute decision making based on S-Fuzzy sets. This model greatly simplifies the representation of linguistic weights given to various attributes, the rating of various generating units in terms of the attributes and the computation involved in calculating the overall rating of each unit in terms of all the attributes. The planning program is a part of an ongoing effort to develop an algorithm for long term generation expansion which can handle real domain complexities and uncertainties (8 References).

RESULTADO <97>

Score

****-

Accession Number

4794541

Author

Ferrero A. Sangiovanni S. Zappitelli E.

Author/Editor Affiliation

Dipartimento di Elettrotecnica, Politecnico di Milano, Italy.

Title

A fuzzy-set approach to fault-type identification in digital relaying.

Source

Proceedings of the 1994 IEEE Power Engineering Society Transmission and Distribution Conference (Cat. No.94CH3428-0). IEEE. 1994, pp. 269-75. New York, NY, USA.

Conference Information

Proceedings of IEEE/PES Transmission and Distribution Conference . Chicago, IL, USA. IEEE Power Eng. Soc. 10-15 April 1994.

Abstract

Sometime the operations that a relay is required to perform cannot be easily described in a deterministic way. A significant example of this situation is given by the operations a line relay must perform in order to detect the type of fault (line-to-ground, line-to-line, line-to-line involving ground). The mathematical theory of fuzzy sets featured many practical applications, mainly in industrial controls, and fuzzy-set processors are available to allow real time applications. This paper shows that a fuzzy-set approach can be useful even in digital relaying, whenever "fuzzy" decisions have to be undertaken. A possible application to the detection of the type of fault when symmetrical component relaying techniques are adopted is proposed and the results of simulation tests are given (9 References).

RESULTADO <98>

Score

****-

Accession Number

3531637

Author

Di Nola A. Sessa S. Pedrycz W. Sanchez E.
Title
  Fuzzy relation equations and their applications to knowledge engineering.
Source
  Kluwer. 1989, pp. xiii+278. Dordrecht, Netherlands.

Abstract
  The book develops essentially two features of the theory of fuzzy relation equations. First, it gives the main fundamental aspects of this theory, emphasizing the lattice structures on which fuzzy equations are defined and studied. This approach is provided since it is in accordance with the spirit of the symbolic computations that are peculiar to artificial intelligence. Second, fuzzy sets and fuzzy relations are expressed in the real unit interval in order to apply the theory to general fields and contexts, like knowledge acquisition and expert systems, handling of fuzzy information in knowledge-based systems, design of fuzzy controllers, etc. All chapters are self-contained and have their own references (524 References).

RESULTADO <99>

Score
  ****-
Accession Number
  10045160
Author
  Oberguggenberger M. Schmelzer B. Fellin W.
Author/Editor Affiliation
  Eng. Math., Univ. of Innsbruck, Innsbruck, Austria.
Title
  Sensitivity analysis through random and fuzzy sets.
Source
  NAFIPS 2008 - Annual Meeting of the North American Fuzzy Information Processing Society. IEEE. pp. 689-94. Piscataway, NJ, USA.
Conference Information
  NAFIPS 2008 - Annual Meeting of the North American Fuzzy Information Processing Society. New York City, NY, USA. 19-22 May 2008.

Abstract
  Sensitivity analysis has become a major tool in the assessment of the reliability of engineering structures. Given an input-output system, the question is which input variables have the most decisive influence on the output. Random and/or fuzzy sets offer a framework for modelling the data variability. Propagating random set data or fuzzy set data through a deterministic system provides a valuable impression of the output variability. The sensitivity can be assessed by pinching individual variables, changing their correlations or by varying their degree of interactivity. An important ingredient in the quantification of the changes derives from generalized information theory, namely, measures of nonspecificity, in particular, Hartley-like measures. The purpose of this contribution is to present an investigation of various methods of modelling correlations and interactivity, quantifying the results by Hartley-like measures and exhibiting a number of concrete applications in !
 engineering. (19 References).

RESULTADO <100>

Score
  ****-
Accession Number
  9987234
Author
  Kouatli I.
Author/Editor Affiliation
  Lebanese American Univ., Beirut, Lebanon.
Title

Definition and selection of fuzzy sets in genetic-fuzzy systems using the concept of fuzzimetric arcs.
Source
  Kybernetes, vol.37, no.1, 2008, pp. 166-81. Publisher: Emerald, UK.

Abstract
  This paper seeks to identify and propose a standard approach for the selection and optimization of fuzzy sets used in fuzzy decision-making systems. The design was based on two principles: selection and optimization. The selection methodology was based on the "Fuzzimetric Arcs" principle, which is an analogy of the trigonometric circle principle. This would allow an initial sinusoidal fuzzy set shape. Other shapes may also be selected using the described formula (trapezoidal, triangular,....., etc.). As the proposal methodology is based on the trigonometric circle, other trigonometric formulae can be applied. For example, linguistic hedges can be defined using standard trigonometric formulae. Regarding optimization, the initial fuzzy set selection was assumed to be of regular shape (sinusoidal, trapezoidal or triangular). An irregular shape may be required by some systems. Hence, a genetic algorithm was proposed as a methodology to optimize the performance of fuzzy systems!
  by mutating different regular shapes. A simplified business decision-making application was described and the proposed selection methodology was explained in the form of an example. Currently, there is no standard for the selection of fuzzy sets as this is dependent on knowledge engineering and the type of application chosen. The proposed methodology offers an easy-to-use possible standard which all developers/researchers may adopt irrespective of their application field. Moreover, the proposed methodology may integrate well with object-oriented technology. The paper presents standardization of the fuzzy sets selection and optimization technique used in any type of management information systems. This will aid all developers and researchers to enhance their technical communication. It would also enhance the simplicity and effectiveness of optimizing the performance of such systems. (8 References).

RESULTADO <101>

Score
  ****-
Accession Number
  9646142

Author
  Mendel JM. Hongwei Wu.
Author/Editor Affiliation
  Univ. of Southern California, Los Angeles, USA.

Title
  Type-2 fuzzistics for <i>nonsymmetri</i>c interval type-2 fuzzy sets: forward problems.
Source
  IEEE Transactions on Fuzzy Systems, vol.15, no.5, Oct. 2007, pp. 916-30. Publisher: IEEE, USA.

Abstract
  Interval type-2 fuzzy sets (IT2 FS) play a central role in fuzzy sets as models for words and in engineering applications of T2 FSs. These fuzzy sets are characterized by their footprints of uncertainty (FOU), which in turn are characterized by their boundaries-upper and lower membership functions (MF). The centroid of an IT2 FS, which is an IT1 FS, provides a measure of the uncertainty in the IT2 FS. The main purpose of this paper is to quantify the centroid of a non-symmetric IT2 FS with respect to geometric properties of its FOU. This is very important because interval data collected from subjects about words suggests that the FOUs of most words are non-symmetrical. Using the results in this paper, it is possible to formulate and solve <i>forward problems</i>, i.e., to go from parametric non-symmetric IT2 FS models to data with associated uncertainty bounds. We provide some solutions to such problems for non-symmetrical triangular, trapezoidal, Gaussian and shoulder FOU!
 s. (26 References).

RESULTADO <102>

Score
  ****-
Accession Number
  9475897

Author
  Sheela Ramanna. Rajen Bhatt. Biernot P.
Author/Editor Affiliation
  Dept. of Appl. Comput. Sci., Winnipeg Univ., Man., Canada.
Editor
  An A; Stefanowski J; Ramanna S; Butz CJ; Pedrycz W; Wang G.
Title
  A rough-hybrid approach to software defect classification.
Source
  Rough Sets, Fuzzy Sets, Data Mining and Granular Computing. 11th International Conference, RSFDGrC 2007. Proceedings (Lecture Notes in Artificial Intelligence Vol.4482). Springer. pp. 79-86. Berlin, Germany.
Conference Information
  Rough Sets, Fuzzy Sets, Data Mining and Granular Computing. 11th International Conference, RSFDGrC 2007. Proceedings. Toronto, Ont., Canada. 14-16 May 2006.

Abstract
  Knowledge discovery methods used to find relationships among software engineering data and the extraction of rules have gained increasing importance in recent years. These methods have become necessary for improvements in the quality of the software product and the process. The focus of this paper is a first attempt towards combining strengths of rough set theory and neuro-fuzzy decision trees in classifying software defect data. We compare classification results for four methods: rough sets, neuro-fuzzy decision trees, partial decision trees, rough-neuro-fuzzy decision trees. The analysis of the results include a family-wise 10 fold paired t-test for accuracy and number of rules. The contribution of this paper is the application of a hybrid rough-neuro-fuzzy decision tree method in classifying software defect data (16 References).

RESULTADO <103>

Score
  ****-
Accession Number
  9208160

Author
  Mendel JM. Hongwei Wu.
Author/Editor Affiliation
  Dept. of Electr. Eng., Univ. of Southern California, Los Angeles, CA, USA.
Title
  Type-2 fuzzistics for symmetric interval type-2 fuzzy sets: part 1, forward problems.
Source
  IEEE Transactions on Fuzzy Systems, vol.14, no.6, Dec. 2006, pp. 781-92. Publisher: IEEE, USA.

Abstract
  Interval type-2 fuzzy sets (T2 FS) play a central role in fuzzy sets as models for words and in engineering applications of T2 FSs. These fuzzy sets are characterized by their footprints of uncertainty (FOU), which in turn are characterized by their boundaries-upper and lower membership functions (MF). In this two-part paper, we focus on symmetric interval T2 FSs for which the centroid (which is an interval type-1 FS) provides a measure of its uncertainty. Intuitively, we anticipate that geometric properties about the FOU, such as its area and the center of gravities (centroids) of its upper and lower MFs, will be associated with the amount of uncertainty in such a T2 FS. The main purpose of this paper (Part 1) is to demonstrate that our intuition is correct and to quantify the centroid of a symmetric interval T2 FS, and consequently its uncertainty, with respect to such geometric properties. It is then possible, for the first time, to formulate and solve forward problems,!
  i.e., to go from parametric interval T2 FS models to data with associated uncertainty bounds. We provide some solutions to such problems. These solutions are used in Part 2 to solve some inverse problems, i.e., to go from uncertain data to parametric interval T2 FS models (T2 fuzzistics) (12 References).

RESULTADO <104>

Score
 ****-
Accession Number
 8901463
Author
 Mikheyev PA. Manusov VZ.
Author/Editor Affiliation
 Dept. of Power Eng., NSTU, Novosibirsk, Russia.
Title
 Adaptation the theory of complex numbers to the fuzzy sets.
Source
 8th Korea-Russia International Symposium on Science and Technology (IEEE Cat. No. 04EX817). IEEE. Part vol. 2, 2004, pp. 161-4 vol. 2. Piscataway, NJ, USA.
Conference Information
 8th Korea-Russia International Symposium on Science and Technology . Tomsk, Russia. 26 June-3 July 2004.
Abstract

  The theory of fuzzy sets, in comparison with classical mathematical theories, is concerning young as it is based only in the middle of the last century by L.A. Zadeh, as consequence, this theory has found the engineering application considerably after other mathematical theories. Attempt of creation of symbiosis of theories of complex numbers and fuzzy sets is made, keeping features of both mathematical theories. The basic expressions for a conclusion of fuzzy complex number and also an fuzzy polar corner (phase) are resulted in article. It is considered small example with use of described expressions. Interpretations of both mathematical theories in electrotechnical calculations are given, mathematical calculations and expressions speak graphically (2 References).

RESULTADO <105>

Score
 ****-
Accession Number
 8795532
Author
 Wei Yubin. Chen Ke. Zhang Xiaotong. Sun Zhaolin. Guo Ying.
Author/Editor Affiliation
 Liaoning Univ. of Pet. & Chem. Technol., Fushun, China.
Title
 Fault diagnosis based on integration of rough sets and adaptive neuron-fuzzy inference system.
Source
 Computer Measurement & Control, vol.13, no.8, 2005, pp. 755-7. Publisher: Magazine Agency of Comput. Measurement & Control, China.
Abstract

  Considering the ability of fuzzy clustering to discretization of data, that of rough sets theory to reduction of decision system, and that of fuzzy neural networks to nonlinear mapping, a new hybrid system of fuzzy rough sets theory, and adaptive neuron-fuzzy inference system (ANFIS) for intelligent fault diagnosis is presented. Firstly, the continuous attributes in diagnostic decision system were discretized with SOM. Then, reducts were found based on rough sets theory, and the key conditions for diagnosis were determined. Lastly, according to the chosen reduct, the ANFIS was designed for fault diagnosis. The diagnosis of a diesel demonstrates that the solution can reduce the cost and raise the efficiency of diagnosis, and verifies the feasibility of engineering application. With enough samples, the solution can be applied to other machinery (8 References).

RESULTADO <106>

Score
 ****-
Accession Number

8262624
Author
  Mendel JM. Hongwei Wu.

Author/Editor Affiliation
  Dept. of Electr. Eng., Univ. of Southern California, Los Angeles, CA, USA.

Title
  Centroid uncertainty bounds for interval type-2 fuzzy sets: forward and inverse problems.

Abstract
  Interval type-2 fuzzy sets (T2 FS) play a central role in fuzzy sets as models for words and in engineering applications of T2 FSs. These fuzzy sets are characterized by their footprints of uncertainty (FOU), which in turn are characterized by their boundaries-upper and lower membership functions (MF). The centroid of an interval T2 FS, which is an interval T1 FS, provides a measure of the uncertainty in the interval T2 FS. Intuitively, we anticipate that geometric properties about the FOU, such as its area and the center of gravities (centroids) of its upper and lower MFs, associated with the amount of uncertainty in an interval T2 FS. The main purpose of this paper is to demonstrate that our intuition is correct and to quantify the centroid of an interval T2 FS with respect to these geometric properties of its FOU. It is then possible to formulate and solve inverse problems, i.e., going from data to parametric T2 FS models (9 References).

RESULTADO <107>
Score
  ****-
Accession Number
  8014434
Author
  Cungen Cao. Yuefei Sui. Zaiyue Zhang.

Author/Editor Affiliation
  Key Lab. of Intelligent Inf. Process., Chinese Acad. of Sci., Beijing, China.
Editor
  Wang G; Liu Q; Yao Y; Skowron A.

Title
  Rough mereology in knowledge representation.

Abstract
  The rough mereology proposed by Polkowski and Skowron is used in complex systems, multi-agent systems, knowledge engineering and knowledge representation. The function mu makes the rough mereology more like the fuzzy mereology. A new rough mereology is proposed, in which the rough inclusion is defined completely based on the upper and lower approximations of rough sets. The basic properties of the rough mereology, and applications in the knowledge representation and knowledge engineering are discussed (8 References).

RESULTADO <108>
Score
  ****-
Accession Number

7711085
Author
  Jin Chao-guang. Lin Yan. Ji Zhuo-shang.
Author/Editor Affiliation
  Ship CAD Eng. Cent., Dalian Univ. of Technol., China.
Title
  Application of event tree analysis based on fuzzy sets in risk analysis.
Source
  Journal of Dalian University of Technology, vol.43, no.1, Jan. 2003, pp. 97-100. Publisher: Dalian Univ.
Technol, China.
Abstract

  Probabilities are treated as exact values in conventional methods using event tree technology to analyze
risk. In many engineering applications, however, it is difficult to evaluate the probabilities from past
experiences. The common way is that experts estimate the fault probabilities in verbal statements by
means of their knowledge. The event tree analysis based on fuzzy sets, presented in the paper, converts
verbal statements into triangular fuzzy numbers or trapezoidal fuzzy numbers and evaluates risk of
consequence through lambda-cut and ranking method of fuzzy numbers. It can be concluded that the
method is advanced and practicable by means of an example of risk analysis in ship building process.
This method can also be used in risk analysis of other engineering projects (10 References).

RESULTADO <109>
Score
  ****-
Accession Number
  7448845
Author
  Ekel PYa.
Author/Editor Affiliation
  Post Graduate Program in Electr. Eng., Pontificial Catholic Univ. of Minas Gerais, Belo Horizonte, Brazil.
Title
  Fuzzy sets and models of decision making.
Source
  Computers & Mathematics with Applications, vol.44, no.7, Oct. 2002, pp. 863-75. Publisher: Elsevier, UK.
Abstract

  Results of research into the use of fuzzy sets for handling various forms of uncertainty in optimization
problems related to the design and control of complex systems are presented. Much attention is given to
considering the uncertainty of goals that is associated with a multicriteria character of many optimization
problems. The application of a multicriteria approach is needed to solve (1) problems in which solution
consequences cannot be estimated on the basis of a single criterion, that involves the necessity of
analyzing a vector of criteria, and (2) problems that may be considered on the basis of a single criterion
but their unique solutions are not achieved because the uncertainty of information produces so-called
decision uncertainty regions, and the application of additional criteria can serve as a convincing means to
contract these regions. According to this, two classes of models (<X, M> and <X, R> models) are
considered by applying the Bellman-Zadeh approach and!
  techniques of fuzzy preference relations to their analysis. The consideration of <X, R> models is
associated with a general approach to solving a wide class of optimization problems with fuzzy
coefficients. This approach consists in formulating and analyzing one and the same problem within the
framework of interrelated models with constructing equivalent analogs with fuzzy coefficients in objective
functions alone. It allows one to maximally cut off dominated alternatives. The subsequent contraction of
the decision uncertainty region is associated with reduction of the problem to multicriteria decision making
in a fuzzy environment with its analysis applying one of two techniques based on fuzzy preference
relations. The results of the paper are of a universal character and are already being used to solve
problems of power engineering (36 References).

RESULTADO <110>

Score
 ****-
Accession Number
 6309166
Author
 Jahan-Shahi H. Shayan E. Masood S.
Author/Editor Affiliation
 Ind. Res. Inst., Swinburne Univ. of Technol., Melbourne, Vic., Australia.
Title
 Cost estimation in flat plate processing using fuzzy sets.
Source
 Elsevier. Computers & Industrial Engineering, vol.37, no.1-2, Oct. 1999, pp. 485-8. UK.
Conference Information
 24th International Conference on Computers and Industrial Engineering. Uxbridge, UK. 2-4 Sept. 1998.

Abstract
 Cost estimation in Flat Plate Processes (FPP's) involves a combination of man, machine and resources and consequently, a combination of physical processes, engineering resources and economic laws as well as actions and behaviour of people should be taken into consideration. Thus, in cost estimation process, apart from physical and engineering variables, there often exist several subjective criteria, which need to be described qualitatively and linguistically. In addition, there are some probabilistic or random variables including labour fatigue, shortage of resources and materials, failure of machines, unavailability of facilities and so on, which can not be accurately predicted. Using analytical and mathematical approaches, it is not possible to quantify and transform these imprecise and subjective criteria and random factors into proper input variable in the cost estimation model. Therefore, the state of uncertainty should be considered in cost estimation problem in some!
 ways. In this paper, fuzzy sets and probability distribution approaches are applied to tackle the problem of uncertainty in cost estimation in order to generate reliable cost estimates in flat plate processing industry (13 References).

RESULTADO <111>
Score
 ****-
Accession Number
 3777727
Author
 Mamdani EH. Stipanicev D.
Author/Editor Affiliation
 Queen Mary Coll., London, UK.
Editor
 Husson R.
Title
 Fuzzy sets theory and process control: past, present and future.
Source
 Advanced Information Processing in Automatic Control. Selected Papers from the IFAC/IMACS/IFORS Symposium (AIPAC '89). Pergamon. 1990, pp. 157-60. Oxford, UK.
Conference Information
 Advanced Information Processing in Automatic Control. Selected Papers from the IFAC/IMACS/IFORS Symposium (AIPAC '89). Nancy, France. IFAC. IMACS. AFCET. CNRS. INRIA. 3-5 July 1989.

Abstract
 The authors take a retrospective look at the original study on fuzzy control and describe how and why it came about. They present some reflections on the importance and the nature of this work. Finally, they consider in some projections concerning fruitful avenues of the future research. One key point put forward in this paper is that the original study was aimed more at control engineering than at fuzzy sets research, and so the projections in this paper also address the same control engineering community (17 References).

RESULTADO <112>

Score
  ****-

Accession Number
  2761032

Author
  Liang Tai-ji. Gui-rong.

Author/Editor Affiliation
  Nat. Univ. of Defense Technol., Changsha , China.

Title
  Applications of fuzzy sets to information systems.

Source
  Acta Electronica Sinica, vol.14, no.2, March 1986, pp. 106-14, 118. China.

Abstract
  The problem of applications of fuzzy sets to information systems is described. The current state of its applications to information systems is presented. The future of its applications to electronic engineering is predicted (79 References).

RESULTADO <113>

Score
  ****-

Accession Number
  9555946

Author
  Zhao Wujing. Wu Kaiya. Jin Juliang.

Author/Editor Affiliation
  Sch. of Hydraulic Eng., Anhui Tech. Coll. of Water Resources & Hydroelectric Power, Hefei, China.

Title
  Set pair analysis - variable fuzzy set model for flood control engineering security evaluation.

Source
  Water Resources and Power, vol.25, no.2, April 2007, pp. 5-13. Publisher: Water Resources and Power Editorial Dept., China.

Abstract
  Comprehensive security evaluation of valley flood control engineering systems can serve as an important basis for the security management of valley flood disaster. In order to develop quantitative comprehensive security evaluation model for valley flood control engineering systems, on the basis of security evaluation index system of valley flood control engineering and its grading criterion, a new method was presented to establish the relative diversity degree function of variable fuzzy set using set pair analysis method, which combined with fuzzy comprehensive evaluation can form a new model, namely the integrated model of set pair analysis and fuzzy comprehensive evaluation (namely SPA-FCE for short). The result shows that SPA?FCE is visual, simple and general, its result is reasonable and its computation precision is high. SPA-FCE can be applied to different comprehensive evaluation problems under the known grading evaluation criterion and can be of great advantage to d!
 evelop the theory of variable fuzzy sets. (15 References).

RESULTADO <114>

Score
  ****-

Accession Number
  8510058

Author
  Peldschus F. Zavadskas EK.

Author/Editor Affiliation
  Leipzig Univ. of Appl. Sci., Germany.

Title
  Fuzzy matrix games multi-criteria model for decision-making in engineering.
Source
  Informatica, vol.16, no.1, 2005, pp. 107-20. Publisher: Lithuanian Acad. Sci, Lithuania.
Abstract
  When handling engineering problems associated with optimal alternative selection, a researcher often deals with not sufficiently accurate data. The alternatives are usually assessed by applying several different criteria. A method takes advantage of the relationship between fuzzy sets and matrix game theories can be offered for multicriteria decision-making. Practical investigations have already been discussed for selecting the variants water supply systems (27 References).

RESULTADO <115>
Score
  ****-
Accession Number
  6977402
Author
  Martins LEG. Da Silva AEA.
Author/Editor Affiliation
  Methodist Univ. of Piracicaba, Brazil.
Editor
  Hamza MH.
Title
  Using fuzzy set theory for evaluating software requirements specification.
Source
  Proceedings of the IASTED International Conference. Software Engineering and Applications. IASTED/ACTA Press. 2000, pp. 67-72. Anaheim, CA, USA.
Conference Information
  Proceedings of 2000 Conference on Software Engineering and Applications. Las Vegas, NV, USA. IASTED. 6-9 Nov. 2000.
Abstract
  Although there are several methodologies to support the process of software requirements engineering, there is a lack of mechanisms to properly evaluate the specifications produced. Some researchers have identified quality attributes to create mechanisms for software requirements specification. Usually, these attributes are evaluated in a very restricted way because they either indicate success or failure of achievement of the attributes. There is not too much information beyond the two-valued classification provided. Because of the inherent uncertainty found in the process of software requirements specification, we assume that evaluations should be more flexibly performed to quantify the degree of achievement of each quality attribute. For this purpose, the paper presents an approach to evaluate software requirements based on fuzzy set theory. This approach intends to derive evaluation of quality attributes through association of quality attributes viewed as linguistic te!
 rms whose meaning are defined via fuzzy sets (13 References).

RESULTADO <116>
Score
  ****-
Accession Number
  6806615
Author
  Matthews C. Swatman PA.
Author/Editor Affiliation
  Sch. of Manage. Inf. Sci., Deakin Univ., Geelong, Vic., Australia.
Title
  Fuzzy concepts and formal methods: some illustrative examples.
Source

Proceedings Seventh Asia-Pacific Software Engineering Conference. APSEC 2000. IEEE Comput. Soc. 2000, pp. 230-8. Los Alamitos, CA, USA.

Conference Information

Proceedings Seventh Asia-Pacific Software Engineering Conference. ASPEC 2000. Singapore. Nat. Univ. Singapore. Knowledge Eng. Pte. Rational Software. Fujitsu Singapore Pte. Taknet Syst. Pte. Lee Found.. IEEE Tech. Council on Software Eng.. IEEE Comput. Soc. 5-8 Dec. 2000.

Abstract

It has been recognised that formal methods are useful as a modelling tool in requirements engineering. Specification languages such as Z permit the precise and unambiguous modelling of system properties and behaviour. However, some system problems, particularly those drawn from the information systems (IS) problem domain, may be difficult to model in crisp or precise terms. It may also be desirable that formal modelling should commence as early as possible, even when our understanding of parts of the problem domain is only approximate. This paper identifies the problem types of interest and argues that they are characterised by uncertainty and imprecision. It suggests fuzzy set theory as a useful formalism for modelling aspects of this imprecision. The paper illustrates how a fuzzy logic toolkit for Z can be applied to such problem domains. Several examples are presented illustrating the representation of imprecise concepts as fuzzy sets and relations, and soft pre-conditi!
ons and system requirements as a series of linguistically quantified propositions (47 References).

RESULTADO <117>

Score

****-

Accession Number

5968363

Author

Jones JD. Hua Y.

Author/Editor Affiliation

Sch. of Eng. Sci., Simon Fraser Univ., Burnaby, BC, Canada.

Title

A fuzzy knowledge base to support routine engineering design.

Source

Fuzzy Sets and Systems, vol.98, no.3, 16 Sept. 1998, pp. 267-78. Publisher: Elsevier, Netherlands.

Abstract

Much of engineering design can be characterised as putting together variants of existing mechanisms to meet novel requirements. This paper describes an approach to engineering design in which fuzzy sets are used to represent the range of variants on existing mechanisms. Membership functions are chosen to reproduce the distinctions and classifications used by experienced designers. Methods are introduced to calculate the fuzzy performance range achievable by each component type, and a metric is suggested for the ranking of design candidates against design requirements. The underlying approach to design evaluation derives from that developed by Wood and Antonsson (1989) and Otto and Antonsson (1991). If the components model the design domain accurately, this architecture will always find a successful design, where one exists. However, finding this design may involve exhaustive search of the design space, and the time required for such an exhaustive search is typically far gr!
eater than is available for the task. The architecture is therefore augmented by the introduction of design agents, embodying heuristic rules to direct the search intelligently, so that a satisfactory design is found within a reasonable length of time. As an example, the method is applied to preliminary design of a Stirling engine heat exchanger (20 References).

RESULTADO <118>

Score

****-

Accession Number

5899643

Author

Dubois D. Prade H. Yager RR.

Author/Editor Affiliation
  Inst. de Recherche en Inf., Univ. Paul Sabatier, Toulouse, France.
Title
  Fuzzy information engineering-a manifesto.
Source
  Fourth European Congress on Intelligent Techniques and Soft Computing Proceedings, EUFIT '96. Verlag Mainz. Part vol.1, 1996, pp. 637-40. Aachen, Germany.
Conference Information
  Proceedings of Fourth European Congress on Intelligent Techniques and Soft Computing (EUFIT'96). Aachen, Germany. 2-5 Sept. 1996.

Abstract
  Informally, we can tentatively see information engineering as consisting of three main components, namely clarifying, retrieving and exploiting information, although time will possibly extend and refine this initial categorization. In each of the above three components of information engineering, we emphasize the importance of the communication of information between man and machine. This communication goes in both directions: information generated by the machine should be in a form easily comprehensible by human beings while information provided by human beings should be in a format exploitable by the computer. Fuzzy sets play an important role in providing this bridge. We look at the three components of information engineering and summarize the role fuzzy sets can play in each of them. We show that nice applications of genuine fuzzy set research were done in the past, and that this tradition is alive, with a potentially appealing future (4 References).

RESULTADO <119>
Score
 ****-
Accession Number
  5464003
Author
  Lori N. Branco PJC.
Author/Editor Affiliation
  Lab. de Mecatronica, Inst. Superior Tecnico, Lisbon, Portugal.
Editor
  Dagli CH; Akay M; Chen CLP; Fernandez BR; Ghosh J.
Title
  Autonomous mountain-clustering method applied to fuzzy systems modeling.
Source
  Intelligent Engineering Systems Through Artificial Neural Networks. Vol.5. Fuzzy Logic and Evolutionary Programming. Proceedings of the Artificial Neural Networks in Engineering (ANNIE'95). ASME Press. 1995, pp. 311-16. New York, NY, USA.
Conference Information
  Proceedings of Intelligent Engineering Systems through Artificial Neural Networks. St. Louis, MO, USA. 12-15 Nov. 1995.

Abstract
  One of the main tasks of engineering is to control the behavior of machines. These machines can be electronic circuits, hydraulic motors or any other type of electromechanical structure. Nevertheless, the purpose is usually the same: to control. Usually, the controllers are either humans or machines that are unable to learn, but in many cases it is best to use machines that can learn the machine's structure. Up to now, the main advantage of neural networks over fuzzy logic was the fuzzy logic's dependence on human assistance. This paper shows that, when using the author's autonomous mountain clustering method in the initialization of fuzzy sets, a simple fuzzy system can produce results that are comparable to those obtained by a recurrent net in a quicker and more autonomous way. To elucidate this claim, we used a highly nonlinear data set, obtained from an experimental electrohydraulic system (5 References).

RESULTADO <120>
Score

Accession Number
  5420748
Author
  Kai-Yuan Cai.
Author/Editor Affiliation
  Centre for Software Reliability, City Univ., London, UK.
Title
  System failure engineering and fuzzy methodology. An introductory overview.
Source
  Fuzzy Sets and Systems, vol.83, no.2, Oct. 1996, pp. 113-33. Publisher: Elsevier, Netherlands.
Abstract

  System failure engineering may encompass reliability: safety, security, maintainability, risk, and quality control. We consider a unified view, i.e., a failure-oriented view of system failure engineering. The notion of failure can be represented in terms of fuzzy sets and widely interpreted. We then discuss various application aspects of the fuzzy methodology in system failure engineering, which include the fuzzy methodology in fault diagnosis, probist systems, structural reliability, software reliability, human reliability, safety engineering, security engineering, risk engineering, and quality control, as well as profust, posbist, and posfust reliability theories. Engineering case studies and mathematical problems raised by applications of the fuzzy methodology in system failure engineering are also addressed (112 References).

RESULTADO <121>
Score
Accession Number
  5130860
Author
  Arciszewski T. Ziarko W. Khan TL.
Author/Editor Affiliation
  Dept. of Syst. Eng., George Mason Univ., Fairfax, VA, USA.
Editor
  Ziarko WP.
Title
  Learning conceptual design rules: a rough sets approach.
Source
  Rough Sets, Fuzzy Sets and Knowledge Discovery. Proceedings of the International Workshop on Rough Sets and Knowledge Discovery (RSKD'93). Springer-Verlag. 1994, pp. 444-9. Berlin, Germany.
Conference Information
  Proceedings of International Workshop on Rough Sets and Knowledge Discovery (RSKD-93). Banff, Alta., Canada. 12-15 Oct. 1993.
Abstract

  The paper presents the results of a feasibility study conducted in the area of learning conceptual design rules governing the selection of wind bracing components in steel skeleton structures of tall buildings. The study's objectives were to compare decision rules produced by different learning systems using the same body of examples, and to formally verify these rules using the overall empirical error rate. The study was conducted using two learning systems, both based on the theory of rough sets: (1) System ROUGH which usually produces a large number of complex deterministic rules; and (2) System DataLogic which can generate probabilistic rules, relatively simple and much fewer in number than in the case of ROUGH. All experiments were conducted using a collection of 374 examples of minimum weight (optimal) design of wind bracings in steel skeleton structures of tall buildings. The examples were prepared under identical design assumptions for a three bay skeleton structur!
 e of a tall building. They were produced using SODA, a computer software package for the analysis, design and optimization of steel structures. The paper gives a description of the learning experiments performed. It also provides a comparison of decision rules produced by DataLogic and Rough, and an analysis of empirical error rates obtained for the various collection of examples for ROUGH (5

References).

RESULTADO <122>
Score
 ****-
Accession Number
 10220058
Author
 Fleyeh H.
Author/Editor Affiliation
 Dept. of Comput. Sci., Dalarna Univ., Borlange, Sweden.
Title
 Traffic sign recognition by fuzzy sets.
Source
 2008 IEEE Intelligent Vehicles Symposium (IV). IEEE. pp. 422-7. Piscataway, NJ, USA.
Conference Information
 2008 IEEE Intelligent Vehicles Symposium (IV). Eindhoven, Netherlands. 4-6 June 2008.
Abstract
A novel fuzzy approach developed to recognize traffic signs is presented in this paper. More than 3400 images of traffic signs were collected in different light conditions by a digital camera mounted in a car and used for developing and testing this approach. Every RGB image was converted into HSV color space and segmented by using a set of fuzzy rules depending on the hue and saturation values of each pixel. Objects in each segmented image are labeled and tested for the presence of probable sign. Objects passed this test are recognized by a fuzzy shape recognizer which invokes another set of fuzzy rules. These fuzzy rules are based on four invariant shape measures which are invoked to decide the shape of the sign; rectangularity, triangularity, ellipticity, and the new shape measure octagonality. The method is tested in different environmental conditions and it shows high robustness. (13 References).

RESULTADO <123>
Score
 ****-
Accession Number
 9623259
Author
 Avogadri R. Valentini G.
Author/Editor Affiliation
 Univ. degli Studi di Milano, Milano, Italy.
Editor
 Masulli F; Mitra S; Pasi G.
Editor Affiliation
 University of Genoa, Genova, Italy.
 Universita degli Studi di Milano Bicocca, Milano, Italy..
Title
 Fuzzy ensemble clustering for DNA microarray data analysis.
Source
 Applications of Fuzzy Sets Theory. Springer-Verlag. pp. 537-43. Berlin, Germany.
Conference Information
 Applications of Fuzzy Sets Theory. 7th International Workshop on Fuzzy Logic and Applications, WILF 2007. Camogli, Italy. 7-10 July 2007.
Abstract
Two major problems related the unsupervised analysis of gene expression data are represented by the accuracy and reliability of the discovered clusters, and by the biological fact that classes of examples or classes of functionally related genes are sometimes not clearly defined. To face these items, we propose a fuzzy ensemble clustering approach to both improve the accuracy of clustering results and to take into account the inherent fuzziness of biological and bio-medical gene expression data. Preliminary results with

DNA microarray data of lymphoma and adenocarcinoma patients show the effectiveness of the proposed approach. (11 References).

RESULTADO <124>
Score
 ****-
Accession Number
 7970206
Author
 Carmona P. Castro JL. Zurita JM.
Author/Editor Affiliation
 Depto. de Informatica, Univ. de Extremadura , Spain.
Editor
 Bilgic T; De Baets B; Kaynak O.
Title
 Commutativity as prior knowledge in fuzzy modeling.
Source
 Fuzzy Sets and Systems - IFSA 2003. 10th International Fuzzy Systems Association World Congress. Proceedings (Lecture Notes in Artificial Intelligence Vol. 2715). Springer-Verlag. 2003, pp. 620-7. Berlin, Germany.
Conference Information
 Fuzzy Sets and Systems - IFSA 2003. 10th International Fuzzy Systems Association World Congress. Proceedings. Istanbul, Turkey. 30 June-2 July 2003.

Abstract
 This paper faces with the integration of mathematical properties satisfied by the system as prior knowledge in fuzzy modeling (FM), focusing on the commutativity as a starting point. The underlying idea is to reward the rules in each input fuzzy region that provide good commutativity degrees respecting its complementary - commutatively related - input fuzzy region. With this aim, the similarity between the outputs in both regions is obtained. The experimental results show the accuracy improvement gained by the proposed method (12 References).

RESULTADO <125>
Score
 ****-
Accession Number
 7970192
Author
 Haber RE. Alique JR. Alique A. Uribe-Etxebarria R. Hernadez J.
Author/Editor Affiliation
 Inst. de Autom. Ind., Madrid, Spain.
Editor
 Bilgic T; De Baets B; Kaynak O.
Title
 Embedded fuzzy control system in an open computerized numerical control: a technology transfer case-study.
Source
 Fuzzy Sets and Systems - IFSA 2003. 10th International Fuzzy Systems Association World Congress. Proceedings (Lecture Notes in Artificial Intelligence Vol. 2715). Springer-Verlag. 2003, pp. 442-9. Berlin, Germany.
Conference Information
 Fuzzy Sets and Systems - IFSA 2003. 10th International Fuzzy Systems Association World Congress. Proceedings. Istanbul, Turkey. 30 June-2 July 2003.

Abstract
 In order to improve machining efficiency, the current study is focused on the design and implementation of an intelligent controller in an open computerized numerical controller in an open computerized

numerical (CNC) system. The main advantages of the present approach include an embedded fuzzy controller in an open CNC to deal with a real life industrial process, a simple computational procedure to fulfill the time requirements and an application without restrictions concerning sensor cost (sensorless applications), wiring and synchronization with CNC. The integration process, design steps and results of applying an embedded fuzzy control system are shown through the example of real machining operations (8 References).

RESULTADO <126>

Score
 ****-
Accession Number
 7609003
Author
 Gien D. Jacqmart S. Seklouli A. Barad M.
Author/Editor Affiliation
 Lab. d'Informatique, Univ. Blaise Pascal, Aubiere, France.
Title
 An approach based on fuzzy sets for manufacturing system design.
Source
 International Journal of Production Research, vol.41, no.2, 20 Jan. 2003, pp. 315-35. Publisher: Taylor & Francis, UK.
Abstract

 The aim of this work is to provide small and medium enterprises (SMEs) with adapted design methods for manufacturing systems. In a total quality strategy, the design activity consists of searching for the means able to satisfy all users' needs from company customers to floor plant workers. That includes usual costs, delays and quality targets but also employees' involvement. Due to the variety of data sources and to the continuous changes of goals, the information is imperfect. The main concerns are uncertainty, inaccuracy and vagueness of both objectives and solutions. The fuzzy set theory provides a quite convenient framework to represent all those imperfections using one mathematical object. Fuzzy logic is used to aggregate specifications and to deploy solutions. Possibility theory finally allows a graded evaluation of expected performances. The obtained result is graded, providing the engineer with some degrees of freedom for the realization of the manufacturing system!
 . The valuation of the design quality is an undeniable progress towards the continuous improvement of the whole system performance. Finally, such a criterion may also be used for an empirical search for a convenient solution, as for the automatic computation of an optimal result (39 References).

RESULTADO <127>

Score
 ****-
Accession Number
 6799795
Author
 Wasfy TM. Noor AK.
Author/Editor Affiliation
 NASA Langley Res. Center, Virginia Univ., Hampton, VA, USA.
Title
 Multibody dynamic simulation of the next generation space telescope using finite elements and fuzzy sets.
Source
 Computer Methods in Applied Mechanics and Engineering, vol.190, no.5-7, 10 Nov. 2000, pp. 803-24. Publisher: Elsevier, Netherlands.
Abstract

 Multibody dynamic simulations are performed for a large deployable space structure using finite element models and an explicit temporal integration procedure. The structure considered is NASA's light-weight, 8 m aperture next generation space telescope (NGST). The NGST structure consists of beam components

(modeled using beam super-elements, each composed of two truss elements and a torsional spring), thin-surface shell-type components (modeled using super-elements, each composed of one brick, twelve truss elements, and six surface elements), revolute and prismatic joints, and reaction wheels. Detailed numerical simulations are conducted for the vibrational response, attitude control, and deployment. A fuzzy-set technique is used to assess the effect of changing the dwell time of the various deployment actuators on the total strain energy of the structure (10 References).

RESULTADO <128>
Score
  ****-
Accession Number
  5642581
Author
  Xilin Lu. Simmonds SH.
Author/Editor Affiliation
  Res. Inst. of Eng. Structures, Tongji Univ., Shanghai, China.
Title
  KBES for evaluating R.C. framed buildings using fuzzy sets.
Source
  Automation in Construction, vol.6, no.2, May 1997, pp. 121-37. Publisher: Elsevier, Netherlands.
Abstract
  A methodology for developing a knowledge-based expert system for assessing the structural condition of existing reinforced concrete buildings is proposed in this paper. The procedure incorporates the results of field observations and, if necessary, strength computations of individual members and combines these using weighting factors to obtain the overall structural condition of the building. The lack of precision associated with verbal descriptions used in recording some field observations is expressed using fuzzy set notation. Elements of fuzzy set theory are also used in the reasoning process. A KBES incorporating this methodology and using expertise based primarily on the experience of a team of investigating engineers at Tongji University, China, is described (13 References).

RESULTADO <129>
Score
  ****-
Accession Number
  4723414
Author
  Jarventausta P. Verho P. Partanen J.
Author/Editor Affiliation
  Tampere Univ. of Technol., Finland.
Title
  Using fuzzy sets to model the uncertainty in the fault location process of distribution networks.
Source
  IEEE Transactions on Power Delivery, vol.9, no.2, April 1994, pp. 954-60. USA.
Abstract
  In the computerized fault diagnosis of distribution networks the heuristic knowledge of the control center operators can be combined with the information obtained from the network database and SCADA system. However, the nature of the heuristic knowledge is inexact and uncertain. Also the information obtained from the remote control system contains uncertainty and may be incorrect, conflicting or inadequate. This paper proposes a method based on fuzzy set theory to deal with the uncertainty involved in the process of locating faults in distribution networks. The method is implemented in a prototype version of the distribution network operation support system (14 References).

RESULTADO <130>
Score
  ****-

Accession Number
  4566444
Author
  Gacogne L.
Author/Editor Affiliation
  LAFORIA, Paris VI Univ., France.
Title
  An application of fuzzy logic in the domain of the choice of ball-bearings.
Source
  Les Applications Des Ensembles Flous (Applications of Fuzzy Sets). EC2. 1992, pp. 319-24. Nanterre Cedex, France.
Conference Information
  Les Applications Des Ensembles Flous (Applications of Fuzzy Sets) . Nimes, France. 2-3 Nov. 1992.
Abstract
  This paper describes an application of fuzzy logic to the choice of ball-bearings on an axle and the computation of certain of their characteristics. Fuzzy set concepts and possibility theory are appropriate in such a case because the problem continually arises in mechanics and is resolved empirically, there being many recommendations, obligations, etc. that are given with imprecise data such as `weak axle power' and `heavy width series'. The author uses the values given in a lambda-trapezoidal way, couples (necessity-possibility), are purely qualitative predicates or pseudo-qualitative predicates when it is possible to reduce the quantitative. The deduction is made according to a possibility distribution pi(x,y) for the equivalence `x is Ay is B'. The rules thus are all of the same type, even if they express a fuzzy empirical formula. He discusses the `trapezoidal function' in this respect in order to formalize gradual rules such as the `the stronger the radial power, the!
  greater the need to choose a large diameter series'. Moreover, when the initial data is incomplete, the system carries out several choices on a certain number of qualities, and backtracks through the tree of all solutions to the problem (11 References).

RESULTADO <131>
Score
  ****-
Accession Number
  3699999
Author
  Murthy SV. Kandel A.
Author/Editor Affiliation
  Dept. of Comput. Sci., Florida State Univ., Tallahassee, FL, USA.
Title
  Fuzzy sets and typicality theory.
Source
  Information Sciences, vol.51, no.1, June 1990, pp. 61-93. USA.
Abstract
  A set whose elements take grades of membership in the interval [0,1] is known as a fuzzy set. In practice, assignment of grades of membership to the elements of a fuzzy set is based on statistical considerations. The paper is concerned with the problem of identifying what should be meant by a `typical' element of a fuzzy set. Because of the subjective nature of membership grades, use of the common statistical measures such as the mean or median is theoretically unjustifiable. The authors employ the concepts of the fuzzy expected value and fuzzy random variable as the basis for a measure of what is typical of a fuzzy set, an approach which shows promise in fields like pattern recognition and expert systems. They propose a flexible algorithm which incorporates subjective ideas of typicality and some simple statistical techniques to arrive at the typical element of a fuzzy set. No attempt is made to further fuzzify the element of the given fuzzy set with respect to the typica!
 l element: however, it is an issue worth considering at a later stage. The investigation assumes a well-defined fuzzy set; i.e. the grades of membership are known. Subjective feelings of cohesiveness within a set (based on proximity and density, for example) are incorporated within the algorithm (14 References).

RESULTADO <132>
Score
 ****-
Accession Number
 3368554
Author
 Turksen IB.
Author/Editor Affiliation
 Dept. of Ind. Eng., Toronto Univ., Ont. , Canada.
Title
 Four methods of approximate reasoning with interval-valued fuzzy sets.
Source
 International Journal of Approximate Reasoning, vol.3, no.2, March 1989, pp. 121-42. USA.
Abstract
 An interval-valued fuzzy set approach is proposed for approximate reasoning. There are a number of possible interpretations of the interval-valued fuzzy modus ponens. Four of these are discussed. Sufficiency conditions are identified in order to reach a conclusion similar to the classical result. Numerical examples are given where appropriate. A prototype study is reviewed that shows an application of the interval-valued fuzzy set approach to aggregate production planning. The results of this approach are shown to fairly well approximate the results of currently accepted methods of aggregate production planning. Furthermore, the approach provides a much more user friendly interface (27 References).

RESULTADO <133>
Score
 ****-
Accession Number
 3248329
Author
 Dubois D. Prade H.
Author/Editor Affiliation
 Univ. Paul Sabatier, Toulouse, France.
Title
 The treatment of uncertainty in knowledge-based systems using fuzzy sets and possibility theory.
Source
 Proceedings - 2nd International Symposium on Artificial Intelligence and Expert Systems. AMK Berlin. 1988, pp. 1-11. Berlin, West Germany.
Conference Information
 Proceedings - 2nd International Symposium on Artificial Intelligence and Expert Systems. Berlin, West Germany. 20-24 June 1988.
Abstract
 Possibility theory offers a common setting for modeling uncertainty and imprecision in reasoning systems. However, the reasoning methodology in fuzzy logic differs drastically from the theorem-proving approach. In the latter, statements are translated into logical formulas. Inference is then symbolically performed regardless of the meaning of the formulas. In fuzzy logic, on the contrary, statements are translated into elastic constraints in a meaning-representation language, and the meaning of the conclusion is directly computed via nonlinear programming techniques. However, in possibility logic, as soon as no vagueness pervades the knowledge, it seems that part of the theorem-proving methodology can be extended, as indicated by Dubois and Prade (1987). It is pointed out in conclusion that the notion of truth can be viewed as the result of a semantic pattern-matching process. This view leads to the definition of operational procedures in order to compute degrees of truth !
 and degrees of uncertainty which can feed approximate reasoning systems. Lastly, possibility theory due to the extensive use of max and min operations is shown to be computationally tractable in practice (39 References).

RESULTADO <134>
Score
  ****-
Accession Number
  3163075
Author
  Kangari R. Boyer LT.
Author/Editor Affiliation
  Georgia Inst. of Technol., Atlanta, GA, USA.
Title
  Knowledge-based systems and fuzzy sets in risk management.
Source
  Microcomputers in Civil Engineering, vol.2, no.4, Dec. 1987, pp. 273-83. USA.

Abstract
  An integrated microcomputer-based knowledge system is developed for risk management in construction. The system (Expert-Risk) applies the concepts of fuzzy set theory to evaluate the overall risk of a project. It is also integrated with various relational databases that provide the system with financial and cost data necessary for bankruptcy and risk analysis. Today's construction industry involves more dynamic and uncertain planning than ever before. Without professional risk management, decision makers cannot systematically approach complex problems. The system provides a more definitive perception of the overall risk of a construction project, and a more rational basis for contingency planning and evaluation. The system allows management to focus on those risk factors which have significant impact on planning (20 References).

RESULTADO <135>
Score
  ****-
Accession Number
  5044722
Author
  Gyei-Kark Park.
Author/Editor Affiliation
  Mokpo National Maritime Univ., South Korea.
Title
  Linguistic instruction based learning and its applications.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1891-6. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  Human learning on the linguistic level is superior to other kinds of learning. Learning at the linguistic level involves the use of language as a medium. In this paper, the human learning is characterized by a process under a natural language environment, and an approach of learning based on indirect linguistic instructions is discussed. An instruction is interpreted through some meaning elements and each trend. Fuzzy evaluation rules are constructed for the searched meaning element of the given instruction, and the performance of a system to be learned is improved by the evaluation rules. In this paper, we discuss a framework of linguistic instruction based learning: FULLINS (Fuzzy-Learning based on Linguistic Instruction). FULLINS is applied to two examples: the truck backer-upper and the helicopter flight control problems (5 References).

RESULTADO <136>
Score
 ****-
Accession Number
 2813857
Author
 Moreau A. Asse A. Willaeys D.
Author/Editor Affiliation
 Lab. d'Automat. Ind. et Humaine, Univ. de Valenciennes et du Hainaut-Cambresis, Le Mont Houy, France.
Editor
 Bandler W; Kandel A.
Title
 A method for dealing with imprecise informations in computer and aided diagnosis.
Source
 Recent Developments in the Theory and Applications of Fuzzy Sets. Proceedings of NAFIPS '86 - 1986 Conference of the North American Fuzzy Information Processing Society. Florida State Univ. 1986, pp. 412-27. Tallahassee, FL, USA.
Conference Information
 Recent Developments in the Theory and Applications of Fuzzy Sets. Proceedings of NAFIPS '86 - 1986 Conference of the North American Fuzzy Information Processing Society. New Orleans, LA, USA. Louisiana State Univ.. Tulane Univ. 2-4 June 1986.

Abstract
 The growth of engineering sciences has given rise to the development of more and more complex industrial installations. That is why computer-aided diagnosis systems and in particular expert systems have been designed. Yet the principle of incompatibility [Zadeh 1973] states that `as the complexity of a system increases, our ability to make precise and yet significant statements about its behavior diminishes until a threshold is reached beyond which precision and significance become almost mutually exclusive characteristics'. It then becomes essential for a computer-aided diagnosis system to use imprecise and even uncertain knowledge. This paper deals with subsets and knowledge granules coded in the form of `if . . . then . . .' rules, using imprecise information. One interpretation of these rules by Zadek (1975) is based on the implicative sum, but this interpretation distorts the knowledge contained in the rule. While conforming to Zadeh's approach, the authors have desig!
 ned a method which attenuates the distortion, on more general theoretical bases (14 References).

RESULTADO <137>
Score
 ****-
Accession Number
 10397997
Author
 Jahankhani P. Revett K. Kodogiannis V.
Author/Editor Affiliation
 Sch. of Comput. Sci., Univ. of Westminster, London, UK.
Title
 A rule based approach to classification of EEG datasets: a comparison between ANFIS and rough sets.
Source
 2008 9th Symposium on Neural Network Applications in Electrical Engineering (NEUREL 2008). IEEE. pp. 157-60. Piscataway, NJ, USA.
Conference Information
 2008 9th Symposium on Neural Network Applications in Electrical Engineering (NEUREL 2008). Belgrade, Serbia. 25-27 Sept. 2008.

Abstract
 This paper compares two different rule based classification methods in order to evaluate their relative

efficiency with respect to classification accuracy and the caliber of the resulting rules. Specifically, the application of adaptive neuro-fuzzy inference system (ANFIS) and rough sets were deployed on a complete dataset consisting of electroencephalogram (EEG) data. The results indicate that both were able to classify this dataset accurately and the number of rules were similar in both cases, provided the dataset was pre-processed using PCA in the case of ANFIS. (6 References).

RESULTADO <138>
Score
 ****-
Accession Number
 9789429
Author
 Tettey T. Nelwamondo FV. Marwala T.
Author/Editor Affiliation
 Univ. of the Witwatersrand, Johannesburg, South Africa.
Title
 HIV data analysis via rule extraction using rough sets.
Source
 2007 11th International Conference on Intelligent Engineering Systems. IEEE. pp. 105-10. Piscataway, NJ, USA.
Conference Information
 2007 11th International Conference on Intelligent Engineering Systems. Budapest, Hungary. 29 June-2 July 2007.

Abstract
 The paper presents an analysis HIV data obtained from a survey performed on pregnant women by the Department of Health in South Africa. The HIV data is analysed by formulating a rough set approximation of the six demographic variables analysed. These variables are Race,, Age of Mother, Education, Gravidity, Parity and Age of Father. It is found that of the 4096 possible subsets in the input space, the data only represents 225 of those cases with 130 cases being discernible and 96 cases indiscernible. The rough sets analysis is suggested as a quick way of analysing data and rule extraction over Neuro-fuzzy models when it comes to data driven identification. Comparisons of rule extraction using rough sets and using neuro-fuzzy is conducted and the results are in favour of the rough sets. (18 References).

RESULTADO <139>
Score
 ****-
Accession Number
 7882429
Author
 Hsuan-Shih Lee.
Author/Editor Affiliation
 Dept. of Shipping & Transp. Manage., Nat. Taiwan Ocean Univ., Keelung, Taiwan.
Editor
 Damiani E; Howlett RJ; Jain LC; Ichalkaranje N.
Title
 A measure of fuzziness in rough sets.
Source
 Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002. IOS Press. Part vol.1, 2002, pp. 80-4. Amsterdam, Netherlands.
Conference Information
 Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002. Polo di Crema, Italy. 16-18 Sept. 2002.

Abstract
 The concept of the rough set is a new mathematical approach to imprecision, vagueness and uncertainty in data analysis beside fuzzy set theory. The origin of the rough set philosophy is the assumption that with

every object we associate some information. Objects can be something like patients, while the symptoms of the disease are the information employed to characterized patients. Objects are similar or indiscernible, if they are characterized by the same information. Dubios and Prade combined fuzzy sets and rough sets in a fruitful way by defining rough fuzzy sets and fuzzy rough sets. Banerjee and Pal have characterized a measure of roughness of a fuzzy set making use of the concept of rough fuzzy sets. They also suggested some possible applications of the measure in pattern recognition and image analysis problems. We give a different measure of fuzziness in rough sets, preventing the inconsistency problem of the measure proposed by Chakrabarty et al (12 References).

RESULTADO <140>
Score
 ****-
Accession Number
 7479391
Author
 Xiaoshu Hang. Zhen Yu Wang. Fanlun Xiong.
Author/Editor Affiliation
 Hefei Inst. of Intelligent Machines, Acad. Sinica, Hefei, China.
Editor
 Baba N; Jain LC; Howlett RJ.
Title
 Constructing knowledge-based artificial neural network with rough sets.
Source
 Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.1, 2001, pp. 266-72. Amsterdam, Netherlands.
Conference Information
 Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.

Abstract
 An approach of constructing a knowledge-based artificial neural network based on rough sets is proposed. Crude domain knowledge is extracted from the 0-1 table produced from the fuzzy information table of example data by a threshold. The extracted initial rules and their accuracy and coverage are used to configure the fuzzy multilayer perceptron-structure and initial weights. An algorithm of attribute-reduction based on information entropy is also proposed in this paper. Results on diagnosis of rice pests show that the performance of this fuzzy neural system is the same as that of a conventional multilayer perceptron (9 References).

RESULTADO <141>
Score
 ****-
Accession Number
 7937373
Author
 Inelmen E. Inelmen E. Ibrahim A.
Author/Editor Affiliation
 Padova Univ., Italy.
Editor
 Bilgic T; De Baets B; Kaynak O.
Title
 A new approach to teaching fuzzy logic system design.
Source
 Fuzzy Sets and Systems - IFSA 2003. 10th International Fuzzy Systems Association World Congress. Proceedings (Lecture Notes in Artificial Intelligence Vol. 2715). Springer-Verlag. 2003, pp. 79-86. Berlin, Germany.
Conference Information

Fuzzy Sets and Systems - IFSA 2003. 10th International Fuzzy Systems Association World Congress. Proceedings. Istanbul, Turkey. 30 June-2 July 2003.

Abstract

In order for fuzzy systems to continue to flourish in all scientific research areas, not only engineering, a more efficient and effective way of transmitting the relevant knowledge and skills of this discipline is necessary. Conventional tutorials in this area follow a fixed outline starting from the basic principles (set operations, relations, etc.) and ending with current applications such as pattern recognition, information classification and system control. We argue that an iterative and concurrent top-down/down-top approach to learning would be more effective, and suggest that a plan to discover concepts first and map them afterwards is viable. Several publications and a case study currently under development in the field of medicine are used as examples to show evidence for the future of this new approach (25 References).

RESULTADO <142>

Score
  ****-
Accession Number
  7069073
Author
  Royes GF. Bastos RC.
Author/Editor Affiliation
  Univ. Fed. de Santa Catarina, Florianopolis , Brazil.
Editor
  Smith MH; Gruver WA; Hall LO.
Title
  Fuzzy sets in political science.
Source
  Proceedings Joint 9th IFSA World Congress and 20th NAFIPS International Conference (Cat. No. 01TH8569). IEEE. Part vol.2, 2001, pp. 935-40. Piscataway, NJ, USA.
Conference Information
  Proceedings Joint 9th IFSA World Congress and 20th NAFIPS International Conference. Vancouver, BC, Canada. Int. Fuzzy Syst. Assoc.. North American Fuzzy Inf. Process. Soc.. IEEE Syst. Man and Cybern. Soc.. IEEE Neural Networks Council. 25-28 July 2001.
Abstract

Several computational intelligence (CI) paradigms have been popularized by their broad use in industry. The practical value of these techniques is seldom questioned in traditional areas like engineering and medicine. However, there are other fields still waiting to be better explored. Relatively new paradigms in CI that can deal with uncertainty has facilitated the construction of advanced expert systems. Treating uncertainty with fuzzy logic (FL) in politics is an exercise that may demonstrate a promising use of expert systems, opposing the idea that vagueness is a source of great complexity, only approachable by human experts. The paper explores the applicability of FL for politics via a practical experiment, that is also useful for discussing some important details about implementation. The area known as social science, which for a long time has been held in reserve for human specialists, can now be aided by intelligent systems regarding decision making (18 References).

RESULTADO <143>

Score
  ****-
Accession Number
  5773133
Author
  Jamshidi M.
Author/Editor Affiliation
  NASA Center for Autonomous Control Eng., New Mexico Univ., Albuquerque, NM, USA.
Title
  Introduction to fuzzy systems: from fuzzy sets to industrial applications.

Source
  Proceedings. Thirty-Fourth Annual Allerton Conference on Communication, Control, and Computing. Univ. Illinois. 1996, pp. 933-41. Urbana, IL, USA.
Conference Information
  Proceedings of 34th Annual Allerton Conference on Communication, Control and Computing. Monticello, IL, USA. Univ. Illinois at Urbana-Champaign. 2-4 Oct. 1996.

Abstract
  One of the more popular new technologies of today is "intelligent control", which is defined as a combination of control theory, operations research, and artificial intelligence (AI). Among many possible new technologies based on AI, fuzzy logic is now perhaps the most popular area, judging by the billions of dollars worth of sales of products and close to 2000 patents issued in Japan alone since the announcement of the first fuzzy chips in 1987. This is not, however, so in the USA. In recent years from 700 fuzzy logic patents issued by the USA Patent Office, only 60 of them were issued to non-Japanese inventors. Thanks to tremendous technological and commercial advances in fuzzy logic in Japan and other nations, today fuzzy logic is enjoying an unprecedented popularity in the technological and engineering fields including manufacturing, automation, financial engineering (e.g., stock markets, mutual funds, etc.), medicine, etc. The most important issue facing many industri!
 alized nations in the next several decades will be global competition to an extent that has never before been posed. The purpose of this paper is to introduce fuzzy logic and fuzzy control to readers. It describes its birth and progress up to now (2 References).

RESULTADO <144>

Score
  ****-
Accession Number
  5160467
Author
  Sztandera LM.
Author/Editor Affiliation
  Dept. of Comput. Sci., Philadelphia Coll. of Textiles & Sci., PA, USA.
Title
  A comparative study of ranking fuzzy sets defined by a neural network algorithm - justification for a centroidal method.
Source
  Archives of Control Sciences, vol.4(40), no.1-2, 1995, pp. 89-111. Publisher: Warsaw Univ. Technol, Poland.

Abstract
  Ranking fuzzy subsets is an important event in dealing with fuzzy decision problems in many areas, such as social sciences, management sciences and engineering. However, until now, no thorough investigation has been made to evaluate the relative performance of all the ranking methods, and to analyze the differences between these methods for a particular application. A recent breakthrough calls on a neural network algorithm, Fuzzy CID3 Algorithm, which learns the needed membership functions from a set of training examples to differentiate between classes. It is the purpose of this paper to evaluate and analyze the performance of available methods of ranking fuzzy subsets on a set of selected examples that cover possible situations we might encounter in defining fuzzy subsets at each node of a neural network. Through this analysis, suggestions as to which methods have better performance for utilization in neural network architectures, as well as criteria for choosing an appr!
 opriate method for ranking in corresponding fuzzy trees, are made (144 References).

RESULTADO <145>

Score
  ****-
Accession Number
  4885501
Author

Seitz T. Haubrich H-J. Bovy A.

Author/Editor Affiliation
  Inst. of Power Syst. & Power Econ., Tech. Hochschule Aachen, Germany.

Title
  Reliability evaluation of power distribution systems with local generation using fuzzy sets.

Source
  PSCC. Proceedings of the Eleventh Power Systems Computation Conference. Power Syst. Comput. Conference. Part vol.1, 1993, pp. 39-45. Zurich, Switzerland.

Conference Information
  Proceedings of PSCC. 11th Power Systems Computation Conference. Avignon, France. 30 Aug.-3 Sept. 1993.

Abstract
  Reliability evaluations in the area of electrical distribution systems tend to be very complex and methodically regarded as difficult. Especially, if local generating units are considered, calculation time and the data basis both become serious problems. This paper depicts the application of fuzzy set theory (FST) for more suitable problem solving in this field. It includes an introduction to the basic idea of FST. Furthermore, applications in the field of power systems engineering are discussed briefly. The new method is applied to a model power system that was developed in close cooperation with a Dutch electric utility. First results and possible effects on the network structure are discussed (21 References).

RESULTADO <146>

Score
  ****-

Accession Number
  4875457

Author
  Sztandera LM.

Author/Editor Affiliation
  Philadelphia Coll. of Textiles & Sci., PA, USA.

Editor
  Hall L; Hao Ying; Langari R; Yen J.

Title
  Ordering fuzzy sets for class separation purposes.

Source
  NAFIPS/IFIS/NASA '94. Proceedings of the First International Joint Conference of the North American Fuzzy Information Processing Society Biannual Conference. The Industrial Fuzzy Control and Intelligent Systems Conference, and the NASA Joint Technology Workshop on Neural Networks and Fuzzy Logic (Cat. No.94TH8006). IEEE. 1994, pp. 315-16. New York, NY, USA.

Conference Information
  NAFIPS/IFIS/NASA '94. Proceedings of the First International Joint Conference of The North American Fuzzy Information Processing Society Biannual Conference. The Industrial Fuzzy Control and Intelligent Systems Conference, and the NASA Joint Technology Workshop on Neural Networks and Fuzzy Logic. San Antonio, TX, USA. North American Fuzzy Inf. Process. Soc.. Center for Fuzzy Logic and Intelligent Syst. Res.. Texas A&M Univ.. NASA. IEEE Neural Networks Council. 18-21 Dec. 1994.

Abstract
  Ranking fuzzy subsets is an important event in dealing with fuzzy decision problems in many areas, such as management sciences, engineering, and even social sciences. This issue has been of concern for many researchers over the years. Some twenty eight methods have been proposed in the publications for ranking fuzzy subsets. It is the purpose of this paper to evaluate and analyze the performance of available methods of ranking fuzzy subsets on a set of selected examples that cover possible situations one might encounter as defining fuzzy subsets at each node of a neural network. Through this analysis, suggestions as to which methods have better performance for utilization in neural network architectures, as well as criteria for choosing an appropriate method for ranking in corresponding fuzzy trees are made (8 References).

RESULTADO <147>

Score
 ****-

Accession Number
 4607226

Author
 Seitz T. Haubrich H-J. Bovy A.

Author/Editor Affiliation
 Inst. of Power Syst. & Power Econ., Aachen Univ. of Technol., Germany.

Editor
 Dillon TS.

Title
 Fuzzy sets in reliability analysis of power distribution systems.

Source
 Expert System Application to Power Systems IV Proceedings. CRL Publishing. 1992, pp. 212-17. Aldershot, UK.

Conference Information
 Expert System Application to Power Systems IV Proceedings. Melbourne, Vic., Australia. NSF. EPRI. Applied Comput. Res. Inst. 4-8 Jan. 1993.

Abstract
 This paper presents possible applications of fuzzy set theory (FST) for more suitable problem solving in the field of computer-based electric power system planning. A general and detailed introduction first explains the basic idea of FST. Applications in the field of electric energy systems engineering are discussed briefly, while this paper focuses on the area of reliability analysis. New FST based approaches are then used to solve an actual planning problem in the field of distribution systems. A new method for reliability analysis is depicted, that had to be developed to take local generating units, combined heat and power (CHP), with time dependent generation, into account (19 References).

RESULTADO <148>

Score
 ****-

Accession Number
 4566453

Author
 Dubois D. Prade H.

Author/Editor Affiliation
 IRIT, Paul Sabatier Univ., Toulouse, France.

Title
 Calculation with fuzzy quantities.

Source
 Les Applications Des Ensembles Flous (Applications of Fuzzy Sets). EC2. 1992, pp. 24-7. Nanterre Cedex, France.

Conference Information
 Les Applications Des Ensembles Flous (Applications of Fuzzy Sets) . Nimes, France. 2-3 Nov. 1992.

Abstract
 In some instances where numerical data are either provisional, incomplete, or variable within a limited range, the classical calculation of confidence intervals can be extended in a fuzzy-set approach, distinguishing between more or less plausible values. The simultaneous use of relatively wide intervals containing all possible values, and generally much narrower intervals covering only the most likely ones, can give sufficiently informative results. Some precautions advisable in arithmetic operations on imprecisely known quantities are outlined. Examples of application include provisional budgeting, resource estimation, evaluation of candidates, and extension of PERT to projects involving precedence among elementary tasks with uncertain durations and/or starting times. Computer-aided engineering design can also benefit from fuzzy specifications for values eventually to be optimised (14 References).

RESULTADO <149>
Score
  ****-
Accession Number
  4011347
Author
  Zhong Zhihuan. Yu Junjing.
Author/Editor Affiliation
  Tianjin Univ., China.
Editor
  Ayyub BM.
Title
  Prediction of earthquake damages and reliability analysis using fuzzy sets.
Source
  Proceedings. First International Symposium on Uncertainty Modeling and Analysis (Cat. No.90TH0334-3). IEEE Comput. Soc. Press. 1991, pp. 173-6. Los Alamitos, CA, USA.
Conference Information
  Proceedings. First International Symposium on Uncertainty Modeling and Analysis (Cat. No.90TH0334-3). College Park, MD, USA. IEEE. Univ. Maryland. Int. Fuzzy Syst. Assoc.. North American Fuzzy Inf. Processing Soc.. ASME. NSF. SRE. Univ. Stuttgart. American Water Resources Assoc. 3-5 Dec. 1990.

Abstract
  Based on the analysis of randomness of earthquake occurrence and fuzziness of earthquake intensity, a method is obtained by treating the earthquake damage prediction as fuzzy-random event. The prediction results expressed by the fuzzy probabilistic subset wholly estimated the earthquake damage assessment. In addition, considering the fuzziness of earthquake intensity, the fuzzy earthquake intensity and crisp earthquake intensity are defined. The concept and the computational method based on the fuzzy earthquake intensity and fuzzy reliability were extended from the conventional concept and the calculation the method for the reliability based on the crisp earthquake intensity. Based on the analysis of the effect of multifactors on the reliability in earthquake engineering, the method for fuzzy comprehensive evaluation of the reliability in earthquake engineering is suggested (5 References).

RESULTADO <150>
Score
  ****-
Accession Number
  1683763
Author
  Oda M. Shimomura T. Womack BF.
Author/Editor Affiliation
  Dept. of Information & Control, Nagoya Univ., Chikusa-ku, Nagoya, Japan.
Editor
  Wang PP; Chang SK.
Title
  Concept structure and its distortion in the communication and formation process of morality concept.
Source
  Fuzzy Sets. Theory and Applications to Policy Analysis and Information Systems. Proceedings of the Symposium on Policy Analysis and Information Systems. Plenum. 1980, pp. 369-89. New York, NY, USA.
Conference Information
  Fuzzy Sets. Theory and Applications to Policy Analysis and Information Systems. Proceedings of the Symposium on Policy Analysis and Information Systems. Durham, NC, USA. 28-30 June 1980.

Abstract
  Studies the concept structure and its distortion phases in the communication and formation process of an aimed concept of morality teaching material used in elementary schools of Japan from viewpoints of instructional engineering and fuzzy set theory application (12 References).

RESULTADO <151>
Score
  ****-
Accession Number
  1683565
Author
  Kandel A.
Author/Editor Affiliation
  Florida State Univ., Tallahassee, FL, USA.
Editor
  Wang PP; Chang SK.
Title
  Fuzzy dynamical systems and the nature of their solutions.
Source
  Fuzzy Sets. Theory and Applications to Policy Analysis and Information Systems. Proceedings of the Symposium on Policy Analysis and Information Systems. Plenum. 1980, pp. 93-121. New York, NY, USA.
Conference Information
  Fuzzy Sets. Theory and Applications to Policy Analysis and Information Systems. Proceedings of the Symposium on Policy Analysis and Information Systems. Durham, NC, USA. 28-30 June 1980.
Abstract
  Examines solutions to differential equations with fuzzy coefficients. The objective of this paper to give a careful presentation of the fuzzy approach to the solution of imprecise differential equations, by using the theory of fuzzy statistics, and to explore its applications to problems in science and engineering (22 References).

RESULTADO <152>
Score
  ****-
Accession Number
  10403285
Author
  Wolf P.
Author/Editor Affiliation
  ATR-352, VSB-Tech. Univ. Ostrava, Ostrava, Czech Republic.
Title
  Fuzzy logic in decision-making process.
Source
  9th WSEAS International Conference on Mathematical Methods and Computational Techniques in Electrical Engineering (MMACTEE '07). 6th WSEAS International Conference on Non-Linear Analysis, Non-Linear Systems and Chaos (NOLASC '07). 7th WSEAS International. WSEAS. pp. 282-7. Athens, Greece.
Conference Information
  9th WSEAS International Conference on Mathematical Methods and Computational Techniques in Electrical Engineering (MMACTEE '07). 6th WSEAS International Conference on Non-Linear Analysis, Non-Linear Systems and Chaos (NOLASC '07). 7th WSEAS International . Arcachon, France. 13-15 Oct. 2007.
Abstract
  The article deals with the practical use of the methods of the fuzzy sets theory while solving the manager decision-making middle-term and long-term tasks. (9 References).

RESULTADO <153>
Score
  ****-
Accession Number
  10333334

Author
  Chang-Wook Han.
Author/Editor Affiliation
  Dept. of Electr. Eng., Dong-Eui Univ., Busan, South Korea.
Title
  Evolutionary optimization of union-based rule-antecedent fuzzy neural networks and its applications.
Source
  Intelligent Data Engineering and Automated Learning. Proceedings 9th International Conference, IDEAL 2008. Springer-Verlag. pp. 80-7. Berlin, Germany.
Conference Information
  Intelligent Data Engineering and Automated Learning. 9th International Conference, IDEAL 2008. Daejeon, South Korea. 2-5 Nov. 2008.

Abstract
  A union-based rule-antecedent fuzzy neural networks (URFNN), which can guarantee a parsimonious knowledge base with reduced number of rules, is proposed. The URFNN allows union operation of input fuzzy sets in the antecedents to cover bigger input domain compared with the complete structure rule which consists of AND combination of all input variables in its premise. To construct the URFNN, we consider the union-based logic processor (ULP) which consists of OR and AND fuzzy neurons. The fuzzy neurons exhibit learning abilities as they come with a collection of adjustable connection weights. In the development stage, genetic algorithm (GA) constructs a Boolean skeleton of URFNN, while gradient-based learning refines the binary connections of GA- optimized URFNN for further improvement of the performance index. A cart- pole system is considered to verify the effectiveness of the proposed method. (9 References).

RESULTADO <154>

Score
  ****-
Accession Number
  10203623
Author
  Silva J. Lima M. Campos G. Souza J.
Author/Editor Affiliation
  Univ. Estadual do Ceara, Ceara, Brazil.
Title
  A fuzzy utility-based agent for the design problem.
Source
  2008 IEEE International Engineering Management Conference (IEMC-Europe 2008). IEEE. pp. 5. Piscataway, NJ, USA.
Conference Information
  2008 IEEE International Engineering Management Conference (IEMC-Europe 2008). Estoril, Portugal. 28-30 June 2008.

Abstract
  This article conceptualizes, formalizes, and tests a utility-based agent with multiple goals capable of designing sequences of actions, in an environment where perceptions regarding the present and desired situations of the agent, its actions, and information that it maintains internally with respect to the effects of these actions are ambiguous and vague concepts. Fuzzy sets, the compositional rule of inference, several theoretical results involving fuzzy relational equations solutions, a measurement for fuzzy sets similarity, problem-solving and decision making theories and others results from heuristic search were used in the outline of the agent and the formalization of its actions selection mechanism. (9 References).

RESULTADO <155>

Score
  ****-
Accession Number
  10187026

Author
  Meesad P. Srikhacha T.

Author/Editor Affiliation
  Fac. of Tech. Educ., Dept. of Teacher Training in Electr. Eng., King Mongkut&psila;s Inst. of Technol., Bangkok, Thailand.

Title
  Stock price time series prediction using neuro-fuzzy with support vector guideline system.

Abstract
  Global prediction techniques such as support vector machines show accurate prediction for time series data; however, such models tend to delay the predicted output. Fuzzy systems have benefits in local optimum, thus producing significant results within training sets. Unfortunately, the existing techniques sometimes give undesired effects of surface oscillation at predicted outputs. This paper presents a cascade model called Neuro-Fuzzy with Support Vector guideline system (NFSV) to resolve the problem mentioned above. The proposed model takes benefits from both support vector machine and fuzzy model with appropriate stock price rule filtering. From evaluation, the proposed method seems to have low error rate in stock price time series prediction. (17 References).

RESULTADO <156>
Score
  ****-
Accession Number
  10170667
Author
  Looney CG. Dascalu S.

Author/Editor Affiliation
  Comput. Sci. & Eng./171, Univ. of Nevada, Reno, NV, USA.

Title
  A simple fuzzy neural network.

Abstract
  Our simple fuzzy neural network first thins the set of exemplar input feature vectors and then centers a Gaussian function on each remaining one and saves its associated output label (target). Next, any unknown feature vector to be classified is put through each Gaussian to get the fuzzy truth that it belongs to that center. The fuzzy truths for all Gaussian centers are then maximized and the label of the winner is the class of the input feature vector. We use the knowledge in the exemplar-label pairs directly with no training, no weights, no local minima, no epochs, no defuzzification, no overtraining, and no experience needed to use it. It sets up automatically and then classifies all input feature vectors from the same population as the exemplar feature vectors. We compare our results on well known data with those of several other fuzzy neural networks, which themselves compared favorably to other neural networks. (9 References).

RESULTADO <157>
Score
  ****-

Accession Number
  10170639
Author
  Celebi FV. Ozturk T.
Author/Editor Affiliation
  Dept. of Comput. Eng., Baskent Univ. Baglica Campus, Ankara, Turkey.
Title
  A simple model for distributed-feedback laser using adaptive neuro-fuzzy inference system.
Source
  16th International Conference on Software Engineering and Data Engineering. International Society for Computers and Their Applications (ISCA). pp. 143-7. Honolulu, HI, USA.
Conference Information
  16th International Conference on Software Engineering and Data Engineering. Las Vegas, NV, USA. 9-11 July 2007.

Abstract
  Calculation of the optical quantities generally requires a large amount of computational time by using different theories, approximations and assumptions. In this study, neuro-fuzzy (NF) models are used which are well-known robust learning systems that combine the advantages of fuzzy sets and neuro-computation theory. In particular, the adaptive network-based fuzzy inference system (ANFIS) is successfully developed from the amplified spontaneous emission (ASE) of a strained quantum-well (SQW) distributed feedback (DFB) laser diode in order to obtain the critical quantities and their dependences on wavelength and currents. These critical quantities are the differential gain, the induced effective index change and the linewidth enhancement factor (Alpha parameter). Excellent agreement between the computed results and experimental measurements is obtained that validates the presented NF approach. (16 References).

RESULTADO <158>
Score
  ****-
Accession Number
  10141233
Author
  Suma GJ. Shashi M. Devi GL.
Author/Editor Affiliation
  Dept of Comput. Sci. & Eng., Gitam Univ., Visakhapatnam, India.
Title
  A comprehensible approach to develop fuzzy decision trees.
Source
  2008 1st International Conference on Emerging Trends in Engineering and Technology (ICETET). IEEE. pp. 601-5. Piscataway, NJ, USA.
Conference Information
  2008 1st International Conference on Emerging Trends in Engineering and Technology (ICETET). Nagpur, Maharashtra, India. 16-18 July 2008.

Abstract
  With the immense increase of the data in various fields, interpreting the data into useful information has become a tedious job. Design of models to handle the problem is essential. This paper discusses the methods that handle uncertain information with continuous data and deliver comprehensible classification model. We investigate fuzzy decision tree as a method for classification problems and axiomatic fuzzy set for building fuzzy sets (membership functions) . To select the best available test attributes of fuzzy decision trees we use a generalized Shannon Entropy. The problems connected with this generalization arised from fuzzy domain are discussed and some alternatives are proposed. (21 References).

RESULTADO <159>
Score
  ****-
Accession Number

9868329
Author
  Baowen Wang. Qingda Zhang. Wenyuan Liu. Yan Shi.
Author/Editor Affiliation
  Yan Shan Univ., Yan Shan, China.
Title
  Multidimensional fuzzy interpolative reasoning method based on lambda-width similarity.
Source
  2007 8th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing. IEEE. pp. 776-81. Piscataway, NJ, USA.
Conference Information
  2007 8th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing. Qingdao, China. 31 July-1 Aug. 2007.

Abstract
  Fuzzy reasoning is the very important process in the intelligent systems. Very few papers address the research for interpolative reasoning under multidimensional sparse rules. Moreover, these methods sometimes can not guarantee the convexity of result. Nowadays, multidimensional sparse rules base focus on the premises composed of many fuzzy sets, but do not consider the consequences composed of multidimensional fuzzy sets. Thus the fuzzy production rule can not express the complicate problems in the real world. It needs to be extended. This paper proposes a similarity relation between fuzzy sets. Based on the similarity relation, then we propose an improved fuzzy interpolative reasoning method. Moreover, we extend the method to the case of complex multidimensional consequences. (10 References).

RESULTADO <160>

Score
  ****-
Accession Number
  9840585
Author
  Safiih LM. Kamil AAB. Osman MTA.
Author/Editor Affiliation
  Univ. Malaysia Terengganu, Kuala Terengganu, Malaysia.
Title
  Fuzzy semi-parametric sample selection model for participation of married women.
Source
  Applied Mathematics for Science and Engineering. Proceedings of the 12th WSEAS International Conference on Applied Mathematics. WSEAS. pp. 313-18. Stevens Point, WI, USA.
Conference Information
  Applied Mathematics for Science and Engineering. 12th WSEAS International Conference on Applied Mathematics. Cairo, Egypt. 29-31 Dec. 2007.

Abstract
  The sample selection model is studied in the context of semi-parametric methods. The issue of uncertainty and ambiguity are still major problems and the modelling of a semi- parametric sample selection model as well as its parametric is complicated. The best approach of accounting for uncertainty and ambiguity is to take advantage of the tools provided by the theory of fuzzy sets. The semi-parametric of a sample selection model is an econometric model that has found an interesting application in empirical studies. In this paper, the married women participants in the Malaysia labour force are studied. It comprises the analysis of a) participation equation in the wage sector and b) the wage equation in the wage sector. The data set used for this study is from the Malaysian population and family survey 1994 (MPFS-1994). (13 References).

RESULTADO <161>

Score
  ****-

Accession Number
 9840584
Author
 Safiih LM. Kamil AAB. Osman MTA.
Author/Editor Affiliation
 Univ. Malaysia Terengganu, Kuala Terengganu, Malaysia.
Title
 Fuzzy approach to semi-parametric sample selection model.
Source
 Applied Mathematics for Science and Engineering. Proceedings of the 12th WSEAS International Conference on Applied Mathematics. WSEAS. pp. 307-12. Stevens Point, WI, USA.
Conference Information
 Applied Mathematics for Science and Engineering. 12th WSEAS International Conference on Applied Mathematics. Cairo, Egypt. 29-31 Dec. 2007.

Abstract
 The sample selection model studied in the context of semi-parametric methods. With the deficiency of the parametric model, such as inconsistent estimators etc, the semi-parametric estimation methods provide the best alternative to handle this deficiency. Semi-parametric of a sample selection model is an econometric model has been found interesting application in empirical studies. The issue of uncertainty and ambiguity still become are major problem and complicated in the modeling of semi-parametric sample selection model as well as its parametric. In this study, we will focus in the context of fuzzy concept as a hybrid to the semi-parametric sample selection model. The best approach of accounting for uncertainty and ambiguity is to take advantage of the tools provided by the theory of fuzzy sets. It seems particularly appropriate for modeling vague concepts. Fuzzy sets theory and its properties through the concept of fuzzy number provide an ideal framework in order to sol!
 ve the problem of uncertainty data. In this paper, we introduce a fuzzy membership function for solving uncertainty data of a semi-parametric sample selection model. (15 References).

RESULTADO <162>
Score
 ****-
Accession Number
 9822586
Author
 Tavakkoli-Moghaddam R. Rabbani M. Gharehgozli AH. Zaerpour N.
Author/Editor Affiliation
 Univ. of Tehran, Tehran, Iran.
Title
 A fuzzy aggregate production planning model for make-to-stock environments.
Source
 2007 IEEE International Conference on Industrial Engineering and Engineering Management. IEEE. pp. 1609-13. Piscataway, NJ, USA.
Conference Information
 2007 IEEE International Conference on Industrial Engineering and Engineering Management. Singapore, Singapore. 2-4 Dec. 2007.

Abstract
 This paper presents an aggregate production planning model for make-to-stock (MTS) environments. Since multiple sources of imprecision and complex inter-relationships at various levels between diverse entities exist in the supply chain (SC), we can use stochastic or fuzzy control models to describe the complex SC processes, associated management, and control tasks. We consider the fuzzy sets theory as a solution to tackle the uncertainties in different terms of the model. Finally, the effectiveness of the proposed model is demonstrated by a numerical example. (15 References).

RESULTADO <163>
Score

****-
Accession Number
 9822301
Author
 Wu Liao. Yun-xiang Chen. Kun Li.
Author/Editor Affiliation
 Univ. of Air Force Eng., Xian, China.
Title
 Fuzzy DEA model based on cloud theory.
Source
 2007 IEEE International Conference on Industrial Engineering and Engineering Management. IEEE. pp. 90-4. Piscataway, NJ, USA.
Conference Information
 2007 IEEE International Conference on Industrial Engineering and Engineering Management. Singapore, Singapore. 2-4 Dec. 2007.
Abstract

 Traditional data envelopment analysis (DEA) models require the values for all inputs and outputs should be known exactly. However, it is essential to take into account the presence of qualitative factors of inputs and outputs in a real evaluation problem. By referring to the cloud theory and conventional interval DEA model, this paper develops a new fuzzy DEA model called Cloud DEA (C-DEA) model to deal with qualitative factors. Through three digital parameters (Ex, En, He), the fuzziness and randomness of qualitative factors are integrated in a unified way. Based on cloud generator and a-level sets, qualitative information and fuzzy data are converted into interval data, respectively, and are incorporated into the interval DEA models. It shows in a numerical example that the C-DEA model has many advantages over the conventional DEA methodology and can be used to evaluate the relative efficiency of decision making units (DMUs) under uncertainty. (20 References).

RESULTADO <164>

Score
 ****-
Accession Number
 9811700
Author
 Gonzalez-Castolo JC. Lopez-Mellado E.
Author/Editor Affiliation
 CINVES-TAV Unidad Guadalajara, Zapopan, Mexico.
Title
 Approximating state of DES using fuzzy timed Petri nets.
Source
 Proceedings of the 3rd Annual IEEE Conference on Automation Science and Engineering. IEEE. pp. 722-8. Piscataway, NJ, USA.
Conference Information
 3rd Annual IEEE Conference on Automation Science and Engineering. Scottsdale, AZ, USA. 22-25 Sept. 2007.
Abstract

 This paper addresses state estimation of discrete event systems (DES) modeled by fuzzy timed Petri nets (FTPN). A definition of FTPN in which fuzzy sets, associated to places, represent the ending time uncertainty of activities is presented; then the fuzzy state equation composed by a set of matrix expressions is developed, allowing computing the marking evolution of DES exhibiting cyclic behavior. A method for approximating the marking of strongly connected state machines is proposed. (16 References).

RESULTADO <165>

Score
 ****-
Accession Number

9727115
Author
  Shayeghi H. Jalil A.

Author/Editor Affiliation
  Mohaghegh Ardebili Univ., Ardebil, Iran.

Title
  Hybrid fuzzy LFC design by GA in a deregulated power system.
Source
  Proceedings of the 6th WSEAS International Conference on Applications of Electrical Engineering (AEE '07). World Scientific and Engineering Academy and Society Press. pp. 77-82. Greece.
Conference Information
  6th WSEAS International Conference on Applications of Electrical Engineering (AEE '07). Istanbul, Turkey. 27-29 May 2007.

Abstract
  A new hybrid fuzzy (HF) PID type controller based on genetic algorithms (GAs) is proposed for solution of the load frequency control (LFC) problem in a deregulated power system. In order for a fuzzy rule based control system to perform well, the fuzzy sets must be carefully designed. A major problem plaguing the effective use of this method is the difficulty of accurately constructing the membership functions. On the other hand, GAs is a technique that emulates biological evolutionary theories to solve complex optimization problems by using directed random searches to derive a set of optimal solutions. For this reason, in the proposed GA based HF (GAHF) controller the membership functions are tuned automatically using a modified GA's based on the hill climbing method. The aim is to reduce fuzzy system effort and take large parametric uncertainties into account. This newly developed control strategy combines the advantages of GAs and fuzzy system control techniques and lead!
 s to a flexible controller with simple stricture that is easy to implement. The proposed method is tested on a three-area deregulated power system under different operating conditions in comparison with the robust mixed HJH controller through some performance indices to illustrate its robust performance. (7 References).

RESULTADO <166>
Score
  ****-
Accession Number
  9704098
Author
  Fakhrahmad SM. Zare A. Jahromi MZ.

Author/Editor Affiliation
  Islamic Azad Univ. of Shiraz, Shiraz, Iran.

Title
  Constructing accurate fuzzy rule-based classification systems using apriori principles and rule-weighting.
Source
  Intelligent Data Engineering and Automated Learning - IDEAL 2007. Proceedings 8th International Conference. (Lecture Notes in Computer Science vol. 4881). Springer-Verlag. pp. 547-56. Berlin, Germany.
Conference Information
  8th International Intelligent Data Engineering and Automated Learning Conference - IDEAL 2007. Birmingham, UK. 16-19 Dec. 2007.

Abstract
  A fuzzy rule-based classification system (FRBCS) is one of the most popular approaches used in pattern classification problems. One advantage of a fuzzy rule-based system is its interpretability. However, we're faced with some challenges when generating the rule-base. In high dimensional problems, we can not generate every possible rule with respect to all antecedent combinations. In this paper, by making the use of some data mining concepts, we propose a method for rule generation, which can result in a rule-base containing rules of different lengths. As the next phase, we use rule-weight as a simple mechanism to tune the classifier and propose a new method of rule-weight specification for this purpose. Through computer

simulations on some data sets from UCI repository, we show that the proposed scheme achieves better prediction accuracy compared with other fuzzy and non-fuzzy rule-based classification systems proposed in the past. (15 References).

RESULTADO <167>
Score
 ****-
Accession Number
 9704092
Author
 Kenesei T. Roubos JA. Abonyi J.
Author/Editor Affiliation
 Pannonia Univ., Veszprem, Hungary.
Title
 A combination-of-tools method for learning interpretable fuzzy rule-based classifiers from support vector machines.
Source
 Intelligent Data Engineering and Automated Learning - IDEAL 2007. Proceedings 8th International Conference. (Lecture Notes in Computer Science vol. 4881). Springer-Verlag. pp. 477-86. Berlin, Germany.
Conference Information
 8th International Intelligent Data Engineering and Automated Learning Conference - IDEAL 2007. Birmingham, UK. 16-19 Dec. 2007.
Abstract
 A new approach is proposed for the data-based identification of transparent fuzzy rule-based classifiers. It is observed that fuzzy rule-based classifiers work in a similar manner as kernel function-based support vector machines (SVMs) since both model the input space by nonlinearly maps into a feature space where the decision can be easily made. Accordingly, trained SVM can be used for the construction of fuzzy rule-based classifiers. However, the transformed SVM does not automatically result in an interpretable fuzzy model because the SVM results in a complex rule-base, where the number of rules is approximately 40-60% of the number of the training data. Hence, reduction of the SVM-initialized classifier is an essential task. For this purpose, a three-step reduction algorithm is developed based on the combination of previously published model reduction techniques. In the first step, the identification of the SVM is followed by the application of the reduced set method to!
  decrease the number of kernel functions. The reduced SVM is then transformed into a fuzzy rule-based classifier. The interpretability of a fuzzy model highly depends on the distribution of the membership functions. Hence, the second reduction step is achieved by merging similar fuzzy sets based on a similarity measure. Finally, in the third step, an orthogonal least-squares method is used to reduce the number of rules and re-estimate the consequent parameters of the fuzzy rule-based classifier. The proposed approach is applied for the Wisconsin Breast Cancer, Iris and Wine classification problems to compare its performance to other method. (21 References).

RESULTADO <168>
Score
 ****-
Accession Number
 9702070
Author
 Millman E. Budakoglu C. Neville SW.
Author/Editor Affiliation
 Univ. of Victoria, Victoria, Canada.
Title
 A python-based MPI framework for exploring an adaptive fuzzy-agent approach to simulating large-scale non-cooperative games.
Source

2007 Canadian Conference on Electrical and Computer Engineering. IEEE. pp. 1384-7. Piscataway, NJ, USA.

Conference Information

2007 Canadian Conference on Electrical and Computer Engineering. Vancouver, BC, Canada. 22-26 April 2007.

Abstract

In this article, we describe how to construct a large scale simulation system using the standard message passing interface (MPI) framework which can effectively explore the simulated players' strategy search spaces (i.e., to identify "good" strategies within particular "games" out of large sets of potential strategies) using genetic algorithms. We demonstrate how to create "intelligent" players who are capable of adapting their behaviors as the game evolves, given the problematic nature of identifying "good" strategies a priori using fuzzy logic. We prove these two concepts by building a scalable predator and prey simulation framework. (12 References).

RESULTADO <169>

Score

****-

Accession Number

9701923

Author

Alexiuk MD. Pizzi NJ. Sawatzky G. Pedrycz W.

Author/Editor Affiliation

Univ. of Manitoba, Winnipeg, Canada.

Title

Narrowcast advertising retail metrics: a simulation with fuzzy product profitability potential.

Source

2007 Canadian Conference on Electrical and Computer Engineering. IEEE. pp. 784-7. Piscataway, NJ, USA.

Conference Information

2007 Canadian Conference on Electrical and Computer Engineering. Vancouver, BC, Canada. 22-26 April 2007.

Abstract

Narrowcast advertising is becoming a prominent means to modify retail product consumption. This consumption is directed to maximize profit despite changes in consumer preferences and is effected by changes to the number of advertising impressions and their product content. The profitability potential of a product quantifies possible future earnings for a retail outlet and is a useful tool for retail decision makers. Common retail metrics, such as sales data, surveys of consumer product preferences, and advertising impressions, can be fused to robustly define product profitability potential. This paper evaluates several profitability potential definitions that fuse three common retail measurements encoded as fuzzy sets. The simulation considers a pool of consumers who act on their product preferences and modify these preferences in response to advertising. The retail outlet modifies advertising playout in an attempt to maximize profit. Control retail outlets compare results!

across the same initial consumer population and price structure. Profitability definitions that included advertising impressions performed well against other definitions. (10 References).

RESULTADO <170>

Score

****-

Accession Number

9688371

Author

Krol D. Lasota T. Nalepa W. Trawiriski B.

Author/Editor Affiliation

Wroclaw Univ. of Technol., Wroclaw, Poland.

Title

Fuzzy system model to assist with real estate appraisals.
Source
  New Trends in Applied Artificial Intelligence. 20th International Conference on Industrial, Engineering and Other Applications Applied Intelligent Systems. Springer-Verlag. pp. 260-269. Berlin, Germany.
Conference Information
  New Trends in Applied Artificial Intelligence. 20th International Conference on Industrial, Engineering and Other Applications Applied Intelligent Systems. Kyoto, Japan. 26-29 June 2007.

Abstract
  Real estate appraisal requires expert knowledge and should be performed by licensed professionals. Prior to the evaluation the appraiser must conduct a thorough study of the appraised property i.e. a land parcel and/or a building. Despite the fact that he sometimes uses the expertise of the surveyor, the builder, the economist or the mortgage lender, his estimations are usually subjective and are based on his experience and intuition. The primary goal of the paper is to present the concept of a fuzzy rule-based system to assist with real estate appraisals. The input variables of the system comprise seven attributes of a property and as the output the system proposes the property's value. For the appraisal area, so called representative property is determined and in fact the deviations of property attribute values from the representative ones are the input into the fuzzy system. The proportion of the representative property price to the value of the property being assessed !
 is produced as the output of the system. The experts have built the Mamdani model of the system, however they have not been able to construct the rule base. Therefore an evolutionary algorithm has been employed to generate the rule base. The Pittsburgh approach has been applied. The learning process has been conducted using training and testing sets prepared on the basis of 150 sales transactions from one city. (13 References).

RESULTADO <171>
Score
  ****-
Accession Number
  9560527
Author
  Looney CG.
Author/Editor Affiliation
  Comput. Sci. & Eng. Dept., Nevada Univ., Reno, NV, USA.
Editor
  Philip T.
Title
  Clustering via a fuzzy connectivity matrix.
Source
  Proceedings. 19th International Conference on Computer Applications in Industry and Engineering (CAINE-2006). International Society for Computers and Their Applications. pp. 275-80. Cary, NC, USA.
Conference Information
  Proceedings. 19th International Conference on Computer Applications in Industry and Engineering (CAINE-2006). Las Vegas, NV, USA. 13-15 Nov. 2006.

Abstract
  We use a fuzzy set membership function $g(x,y)$ on pairs of feature vectors to generate a fuzzy connectivity matrix. For larger sets of feature vectors this generates a larger matrix, but here we reduce the matrix size by first clustering very similar feature vectors into small pre-clusters, finding their centers, and then mapping pairs of these centers into a fuzzy connectivity matrix. Our experiments show that the method works well for clusters of small volume (close similarity), and reduces the matrix size considerably. The pre-clustering uses a type of feature voting. This method determines the unknown number K of classes, which solves an outstanding problem in clustering. We apply the method to synthetic data to show how it works and then to the famous iris dataset of 150 feature vectors. (22 References).

RESULTADO <172>
Score

****-
Accession Number
  9560521
Author
  Nam DH. Singh H. Putatunda S.
Author/Editor Affiliation
  Eng. & Comput. Sci., Wilberforce Univ., OH, USA.
Editor
  Philip T.
Title
  Material processing of ADI data using neuro fuzzy system.
Source
  Proceedings. 19th International Conference on Computer Applications in Industry and Engineering (CAINE-2006). International Society for Computers and Their Applications. pp. 242-7. Cary, NC, USA.
Conference Information
  Proceedings. 19th International Conference on Computer Applications in Industry and Engineering (CAINE-2006). Las Vegas, NV, USA. 13-15 Nov. 2006.

Abstract
  In this paper, we present the material processing technique with a statistical analysis for austempered ductile cast iron (ADI) using neuro fuzzy system by implementing an equivalently reduced order system from the given data. This technique is developed for designing a reduced rule-based neuro fuzzy system by simultaneously reducing the number of observations and the number of variables from the original data. Performance and accuracy of the approach have been examined through ADI data. First, factor analysis is used to extract a set of hidden feature vectors that are used to linearly combine the elements of the full feature vector of the original variables (measurements). Secondly, fuzzy c-means (FCM) clustering analysis and subtractive clustering (SUBCLUST) are applied to map the clustered observations from ADI data. Third, factor analysis with FCM clustering technique and SUBCLUST technique are applied to ADI data to extract the reduced dimensional features for the ADI!
  data and compared with other multivariate techniques. The estimated outputs are compared with the actual output from the experiment through the behaviors of neuro fuzzy systems from the original data set and the reduced order data sets. All results from each technique are evaluated by equally weighted index (EWI) using statistical measurements such as correlation (CORR), total root mean square (TRMS), standard deviation (STD), and mean of absolute distance (MAD). (12 References).

RESULTADO <173>
Score
  ****-
Accession Number
  9376503
Author
  Wang X. Shen X. Georganas ND.
Author/Editor Affiliation
  Distributed & Collaborative Virtual Environ. Res., Ottawa Univ., Ont., Canada.
Title
  A fuzzy logic based intelligent negotiation agent (FINA) in e-commerce.
Source
  2006 Canadian Conference on Electrical and Computer Engineering . IEEE. pp. 4. Piscataway, NJ, USA.
Conference Information
  2006 Canadian Conference on Electrical and Computer Engineering. Ottawa, Ont., Canada. 7-10 May 2006.

Abstract
  With the evolution of electronic commerce (eCommerce) on the Web and the rise of interest in intelligence of software agents, automated negotiation is becoming an increasingly popular method for an eCommerce system to be efficient; however, negotiation, which takes place in transactions, is complicated, time-consuming and costly for participants to reach an agreement. This paper presents a

model of an intelligent negotiation agent based on fuzzy logic methodology in order to alleviate the complexity of negotiation. The proposed negotiation agent model is particularly suitable to open environments, such as the Internet. The conventional methods, such as game theory, are incapable of handling an open environment where the information is sparse and full of uncertainty, while the fuzzy approaches are suitable to elegantly deal with this problem. The fuzzy logic based intelligent negotiation agent, presented in this paper, is able to interact autonomously and consequently save !
 human labor in negotiations. The aim of modeling a negotiation agent is to reach mutual agreement efficiently and intelligently. The negotiation agent is able to negotiate with other such agents, over various sets of issues, on behalf of the real-world parties they represent, i.e. it can handle multi-issue negotiation. The reasoning model of the negotiation agent has been implemented partially by using c# based on Microsoft .NET. The reliability and the flexibility of the reasoning model are finally evaluated. The results show that performance of the proposed agent model is acceptable for negotiation parties to achieve mutual benefits (7 References).

RESULTADO <174>
Score
 ****-
Accession Number
 9376427
Author
 Kashyap SK. Raol JR.
Author/Editor Affiliation
 Flight Mech. & Control Div., Nat. Aerosp. Lab., Bangalore, India.
Title
 Unification and interpretation of fuzzy set operations.
Source
 2006 Canadian Conference on Electrical and Computer Engineering . IEEE. pp. 4. Piscataway, NJ, USA.
Conference Information
 2006 Canadian Conference on Electrical and Computer Engineering. Ottawa, Ont., Canada. 7-10 May 2006.
Abstract
 Fuzzy Logic (FL) facilitates modeling of within-the-event uncertainty. The crisp logic models the 'between the events' uncertainty. Fuzzy techniques in the form of approximate reasoning aid decision making with powerful reasoning capabilities. The FL techniques have been used in varieties of applications: i) image analysis, detection of edges, feature extraction, classification, and clustering, ii) parameter estimation of unknown dynamic systems, iii) home appliances - washing machine, air conditioning systems, and iv) decision fusion, situation and threat assessment. In this paper we study FL concepts, fuzzy sets, several membership functions and their properties, FL operators, fuzzy proposition and attempt to bring out relationships, interconnectivities, contradistinctions between various operations/operators and unification. Illustrative example is presented to make the above concepts very clear (2 References).

RESULTADO <175>
Score
 ****-
Accession Number
 9341821
Author
 Mosqueira-Rey E. Moret-Bonillo V.
Author/Editor Affiliation
 Dept. of Comput. Sci., Univ. of A Coruna , Spain.
Editor
 Gabrys B; Howlett RJ; Jain LC.
Title
 Interpretation of group measurements of validation data using fuzzy techniques in an object-oriented approach.

Source
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part III (Lecture Notes in Artificial Intelligence Vol. 4253). Springer-Verlag. pp. 1136-42. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part III. Bournemouth, UK. 9-11 Oct. 2006.

Abstract
  Fuzzy logic is particularly indicated for representing the uncertainty associated with the processes that take place in non-probabilistic systems. It is also useful for the linguistic quantification of sets in which the classification of concepts and events is affected by semantic imprecision. We describe a fuzzy method designed to assist with interpretations of group measurements obtained from validation data for intelligent systems operating in complex domains. The method described was implemented applying an object-oriented paradigm. The suitability of using fuzzy methods and an object-oriented approach are both discussed in the article (8 References).

RESULTADO <176>
Score
  ****-
Accession Number
  9307083
Author
  Chang-Wook Han. Jung-Il Park.
Author/Editor Affiliation
  Sch. of Electr. Eng. & Comput. Sci., Yeungnam Univ., Gyongbuk, South Korea.
Editor
  Gabrys B; Howlett RJ; Jain LC.
Title
  Designing a self-adaptive union-based rule-antecedent fuzzy controller based on two step optimization.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part I (Lecture Notes in Artificial Intelligence Vol. 4251). Springer-Verlag. 2006, pp. 850-7. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part I. Bournemouth, UK. 9-11 Oct. 2006.

Abstract
  A self-adaptive union-based rule-antecedent fuzzy controller (SURFCon), which can guarantee a parsimonious knowledge base with reduced number of rules, is proposed. The SURFCon allows union operation of input fuzzy sets in the antecedents to cover bigger input domain compared with the complete structure rule which consists of AND combination of all input variables in its premise. To construct the SURFCon, we consider the union-based logic processor (ULP) which consists of OR and AND fuzzy neurons. The fuzzy neurons exhibit learning abilities as they come with a collection of adjustable connection weights. In the development stage, genetic algorithm (GA) constructs a Boolean skeleton of SURFCon, while stochastic reinforcement learning refines the binary connections of GA-optimized SURFCon for further improvement of the performance index. A cart-pole system is considered to verify the effectiveness of the proposed method (12 References).

RESULTADO <177>
Score
  ****-
Accession Number
  9307072
Author
  Orlowski C. Kowalczuk Z.

Author/Editor Affiliation
  Gdansk Univ., Poland.
Editor
  Gabrys B; Howlett RJ; Jain LC.
Title
  Knowledge management based on dynamic and self-adjusting fuzzy models.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part I (Lecture Notes in Artificial Intelligence Vol. 4251). Springer-Verlag. 2006, pp. 671-8. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part I. Bournemouth, UK. 9-11 Oct. 2006.
Abstract
  The objective of this paper is to present a knowledge management based on dynamic and self-adjusting fuzzy models. Specifically, the proposed approach is founded on a knowledge-based methodology and theories of dynamic systems and fuzzy sets. A preliminary design of our fuzzy model takes advantage of the experience from managing of IT projects. Relevant experimental data resulting from these projects are utilized for adjusting the membership functions of the fuzzy model applied in the knowledge-based decision-support system (8 References).

RESULTADO <178>

Score
  ****-
Accession Number
  9263932
Author
  Lu Xiao-li. Yu Hai-feng.
Author/Editor Affiliation
  Sch. of Manage., Dalian Univ. of Technol. , China.
Editor
  Hua L.
Title
  Resident's perceptions of tourism impacts: an analysis of fuzzy synthetic evaluation.
Source
  2006 International Conference on Management Science and Engineering (IEEE Cat. No. 06EX1529). IEEE. Part vol. 2, 2006, pp. 880-5 vol. 2. Piscataway, NJ, USA.
Conference Information
  2006 International Conference on Management Science and Engineering . Lille, France. Nat. Natural Sci. Found. of China. Harbin Inst. of Technol. P.R. China. 5-7 Oct. 2006.
Abstract
  Investigating resident's perception of tourism impact is a good method to analyze the status of tourism impact. Due to the underlying correlation among several impacts indices, tourism impacts are generally very complex to model. Various methods such as single-variable and statistics used in previous authoritative studies are not sensitive enough which may cause the decision-making process adversely. The purpose of this research is to present the fuzzy synthetic evaluation method to analysis resident's perceptions of tourism impacts. At first, basic attributes and a hierarchical framework of tourism impacts are defined and formed. Secondly, the weighted vectors are determined according to the knowledge and experience of experts. Thirdly, the weighted evaluation matrices are aggregated to get the fuzzy sets of tourism impacts. In the final stage, the final fuzzy sets are defuzzified to get the rank of the resident's perceptions of tourism impacts. Sensitivity of fuzzy synth!
 etic evaluation is quite high compared to other index evaluation techniques. A case study in Jiuzhaigou National Park of China is provided to demonstrate the application of this method. The finding clearly indicates that the Fuzzy synthetic evaluation may successfully harmonize inherent complex conditions in tourism impact (26 References).

RESULTADO <179>
Score
 ****-
Accession Number
 9250954
Author
 Kukkurainen P. Luukka P.
Author/Editor Affiliation
 Lappeenranta Univ. of Technol., Finland.
Editor
 Gabrys B; Howlett RJ; Jain LC.
Title
 New classifier based on fuzzy level set subgrouping.
Source
 Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part III (Lecture Notes in Artificial Intelligence Vol. 4253). Springer-Verlag. 2006, pp. 383-9. Berlin, Germany.
Conference Information
 Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part III. Bournemouth, UK. 9-11 Oct. 2006.
Abstract

 We present new classification system which is based on fuzzy level sets subgrouping. This new classification system allow us fast classification method with quite accurate results (7 References).

RESULTADO <180>
Score
 ****-
Accession Number
 9220670
Author
 Zhang B. Epstein DJ.
Author/Editor Affiliation
 Dept. of Ind. & Syst. Eng., Univ. of Southern California, Los Angeles, CA, USA.
Title
 A fuzzy-logic-based methodology for batch process scheduling.
Source
 2006 IEEE Systems and Information Engineering Design Symposium (IEEE Cat. No. 06EX1421). IEEE. 2006, pp. 101-5. Piscataway, NJ, USA.
Conference Information
 2006 IEEE Systems and Information Engineering Design Symposium. Charlottesville, VA, USA. 28 April 2006.
Abstract

 We introduce a formal scheduling methodology for batch processes based on fuzzy logic theory. In particular, we present this methodology in the manufacturing context. Our approach takes into account most, if not all, relevant factors in this scheduling problem and models them as fuzzy sets. In the model developed for factory batch process scheduling, the inputs include the "literal" job priority, job's critical ratio, the length of each queue, job's current relative position in its process flow, etc. The model outputs the effective priority value for each queue, based upon which scheduling decisions are made. On numerical examples, we illustrate the use of our model and show the correctness and effectiveness of our model. More importantly, we were able to show that the batch processors' utilization could be increased and jobs' average lateness (with respect to the internal deadline) reduced significantly by applying our methodology (19 References).

RESULTADO <181>

Score
 ****-
Accession Number
 9219396
Author
 Inokuchi R. Miyamoto S.
Author/Editor Affiliation
 Doctoral Program in Risk Eng., Tsukuba Univ., Ibaraki, Japan.
Editor
 Gabrys B; Howlett RJ; Jain LC.
Title
 Finding simple fuzzy classification systems with high interpretability through multiobjective rule selection.
Source
 Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part II (Lecture Notes in Artificial Intelligence Vol. 4252). Springer-Verlag. 2006, pp. 78-85. Berlin, Germany.
Conference Information
 Knowledge-Based Intelligent Information and Engineering Systems. 10th International Conference, KES 2006. Proceedings, Part II. Bournemouth, UK. 9-11 Oct. 2006.
Abstract

 In this paper, we demonstrate that simple fuzzy rule-based classification systems with high interpretability are obtained through multiobjective genetic rule selection. In our approach, first a prespecified number of candidate fuzzy rules are extracted from numerical data in a heuristic manner using rule evaluation criteria. Then multiobjective genetic rule selection is applied to the extracted candidate fuzzy rules to find a number of non-dominated rule sets with respect to the classification accuracy and the complexity. The obtained non-dominated rule sets form an accuracy-complexity tradeoff surface. The performance of each non-dominated rule set is evaluated in terms of its classification accuracy and its complexity. Computational experiments show that our approach finds simple fuzzy rules with high interpretability for some benchmark data sets in the UC Irvine machine learning repository (10 References).

RESULTADO <182>
Score
 ****-
Accession Number
 9210880
Author
 Passera K. Potepan P. Setti E. Vergnaghi D. Sarti A. Mainardi L. Cerutti S.
Author/Editor Affiliation
 Dipt. di Ingegneria Biomed., Politecnico di Milano, Milan, Italy.
Title
 A Fuzzy-C-means clustering algorithm for a volumetric analysis of paranasal sinus and nasal cavity cancers.
Source
 Conference Proceedings. Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No. 06CH37748). IEEE. 2006, pp. 4. Piscataway, NJ, USA.
Conference Information
 Conference Proceedings. Annual International Conference of the IEEE Engineering in Medicine and Biology Society. New York, NY, USA. IEEE EMB. 30 Aug.-3 Sept. 2006.
Abstract

 In this paper, a semi-automatic segmentation algorithm for volumetric analysis of paranasal sinus and nasal cavity cancers is presented and validated. The algorithm, based on a semi-supervised Fuzzy-C-means method, was applied to a Magnetic Resonance data sets (each of them composed by T1-weighted, Contrast Enhanced T1-weighted and T2-weighted images) for a total of 64 tumor-contained slices. Method performances are tested by both a numerical and a clinical validation. Results show that the proposed method has a higher accuracy in quantifying lesion area than a region growing algorithm and it can be

applied in the evaluation of tumor response to therapy (8 References).

RESULTADO <183>
Score
 ****-
Accession Number
 9209004
Author
 Herman P. Prasad G. McGinnity TM.
Author/Editor Affiliation
 Sch. of Comput. & Intelligent Syst., Ulster Univ., Derry, Ireland.
Title
 Investigation of the type-2 fuzzy logic approach to classification in an EEG-based brain-computer interface.
Source
 2005 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.05CH37611C) . IEEE. 2006, pp. 4. Piscataway, NJ, USA.
Conference Information
 2005 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Shanghai, China. 31 Aug.-3 Sept. 2005.

Abstract
 Analysis of electroencephalogram (EEG) requires a framework that facilitates handling the uncertainties associated with the varying brain dynamics and the presence of noise. Recently, the type-2 fuzzy logic systems (T2 FLSs) have been found effective in modeling uncertain data. This paper examines the potential of the T2 FLS methodology in devising an EEG-based brain-computer interface (BCI). In particular, a T2 FLS has been designed to classify imaginary left and right hand movements based on time-frequency information extracted from the EEG with the short time Fourier transform (STFT). Robustness of the method has also been verified in the presence of additive noise. The performance of the classifier is quantified with the classification accuracy (CA). The T2 fuzzy classifier has been proven to outperform its type-1 (T1) counterpart on all data sets recorded from three subjects examined. It has also compared favorably to the well known classifier based on linear discrimi!
 nant analysis (LDA) (9 References).

RESULTADO <184>
Score
 ****-
Accession Number
 9199630
Author
 Ubeyli ED.
Author/Editor Affiliation
 Dept. of Electr. & Electron. Eng., TOBB Ekonomi ve Teknoloji Univ., Ankara, Turkey.
Title
 Fuzzy similarity index for discrimination of EEG signals.
Source
 Conference Proceedings. Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No. 06CH37748). IEEE. 2006, pp. 4. Piscataway, NJ, USA.
Conference Information
 Conference Proceedings. Annual International Conference of the IEEE Engineering in Medicine and Biology Society. New York, NY, USA. IEEE EMB. 30 Aug.-3 Sept. 2006.

Abstract
 In this study, a new approach based on the computation of fuzzy similarity index was presented for discrimination of electroencephalogram (EEG) signals. The EEG, a highly complex signal, is one of the most common sources of information used to study brain function and neurological disorders. The analyzed EEG signals were consisted of five sets (set A-healthy volunteer, eyes open; set B-healthy

volunteer, eyes closed; set C-seizure-free intervals of five patients from hippocampal formation of opposite hemisphere; set D-seizure-free intervals of five patients from epileptogenic zone; set E-epileptic seizure segments). The EEG signals were considered as chaotic signals and this consideration was tested successfully by the computation of Lyapunov exponents. The computed Lyapunov exponents were used to represent the EEG signals. The aim of the study is discriminating the EEG signals by the combination of Lyapunov exponents and fuzzy similarity index. Toward achieving this aim, !
 fuzzy sets were obtained from the feature sets (Lyapunov exponents) of the signals under study. The results demonstrated that the similarity between the fuzzy sets of the studied signals indicated the variabilities in the EEG signals. Thus, the fuzzy similarity index could discriminate the healthy EEG segments (sets A and B) and the other three types of segments (sets C, D, and E) recorded from epileptic patients (16 References).

RESULTADO <185>
Score
 ****-
Accession Number
 9133125
Author
 Popoola A. Ahmad K.
Author/Editor Affiliation
 Dept. of Comput., Surrey Univ., Guildford , UK.
Editor
 Ahmed MM; Qadir MA; Nazir OB; Anwar O; Ali U.
Title
 Fuzzy models for time series analysis: towards systematic data pre-processing.
Source
 2006 IEEE International Conference on Engineering of Intelligent Systems (IEEE Cat. No. 06EX1417). IEEE. 2006, pp. 5. Piscataway, NJ, USA.
Conference Information
 2006 IEEE International Conference on Engineering of Intelligent Systems. Islamabad, Pakistan. IEEE Islamabad Sect.. Mohammed Ali Jinnah Univ.. Pakistan Inst. of Eng. & Appl. Sci. 22-23 April 2006.
Abstract
 Time series forecasting is an all-pervasive task that affects almost all disciplines. Given that time varied phenomena almost invariably need pre-processing, it is important to develop a framework where such pre-processing is executed in a systematic and transparent manner. In this paper, we investigate the effect of data pre-processing on the forecast performance of subtractive clustering fuzzy model. Our work on benchmark data sets (US Census Board and US Federal Reserve data) shows that ad hoc application of pre-processing techniques is not optimal. We have used autocorrelation functions to understand both the behavior of time series and the effects of different preprocessing methods on prediction accuracy. Our results indicate that the use of autocorrelation functions to determine the suitability of different pre-processing methods is beneficial (12 References).

RESULTADO <186>
Score
 ****-
Accession Number
 9133102
Author
 Burney SMA. Jilani TA. Saleemi MA.
Author/Editor Affiliation
 Dept. of Comput. Sci., Karachi Univ., Pakistan.
Editor
 Ahmed MM; Qadir MA; Nazir OB; Anwar O; Ali U.
Title
 Approximate knowledge extraction using MRA for type-I fuzzy neural networks.

Source
  2006 IEEE International Conference on Engineering of Intelligent Systems (IEEE Cat. No. 06EX1417). IEEE. 2006, pp. 6. Piscataway, NJ, USA.
Conference Information
  2006 IEEE International Conference on Engineering of Intelligent Systems. Islamabad, Pakistan. IEEE Islamabad Sect.. Mohammed Ali Jinnah Univ.. Pakistan Inst. of Eng. & Appl. Sci. 22-23 April 2006.

Abstract
  Using neural network, we try to model the unknown function/for given input-output data pairs. The connection strength of each neuron is updated through learning. Repeated simulations of crisp neural network produce different values of weight factors that are directly affected by the change of different parameters. We propose the idea that for each neuron in the network, we can obtain reduced model with higher efficiency using wavelet based multi-resolution analysis (MRA) to form wavelet based quasi fuzzy weight sets (WBQFWS) through repeated simulation of the crisp neural network. Such type of WBQFWS provides good initial solution for training type-I fuzzified neural networks. As real data is subjected to noise and uncertainty, therefore, WBQWFS help in the simplification of the structure of the complex problems using low dimensional data sets. Such fuzzy sets are also supportive in approximating the sum of knowledge that a hidden or output neuron contains in the learning !
  frameworks (26 References).

RESULTADO <187>

Score
  ****-
Accession Number
  9096384
Author
  Mishra S.
Author/Editor Affiliation
  Indian Inst. of Technol., Delhi, India.
Title
  TS-fuzzy controlled active power filter for load compensation.
Source
  2006 IEEE Power Engineering Society General Meeting. IEEE. 2006, pp. 1. Piscataway, NJ, USA.
Conference Information
  2006 IEEE Power Engineering Society General Meeting. Montreal, Que., Canada. 18-22 June 2006.

Abstract
  Summary form only given. The paper describes the application of Takagi-Sugeno (TS) type fuzzy logic controller to three-phase shunt active power filter (APF) for the power quality improvement and reactive power compensation required by a non-linear load. The advantage of fuzzy logic control is that it does not require a mathematical model of the system. The application of Mamdani type fuzzy logic controller to three-phase shunt active power filter have been investigated earlier but it has the limitation of more number of fuzzy sets and rules. Therefore, it needs to optimize large number of coefficients, which increases the complexity of the controller. On the other hand, TS fuzzy controllers are quite general in that they use arbitrary input fuzzy sets, any type of fuzzy logic, and the general defuzzifier. Moreover, TS fuzzy controller could be designed by using less number of rules and classes. Further, in this paper hysteresis current control mode of operation is impleme!
  nted for PWM switching signal generation. Computer simulation results show that the dynamic behavior of TS fuzzy controller is better than the conventional PI controller and is found to be more robust to changes in load and other system parameters compared to the conventional PI controller (0 References).

RESULTADO <188>

Score
  ****-
Accession Number
  9055194
Author

Rui Ma. Hongweng Yan. Xiaojiao Tong.
Author/Editor Affiliation
  Sch. of Electr. & Inf., Changsha Univ. of Sci. & Technol., China.
Title
  Multiobjective fuzzy optimal transaction planning based optimal power flow for electricity market.
Source
  2005 International Power Engineering Conference (IEEE Cat. No. 05EX1109). IEEE. 2005, pp. 116-20. Piscataway, NJ, USA.
Conference Information
  2005 International Power Engineering Conference. Singapore. 29 Nov.-2 Dec. 2005.
Abstract
  This paper presents a multi-objective fuzzy optimal transaction model based on optimal power flow for electricity market. The proposed mode! is formulated as multi-objective optimization problem of minimizing both pool purchase cost and the pollution emission, which takes the generator capacity, transmission lines capability and node voltage security constraints into account. Firstly, the pool purchase cost and emission objectives are optimized individually in order to define the membership function of objective, then, the multi-objective problem is reformulated into a new standard nonlinear problem by the fuzzy sets theory and max-min operator, finally, it is solved by interior point method and the results that corresponding to multi-objective optimization problem are gained. The simulation results of IEEE 6-generator 30-bus system show that the proposed model can make multi-objective optimization and ensure the multifactor fairness of bidding unit (11 References).

RESULTADO <189>
Score
  ****-
Accession Number
  9053280
Author
  Iqbal J. Khan MA. Tarar S. Khan M. Sabahat Z.
Author/Editor Affiliation
  Dept. of Mechatronics, Nat. Univ. of Sci. & Technol., Pakistan.
Title
  Implementing ball balancing beam using digital image processing and fuzzy logic.
Source
  2005 Canadian Conference on Electrical and Computer Engineering . IEEE. 2006, pp. 2241-4. Piscataway, NJ, USA.
Conference Information
  2005 Canadian Conference on Electrical and Computer Engineering. Saskatoon, Sask., Canada. 1-4 May 2005.
Abstract
  Fuzzy logic is a paradigm for an alternative design technique, which can be applied in both linear and non linear systems for embedded control. It is a problem-solving control system methodology that can be built into anything from small, embedded controller and hand-held products to large computerized process control systems. This paper proposes and analyses methods to control a ball balancing system using fuzzy logic. It is a nonlinear dynamic system which is quite difficult to control using conventional methods. It has delayed feedback associated with control actions; however, control system based on fuzzy logic requires less mathematical derivation in design and has a high noise tolerance. Image of the ball taken from an audio/video (AV) camera is processed to determine the coordinates of its centre. This input data is fed into the 68HCS12 microcontroller, which has the most efficient implementation of fuzzy logic instruction sets. Built-in PWM channels, A to D convert!
 ers, 32 kb flash memory and in-system programming make this controller ideal for the system considered. The controller processes this input using the fuzzy logic rule base and sends consequent signals to the servo motor controlling the beam motion (9 References).

RESULTADO <190>

Score
  ****-
Accession Number
  8746367
Author
  Nandedkar AV. Biswas PK.
Author/Editor Affiliation
  Indian Inst. of Technol., Kharagpur, India.
Editor
  Khosla R; Howlett RJ; Jain LC.
Title
  A general fuzzy min-max neural network with compensatory neuron architecture.
Source
  Knowledged-Based Intelligent Information and Engineering Systems. 9th International Conference, KES 2005. Proceedings, Part III (Lecture Notes in Artificial Intelligence Vol. 3683). Springer-Verlag. 2005, pp. 1160-7. Berlin, Germany.
Conference Information
  Knowledged-Based Intelligent Information and Engineering Systems. 9th International Conference, KES 2005. Proceedings, Part III. Melbourne, Vic., Australia. 14-16 Sept. 2005.

Abstract
  This paper proposes "a general fuzzy min-max neural network with compensatory neuron architecture" (GFMCN) for pattern classification and clustering. The network is capable of handling labeled and unlabeled data simultaneously, on-line. The concept of compensatory neurons is inspired from reflex system of the human brain. Fuzzy min-max neural network based architectures use fuzzy hyperbox sets to represent the data cluster or classes. An important stage in the training phase of these techniques is to manage the hyperbox overlaps and containments. In case of GFMCN, compensatory neurons are trained to handle the hyperbox overlap and containment. Inclusion of these neurons with a new learning approach has improved the performance significantly for labeled as well as unlabeled data. Moreover accuracy is almost independent of the maximum hyperbox size. The advantage of GFMCN is that it can learn data in a single pass (on-line). The performance of GFMCN is compared with "general!
  fuzzy min-max neural network" proposed by Gabrys and Bargiela on several datasets (11 References).

RESULTADO <191>
Score
  ****-
Accession Number
  8746235
Author
  Baowen Xu. Dazhou Kang. Jianjiang Lu. Yanhui Li. Jixiang Jiang.
Author/Editor Affiliation
  Dept. of Comput. Sci. & Eng., Southeast Univ., Nanjing, China.
Editor
  Khosla R; Howlett RJ; Jain LC.
Title
  Mapping fuzzy concepts between fuzzy ontologies.
Source
  Knowledged-Based Intelligent Information and Engineering Systems. 9th International Conference, KES 2005. Proceedings, Part III (Lecture Notes in Artificial Intelligence Vol. 3683). Springer-Verlag. 2005, pp. 199-205. Berlin, Germany.
Conference Information
  Knowledged-Based Intelligent Information and Engineering Systems. 9th International Conference, KES 2005. Proceedings, Part III. Melbourne, Vic., Australia. 14-16 Sept. 2005.

Abstract
  Fuzzy ontology mapping is important for handling uncertain knowledge on the semantic Web. However, current ontology mapping technologies are not sufficient for fuzzy ontologies. This paper proposes a

framework of mapping fuzzy concepts between fuzzy ontologies. It applies the approximate concept mapping approach, extends atom fuzzy concept sets and defines the least upper bounds to reduce the searching space. It resolves the mapping problem of fuzzy concepts into finding the simplified least upper bounds for atom fuzzy concepts, and gives an algorithm for searching the simplified least upper bounds, which is fast and proved correct. The framework is efficient for mapping fuzzy concepts between fuzzy ontologies (7 References).

RESULTADO <192>
Score
 ****-
Accession Number
 8732393
Author
 Yanhui Li. Baowen Xu. Jianjiang Lu. Dazhou Kang. Peng Wang.
Author/Editor Affiliation
 Dept. of Comput. Sci. & Eng., Southeast Univ., Nanjing, China.
Editor
 Khosla R; Howlett RJ; Jain LC.
Title
 Extended fuzzy description logic ALCN.
Source
 Knowledge-Based Intelligent Information and Engineering Systems. 9th International Conference. KES 2005. Proceedings, Part IV (Lecture Notes in Artificial Intelligence Vol. 3684). Springer-Verlag. 2005, pp. 896-902. Berlin, Germany.
Conference Information
 Knowledge-Based Intelligent Information and Engineering Systems. 9th International Conference. KES 2005. Proceedings, Part IV. Melbourne, Vic., Australia. 14-16 Sept. 2005.
Abstract
 Web applications based on description logics often need management of fuzzy information and encounter fuzzy concepts. This paper proposes an extended fuzzy ALCN to enable representation and reasoning for complex fuzzy information. The extended fuzzy ALCN introduces the cut sets of fuzzy concepts and fuzzy roles as atomic concepts and atomic roles, and inherits the concept constructors from description logics to support a new logic system. This paper defines its syntax structure, semantic interpretation and reasoning problems. The extended fuzzy ALCN is more expressive than the existing fuzzy description logics and present more wide fuzzy information (6 References).

RESULTADO <193>
Score
 ****-
Accession Number
 8732363
Author
 Dong-Won Kim. Gwi-Tae Park.
Author/Editor Affiliation
 Dept. of Electr. Eng., Korea Univ., Seoul , South Korea.
Editor
 Khosla R; Howlett RJ; Jain LC.
Title
 Using interval singleton type 2 fuzzy logic system in corrupted time series modeling.
Source
 Knowledge-Based Intelligent Information and Engineering Systems. 9th International Conference. KES 2005. Proceedings, Part IV (Lecture Notes in Artificial Intelligence Vol. 3684). Springer-Verlag. 2005, pp. 566-72. Berlin, Germany.
Conference Information
 Knowledge-Based Intelligent Information and Engineering Systems. 9th International Conference. KES

2005. Proceedings, Part IV. Melbourne, Vic., Australia. 14-16 Sept. 2005.
Abstract

  This paper is focused on modelling of time series data which are corrupted by noise using type 2 fuzzy logic system (FLS). Type 2 FLS in which premise or consequent membership functions are type-2 fuzzy sets, can handle rule uncertainties. Type-2 FLS is very similar to a type-1 FLS, the major structural difference being that the defuzzifier block of a type-1 FLS is replaced by the output processing block in a type-2 FLS. That block consists of type-reduction followed by defuzzification. In the simulation results, Box-Jenkin's gas furnace time series is demonstrated and we also compare the results of the type-2 fuzzy logic approach with the results of using only a traditional type-1 fuzzy logic approach (9 References).

RESULTADO <194>
Score
  ****-
Accession Number
  8732323
Author
  Sai Krishna K. Radha Krishna P. Supriya Kumar De.
Author/Editor Affiliation
  Inst. for Dev. & Res. in Banking Technol., Andhra Pradesh, India.
Editor
  Khosla R; Howlett RJ; Jain LC.
Title
  Discovering fuzzy association rules with interest and conviction measures.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 9th International Conference. KES 2005. Proceedings, Part IV (Lecture Notes in Artificial Intelligence Vol. 3684). Springer-Verlag. 2005, pp. 101-7. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 9th International Conference. KES 2005. Proceedings, Part IV. Melbourne, Vic., Australia. 14-16 Sept. 2005.
Abstract

  Association rule mining forms an important research area in the field of data mining. The theory of fuzzy sets can be used over relational databases to discover useful, meaningful patterns. In this paper, we propose an algorithm to mine fuzzy association rules over relational databases using interest and conviction measures. In the present work, we introduce fuzzy interest and fuzzy conviction measures and eliminate the rules, which have negative correlation. The experiments are conducted on an insurance database using our approach. The presented approach is very useful and efficient when there are more infrequent itemsets in a database (16 References).

RESULTADO <195>
Score
  ****-
Accession Number
  8714723
Author
  Fayad C. Petrovic S.
Author/Editor Affiliation
  Sch. of Comput. Sci. & Inf. Technol., Nottingham Univ., UK.
Editor
  Ali M; Esposito F.
Title
  A fuzzy genetic algorithm for real-world job shop scheduling.
Source
  Innovations in Applied Artificial Intelligence. 18th Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE 2005. Proceedings (Lecture Notes in Artificial Intelligence Vol.

3533). Springer-Verlag. 2005, pp. 524-33. Berlin, Germany.
Conference Information
  Innovations in Applied Artificial Intelligence. 18th Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE 2005. Proceedings. Bari, Italy. 22-24 June 2005.

Abstract
  In this paper, a multi-objective genetic algorithm is proposed to deal with a real-world fuzzy job shop scheduling problem. Fuzzy sets are used to model uncertain due dates and processing times of jobs. The objectives considered are average tardiness and the number of tardy jobs. Fuzzy sets are used to represent satisfaction grades for the objectives taking into consideration the preferences of the decision maker. A genetic algorithm is developed to search for the solution with maximum satisfaction grades for the objectives. The developed algorithm is tested on real-world data from a printing company. The experiments include different aggregation operators for combining the objectives (14 References).

RESULTADO <196>

Score
  ****-
Accession Number
  8382923
Author
  Nawi SM. Johari J. Abidin AF.
Author/Editor Affiliation
  Fac. of Electr. Eng., Univ. Technol. of MARA, Selangor, Malaysia.
Title
  A fuzzy logic application for identification of harmonics disturbances sources.
Source
  National Power Engineering Conference (IEEE Cat. No. 03EX770) . IEEE. 2003, pp. 27-31. Piscataway, NJ, USA.
Conference Information
  National Power Engineering Conference. Bangi, Malaysia. 15-16 Dec. 2003.

Abstract
  This paper represented an application of fuzzy logic to power quality issue. It describes the sources of harmonics detected, by using fuzzy sets and IF-THEN inferences rules. Harmonics can create unwanted impacts on power systems and to end-users. Electrical utilities, manufactures and customers have been bothered by harmonic distortion problems in power system. The harmonics is based on power quality and according to the IEEE 519-1992. The harmonic signals and spectrum are determined by the application of a fast Fourier transform (FFT). A fuzzy inference system is experimentally implemented for these cases, showing the general procedures of how to use this theory. It appears that fuzzy set theory can play an important rule in diagnosing power quality disturbances, and hence it can offer insights towards the satisfaction of the needs of manufacturers, utilities and customers (7 References).

RESULTADO <197>

Score
  ****-
Accession Number
  8245994
Author
  Du CJ. Yin HE. Wu SC. Ren XY. Zeng YJ. Pan YF.
Author/Editor Affiliation
  Biomedical Inf. Inst., Beijing Polytech. Univ., China.
Title
  Visual evoked potentials estimation by adaptive noise cancellation with neural-network-based fuzzy inference system.
Source
  Conference Proceedings. 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.04CH37558). IEEE. Part Vol.1, 2004, pp. 624-7 Vol.1. Piscataway, NJ,

USA.
Conference Information
  Conference Proceedings. 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. San Francisco, CA, USA. 1-5 Sept. 2004.

Abstract
  Visual evoked potentials (VEPs) are time-varying signals typically buried in relatively large background noise known as the electroencephalogram (EEG). In this paper, an adaptive noise cancellation with neural-network-based fuzzy inference system was used and the NNFIS was carefully designed to model the VEP signal. An advantage of the method in this paper is that no reference signal is required. The NNFIS based on Takagi and Sugeno's fuzzy model has the advantage of being linear-in-parameter, which is able to closely fit any function mapping and can track the dynamic behavior of VEP in a real-time fashion. 4 sets of simulated data indicate that the proposed method is appropriate to estimate VEP. A total of 150 trials are processed to demonstrate the superior performance of the proposed method (7 References).

RESULTADO <198>
Score
  ****-
Accession Number
  8244115
Author
  Kaya M. Alhajj R.
Author/Editor Affiliation
  Dept. of Comput. Eng., Firat Univ., Elazig , Turkey.
Editor
  Yang ZR; Everson R; Yin H.
Title
  Multi-objective genetic algorithm based method for mining optimized fuzzy association rules.
Source
  Intelligent Data Engineering and Automated Learning - IDEAL 2004. 5th International Conference. Proceedings (Lecture Notes in Comput. Sci. Vol.3177). Springer-Verlag. 2004, pp. 758-64. Berlin, Germany.
Conference Information
  Intelligent Data Engineering and Automated Learning - IDEAL 2004. 5th International Conference. Proceedings. Exeter, UK. 25-27 Aug. 2004.

Abstract
  This paper introduces optimized fuzzy association rules mining. We propose a multiobjective genetic algorithm (GA) based approach for mining fuzzy association rules containing instantiated and uninstantiated attributes. According to our method, fuzzy association rules can contain an arbitrary number of uninstantiated attributes. The method uses three objectives for the rule mining process: support, confidence and number of fuzzy sets. Experimental results conducted on a real data set demonstrate the effectiveness and applicability of the proposed approach (8 References).

RESULTADO <199>
Score
  ****-
Accession Number
  8231701
Author
  Nunes CS. Mendonca TF. Amorim P. Ferreira DA. Antunes LM.
Author/Editor Affiliation
  Dept. of Appl. Math., Porto Univ., Portugal.
Title
  Radial basis function neural networks versus fuzzy models to predict return of consciousness after general anesthesia.

Source
  Conference Proceedings. 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.04CH37558). IEEE. Part Vol.2, 2004, pp. 865-8 Vol.2. Piscataway, NJ, USA.
Conference Information
  Conference Proceedings. 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. San Francisco, CA, USA. 1-5 Sept. 2004.

Abstract
  This paper presents two modelling techniques to predict return of consciousness (ROC) after general anaesthesia, considering the effect concentration of the anaesthetic drug at awakening. First, several clinical variables were statistically analysed to determine their correlation with the awakening concentration. The anaesthetic and the analgesic mean dose during surgery, and the age of the patient, proved to have significantly high correlation coefficients. Variables like the mean bispectral index value during surgery, duration of surgery did not present a statistical relation with ROC. Radial basis function (RBF) neural networks were trained relating different sets of clinical values with the anaesthetic drug effect concentration at awakening. Secondly, fuzzy models were built using an adaptive network-based fuzzy inference system (ANFIS) also relating different sets of variables. Clinical data was used to train and test the models. The fuzzy models and RBF neural networor!
 ks proved to have good prediction properties and balanced results (13 References).

RESULTADO <200>
Score
  ****-
Accession Number
  8097496
Author
  Agamy MS. Yousef HA. Sebakhy OA.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Queen's Univ., Canada.
Title
  Adaptive fuzzy variable structure control of induction motors.
Source
  Canadian Conference on Electrical and Computer Engineering 2004 (IEEE Cat. No.04CH37513). IEEE. Part Vol.1, 2004, pp. 89-94 Vol.1. Piscataway, NJ, USA.
Conference Information
  Canadian Conference on Electrical and Computer Engineering 2004. Niagara Falls, Ont., Canada. Cisco Syst.. General Elec.. Ryerson Univ.. AVFX Audio Visual. Bell Canada. Dofasco. Dye & Durham. Gennum Corp.. IEEE Canada Found.. Univ. of Toronto. Niagara College of Appl. Arts and Technol. 2-5 May 2004.

Abstract
  In variable structure sliding mode control schemes, one has to adjust the controller gains in order to obtain an acceptable response. The controller gains are required to be readjusted under variation of the disturbance load torque and/or of the parameters of the induction motor. To compensate automatically for the uncertainties experienced by the system, the controller gains are adjusted by a fuzzy inference mechanism. Furthermore, an adaptive fuzzy sliding mode controller is proposed. It combines the merits of sliding mode control, fuzzy inference mechanism and the adaptive algorithm. First, a sliding mode controller is designed, and then a fuzzy inference mechanism is used to compensate for the uncertainties experienced by the system by adjusting the reaching rates of the sliding mode controller. Finally an adaptation algorithm is used to adjust the centers of the fuzzy sets in order to reduce the control effort and chattering. Simulation results verify the effectivenes!
 s of the proposed algorithm (23 References).

Buscar: fuzzy sets civil engineering {Sin términos relacionados}
RESULTADOs: 401-544

RESULTADO <1>
Score
  ****-
Accession Number
  8080610
Author
  Bocaniala CD. Sa da Costa J. Louro R.
Author/Editor Affiliation
  Comput. Sci. & Eng. Dept., Univ. Dunarea de Jos of Galati, Domneasca, Romania.
Editor
  Palade V; Howlett RJ; Jain L.
Title
  A fuzzy classification solution for fault diagnosis of valve actuators.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. (Lecture Notes in Comput. Sci. Vol.2773). Springer-Verlag. Part Vol.1, 2003, pp. 741-7 Vol.1. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. Oxford, UK. 3-5 Sept. 2003.

Abstract
  This paper proposes a fuzzy classification solution for fault diagnosis of valve actuators. The belongingness of the current state of the system to the normal and/or a faulty state is described with the help of fuzzy sets. The theoretical aspects of the classifier are presented. Then, the case study the DAMADICS benchmark flow control valve, is shortly introduced and also the method used to generate the data for designing and testing the classifier. Finally, the simulation results are discussed (9 References).

RESULTADO <2>
Score
  ****-
Accession Number
  8080561
Author
  Salgado P.
Author/Editor Affiliation
  Univ. de Tras-os-Montes e Alto Douro, Vila Real, Portugal.
Editor
  Palade V; Howlett RJ; Jain L.
Title
  Possibilistic hierarchical fuzzy model.
Source
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. (Lecture Notes in Comput. Sci. Vol.2773). Springer-Verlag. Part Vol.1, 2003, pp. 244-50 Vol.1. Berlin, Germany.
Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. Oxford, UK. 3-5 Sept. 2003.

Abstract
  This paper presents a Fuzzy Clustering of Fuzzy Rules Algorithm (FCFRA) with dancing cones that allows the automatic organisation of the sets of fuzzy IF...THEN rules of one fuzzy system in a Hierarchical Prioritised Structure (HPS). The algorithm belongs to a new methodology for organizing linguistic information, SLIM (Separation of Linguistic Information Methodology), and is based on the concept of relevance of rules. The proposed FCFRA algorithm has been successfully applied to the clustering of an image (7 References).

RESULTADO <3>

Score
 ****-

Accession Number
  8055311

Author
  Carbo J. Molina JM. Davila J.

Author/Editor Affiliation
  Dept. of Comput. Sci., Univ. Carlos III of Madrid, Spain.

Editor
  Palade V; Howlett RJ; Jain L.

Title
  Secure matchmaking of fuzzy criteria between agents.

Source
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. (Lecture Notes in Comput. Sci. Vol.2773). Springer-Verlag. Part Vol.1, 2003, pp. 1185-91 Vol.1. Berlin, Germany.

Conference Information
  Knowledge-Based Intelligent Information and Engineering Systems. 7th International Conference, KES 2003. Proceedings. Oxford, UK. 3-5 Sept. 2003.

Abstract
  A subjective evaluation of services and agents play a fundamental role in open systems. The vague nature of the personal criteria used in subjective evaluations justify the use of fuzzy sets. This distributed approach requires cooperation (information sharing) between agents with similar criteria to improve decision making process. So similarity between criteria is used to decide whether cooperate with a given agent or not. But since personal criteria of evaluation reflect users' profile, this information should be protected, and not be disclosed to any agent. This paper presents an analytic study about the viability of applying distributed secure computations over the matching of fuzzy sets representing such personal criteria (12 References).

RESULTADO <4>

Score
 ****-

Accession Number
  7954429

Author
  Sokhansansanj BA. Fitch JP. Quong JN. Quong AA.

Author/Editor Affiliation
  Chem. & Mater. Sci. Directorate, California Univ., Livermore, CA, USA.

Title
  Exhaustive search for fuzzy gene networks from microarray data.

Source
  Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.03CH37439). IEEE. Part Vol.4, 2003, pp. 3571-4 Vol.4. Piscataway, NJ, USA.

Conference Information
  Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Cancun, Mexico. Whitaker Found. 17-21 Sept. 2003.

Abstract
  Recent technological advances in high-throughput data collection allow for the study of increasingly complex systems on the scale of the whole cellular genome and proteome. Gene network models are required to interpret large and complex data sets. Rationally designed system perturbations (e.g. gene knock-outs, metabolite removal, etc) can be used to iteratively refine hypothetical models, leading to a modeling-experiment cycle for high-throughput biological system analysis. We use fuzzy logic gene

network models because they have greater resolution than Boolean logic models and do not require the precise parameter measurement needed for chemical kinetics-based modeling. The fuzzy gene network approach is tested by exhaustive search for network models describing cyclin gene interactions in yeast cell cycle microarray data, with preliminary success in recovering interactions predicted by previous biological knowledge and other analysis techniques. Our goal is to further deve!
 lop this method in combination with experiments we are performing on bacterial regulatory networks (14 References).

RESULTADO <5>
Score
 ****-
Accession Number
  7891040
Author
  Sheng-Yung Chang. Chuei-Tin Chang.
Author/Editor Affiliation
  Dept. of Chem. Eng., Nat. Cheng Kung Univ., Tainan, Taiwan.
Editor
  Damiani E; Howlett RJ; Jain LC; Ichalkaranje N.
Title
  A fuzzy-logic based fault diagnosis strategy for process control loops.
Source
  Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002. IOS Press. Part vol.2, 2002, pp. 838-42. Amsterdam, Netherlands.
Conference Information
  Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002. Podere d'Ombriano, Crema, Italy. 16-18 Sept. 2002.
Abstract
  By considering the fault propagation behaviors in process systems with control loops, a fuzzy-logic based fault diagnosis strategy has been developed in the present work. The proposed fault diagnosis methods can be implemented in two stages. In the offline preparation stage, the potential causes of a system hazard are identified by determining the minimal cut sets of a fault tree. The occurrence order of observable fault symptoms is derived from the system digraph and then encoded into a set of IF-THEN diagnosis rules. In the next online diagnosis stage, the occurrence indices of the lop event and also the fault origins are computed in a fuzzy inference system based on real-time measurement data. Simulation studies have been carried out to demonstrate the feasibility of the proposed approach (5 References).

RESULTADO <6>
Score
 ****-
Accession Number
  7882537
Author
  Kortelainen J. Tolonen Y.
Author/Editor Affiliation
  Lappeenranta Univ. of Technol., Finland.
Editor
  Damiani E; Howlett RJ; Jain LC; Ichalkaranje N.
Title
  Fuzzy rules in strength grading of lumber.
Source
  Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002. IOS Press. Part vol.2, 2002, pp. 960-4. Amsterdam, Netherlands.
Conference Information
  Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002.

Podere d'Ombriano, Crema, Italy. 16-18 Sept. 2002.

Abstract

  Traditional strength grading (classification) of lumber is based on visual observations of defects and certain physical variables. Additionally, some measurable characteristics have been included in the grading process. For each variable, crisp classes and their borders have been set by laborious statistical methods. The grading equipments are based on these principles, but their yield is still low, especially in high strength classes. Moreover, the increased production speed of saw mills demands a fast grading process. We present a fuzzy rule-based approach to strength grading of lumber. We try to reduce the number of the variables and create fuzzy rules by means of expert's knowledge. Here, only four variables are proposed for the strength grading and for each of them a maximum of three fuzzy sets are determined. Presently, the objects are graded to five crisp strength classes for which the minimum strength values are set by authorities (8 References).

RESULTADO <7>

Score
  ****-

Accession Number
  7823901

Author
  Robak S. Pieczynski A.

Author/Editor Affiliation
  Inst. of Organ. & Manage., Univ. of Zielona Gora, Poland.

Title
  Employing fuzzy logic in feature diagrams to model variability in software product-lines.

Source
  Proceedings 10th IEEE International Conference and Workshop on the Engineering of Computer-Based Systems. IEEE Comput. Soc. 2003, pp. 305-11. Los Alamitos, CA, USA.

Conference Information
  Proceedings 10th IEEE International Conference and Workshop on the Engineering of Computer-Based Systems. ECBS 2003. Huntsville, AL, USA. IEEE Comput. Soc. Tech. Committee on Eng. Comput.-Based Syst . 7-10 April 2003.

Abstract

  The possible features of software product line members may vary according to the needs of particular market segments or purposes. The assessment of what will be common and what will be variable may, e.g., result from market strategies. Customer profiles may be used to model an otherwise anonymous market, each requiring in turn a specific sets of variant features. Identical feature sets may be prioritized in different ways for specific customer groups. The paper proposes a system description based on a feature diagram tree, annotated with weighted variant features in the product line context. The principle how some variant features may be described on the basis of fuzzy logic is introduced and discussed. As the proposed description also integrates the external cross-tree constraints, it leads to an improved homogeneity of the descriptive logic. This opens the opportunity to integrate additional tools into the scenario, e.g., generators or support for constraint based reason!
 ing. The use of the proposed approach is demonstrated by the example of a simple car description (25 References).

RESULTADO <8>

Score
  ****-

Accession Number
  7664251

Author
  Bychkov ED. Lendikrej VV.

Author/Editor Affiliation
  Omsk State Tech. Univ., Russia.

Title

Technique of diagnostics of the technical condition of telecommunication switching system under fuzzy conditions.
Source
  2002 6th International Conference on Actual Problems of Electronic Instrument Engineering. Proceedings. Vol.1 (Cat. No. 02EX546) . IEEE. 2002, pp. 185-9. Piscataway, NJ, USA.
Conference Information
  6th International Conference on Actual Problems of Electronic Instrument Engineering - APEIE. Novosibirsk, Russia. 23-26 Sept. 2002.

Abstract
  The technique of technical diagnostics of switching system of a telecommunication network in conditions of incompleteness of the information caused by high complexity of object of diagnostics and deficiency of time of diagnosing is considered. The offered technique is based on concepts of the theory of fuzzy sets. Decisions on a condition of object of diagnostics is accepted on the basis of calculation procedures of fuzzy matrices of preference and double fuzzy integral (6 References).

RESULTADO <9>
Score
  ****-
Accession Number
  7613594
Author
  Levashenko VG. Zaitseva EN.
Author/Editor Affiliation
  Dept. of Inf. Technol., Belarussian State Economic Univ., Minsk, Belarus.
Editor
  Yin H; Allinson N; Freeman R; Keane J; Hubbard S.
Title
  Usage of new information estimations for induction of fuzzy decision trees.
Source
  Intelligent Data Engineering and Automated Learning - IDEAL 2002. Third International Conference (Lecture Notes in Computer Science Vol.2412). Springer-Verlag. 2002, pp. 493-9. Berlin, Germany.
Conference Information
  Intelligent Data Engineering and Automated Learning-IDEAL 2002. Third International Conference. Manchester, UK. 12-14 Aug. 2002.

Abstract
  We introduce a technique to compute new summary information estimations (information and entropy) for fuzzy sets. Special features for these estimations are investigated. We give an algorithm for determine various information measures for fuzzy sets and fuzzy decision trees. Finally, we use our estimations for induction of fuzzy decision trees from a group of training examples (11 References).

RESULTADO <10>
Score
  ****-
Accession Number
  7554742
Author
  Kyu-Ho Kim. Yu-Jeong Lee. Sang-Bong Rhee. Sang-Kuen Lee. Seok-Ku You.
Author/Editor Affiliation
  Dept. of Electr. Eng, Ansan Coll. of Tech , South Korea.
Title
  Dispersed generator placement using fuzzy-GA in distribution systems.
Source
  2002 IEEE Power Engineering Society Summer Meeting (Cat. No.02CH37376). IEEE. Part vol.3, 2002, pp. 1148-53. Piscataway, NJ, USA.
Conference Information

IEEE PES Summer Meeting. Chicago, IL, USA. 21-25 July 2002.
Abstract

This paper presents a fuzzy-GA method to resolve dispersed generator placement for distribution systems. The problem formulation considers an objective to reduce power loss costs of distribution systems and the constraints with the number or size of dispersed generators and the deviation of the bus voltage. The main idea of solving fuzzy nonlinear goal programming is to transform the original objective function and constraints into the equivalent multi-objectives functions with fuzzy sets to evaluate their imprecise nature and solve the problem using the proposed genetic algorithm without any transformation for this nonlinear problem to a linear model or other methods. Moreover, this algorithm proposes a satisfying method to solve the constrained multiple objective problem. Analyzing the results and updating the expected value of each objective function allows the dispatcher to obtain the compromised or satisfied solution efficiently (13 References).

RESULTADO <11>

Score
****-
Accession Number
7548339
Author
Benitez-Read JS. Lopez-Callejas R. Pacheco-Sotelo JO. Longoria-Gandara LC.
Editor
Jamshidi M; Hata Y; Fathi M; Homaifar A; Jamshidi JS.
Title
Exact aggregation and defuzzification applied to a neutron fuzzy controller.
Source
Soft Computing, Multimedia Biomedicine, Image Processing and Financial Engineering Vol.13 (IEEE Cat. No.D2EX548). TSI Press. 2002, pp. 183-8. Albuquerque, NM, USA.
Conference Information
Soft Computing, Multimedia, Biomedicine, Image Processing and Financial Engineering. Proceedings of the Fifth Biannual World Automation Congress (WAC 2002) ISSCI 2002 and IFMIP 2002. Orlando, FL, USA. 9-13 June 2002.
Abstract

An efficient algorithm that computes an exact aggregation of fuzzy sets, representing the rule consequents fired by the inference engine of a fuzzy controller, is presented. Moreover, the crisp output of the aggregated set is obtained using analytical formulae derived for the center of gravity method. The basic idea is to determine characteristics such as overlapping, intersection points and level of activation among the activated fuzzy sets in every control cycle. When compared to techniques that use discrete universes of discourse, this exact aggregation and defuzzification method requires fewer operations and renders the controller output with greater precision. Simulation results of the algorithm applied to regulate the neutron power in a research reactor model are presented (4 References).

RESULTADO <12>

Score
****-
Accession Number
7548335
Author
Nagamune K. Kobashi S. Hata Y. Taniguchi K.
Author/Editor Affiliation
Himeji Inst. of Technol., Hyogo, Japan.
Editor
Jamshidi M; Hata Y; Fathi M; Homaifar A; Jamshidi JS.
Title
Automated design of fuzzy non-destructive testing system by a genetic algorithms.
Source

Soft Computing, Multimedia Biomedicine, Image Processing and Financial Engineering Vol.13 (IEEE Cat. No.D2EX548). TSI Press. 2002, pp. 159-64. Albuquerque, NM, USA.
Conference Information
Soft Computing, Multimedia, Biomedicine, Image Processing and Financial Engineering. Proceedings of the Fifth Biannual World Automation Congress (WAC 2002) ISSCI 2002 and IFMIP 2002. Orlando, FL, USA. 9-13 June 2002.

Abstract
This paper proposes an application of a genetic algorithms (GA) to fuzzy non-destructive testing (NDT) system. We are concerned here with the system which extracts embedded tubes in concrete from pulse-radar images. The system usually uses several fixed parameters to analyze the input data. The optimal values of the parameters depend on the environment (e.g. the permittivity of concrete, pulse-radar device, and so on). Therefore, the system often fails to extract embedded tubes when the fixed parameters are not optimal in the environment. This paper attempts to optimize the parameters by a simple GA in order to solve the problem. We applied the system with the GA to the two data sets obtained by various environments. As the result, the system with GA was able to adapt each environment (6 References).

RESULTADO <13>

Score
****-
Accession Number
7534108
Author
Abouhaidar TM. Looney CG.
Author/Editor Affiliation
Comput. Sci. Dept., Nevada Univ., Reno, NV , USA.
Editor
Chung A.
Title
Fuzzy analysis and classification of mislabeled and noisy data.
Source
Proceedings of the ISCA 14th International Conference Computer Applications in Industry and Engineering. Int. Soc. Comput. & their Applications - ISCA. 2001, pp. 146-50. Cary, NC, USA.
Conference Information
Proceedings of the ISCA 14th International Conference Computer Applications in Industry and Engineering. Las Vegas, NV, USA. Int. Soc. Comput. & thier Applications - ISCA. 27-29 Nov. 2001.

Abstract
A classifier learns from a "training" data set so it can later correctly classify a new pattern from the same population as the training set. However, when the examples for a learning algorithm consist of real world data then they are usually tainted with noise, ambiguity, uncertainty, imprecision, vagueness or incompleteness. Noise may be introduced by outliers; they are the result of bad measurements or pattern mislabeling. Clearly, classification of such noisy data must be highly efficient and accurate. In this paper, we overcome this problem by introducing an efficient tool for feature selection where "bad" (non-discriminating) features are dropped and "good" features are weighted according to how well they separate classes in a data set. Good features are responsible for "electing" a class that the feature vector under test should naturally belong to. Thus, we call our new method "EFCLASS" denoting election fuzzy classification. The proposed method is simple, fast and!
accurate. Various data sets that are known to be good examples for a classification algorithm are used to test the performance of the proposed method for the fuzzy classifier (10 References).

RESULTADO <14>

Score
****-
Accession Number
7508845
Author

Uncu U. Koklukaya E. Gencsoy A. Annadurdiyew O.
Author/Editor Affiliation
  Dep.of Comput. Eng., Int. Turkmen-Turkish Univ., Ashgabat, Turkmenistan.
Title
  A fuzzy rule-base model for classification of spirometric FVC graphs in chronical obstructive pulmonary diseases.
Source
  2001 Conference Proceedings of the 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (Cat. No.01CH37272). IEEE. Part vol.4, 2001, pp. 3866-9. Piscataway, NJ, USA.
Conference Information
  2001 Conference Proceedings of the 23rd Annual International Conference of the IEEE Engineering n Medicine and Biology Society. Istanbul, Turkey. 25-28 Oct. 2001.
Abstract
  In diagnosis of COPD (Chronic Obstructive Pulmonary Diseases), spirometry is an important "Pulmonary Function Testing" in the medical evaluation of patients. Spirometric measurements FVC & FEV1 are very important to control the treatment, but some difficulties such as incompleteness, inaccuracy and inconsistency are encountered during the test. "Fuzziness in Spirometry" is very important "real-world problem." Even if it is almost impossible to find ideal mathematical equations, ideal prediction formulas and ideal propositions defining the behaviors formulated ideally satisfying the real-life, it is possible to define inexact medical information and findings as fuzzy sets. Furthermore, because of collected data just lying on the border-line cannot be strictly or clearly defined either "normal" or "abnormal", the physicians may misinterpret some criteria or indications. For such kind of reasons, it is needed a formal model of distinguishing COPD group diseases (chronic bronc!
 hitis, emphysema and asthma) by using fuzzy theory and to put into practice a "fuzzy rule-base." The purpose of this study is to construct a fuzzy rule-base model for designing a "COPD Diagnosing Fuzzy Expert System by Classifying Spirometric FVC Plots." (22 References).

RESULTADO <15>
Score
  ****-
Accession Number
  7502979
Author
  Murgu A.
Author/Editor Affiliation
  Dept. of Math. Inf. Technol., Jyvaskyla Univ., Finland.
Editor
  Baba N; Jain LC; Howlett RJ.
Title
  Fuzzy programming of multiperiod probabilistic inference.
Source
  Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.2, 2001, pp. 1468-72. Amsterdam, Netherlands.
Conference Information
  Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.
Abstract
  In this paper we consider the problem of multiperiod aggregation of traffic flows occurring in forecasting strategies in trunk group management of packet switched networks. The fuzzy sets are assimilated as intervals on which the adaptive flow multiplexing strategy is enabled to track relevant statistical parameters of the traffic demand (5 References).

RESULTADO <16>
Score

****-
Accession Number
  7502919
Author
  Cornelis C. De Cock M. Botteldooren D. Kerre E.
Author/Editor Affiliation
  Dept. of Math. & Comput. Sci., Ghent Univ., Belgium.
Editor
  Baba N; Jain LC; Howlett RJ.
Title
  Fuzzy set theory: a useful interlingua?.
Source
  Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.2, 2001, pp. 1137-41. Amsterdam, Netherlands.
Conference Information
  Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.

Abstract
  The practice, common in fuzzy expert systems, to map linguistic data into fuzzy sets has some important reverse implications: given membership functions that represent different terms of a linguistic variable in one natural language X, we can set out to search which of them best matches a given term in another language Y, on the basis of similarity assessments between individual terms. In other words, we are considering fuzzy set theory as an interlingua for use in automated translation. Our approach is applied to data gathered in an International Annoyance Scaling Study (5 References).

RESULTADO <17>
Score
  ****-
Accession Number
  7479493
Author
  Kuwano H.
Author/Editor Affiliation
  Fac. of Bus. Adm. & Inf. Sci., Kanazawa Gakuin Univ., Japan.
Editor
  Baba N; Jain LC; Howlett RJ.
Title
  Fuzzy multiobjective programming problems with possibility measures.
Source
  Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.1, 2001, pp. 788-91. Amsterdam, Netherlands.
Conference Information
  Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.

Abstract
  We discuss one of four comparison indices based possibility theory for a pair of multi-dimensional fuzzy sets. We refer to the difficulty of fuzzy multiobjective programming problems containing interactive fuzzy numbers (5 References).

RESULTADO <18>
Score
  ****-
Accession Number
  7479475
Author

Mattila JK.
Author/Editor Affiliation
  Inst. of Appl. Math., Lappeenranta Univ. of Technol., Finland.
Editor
  Baba N; Jain LC; Howlett RJ.
Title
  On field theory of Lambda-standard fuzzy numbers.
Source
  Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.1, 2001, pp. 695-9. Amsterdam, Netherlands.
Conference Information
  Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.
Abstract
  The set of fuzzy Lambda-standard fuzzy numbers arc considered. These fuzzy numbers are convex normal fuzzy sets. Addition, subtraction, multiplication and division are defined so that the set of these fuzzy numbers is closed under these operations. The set of fuzzy natural numbers is a subset of the set of these real fuzzy numbers. These fuzzy numbers are unique, especially in concerning with the shape of their membership functions and the length of the support of the numbers. The axioms of field theory are shown to be satisfied for the set of fuzzy Lambda-standard fuzzy numbers (6 References).

RESULTADO <19>
Score
  ****-
Accession Number
  7479473
Author
  Huynh VN. Nakamori Y.
Author/Editor Affiliation
  Sch. of Knowledge Sci., JAIST, Ishikawa , Japan.
Editor
  Baba N; Jain LC; Howlett RJ.
Title
  Fuzzy concept formation based on context model.
Source
  Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies. KES'2001. IOS Press. Part vol.1, 2001, pp. 687-91. Amsterdam, Netherlands.
Conference Information
  Proceedings of KES 2001. 5th International Conference on Knowledge Based Intelligent Information Engineering Systems and Allied Technology . Osaka, Japan. 6-8 Sept. 2001.
Abstract
  This paper aims at approaching the problem of mathematical modeling of fuzzy concepts based on the theory of formal concept analysis and the notion of context model. We introduce a notion of fuzzy concepts within a context model and the membership functions associated with these fuzzy concepts. It is shown that fuzzy concepts can be interpreted exactly as the collections of a-cut of their membership functions. An analysis of using the approach in the paper as a simple method of constructing membership functions for fuzzy sets in mining fuzzy association rules from databases is also discussed (15 References).

RESULTADO <20>
Score
  ****-
Accession Number
  7453625
Author

Satpathy PK. Das D. Dutta Gupta PB.
Author/Editor Affiliation
  Indian Inst. of Technol., Kharagpur, India.
Title
  Fuzzy modeling of power system loads for voltage stability analysis.
Source
  IPEC 2001. Fifth International Power Engineering Conference. Proceedings. Nanyang Technological Univ. Part vol.1, 2001, pp. 227-31. Singapore, Singapore.
Conference Information
  Proceedings of Fifth International Power Engineering Conference (IPEC 2001). Singapore. IEEE Power Eng. Soc. 17-19 May 2001.

Abstract
  In this paper, a fuzzy set theory based approach is proposed for investigating the steady state voltage stability margin. The uncertainty in loads is efficiently modeled in terms of fuzzy sets by assigning trapezoidal membership functions. The results are obtained with the help of static power flow tools capable of handling the numerical ill conditioning of the solution due to Jacobian singularity in the vicinity of the critical point. Case studies on IEEE 14-bus and 30-bus test systems indicate that the voltages, power generations and the voltage stability indices at the critical conditions also obey fuzzy distributions (11 References).

RESULTADO <21>
Score
  ****-
Accession Number
  7419586
Author
  Phang KK. Lim SH. Yaacob MH. Ling TC.
Author/Editor Affiliation
  Fac. of Comput. Sci. & Inf. Technol., Malaya Univ., Kuala Lumpur, Malaysia.
Editor
  Hendtlass T; Ali M.
Title
  Design of a fuzzy usage parameter controller for DiffServ and MPLS.
Source
  Developments in Applied Artificial Intelligence. 15th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems IEA/AIE 2002. Proceedings (Lecture Notes in Computer Science Vol.2358). Springer-Verlag. 2002, pp. 470-81. Berlin, Germany.
Conference Information
  Developments in Applied Artificial Intelligence. 15th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE 2002. Proceedings. Cairns, Qld., Australia. 17-20 June 2002.

Abstract
  This paper describes a fuzzy usage parameter control (UPC) mechanism in DiffServ (DS) and Multiprotocol Label Switching (MPLS) networks based on fuzzy logic. Current research treats MPLS as the Internet's solution to a high performance network. In the DS network, UPC is an important factor in ensuring the sources conform to the negotiated service level agreement (SLA). Most of the UPC techniques proposed are based on conventional crisp sets which are inefficient when dealing with the conflicting requirements of UPC. Simulation results show that the proposed fuzzy scheme outperforms conventional techniques in terms of packet loss ratio, higher selectivity and lower false alarm probability (15 References).

RESULTADO <22>
Score
  ****-
Accession Number

7168876
Author
  Hayashi I. Maeda T. Nomura T. Aoki H.
Author/Editor Affiliation
  Hannan Univ., Osaka, Japan.
Editor
  Valafar F.
Title
  A study on unimodality of information entropy in learning type fuzzy ID3.
Source
  Proceedings of the International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences. METMBS'00 . CSREA Press - Univ. Georgia. Part vol.1, 2000, pp. 283-7. Athens, GA, USA.
Conference Information
  Proceedings of the International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences. METMBS'00 . Las Vegas, NV, USA. 26-29 June 2000.

Abstract
  The ability to adjust AND operators in the learning type fuzzy ID3 is discussed. Fuzzy ID3 is a powerful method to acquire fuzzy rules from data sets. However, fuzzy ID3 has a tuning problem. In our fuzzy ID3 algorithm, the AND operator of fuzzy rules is formulated using a t-norm connective with a parameter which is adjusted using the golden section method. However, the unimodality of the average mutual information in the algorithm has to be assumed for using the learning mechanism. We discuss unimodality and show its usefulness using examples (7 References).

RESULTADO <23>
Score
  ****-
Accession Number
  7055318
Author
  Li-Jing Xu. Ying-Lin Yu.
Author/Editor Affiliation
  Dept. of Electron. & Commun. Eng., South China Univ. of Technol., Guangzhou, China.
Editor
  Dagli CH; Buczak AL; Ghosh J; Embrechts M; Ersoy O; Kercel S.
Title
  Choosing suitable fuzzy partitions for a neuro-fuzzy classifier.
Source
  Smart Engineering System Design: Neural Networks, Fuzzy Logic, Evolutionary Programming, Data Mining, and Complex Systems. Vol.10. Proceedings of the Artificial Neural Networks in Engineering Conference (ANNIE 2000). ASME. 2000, pp. 411-16. New York, NY, USA.
Conference Information
  ANNIE 2000. Smart Engineering Systems Design Conference. St. Louis, MO, USA. 5-8 Nov. 2000.

Abstract
  A neuro-fuzzy classifier based on the fuzzy perceptron model is studied in this paper. The parameters of membership function are adjusted in the classifier. Apparently, it's unreasonable to partition the same number fuzzy sets for the different input features. The concept of the fuzzy density is used here to choose the suitable fuzzy partitions for the input feature. The Iris data set is used to illustrate the effectiveness of the proposed scheme (5 References).

RESULTADO <24>
Score
  ****-
Accession Number
  7048750

Author
  Nakamiti G. Freitas R.
Editor
  Dagli CH; Buczak AL; Ghosh J; Embrechts M; Ersoy O; Kercel S.
Title
  Intelligent real-time traffic control.
Source
  Smart Engineering System Design: Neural Networks, Fuzzy Logic, Evolutionary Programming, Data Mining, and Complex Systems. Vol.10. Proceedings of the Artificial Neural Networks in Engineering Conference (ANNIE 2000). ASME. 2000, pp. 893-8. New York, NY, USA.
Conference Information
  ANNIE 2000. Smart Engineering Systems Design Conference. St. Louis, MO, USA. 5-8 Nov. 2000.

Abstract
  The task of controlling urban traffic requires flexibility, adaptability and handling uncertain information spread through the urban network. The paper considers how the use of fuzzy sets, case-based mechanisms, and genetic algorithms in a distributed system framework can provide the necessary foundations for an efficient and adaptable on-line traffic control system (9 References).

RESULTADO <25>
Score
  ****-
Accession Number
  7023482
Author
  Youman Deng. Xiaojuan Ren.
Author/Editor Affiliation
  Dept. of Electr. Eng., Tsinghua Univ., Beijing, China.
Title
  Fuzzy modeling of capacitor switching for radial distribution systems.
Source
  2001 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.01CH37194). IEEE. Part vol.2, 2001, pp. 830-4. Piscataway, NJ, USA.
Conference Information
  Proceedings of 2001 Winter Meeting of the IEEE Power Engineering Society. Columbus, OH, USA. 28 Jan.-1 Feb. 2001.

Abstract
  In this paper, a new approach with fuzzy variables is proposed for solving the capacitor-switching problem in radial distribution systems. This method incorporates the load uncertainty in optimizing capacitor on/off status to minimize real power losses and improving bus voltages. Capacitor switching is an important measure for loss minimization of distribution systems. It aims at determining the optimal banks of adjustable capacitor banks to compensate the reactive load demand. Uncertainties in system data, especially those in load demands, may often affect the final decision. Therefore, it is necessary to take uncertain factors into consideration. In this paper, fuzzy distribution power flow is calculated and is treated as the base of capacitor switching calculation. Uncertain load values are represented as trapezoidal fuzzy numbers via fuzzy sets. All variables during the computation are presented as trapezoidal fuzzy complex numbers. The principles of fuzzy set theory a!
 re applied to form a methodology suitable for calculations of fuzzy complex numbers while maintaining the fast speed of calculations. A computer program has been developed according to this approach, and numerical studies on a radial distribution system are verified in details (8 References).

RESULTADO <26>
Score
  ****-
Accession Number
  6998296

Author
  Khalifa IH. El-Husban AN. Suleh MH.
Author/Editor Affiliation
  Fac. of Eng., Helwan Univ., Cairo, Egypt.
Title
  A neuro-fuzzy control of a DC shunt motor.
Source
  UPEC 2000. 35th Universities' Power Engineering Conference . Queens Univ. 2000, pp. 7. Belfast, Ireland.
Conference Information
  Proceedings of 2000 Universities Power Engineering Conference. Belfast, UK. IEE. IEEE. Queen's Univ. Belfast. Belfast City Council. Northern Ireland Electr.. F G Wilson (Eng.). Kelman. 6-8 Sept. 2000.

Abstract
  This paper presents a novel methodology for designing a neuro-fuzzy control for controlling systems with nonlinearities of known structures and parameters. Due to the different nonlinearities inherent in the system dynamics, we propose a neural-fuzzy control that process both numerical and linguistic information, the proposed control has some characteristics and advantages. The inputs and outputs are fuzzy numbers or numerical numbers, the weights of the proposed neuro-fuzzy control are weights, owing to the representation forms of the alpha-level sets. Different tests are performed to study the effects of different alpha-cut techniques on the closed loop system performance, the first test addresses the effect of alpha-cut techniques, the second test is the effect of number of labels and finally the effect of defuzzification techniques. This approach is able to process and learn numerical information as well as linguistic information. It can be used as an adaptive fuzzy co!
 ntroller. As a model example of nonlinear systems, the DC shunt motor is considered due to its importance in electric drives, Computer simulations are included to help in making that study (25 References).

RESULTADO <27>

Score
  ****-
Accession Number
  6977735
Author
  Krokhin G.
Author/Editor Affiliation
  Novosibirsk State Tech. Univ., Russia.
Title
  Fuzzy models for intellectual industrial regulators in control systems of thermal power stations.
Source
  2000 5th International Conference on Actual Problems of Electronic Instrument Engineering Proceedings. APEIE-2000. Devoted to the 50th Anniversary of Novosibirsk State Technical University. Vol.1 (Cat. No.00EX383). IEEE. 2000, pp. 262-6. Piscataway, NJ, USA.
Conference Information
  2000 5th International Conference on Actual Problems of Electronic Instrument Engineering Proceedings. APEIE-2000. Devoted to the 50th Anniversary of Novosibirsk State University. Vol.1. Novosibirsk, Russia. 26-29 Sept. 2000.

Abstract
  This paper examines ideas proposed in a previous article by the author and the results of applying the theory of fuzzy sets and fuzzy logic to the analysis and diagnosis of the state of functioning power installations, which are represented as open MECHANISMS. Procedures are created and united into fuzzy production models for recognition of "generalized images of the state" of the elements (or nodes) of a power installation. Fuzzy models are applied for the first time in designing an intellectual fuzzy regulator for rarefaction in a turbine condenser (8 References).

RESULTADO <28>

Score
 ****-
Accession Number
 6867100
Author
 Oltean G. Miron C. Zahan S. Gordan M.
Author/Editor Affiliation
 Cluj Univ., Romania.
Editor
 Reljin B; Stankovic S.
Title
 A fuzzy optimization method for CMOS operational amplifier design.
Source
 Proceedings of the 5th Seminar on Neural Network Applications in Electrical Engineering. NEUREL 2000 (IEEE Cat. No.00EX287). IEEE & Academic Mind. 2000, pp. 152-7. Piscataway, NJ, USA & Belgrade, Yugoslavia.
Conference Information
 Proceedings of the 5th Seminar on Neural Network Applications in Electrical Engineering. NEUREL 2000. Belgrade, Yugoslavia. IEEE Signal Process. Soc. 25-27 Sept. 2000.

Abstract
  The aim of the paper is to present a fuzzy method for the optimization of the CMOS operational amplifier design. Our method uses fuzzy systems or fuzzy sets in all stages involved in the optimization process. In order to reduce the time spent for circuit performance evaluation, we use fuzzy system to model each circuit performance. The optimization problem formulation is accomplished in a flexible manner using fuzzy sets to define fuzzy optimization objectives. We use qualitative design knowledge to modify the design parameters in each iteration. This is done using a fuzzy system for each parameter. After introducing our fuzzy optimization method we design a basic two-stage CMOS operational amplifier (15 References).

RESULTADO <29>
Score
 ****-
Accession Number
 6783319
Author
 Abbas AA. Talaat HEA. Morsy MS. El-Hawary ME.
Author/Editor Affiliation
 Dept. of Electr. Power Eng., Ain Shams Univ., Cairo, Egypt.
Title
 Fuzzy rule based dynamic security assessment.
Source
 LESCOPE'00. 2000 Large Engineering Systems Conference on Power Engineering Conference Proceedings. Theme: Navigating the New Power Challenge. Large Engineering Systems. 2000, pp. 261-5. Halifax, NS, Canada.
Conference Information
 Proceedings of 2000 Conference on Power Engineering. Halifax, NS, Canada. 23-26 July 2000.

Abstract
  This paper presents a fuzzy rule-based dynamic security assessment for a multi-machine electric power system. The system security is evaluated using two different groups of variables, global system variables and local generator variables, for the sake of comparison, and a suitable fuzzy classifier was proposed for each case. A suitable fuzzy classifier involves the appropriate selection of variables (features) used for classification, number of rules, and classifier dimensions. The fuzzy rules were generated automatically using a typical numerical training data set. Both cases were tested using different testing sets and a comparison was presented. The availability of on-line implementation was also discussed (11 References).

RESULTADO <30>

Score
  ****-
Accession Number
  6763463
Author
  de Abreu GLCM. Ribeiro JF.
Author/Editor Affiliation
  Dept. of Mech. Eng., Fed.. Univ. of Uberlandia, Brazil.
Editor
  Howlett RJ; Jain LC.
Title
  Optimal design of fuzzy controllers using evolutionary genetic algorithms.
Source
  KES'2000. Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies. Proceedings (Cat. No.00TH8516). IEEE. Part vol.2, 2000, pp. 503-9. Piscataway, NJ, USA.
Conference Information
  Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies/ Proceedings. KES'2000. Brighton, UK. 30 Aug.-1 Sept. 2000.
Abstract

  The paper presents the applicability of evolutionary genetic algorithms (EGAs) in the optimal design of membership functions and sugeno rules for fuzzy logic controllers (FLCs). EGAs are fully capable of creating complete fuzzy controllers given the equations of motion of the system, eliminating the need for human experts in the control design. The proposed technique is an optimization method that evaluates the fuzzy controller using the optimal response of the system. The potential of the method is examined using an inverted pendulum system. The membership functions and sugeno rules were optimized for initial fuzzy sets and sugeno parameters, respectively. The effectiveness of the proposed design control scheme and robustness of the obtained fuzzy controller is demonstrated through numeric simulations (9 References).

RESULTADO <31>

Score
  ****-
Accession Number
  6763461
Author
  Hattori Y. Furuhashi T.
Author/Editor Affiliation
  Dept. of Inf. Electron., Nagoya Univ., Japan.
Editor
  Howlett RJ; Jain LC.
Title
  A proposal of fuzzy modeling with dimensionality reduction incorporating fuzzy inference method.
Source
  KES'2000. Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies. Proceedings (Cat. No.00TH8516). IEEE. Part vol.2, 2000, pp. 495-8. Piscataway, NJ, USA.
Conference Information
  Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies/ Proceedings. KES'2000. Brighton, UK. 30 Aug.-1 Sept. 2000.
Abstract

  Studies of the integration of patterns and symbols have attracted many researchers. Patterns are feature vectors in a feature space and symbols are labels of sets of patterns. The integration of patterns and symbols treats pattern-symbol pairs for information processing. Fuzzy inference is the integration of patterns and symbols by treating pattern sets as fuzzy sets and symbols as the labels of fuzzy sets. Fuzzy

inference is very useful for extraction and incorporation of human knowledge. However, relationships between symbols and multi-dimensional pattern sets are hard to grasp. The paper proposes a fuzzy inference system with a nonlinear projector for dimensionality reduction to visualize relationships between the symbols and the multi-dimensional pattern sets. The proposed system is a good tool for interactive knowledge acquisition/incorporation (3 References).

RESULTADO <32>
Score
 ****-
Accession Number
 6763430
Author
 Weber K.
Author/Editor Affiliation
 Lufthansa Syst. Berlin, Germany.
Editor
 Howlett RJ; Jain LC.
Title
 Fuzzy rules generation from data through fuzzy evaluation of fuzzy rules.
Source
 KES'2000. Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies. Proceedings (Cat. No.00TH8516). IEEE. Part vol.1, 2000, pp. 365-8. Piscataway, NJ, USA.
Conference Information
 Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies/ Proceedings. KES'2000. Brighton, UK. 30 Aug.-1 Sept. 2000.

Abstract
 This paper deals with generating fuzzy rules from numerical data. The rule evaluation which is necessary in order to determine rule fitness with respect to given data is often based on mere heuristics and usually lacks in semantic interpretation. The method proposed in this paper is based on two central ideas which face these shortcomings. Fuzzy rules are evaluated through fuzzy quality values which are similar to fuzzy truth values introduced by Zadeh (1987). They get a semantics by comparison with predefined standard fuzzy quality values. Thus, they are easy to understand even for laymen. The other idea refers to the computation of fuzzy quality values. It is based on frequency distributions of the underlying data which are transformed to fuzzy sets using the theory of mass assignments and a voting model semantics. Furthermore, the fuzzy quality values are involved in the fuzzy inference process. Altogether, this method is well based, uses less heuristics and is more tra!
 nsparent than other approaches (19 References).

RESULTADO <33>
Score
 ****-
Accession Number
 6763405
Author
 Nurnberger A. Klose A. Kruse R.
Author/Editor Affiliation
 Fac. of Comput. Sci., Magdeburg Univ. of Technol., Germany.
Editor
 Howlett RJ; Jain LC.
Title
 Effects of antecedent pruning in fuzzy classification systems.
Source
 KES'2000. Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies. Proceedings (Cat. No.00TH8516). IEEE. Part vol.1, 2000, pp. 154-7. Piscataway, NJ,

USA.
Conference Information
   Fourth International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies/ Proceedings. KES'2000. Brighton, UK. 30 Aug.-1 Sept. 2000.

Abstract
   Fuzzy classification rules are widely considered to be a well-suited representation of classification knowledge, as they allow readable and interpretable rule bases. This paper discusses the shapes of the resulting classification borders under consideration of different types of fuzzy sets, rule bases and t-norms, and thus which class distributions can be represented by such classification systems. We focus on discussing how antecedent pruning influences the classification behaviour of fuzzy classifiers. Our main goal is to give the potential user an insight into the classification behaviour of fuzzy classifiers. For this, 2D and 3D visualisations are mainly used to illustrate the cluster shapes and the borders between distinct classes (10 References).

RESULTADO <34>

Score
   ****-
Accession Number
   6684612
Author
   Puyol-Gruart J. Godo L. Sierra C.

Author/Editor Affiliation
   Artificial Intelligence Res. Inst., CSIC, Catalonia, Spain.
Editor
   Morel G; Vernadat FB.
Title
   Handling fuzzy information in Milord II.
Source
   Information Control in Manufacturing 1998. (INCOM'98). Advances in Industrial Engineering. A Proceedings volume from the 9th IFAC Symposium. Elsevier Science. Part vol.2, 1999, pp. 625-30. Kidlington, UK.
Conference Information
   Proceedings of Symposium on Information Control in Manufacturing . Nancy-Metz, France. IFAC. 24-26 June 1998.

Abstract
   Milord II is a modular language for knowledge-based systems. We concentrate on the parts of the language and the theoretical foundations related to approximate reasoning: the use of local many-valued logics based on linguistic terms, which are the language constructs related to fuzzy sets, and finally the language deductive mechanism (9 References).

RESULTADO <35>

Score
   ****-
Accession Number
   6677978
Author
   Nazarko J. Styczynski Z. Poplawski M.

Author/Editor Affiliation
   Inst. of Manage. & Marketing, Bialystok Tech. Univ., Poland.
Title
   The fuzzy approach to energy losses calculations in low voltage distribution networks.
Source
   2000 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.00CH37077). IEEE. Part vol.4, 2000, pp. 2763-8. Piscataway, NJ, USA.
Conference Information

2000 IEEE Power Engineering Society Winter Meeting. Conference Proceedings. Singapore. 23-27 Jan. 2000.
Abstract
  The occurrence of electric energy losses is connected with the energy production, transmission and distribution processes. The proper computing of electric energy losses is one of the most complex problems in power distribution system analysis, demanding consideration of many factors. The accessibility and credibility of data used in calculations is of the greatest importance here. The careful analysis of system losses is desirable in this respect. This article presents the mathematical model of electric energy losses in low voltage networks with application of fuzzy sets theory. Usage of a fuzzy approach makes it possible to improve loss calculations accuracy. The theoretical statement is illustrated by an example which corresponds to the Polish distribution system (9 References).

RESULTADO <36>
Score
 ****-
Accession Number
 6582738
Author
  Olabe XB. Lopez I. Aramendia GA.
Author/Editor Affiliation
  Dpto. Ingenieria de Sistemas y Autom., Escuela Tecnica Superior de Ingenieros Ind. y de Telecomunicacion, Bibao , Spain.
Editor
  Duch W.
Title
  Tuning fuzzy model by neural networks to drive a robot avoiding obstacles.
Source
  Engineering Applications of Neural Networks. Proceedings of the 5th International Conference on Engineering Applications of Neural Networks (EANN'99). Wydawnictwo Adam Marszalek. 1999, pp. 111-16. Torun, Poland.
Conference Information
  Engineering Applications of Neural Networks. Proceeding of the 5th International Conference on Engineering Applications of Neural Networks (EANN'99). Warsaw, Poland. 13-15 Sept. 1999.
Abstract
  This paper presents an artificial neural network based on the structured knowledge of fuzzy systems. A fuzzy system presents advantages over the conventional approaches but its performance can further be improved if historical data sets of the experience are processed by a fuzzy neural network in order to obtain useful information. The artificial neural network presented here is implemented in an experimental project to improve a robot-car path movements, avoiding a set of obstacles (8 References).

RESULTADO <37>
Score
 ****-
Accession Number
 6552147
Author
  Alonso Gonzalez CJ. Rodriguez Diez JJ.
Author/Editor Affiliation
  Dept. de Inf., Valladolid Univ., Spain.
Editor
  Mohammadian M.
Title
  A graphical rule language for continuous dynamic systems.
Source
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy

Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval (Concurrent Systems Engineering Series Vol.55). IOS Press. 1999, pp. 482-7. Amsterdam, Netherlands.
Conference Information
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval. Vienna, Austria. 17-19 Feb. 1999.
Abstract
  A graphical language to represent rules is described. It has been designed for on-line applications on continuous systems. Rule conditions are represented using pipe diagrams and edition is simple enough for a non-expert computer user. In order to use this language in dynamic systems, elements to deal with uncertainty and time have been introduced. Temporal expressions involving qualifiers like "always" and "generally" over fuzzy sets like "x is high" are available. The syntax and semantics of these primitives and of their combination is presented. The graphical representation and edition of the previous elements is discussed. An application based on this language has been developed to allow the user to adapt the operation of a monitoring and diagnosis system. The methodological approach to the application development is briefly discussed (14 References).

RESULTADO <38>
Score
  ****-
Accession Number
  6545454
Author
  Hersh MA. Hamburg I.
Author/Editor Affiliation
  Dept. of Electron. & Electr. Eng., Glasgow Univ., UK.
Editor
  Mohammadian M.
Title
  Fuzzy logic and green design: a new approach.
Source
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval (Concurrent Systems Engineering Series Vol.55). IOS Press. 1999, pp. 366-71. Amsterdam, Netherlands.
Conference Information
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval. Vienna, Austria. 17-19 Feb. 1999.
Abstract
  The concept of an augmented fuzzy set was recently developed by the authors to allow representation of the degree of certainty of imprecise and uncertain information, as well as the information itself. A new methodology based on augmented fuzzy sets is developed for use in green design. The methodology is illustrated by its application to design choices in PVC manufacturing (8 References).

RESULTADO <39>
Score
  ****-
Accession Number
  6545440
Author
  Zhang J. Knoll A. Renners I.
Author/Editor Affiliation
  Fac. of Technol., Bielefeld Univ., Germany.
Editor
  Mohammadian M.

Title
  Efficient learning of non-uniform B-splines for modelling and control.
Source
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy
Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval (Concurrent Systems
Engineering Series Vol.55). IOS Press. 1999, pp. 282-7. Amsterdam, Netherlands.
Conference Information
  Computational Intelligence for Modelling, Control and Automation. Evolutionary Computation and Fuzzy
Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval. Vienna, Austria. 17-19 Feb.
1999.

Abstract
  We propose an approach to designing fuzzy controllers based on the B-spline model by learning. Unlike
other normalised parameterised set functions for defining fuzzy sets, B-splines do not necessarily span
membership values from zero to one but possess the property of "partition of unity". B-splines can be
automatically determined after each input is partitioned. Learning of a fuzzy controller based on B-splines
is then equivalent to the adaptation of a B-spline interpolator. Parameters of the controller output of each
rule can be rapidly adapted by gradient descent. Optimal placements of the non-uniform B-splines for
specifying each input can be found by a genetic algorithm. Through comparative examples of function
approximation we show that training of such a fuzzy controller generally provides results with minimal
error. The approach can be extended to the problems of supervised as well as unsupervised learning (13
References).

RESULTADO <40>
Score
  ****-
Accession Number
  6506701
Author
  Pascual A. Barcena M. Merelo JJ. Carazo J-M.
Author/Editor Affiliation
  Centro Nacional de Biotechnol.-CSIC, Univ. Autonoma de Madrid, Spain.
Editor
  Mira J; Sanchez-Andres JV.
Title
  Application of the fuzzy Kohonen clustering network to biological macromolecules images classification.
Source
  Engineering Applications of Bio-Inspired Artificial Neural Networks. International Work-Conference on
Artificial and Natural Neural Networks, IWANN'99. Proceedings, Vol.2 (Lecture Notes in Computer
Science Vol.1607). Springer-Verlag. 1999, pp. 331-40. Berlin, Germany.
Conference Information
  Engineering Applications of Bio-Inspired Artificial Neural Networks. International Work-Conference on
Artificial and Natural Neural Networks, IWANN'99. Alicante, Spain. Spanish CICYT. DGICYT (MEC). Univ.
Nacional de Educ. Distancia. et al. 2-4 June 1999.

Abstract
  In this work we study the effectiveness of the fuzzy Kohonen clustering network (FKCN) in the
unsupervised classification of electron microscopic images of biological macromolecules. The algorithm
combines Kohonen's self-organizing feature maps (SOM) and fuzzy c-means clustering technique (FCM)
in order to obtain a powerful clustering technique that inherits their best properties. Two different data sets
obtained from the G40P helicase from B. Subtilis bacteriophage SPP1 have been used for testing the
proposed method, one composed of 2458 rotational power spectra of individual images and the other
composed by 338 images from the same macromolecule. Results of FKCN are compared with SOM and
manual classification. Experimental results have proved that this new technique is suitable for working with
large, high dimensional and noisy data sets. This method is proposed to be used as a classification tool in
electron microscopy (16 References).

RESULTADO <41>
Score
 ****-
Accession Number
 6505710
Author
 Jian Ling. Guerra JM. Robey BL. Winter DC.
Author/Editor Affiliation
 Southwest Res. Inst., San Antonio, TX, USA.
Title
 Continuous cardiac output determination from blood pressure waveforms using a fuzzy logic model.
Source
 Proceedings of the First Joint BMES/EMBS Conference. 1999 IEEE Engineering in Medicine and Biology 21st Annual Conference and the 1999 Annual Fall Meeting of the Biomedical Engineering Society (Cat. No.99CH37015). IEEE. Part vol.2, 1999, pp. 931. Piscataway, NJ, USA.
Conference Information
 Proceedings of the First Joint BMES/EMBS Conference. Atlanta, GA, USA. Medtronic. Johnson & Johnson. Baxter Cardio Vascular Group. Becton Dickinson & Co.. Georgia Biomed. Partnership. Guidant Found.. Kilpatrick Stockton LLP. King & Spaulding. Troutman Sanders LLP. Adv. Tissue Sci.. AVL Biosense Corp.. CUH2A. Ernst & Young LLP. State of Georgia. Dept. Ind.. Trade & Tourism. Healthdyne Companies. Long Aldrige & Norman. Porex Corp.. Sulzer Innotec. Turner Constr. Company. 13-16 Oct. 1999.

Abstract
 Describes the development of an adaptive fuzzy logic system that continuously estimates cardiac output (CO) from the blood pressure waveform. This fuzzy logic system was evaluated using 133 sets of experimental data from 10 baboons. The mean error (or bias) between the model-estimated CO and the thermodilution-measured CO was 0.001 liter/min (4.0%) with a standard deviation (or precision) of 0.97 liter/min (27.7%) when using the aortic blood pressure waveform. The mean error (or bias) was 0.045 liter/min (5.9%) with a standard deviation (or precision) of 0.97 liter/min (26.9%) when using the radial blood pressure waveform. These results demonstrate the significant potential of using a fuzzy logic model to estimate cardiac output from blood pressure waveforms (0 References).

RESULTADO <42>
Score
 ****-
Accession Number
 6505412
Author
 Pedrycz W. Peters JF. Ramanna S.
Author/Editor Affiliation
 Dept. of Electr. & Comput. Eng., Alberta Univ., Edmonton, Alta., Canada.
Editor
 Meng M.
Title
 A fuzzy set approach to cost estimation of software projects.
Source
 Engineering Solutions for the Next Millennium. 1999 IEEE Canadian Conference on Electrical and Computer Engineering (Cat. No.99TH8411). IEEE. Part vol.2, 1999, pp. 1068-73. Piscataway, NJ, USA.
Conference Information
 Engineering Solutions for the Next Millennium. 1999 IEEE Canadian Conference on Electrical and Computer Engineering. Edmonton, Alta., Canada. 9-12 May 1999.

Abstract
 The study is concerned with the development of models of software cost estimation using the technology of fuzzy sets. We propose an augmentation of the well-known class of COCOMO cost estimation models by admitting a granular form of the estimates of the variables used there. Granular models of cost

estimation are also introduced. The performance of the granular models is illustrated by a series of numerical experiments (6 References).

RESULTADO <43>
Score
 ****-
Accession Number
 6469073
Author
 Yiping Fan. Miyagi H.
Author/Editor Affiliation
 Fac. of Eng., Ryukyus Univ., Okinawa, Japan.
Editor
 Jain LC.
Title
 Studying on solution of fuzzy relation equations.
Source
 1999 Third International Conference on Knowledge-Based Intelligent Information Engineering Systems. Proceedings (Cat. No.99TH8410). IEEE. 1999, pp. 357-60. Piscataway, NJ, USA.
Conference Information
 1999 Third International Conference on Knowledge-Based Intelligent Information Engineering Systems. Proceedings KES'99. Adelaide, SA, Australia. 31 Aug.-1 Sept. 1999.
Abstract
E. Sanchez ("Resolution of composite fuzzy relation equations", Inform. and Control, vol. 30, pp. 38-48, 1976) provided a methodology for the solution of certain basic fuzzy relational equations. In this methodology, an algorithm named a-composite was reported to calculate the supremum of solution sets in the fuzzy relation equation A o R=B. Drawing inspiration from this methodology, this paper presents a method to obtain not only the supremum but also the interval of the solutions. Because each such interval is widest, it provides exactly all the widest solution sets which meet our expectations. Moreover, this new algorithm strives to cut down the number of computation rules and to accomplish the simplification of the calculation (4 References).

RESULTADO <44>
Score
 ****-
Accession Number
 6469067
Author
 Pham TD. Wagner M.
Author/Editor Affiliation
 Sch. of Comput., Canberra Univ., ACT, Australia.
Editor
 Jain LC.
Title
 Fuzzy kriging filter for image restoration.
Source
 1999 Third International Conference on Knowledge-Based Intelligent Information Engineering Systems. Proceedings (Cat. No.99TH8410). IEEE. 1999, pp. 333-6. Piscataway, NJ, USA.
Conference Information
 1999 Third International Conference on Knowledge-Based Intelligent Information Engineering Systems. Proceedings KES'99. Adelaide, SA, Australia. 31 Aug.-1 Sept. 1999.
Abstract
Kriging and fuzzy sets are combined as a spatial filter for smoothing gray-scale images degraded by Gaussian white noise. Application of fuzzy sets allows a gradual transition between two boundaries of semi-variance levels as a criterion for smoothing the pixel values. Results which are obtained by the fuzzy

kriging filter are smoother and still preserved edges compared with those by the adaptive Wiener filter (9 References).

RESULTADO <45>
Score
  ****-
Accession Number
  6469041
Author
  Yeon Gyu Choo. Han Ho Tack. Chang Geun Kim.
Author/Editor Affiliation
  Dept. of Electron. Eng., Chinju Nat. Univ., Kyungnam, South Korea.
Editor
  Jain LC.
Title
  The study on position control of a flexible robot manipulator using fuzzy neural networks.
Source
  1999 Third International Conference on Knowledge-Based Intelligent Information Engineering Systems. Proceedings (Cat. No.99TH8410). IEEE. 1999, pp. 226-9. Piscataway, NJ, USA.
Conference Information
  1999 Third International Conference on Knowledge-Based Intelligent Information Engineering Systems. Proceedings KES'99. Adelaide, SA, Australia. 31 Aug.-1 Sept. 1999.

Abstract
  This paper presents position control of flexible robot manipulator system by fuzzy neural networks. The proposed fuzzy neural network models embody the fuzzy model of which fuzzy rules have fuzzy sets in the antecedent part and consequent part. It also provides the fuzzy inferencing. A dynamic model for a flexible robot manipulator is derived, and then a comparative analysis was made with a PID controller through simulation. The results are presented to illustrate the advantages and improved performance of the proposed controller over the PID controller (7 References).

RESULTADO <46>
Score
  ****-
Accession Number
  6440606
Author
  Widjaja M. Mielczarski W.
Author/Editor Affiliation
  Monash Univ., Clayton, Vic., Australia.
Title
  A fuzzy-based approach to analyse system demand in the Australian Electricity Market.
Source
  1999 IEEE Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No. 99CH36364). IEEE. Part vol.2, 1999, pp. 918-23. Piscataway, NJ, USA.
Conference Information
  1999 IEEE Power Engineering Society Summer Meeting. Edmonton, Alta., Canada. IEEE. 18-22 July 1999.

Abstract
  In the Australian National Electricity Market (NEM), pool prices are fully determined by the balance between electricity supply and demand. Market participants provide price and power bids in half-hour periods. Dispatch prices are determined by the market operator in five-minute periods. The bidding behaviour is based on the prediction of electricity market in particular system demand which determines prices in most trading intervals. The more accurate prediction of demand patterns can lead to optimisation of bidding strategies. This paper presents the application of fuzzy sets to analyse system demand in the Australian Electricity Market as the basic input information for optimisation of bidding strategies. Linguistic

variables are effective tools to analyse trends of system demand and predict its future values (4 References).

RESULTADO <47>
Score
 ****-
Accession Number
 6421968
Author
 Shyue-Liang Wang. Yi-Huey Wu.
Author/Editor Affiliation
 Dept. of Inf. Manage., I-Shou Univ., Kaohsiung, Taiwan.
Editor
 Imam I; Kodratoff Y; El-Dessouki A; Ali M.
Title
 A fuzzy knowledge representation and acquisition scheme for diagnostic systems.
Source
 Multiple Approaches to Intelligent Systems. 12th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems. IEA/AIE-99. Proceedings. Springer-Verlag. 1999, pp. 13-22. Berlin, Germany.
Conference Information
 Proceedings of 12th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems . Cairo, Egypt. Int. Soc. Appl. Intelligence. ACM. American Assoc. Artificial Intelligence. et al. 31 May-3 June 1999.

Abstract
 This paper presents a fuzzy knowledge representation, acquisition and reasoning scheme suitable for diagnostic systems. In addition to fuzzy sets and fuzzy production rules, we propose to use proximity relations for representing the interrelationship between symptoms in the antecedence of fuzzy production rules. A systematic generation method for acquiring proximity relations is proposed. An approximate reasoning algorithm based on such representation is also shown. Application to vibration cause identification in rotating machines is illustrated. Our scheme subsumes other fuzzy set based knowledge representation and reasoning approaches when the proximity relation is reduced to the identity relation (14 References).

RESULTADO <48>
Score
 ****-
Accession Number
 6351825
Author
 Reddy NP. Das A. Simcox D.
Author/Editor Affiliation
 Dept. of Biomed. Eng., Akron Univ., OH, USA.
Editor
 Chang HK; Zhang YT.
Title
 Hybrid fuzzy-neural committee networks for recognition of swallow acceleration signals.
Source
 Proceedings of the 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Vol.20 Biomedical Engineering Towards the Year 2000 and Beyond (Cat. No.98CH36286). IEEE. Part vol.3, 1998, pp. 1375-6. Piscataway, NJ, USA.
Conference Information
 Proceedings of the 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Vol.20 Biomedical Engineering Towards the Year 2000 and Beyond. Hong Kong, China. Biomed. Div. Hong Kong Inst. Eng.. Chinese Biomed. Eng. Soc. 29 Oct.-1 Nov. 1998.

Abstract

  Swallowing gives rise to characteristic patterns of acceleration in normal and dysphagic individuals. Usually, there are several artifacts present in the signal due to speech, coughing, etc. In the present study, two sets of fuzzy-neural committee networks were developed and trained to recognized acceleration signals due to swallowing. Evaluation showed that the networks well recognized the swallow signals and artifacts (3 References).

RESULTADO <49>

Score
  ****-
Accession Number
  6324926
Author
  Weerasinghe C. Hong Yan.
Author/Editor Affiliation
  Dept. of Electr. Eng., Sydney Univ., NSW , Australia.
Editor
  Chang HK; Zhang YT.
Title
  Suppression of rotational motion artifacts in MRI using a fuzzy data model and POCS with soft constraints.
Source
  Proceedings of the 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Vol.20 Biomedical Engineering Towards the Year 2000 and Beyond (Cat. No.98CH36286). IEEE. Part vol.2, 1998, pp. 640-3. Piscataway, NJ, USA.
Conference Information
  Proceedings of the 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Vol.20 Biomedical Engineering Towards the Year 2000 and Beyond. Hong Kong, China. Biomed. Div. Hong Kong Inst. Eng.. Chinese Biomed. Eng. Soc. 29 Oct.-1 Nov. 1998.
Abstract
  Rotational motion artifacts in magnetic resonance (MR) images can have a significantly adverse effect on the diagnostic value of the image. Post-processing techniques for the suppression of such artifacts often involve re-gridding of the acquired k-space data. This technique creates significant data void regions in the corrected k-space. Projection onto convex sets (POCS) proved to be successful in estimating the missing k-space values. However, the available data are often subjected to noise and interpolation errors which cause the k-space constraints to form an ill defined convex set, inconsistent with the spatial constraints. Inconsistent constraints often lead to divergence of POCS from the desired solution, within a finite number of iterations. Here, the authors propose a fuzzy model for representing the available k-space values to avoid such divergence. They also present a set of fuzzy rules, to impose soft k-space constraints. Simulation results indicate that the pr!
 oposed algorithm avoids divergence, producing a superior quality final image (11 References).

RESULTADO <50>

Score
  ****-
Accession Number
  6226615
Author
  Sameti M. Ward RK. Morgan-Parkes J. Palcic B.
Author/Editor Affiliation
  Dept. of Cancer Imaging, British Columbia Cancer Res. Centre, Vancouver, BC, Canada.
Title
  A method for detection of malignant masses in digitized mammograms using a fuzzy segmentation algorithm.
Source

Proceedings of the 19th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. `Magnificent Milestones and Emerging Opportunities in Medical Engineering' (Cat. No.97CH36136). IEEE. Part vol.2, 1997, pp. 513-16. Piscataway, NJ, USA.
Conference Information
  Proceedings of the 19th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. `Magnificent Milestones and Emerging Opportunities in Medical Engineering'. Chicago, IL, USA. IEEE. 30 Oct.-2 Nov. 1997.
Abstract

  An algorithm for detection of masses in digitized mammograms is developed. In the first step, the algorithm employs a segmentation method based on the idea of fuzzy sets to divide a mammogram into different regions and produces some mass candidates. In the second step, some discrete texture features are calculated for the area of each mass candidate. Two of those feature were sufficient to produce a 94% true-positive detection rate with a low 0.24 false-positives per image for a data set of 35 mammograms with a malignant mass in each (13 References).

RESULTADO <51>
Score
  ****-
Accession Number
  6082596
Author
  Kazerooni A. Chan FTS. Abbary K. Ip RWL.
Author/Editor Affiliation
  Sch. of Manuf. & Mech. Eng., Univ. of South Australia, The Levels, SA, Australia.
Editor
  Tanaka T; Ohsuga S; Ali M.
Title
  Simulation of scheduling rules in a flexible manufacturing system using fuzzy logic.
Source
  Industrial and Engineering Applications of Artificial Intelligence and Expert Systems. IEA/AIE 96. Proceedings of the Ninth International Conference. Gordon & Breach. 1996, pp. 491-500. Amsterdam, Netherlands.
Conference Information
  Proceedings of 9th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems . Fukuoka, Japan. 4-7 June 1996.
Abstract

  Two decision rules for real-time dispatching of parts using fuzzy logic and fuzzy sets have been developed and tested in a simulated flexible manufacturing system (FMS). Routing flexibility is an important aspect of FMSs. The routing selection method proposed in this paper uses fuzzy sets to incorporate system status in decision making. The next decision rule is concerned with real time machine loading. A conventional dispatching rule always blindly pursues a single objective, but in practice, however, more than one objective may often be perceived to be simultaneously considered. Regarding this fact, a method for combining two dispatching rules using fuzzy logic is suggested (22 References).

RESULTADO <52>
Score
  ****-
Accession Number
  6033555
Author
  Botana F.
Author/Editor Affiliation
  Dept. de Matematica Aplicada, Vigo Univ. , Spain.
Editor
  Mira J; Pasqual del Pobil A; Ali M.

Title
 Deriving fuzzy subsethood measures from violations of the implication between elements.
Source
 Methodology and Tools in Knowledge-Based Systems. 11th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems. IEA-98-AIE. Proceedings . Springer-Verlag. Part vol.1, 1998, pp. 234-43. Berlin, Germany.
Conference Information
 Methodology and Tools in Knowledge-Based Systems 11th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems. Benicassim, Spain. Int. Soc. Appl. Intelligence. 1-4 June 1998.

Abstract
 The aim of this paper is to present a collection of new measures of subsethood between fuzzy sets. Starting from the relationship between crisp set containment and logical implication, some fuzzy approaches are reviewed. An excerpt of reasonable fuzzy implication operators is used to define fuzzy measures of inclusion using Kosko's fit-violation strategy. We test these measures on two axiomatics and derive, when possible, measures of fuzzy entropy. Once a subsethood measure between fuzzy sets is defined, other operations as set equality, similarity, disjointness, complement...can be considered. The need for containment measures is present in wide areas as approximate reasoning and inference, image processing or learning (18 References).

RESULTADO <53>
Score
 ****-
Accession Number
 6027054

Author
 del Acebo E. Oller A. Lluis de la Rosa J. Ligeza A.
Author/Editor Affiliation
 Dept. d'Inf. i Matematica Aplicada, Girona Univ., Spain.
Editor
 Mira J; Pasqual del Pobil A; Ali M.

Title
 Static criteria for fuzzy systems quality evaluation.
Source
 Tasks and Methods in Applied Artificial Intelligence. 11th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems IEA-98-AIE. Proceedings . Springer-Verlag. Part vol.2, 1998, pp. 877-87. Berlin, Germany.
Conference Information
 Tasks and Methods in Applied Artificial Intelligence. 11th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems IEA-98-AIE. Proceedings. Benicassim, Spain. Int. Soc. Appl. Intelligence. 1-4 June 1998.

Abstract
 In consensus research, it is necessary to find criteria to assign confidence factors to the knowledge-based systems involved in a consensus algorithm. Those factors must reflect the confidence that we can have in each system's assertions. A whole class of such criteria are static ones (we call them quality criteria), i.e. criteria based on the structure of the systems more than on any performance measure. In this paper, we propose, justify and formalize three static quality evaluation criteria for fuzzy systems: completeness, redundancy and consistency. They are based on similar ones existing in classical logic, but they are generalized to the fuzzy domain. This is mainly done by making use of the subsethood theorem of Kosko's (1992) set-as-points framework, a very convenient way to assign geometric meaning to fuzzy sets (6 References).

RESULTADO <54>
Score
 ****-

Accession Number
  5893783
Author
  Mohrle MG. Henke A.
Author/Editor Affiliation
  Brandenburgische Tech. Univ., Cottbus, Germany.
Editor
  Liskowsky R; Velichkovsky BM; Wunschmann W.
Title
  Experience-based fuzzy control of teaching recommendation implications on the modifiability of teaching systems.
Source
  Software-Ergonomie '97. Usability Engineering: Integration von Mensch-Computer-Interaktion und Software-Entwicklung (Software-Ergonomics '97. Usability Engineering: Integration of Human-Computer-Interaction and Software Development). B.G. Teubner. 1997, pp. 231-41. Stuttgart, Germany.
Conference Information
  Proceedings of Software - Ergonomie '97. Dresden, Germany. Sachsische Staatsminist. Wissenschaft & Kunst. S A P AG, Walldorf. 3-6 March 1997.

Abstract
  Describes fuzzy control of education programs, such as prototype generation. It is important to build up experience on a new system. Learning tests were carried out with students and an experiment for collecting empirical data is described, dealing with the teaching of the MS-DOS 4.0 operating system. The authors distinguish between linguistic variables, fuzzy sets, rules and the stabilisation of oscillations in the development of the system. A flow diagram for system testing is included. The advantages of having an adequate numbers of students to provide data is stated (16 References).

RESULTADO <55>
Score
  ****-
Accession Number
  5829123
Author
  Ozveren CS. Fyall L. Birch AP.
Author/Editor Affiliation
  Sch. of Eng., Univ. of Abertay Dundee, UK.
Title
  A fuzzy clustering and classification technique for customer profiling.
Source
  32nd Universities Power Engineering Conference. UPEC '97. UMIST. Part vol.2, 1997, pp. 906-9. Manchester, UK.
Conference Information
  Proceedings of Thirty Second Universities Power Engineering Conference (UPEC'97). Manchester, UK. NORWEB. Midlands Electr.. Siemens. Control Tech.. GEC ALSTHOM T & D. EA Technol. 10-12 Sept. 1997.

Abstract
  In this paper we propose a new automatic classification method (ACM) for classifying very large sets of electric demand profiles into predetermined categories. After the removal of the franchise barrier in 1998 and because of the absence of intelligent two-way metering, ACM methods that can deal with a very large set of profile data will be essential for tariff study, setting, and charging purposes. The proposed approach requires the use of fuzzy relationships derived through the use of the cosine amplitude similarity metric (CASM) and is a different approach than the fuzzy membership function (FMF) approach, a method that is modelled through statistical considerations. Using this approach we have been able to devise an algorithm that automatically recognises similarities, clusters (identifies different categories) and classifies the individual load profiles of different customers as belonging to one of these automatically identified different categories. Test results of t!

he algorithm, based on actual customer load information is used to highlight the ease of use, efficiency, accuracy and finally robustness of the proposed methodology that uses a spreadsheet model (8 References).

RESULTADO <56>
Score
 ****-
Accession Number
 5809226
Author
 Padhy NP. Ramachandran V. Paranjothi SR.
Author/Editor Affiliation
 Sch. of Electr. & Electron. Eng., Anna Univ., Madras, India.
Title
 Validation and verification of fuzzy expert system model for unit commitment problem.
Source
 ICEE '96. Proceedings of the International Conference on Electrical Engineering. Int. Acad. Publishers. Part vol.2, 1996, pp. 1070-3. Beijing, China.
Conference Information
 Proceedings of International Conference on Electrical Engineering . Beijing, China. Chinese Soc. Electr. Eng. (CSEE). Inst. Electr. Eng. Japan (IEEJ). Korean Inst. Electr. Eng. (KIEE). et al. 12-15 Aug. 1996.

Abstract
 The major aim of this paper is to verify the consistency and completeness and to validate the fuzzy expert system model for the unit commitment problem. The model for the validation and verification of the unit commitment problem (VVUC model) checks consistency and eliminates redundant rules, conflicting rules, subsumed rules, unnecessary IF conditions, unreachable IF conditions and circular rule chains. Similarly it checks completeness by looking for unreferenced attribute values, illegal attribute values, dead-end IF conditions, dead-end THEN conditions, dead-end goals and unreachable conclusions. The proposed model accepts requirement statements for the often ill-defined problems faced by the fuzzy expert systems, i.e., it takes care of changes and addition to the rule sets to meet different constraints which occur during the development stage. The procedural implementation of rules is the same for all kind of fuzzy expert systems, and hence, the technique described her!
 e is not specific to the unit commitment problem alone. It may be applied to all kinds of fuzzy expert systems. To determine the effectiveness of the proposed model, validation and verification have been conducted for different load profiles belong to the power systems of Tamilnadu (India) consisting of thermal, nuclear, hydro, wind, and diesel power plants (8 References).

RESULTADO <57>
Score
 ****-
Accession Number
 5787068
Author
 Ghoshray S.
Author/Editor Affiliation
 Dept. of Electr. & Comput. Eng., Florida Int. Univ., Miami, FL, USA.
Editor
 Rudas IJ.
Title
 Fuzzy linear regression analysis by symmetric triangular fuzzy number coefficients.
Source
 INES'97. 1997 IEEE International Conference on Intelligent Engineering Systems. Proceedings (Cat. No.97TH8224). IEEE. 1997, pp. 307-13. New York, NY, USA.
Conference Information
 Proceedings of IEEE International Conference on Intelligent Engineering Systems. Budapest, Hungary.

IEEE Ind. Electron. Soc.. IEEE Hungary Sect.. Banki Donat Polytech., Hungary. Nat. Committee for Technol. Dev., Hungary. IEEE Robotics & Autom. Soc. 15-17 Sept. 1997.

Abstract
  Fuzzy regression analysis using fuzzy linear models with symmetric triangular fuzzy number coefficients has been formulated earlier. The goal of this regression is to find the output for all data sets. In this research, we have formulated a newer fuzzy linear regression model that uses symmetric triangular coefficient. The uniqueness of our model lies in the fact that this can be extended to use nonsymmetric fuzzy triangular coefficient that eradicates the drawbacks of existing fuzzy linear regression models (4 References).

RESULTADO <58>

Score
  ****-

Accession Number
  5781246

Author
  Kovacs S. Koczy LT.

Author/Editor Affiliation
  Comput. Centre, Miskolc Univ., Hungary.

Editor
  Rudas IJ.

Title
  Approximate fuzzy reasoning based on interpolation in the vague environment of the fuzzy rulebase.

Source
  INES'97. 1997 IEEE International Conference on Intelligent Engineering Systems. Proceedings (Cat. No.97TH8224). IEEE. 1997, pp. 63-8. New York, NY, USA.

Conference Information
  Proceedings of IEEE International Conference on Intelligent Engineering Systems. Budapest, Hungary. IEEE Ind. Electron. Soc.. IEEE Hungary Sect.. Banki Donat Polytech., Hungary. Nat. Committee for Technol. Dev., Hungary. IEEE Robotics & Autom. Soc. 15-17 Sept. 1997.

Abstract
  In many practical applications of fuzzy logic controllers, fuzzy sets are used to describe a vague value, a value and a kind of density information on the antecedent and consequent universes of the fuzzy rule base. In this case the antecedent and consequent fuzzy partitions (formed by these primary fuzzy sets) can be described by vague environments. Using the concept of vague environment characterized by scaling functions instead of the linguistic term fuzzy sets gives a simple way for fuzzy approximate reasoning. Comparing the description of a universe given by a fuzzy partition to the way of using the concept of vague environment, we can say that the linguistic terms of the fuzzy partition are crisp points in the vague environment, while the shapes of the fuzzy sets (density information) are described by the scaling function. The primary fuzzy sets of the antecedent and the consequent parts of the fuzzy rules can be characterised by crisp points in their vague environmen!
 ts, so the fuzzy rules themselves are points in their vague environment too (in the vague environment of the fuzzy rule base). It means, that the question of approximate fuzzy reasoning can be reduced to the problem of interpolation of the rule points in the vague environment of the fuzzy rule base relation. In other words, using the concept of vague environment, in most cases we can build approximate fuzzy reasoning methods simple enough to be a good alternative to the classical Compositional Rule of Inference (CRI) methods in practical applications. In this paper two methods of approximate fuzzy reasoning based on interpolation in the vague environment of the fuzzy rule base, and a comparison of these methods to the classical CRI are introduced (6 References).

RESULTADO <59>

Score
  ****-

Accession Number
  5752533

Author
  Chi-Ki Sun. Chan CW. Tontwiachwuthikul P.
Author/Editor Affiliation
  Energy Inf. Lab., Regina Univ., Sask., Canada.
Editor
  Thorburn P; Quaicoe J.
Title
  A fuzzy expert system for optimizing pipeline operation.
Source
  CCECE '97. Canadian Conference on Electrical and Computer Engineering. Engineering Innovation: Voyage of Discovery. Conference Proceedings (Cat. No.97TTH8244). IEEE. Part vol.2, 1997, pp. 777-80. New York, NY, USA.
Conference Information
  CCECE '97. Canadian Conference on Electrical and Computer Engineering. Engineering Innovation: Voyage of Discovery. Conference Proceedings. St. Johns, Nfld., Canada. Newfoundland & Labrador Hydro. Oper. ONLINE. Nat. Res. Council Inst. Marine Dynamics. Newtech Instrum.. Corner Brook Pulp & Paper. Newfoundland Light & Power Company. GEC Alsthom Int. Canada. Schneider Canada. ABB. GE Canada. 25-28 May 1997.

Abstract
  The development of a fuzzy expert system is proposed for optimizing natural gas pipeline operation. This expert system employs fuzzy sets and fuzzy logic to manage the uncertainties and imprecision in the pipeline operations (caused by humans) as well as in the system. Fuzzy linear regression analysis is used to extract some of the information to develop the knowledge base of the expert system. Other information used to develop the knowledge base is acquired from both human experts and a simulation of the natural gas pipeline system (6 References).

RESULTADO <60>
Score
  ****-
Accession Number
  5752506
Author
  Oraee H.
Author/Editor Affiliation
  Dept. of Electr. Eng., Sharif Univ. of Technol., Tehran, Iran.
Editor
  Thorburn P; Quaicoe J.
Title
  Application of fuzzy logic in optimal design of toroidal transformers.
Source
  CCECE '97. Canadian Conference on Electrical and Computer Engineering. Engineering Innovation: Voyage of Discovery. Conference Proceedings (Cat. No.97TTH8244). IEEE. Part vol.2, 1997, pp. 450-3. New York, NY, USA.
Conference Information
  CCECE '97. Canadian Conference on Electrical and Computer Engineering. Engineering Innovation: Voyage of Discovery. Conference Proceedings. St. Johns, Nfld., Canada. Newfoundland & Labrador Hydro. Oper. ONLINE. Nat. Res. Council Inst. Marine Dynamics. Newtech Instrum.. Corner Brook Pulp & Paper. Newfoundland Light & Power Company. GEC Alsthom Int. Canada. Schneider Canada. ABB. GE Canada. 25-28 May 1997.

Abstract
  Toroidal transformers are widely used in various low power applications such as switching circuits. Optimal design of these transformers involves solution of a series of nonlinear electromagnetic equations. In this paper, the application of fuzzy logic in the optimal design of toroidal transformers is discussed. The objective function could be cost, weight, power loss or any combination of them. To ensure the practicality of the final design, technologic and practical limitations such as minimum inner diameter of the core, wire

gauges and standard core sizes are imposed in the optimization routine. The routine is run with the relationships and variables defined as a combination of fuzzy and exact sets (4 References).

RESULTADO <61>
Score
  ****-
Accession Number
  5644622
Author
  Pellizzari P. Pizzi C.
Author/Editor Affiliation
  Dept. of Appl. Math., Univ. of Venice, Italy.
Title
  Fuzzy weighted local approximation for financial time series modelling and forecasting.
Source
  Proceedings of the IEEE/IAFE 1997 Computational Intelligence for Financial Engineering (CIFEr) (Cat. No.97TH8304). IEEE. 1997, pp. 137-43. New York, NY, USA.
Conference Information
  Proceedings of the IEEE/IAFE 1997 Computational Intelligence for Financial Engineering (CIFEr). New York City, NY, USA. IEEE Neural Network Council. Int. Assoc. Financial Eng. 24-25 March 1997.

Abstract
  The authors develop a fuzzy local approach to model and forecast time series. The method appears to be flexible, both in modeling nonlinearities and in coping with weak nonstationarities. They estimate local linear approximation (LLA) by a fuzzy weighted regression. They test the model on data from a simulated noisy chaotic map and on two real financial time series, namely FIAT daily stock returns and USD-LIT exchange return rates. The LLA produces very accurate forecasts and is able to identify the correct order of the chaotic map. Moreover, they find evidence that financial time series exhibit low stationarity over time and there is often nonlinear forecastability, although this is true especially when volatility is relatively low. Some of their results point to the fact that possibly better forecasts are obtained when small data sets are used. They argue that large financial datasets might be more difficult to model because of structural changes and other irregularities!
  (10 References).

RESULTADO <62>
Score
  ****-
Accession Number
  5601556
Author
  Intajag S. Paithoonwatanakij K.
Author/Editor Affiliation
  Dept. of Ind. Instrum. Technol., King Mongkut's Inst. of Technol., Bangkok, Thailand.
Editor
  Adey RA; Rzevski G; Sunol AK.
Title
  Edge detection by fuzzy neural network.
Source
  Applications of Artificial Intelligence in Engineering XI [Full papers on CD-ROM]. Comput. Mech. Publications. 1996, pp. 41. Southampton, UK.
Conference Information
  Proceedings of 11th International Conference on Artificial Intelligence in Engineering. Clearwater, FL, USA. Sept. 1996.

Abstract
  Abstract only given: full paper on CD-ROM in PDF format. Edge detection using a fuzzy neural net (FNN) is described. The input features are fuzzy sets and the learning algorithm employs a fuzzified delta rule.

To increase the efficiency during the training, a variable learning rate and momentum is applied instead of fixed values. In addition, texture-based inputs are fed into the FNN to facilitate and determine the quality of an edge feature. Experimental results have been tested for the case of both step edges and real-world images with noise. The performance of the FNN edge detector is compared with other neural nets and traditional techniques. A 4-layer FNN topology is employed for edge detection. This topology is connected with the multilayer perceptron. The inputs of the FNN are standard deviation values in a 22 mask which are fuzzified with the Sigma-function. For the FNN algorithm, the learning is the fuzzified delta rule and it employs two adjustable parameters ins!

 tead of fixed values during the training. Firstly, the learning rate is varied following the variance of each training pattern, and secondly, the momentum factor is changed depending on the standard deviation of each epoch. From the comparison of results with both simulated images and 0-255 grey-level real images, the FNN for edge detection has achieved better performance than a neural net with backpropagation learning and the traditional edge operators, with consistency and more accuracy to identify edge data. The major advantages of this algorithm are the speed-up in convergence time, higher accuracy for the edge position and less thickness (19 References).

RESULTADO <63>
Score
 ****-
Accession Number
 5601552
Author
 Jarvensivu M. Kanninen V.
Author/Editor Affiliation
 Dept. of Chem. Eng., Helsinki Univ. of Technol., Espoo, Finland.
Editor
 Adey RA; Rzevski G; Sunol AK.
Title
 Comparative study of fuzzy logic and neural network methods in modeling of simulated steady-state data.
Source
 Applications of Artificial Intelligence in Engineering XI [Full papers on CD-ROM]. Comput. Mech. Publications. 1996, pp. 33. Southampton, UK.
Conference Information
 Proceedings of 11th International Conference on Artificial Intelligence in Engineering. Clearwater, FL, USA. Sept. 1996.
Abstract
 Abstract only given: full paper on CD-ROM in PDF format. Both neural networks and fuzzy logic inference systems have been proved to have capabilities of universal approximators. Thus, they can both be utilized in the modeling of complicated nonlinear processes. In this paper, both neural network and fuzzy logic methods were used to model simulated nonlinear steady-state data. Feedforward neural networks trained by Levenberg-Marquard optimization and an adaptive neuro-fuzzy inference system (ANFIS), combined with subtractive clustering to initialize ANFIS, were used as tested methods. Two different cases of training and checking data sets were generated. The first case was mathematically ideal in the sense that the output was affected only by known and perfectly-measured input variables and both the structure and parameters of the simulated process were constant. The tested fuzzy logic and neural network methods were capable of modeling the ideal nonlinear data almost perfe!

 ctly without any difficulties. The second case was closer to real industrial process data. White noise was added to the output of the model and two randomly-varied extra non-measured input variables affected the output of the model (or, if viewed in alternative way, two parameters of the process were time-varying). The fuzzy logic and neural network methods gave both quite similar results: rough forecasting was still possible by modeling, but the modeling errors were considerably increased (11 References).

RESULTADO <64>
Score

Score
 ****-
Accession Number
 5577687
Author
 Garcia-Cerezo A. Lopez-Baldan MJ. Mandow A.

Author/Editor Affiliation
 Dept. de Ingenieria de Sistemas y Autom., Malaga Univ., Spain.

Title
 An efficient least squares fuzzy modelling method for dynamic systems.
Source
 Symposium on Modelling, Analysis and Simulation. CESA '96 IMACS Multiconference. Computational Engineering in Systems Applications . Gerf EC Lille - Cite Scientific. Part vol.2, 1996, pp. 885-90. Lille, France.
Conference Information
 Proceedings of International Conference on Computational Engineering in Systems Applications. Lille, France. 9-12 July 1996.

Abstract
 A method for array modelling of static and dynamic systems using fuzzy logic has been developed. The modelling process starts from a set of experimental input-output data, and produces a minimum set of fuzzy rules, whose number depends on a desired degree of the model's accuracy previously selected by the user. The method is based on least squares techniques, and can be used in association with the most common fuzzy operators and sets. The efficiency of the method is demonstrated by a real experiment with a nonlinear dynamic plant, which shows its good properties and its inherent simplicity (12 References).

RESULTADO <65>

Score
 ****-
Accession Number
 5576842
Author
 Kweon HJ. Suk JW. Song JS. Lee MH.

Author/Editor Affiliation
 Dept. of Electr. Eng., Yonsei Univ., Seoul , South Korea.

Title
 Intelligent QRS typification using fuzzy clustering.
Source
 1995 IEEE Engineering in Medicine and Biology 17th Annual Conference and 21 Canadian Medical and Biological Engineering Conference (Cat. No.95CH35746). IEEE. Part vol.1, 1997, pp. 199-200. New York, NY, USA.
Conference Information
 Proceedings of 17th International Conference of the Engineering in Medicine and Biology Society. Montreal, Que., Canada. 20-23 Sept. 1995.

Abstract
 For an automated ECG interpretation system, accurate QRS detection and typification including alignment, labelling, and dominant beat selection are essential for enhancing its performance. In this work we present a fuzzy clustering algorithm for intelligent beat labelling to decide whether each of the QRS complexes can be classified as the same cluster or not. Also for reliable classification, we have proposed efficiency feature sets that can best describe the morphology of the QRS complexes (6 References).

RESULTADO <66>

Score
 ****-
Accession Number
 5572873
Author

Cano Izquierdo JM. Dimitriadis YA. Arauzo Bravo M. Abajo Hanzano F. Lopez Coronado J.
Author/Editor Affiliation
  Dept. of Syst. Eng. & Control, Valladolid Univ., Spain.
Title
  Fuzzy adaptive system ART-based: theory and application to identification of biochemical systems.
Source
  Symposium on Control, Optimization and Supervision. CESA '96 IMACS Multiconference. Computational Engineering in Systems Applications . Gerf EC Lille - Cite Scientifique. Part vol.2, 1996, pp. 918-23. Lille, France.
Conference Information
  Symposium on Control, Optimization and Supervision. CESA '96 IMACS Multiconference. Computational Engineering in Systems Applications. Lille, France. 9-12 July 1996.
Abstract
  Neural network models as well as fuzzy systems have been shown capable of approximating functions and thus for identification of complex systems. In the present paper, a new neuro-fuzzy architecture, called FasArt (fuzzy adaptive system ART based) is proposed. It enhances and adapts the fuzzy ARTMAP neural-fuzzy architecture for nonlinear systems identification, that was initially proposed for supervised pattern recognition. It emphasizes the complementary nature of neural networks and fuzzy systems, while it provides design parameters in order to control the fuzziness degree of the fuzzy sets and the distributed character of the information. The architecture with proven stability and capacity of approximating a function, was tested experimentally with satisfactory results in the highly complex problem of penicillin production and in approximating a function, typically used for comparison in the literature (11 References).

RESULTADO <67>

Score
  ****-
Accession Number
  5559672
Author
  Vienne F. Zunino G. Desodt AM. Jolly D.
Author/Editor Affiliation
  Groupe de Recherche ERASM, Ecole Des Hautes Etudes Industrielles, Lille, France.
Title
  Application of fuzzy logic to the fusion of information in the framework of man-machine interface.
Source
  Symposium on Robotics and Cybernetics. CESA '96 IMACS Multiconference. Computational Engineering in Systems Applications . Gerf EC Lille - Cite Scientifique. 1996, pp. 416-21. Lille, France.
Conference Information
  Symposium on Robotics and Cybernetics. CESA '96 IMACS Multiconference. Computational Engineering in Systems Applications. Lille, France. 9-12 July 1996.
Abstract
  In a data fusion perspective for multisensor system, we present a method based on fuzzy logic techniques. The major interest is to model information sources with fuzzy values (sensor function) and then allow the fusion of poor, imprecise and heterogeneous data. We consider two concepts of fuzzy logic: 1) the membership function which is used to evaluate the feasibility of the current task with a high security rate; and 2) the indication of conflict which is used to compare security function and the sensor function. We first explain how the current task (and related information) can be modeled. Then our fusion scheme is detailed and an example given helps to understand the process. After giving the definition of the indication of conflict, we present two new ratings based on the notion of distance between two fuzzy sets. These can be used in many fusion processes and can be implemented very efficiently. A comparison between three ratings is given with an example (12 Referen!
 ces).

RESULTADO <68>

Score

Accession Number
  5489838
Author
  Edmonds AN. Burkhardt D. Adjei O.
Author/Editor Affiliation
  Sci. in Finance Ltd., Woburn Sands, UK.
Editor
  Refenes A-PN; Abu-Mostafa Y; Moody J; Weigend A.
Title
  Genetic programming of fuzzy logic production rules with application to financial trading.
Source
  Neural Networks in Financial Engineering. Proceedings of the Third International Conference on Neural Networks in the Capital Markets . World Scientific. 1996, pp. 179-88. Singapore, Singapore.
Conference Information
  Proceedings of the 3rd International Conference on Neural Networks in Financial Engineering. London, UK. London Bus. School. California Inst. Technol. 11-13 Oct. 1995.
Abstract

  Koza (1992) has demonstrated that a form of machine learning can be constructed by using the techniques of genetic programming using LISP statements. We describe here an extension to this principle using fuzzy logic sets and operations instead of LISP expressions. We show that genetic programming can be used to generate trees of fuzzy logic statements, the evaluation of which optimise some external process, in our example financial trading. We also show that these trees can be simply converted to natural language rules, and that these rules are easily comprehended by a lay audience. This clarity of internal function can be compared to "black box" nonparametric modelling techniques such as neural networks. We then show that even with minimal data preparation the technique produces rules with good out-of-sample performance on a range of different financial instruments (10 References).

RESULTADO <69>
Score
Accession Number
  5464103
Author
  Candido MAB. Paladini EP. Barcia RM.
Author/Editor Affiliation
  Federal Univ. of Santa Catarina, Brazil.
Editor
  Dagli CH; Akay M; Chen CLP; Fernandez BR; Ghosh J.
Title
  A prototype system to aid the practice of statistical process control using syntactic pattern recognition.
Source
  Intelligent Engineering Systems Through Artificial Neural Networks. Vol.5. Fuzzy Logic and Evolutionary Programming. Proceedings of the Artificial Neural Networks in Engineering (ANNIE'95). ASME Press. 1995, pp. 955-60. New York, NY, USA.
Conference Information
  Proceedings of Intelligent Engineering Systems through Artificial Neural Networks. St. Louis, MO, USA. 12-15 Nov. 1995.
Abstract

  Statistical process control (SPC) has become an important tool for continuously improving quality and has been largely used in companies which adopt management systems based on total quality control concepts. In this work a prototype system which uses artificial intelligence and pattern recognition tools for analysis of control charts is presented. The central point of this work is the use of the syntactic approach for pattern recognition of control charts. A classifier system for noisy patterns using minimum-distance error-correcting parsing techniques and fuzzy sets has been developed and implemented (17

References).

RESULTADO <70>
Score
 ****-
Accession Number
 5456398
Author
 Ng HN. Salama MMA. Chikhani AY.
Author/Editor Affiliation
 Dept. of Electr. & Comput. Eng., Waterloo Univ., Ont., Canada.
Editor
 Malkinson TJ.
Title
 Capacitor placement in distribution systems using fuzzy technique.
Source
 1996 Canadian Conference on Electrical and Computer Engineering. Conference Proceedings. Theme: Glimpse into the 21st Century (Cat. No.96TH8157). IEEE. Part vol.2, 1996, pp. 790-3. New York, NY, USA.
Conference Information
 Proceedings of 1996 Canadian Conference on Electrical and Computer Engineering. Calgary, Alta., Canada. IEEE Canada. Northcon Telecom. Alberta Power Ltd.. Trans Canada Pipelines. The City of Calgary Electr. Syst. 26-29 May 1996.

Abstract
 A new approach using fuzzy sets theory and heuristic rules is used to determine the optimal number, size, and location of capacitors to place in a distribution system. The use of fuzzy sets theory is utilized for the decision of candidate nodes for the installation of capacitors by reconciling the degree of reactive power loss and the voltage sensitivity. This algorithm is applied to a practical case system and its results are compared with those generated by another nonfuzzy method (5 References).

RESULTADO <71>
Score
 ****-
Accession Number
 5444183
Author
 Wei Li. Kezhong He.
Author/Editor Affiliation
 Dept. of Comput. Sci. & Technol., Tsinghua Univ., Beijing, China.
Editor
 Ishii K.
Title
 Sensor-based robot navigation in uncertain environments using fuzzy logic.
Source
 Computers in Engineering 1994. Finite Element Analysis. CAD/CAM, Fluid Mechanics and Energy Systems, AI/Feature-Based Design and Manufacturing, Computers in Engineering Education, Robotics and Controls, Multimedia Application/Interface. Proceedings. ASME. Part vol.2, 1994, pp. 813-18. New York, NY, USA.
Conference Information
 Proceedings of International Computers in Engineering Conference . Minneapolis, MN, USA. ASME. 11-14 Sept. 1994.

Abstract
 This paper presents a new method for sensor-based mobile robot navigation in unknown environments using fuzzy logic. The inputs to the fuzzy control scheme consist of a heading angle between the robot and a specified target and distances between the robot and obstacles to the left, front, and right locations.

The outputs from the control scheme are commands for the speed control unit of two rear wheels of a mobile robot. Distances between the robot and obstacles are acquired by an array of ultrasonic sensors. Current coordinates of the robot are measured by a wheel encoder system. The velocities of the driving wheels are controlled by a motor drive unit. The main idea of the proposed method is quantitatively to formulate reactive behaviors and efficiently to coordinate their conflicts and competitions by fuzzy sets and fuzzy rules. Simulation results show that the proposed method can be efficiently applied to robot navigation in complex and uncertain environments based on !
 sensors (11 References).

RESULTADO <72>
Score
  ****-
Accession Number
  5375746
Author
  Miranda V. Proenca LM.
Author/Editor Affiliation
  Fac. de Engenharia, Porto Univ., Portugal.
Title
  A general methodology for distribution planning under uncertainty, including genetic algorithms and fuzzy models in a multi-criteria environment.
Source
  Stockholm Power Tech International Symposium on Electric Power Engineering. IEEE. Part vol.5, 1995, pp. 832-7. New York, NY, USA.
Conference Information
  Proceedings of Stockholm Power Tech International Symposium on Electric Power Engineering. Stockholm, Sweden. 18-22 June 1995.
Abstract
  This paper presents a new comprehensive methodology based on genetic algorithms and fuzzy sets concepts for multistage electric distribution network planning. The model presented is an extension of previous deterministic developed models, taking in account several aspects usually neglected in other approaches like, for example, multiple criteria and a thorough representation of uncertainties. New concepts are developed, such as the tree of fuzzy futures, fuzzy inadequacy and solution robustness. Decisions are taken from a multicriteria approach and under risk analysis policies, namely by minimizing possible future regrets. The merits of the approach are discussed by analyzing its application to a study based on a real case, in a Portuguese utility (12 References).

RESULTADO <73>
Score
  ****-
Accession Number
  5347799
Author
  Filippetti F. Franceschini G. Tassoni C. Vas P.
Author/Editor Affiliation
  Dipartimento di Ingegneria Elettrica, Bologna Univ., Italy.
Title
  A fuzzy logic approach to on-line induction motor diagnostics based on stator current monitoring.
Source
  Stockholm Power Tech International Symposium on Electric Power Engineering. IEEE. Part vol.3, 1995, pp. 156-61. New York, NY, USA.
Conference Information
  Proceedings of Stockholm Power Tech International Symposium on Electric Power Engineering. Stockholm, Sweden. 18-22 June 1995.
Abstract

A diagnostic procedure based on a fuzzy logic approach has been applied to the detection of induction machine rotor faults. As input variables the current spectrum lines at frequencies $(1+/-2s)f$ are selected and the influence of some parameters, such as load conditions and combined machine-load inertia, are discussed. Fuzzy sets of these variables have been stated and the membership degree assigned. A min-max inference criteria has been used and the rotor condition has been obtained by a centroid defuzzification. The various steps of the procedure are described in detail to put in evidence of the features of the proposed diagnostic system (14 References).

RESULTADO <74>
Score
 ****-
Accession Number
  5302830
Author
  Tien-You Lee. Cheng HD.
Author/Editor Affiliation
  Dept. of Comput. Sci., Utah State Univ., Logan, UT, USA.
Editor
  Dagli CH; Fernandez BR; Ghosh J; Kumara RTS.
Title
  Fuzzy entropy approach for grading of venous beading.
Source
  Intelligent Engineering Systems Through Artificial Neural Networks. Vol.4. ASME. 1994, pp. 495-500. New York, NY, USA.
Conference Information
  Proceedings Intelligent Engineering Systems Through Artificial Neural Networks. St. Louis, MO, USA. 13-16 Nov. 1994.
Abstract
  Selective median filtering and thresholding based on fuzzy entropy approach for grading of venous beading are studied. The fuzzy sets of an image are used to measure the degree of ambiguity in the image. In our algorithm, the image is represented by the grade of the brightness properties possessed by each pixel in the image. The cross-over point for transfering each pixel in the image from intensity domain to their membership function value is selected by maximizing the fuzzy entropy of the image. The results indicate that the proposed algorithm is effective for the grading of venous beading on digitized ocular fundus images (7 References).

RESULTADO <75>
Score
 ****-
Accession Number
  5302796
Author
  Hao Ying. Sheppard LC.
Author/Editor Affiliation
  Dept. of Physiol. & Biophys., Univ. of Texas Med. Branch, Galveston, TX, USA.
Editor
  Dagli CH; Fernandez BR; Ghosh J; Kumara RTS.
Title
  Clinical application of a real-time fuzzy blood pressure controller.
Source
  Intelligent Engineering Systems Through Artificial Neural Networks. Vol.4. ASME. 1994, pp. 271-6. New York, NY, USA.
Conference Information
  Proceedings Intelligent Engineering Systems Through Artificial Neural Networks. St. Louis, MO, USA. 13-16 Nov. 1994.

Abstract

   In this paper, we present the development of a fuzzy control sodium nitroprusside (SNP) delivery system which regulated mean arterial pressure (MAP) in postsurgical patients in a Cardiac Surgical Intensive Care Unit. The fuzzy controller employed two linear input fuzzy sets, three singleton output fuzzy sets, four fuzzy control rules, Zadeh AND and OR fuzzy logic, and a centroid defuzzifier. The analytical structure of the fuzzy controller was precisely derived in relation to conventional control theory. The core of the control algorithms was a nonlinear proportional-integral (PI) controller with inherently variable proportional gain and integral gain. The gains became larger when MAP was farther below or above MAP setpoint, causing more aggressive decrease or increase of SNP infusion rate. The gains became smaller when MAP was closer to the setpoint, resulting in more conservative change of SNP infusion rate. Compared to the classic linear PI controller with constant gain!
 s, the inherent variation of the fuzzy controller gains was desirable because it provided control action in a more dynamic and stable manner. The fuzzy control system was used to control MAP of 12 postoperative patients. MAP was controlled within 10% and 20% of MAP setpoints 89.31% and 97.08%, respectively, of total fuzzy control time of 95 hours and 13 minutes (15 References).

RESULTADO <76>

Score
  ****-
Accession Number
  5275121
Author
  Feroz EH. Taek Mu Kwon.
Author/Editor Affiliation
  Dept. of Accounting, Minnesota Univ., Duluth, MN, USA.
Title
  Self-organizing fuzzy and MLP approaches to detecting fraudulent financial reporting.
Source
  Proceedings of the IEEE/IAFE 1996 Conference on Computational Intelligence for Financial Engineering (CIFEr) (Cat. No.96TH8177). IEEE. 1996, pp. 279-85. New York, NY, USA.
Conference Information
  IEEE/IAFE 1996 Conference on Computational Intelligence for Financial Engineering (CIFEr). New York City, NY, USA. IEEE Neural Networks Council. Int. Association of Financial Eng. 24-26 March 1996.

Abstract
  In the fields of accounting and auditing, detection of firms engaged in fraudulent financial reporting has become increasingly important, due to the increased frequency of such events and the attendant costs of litigation. Conventional statistical tools such as legit and probit have not been successful in detecting such firms. We employ seven redflags which are composed of four financial redflags and three turn over redflags in order to detect targets of the Securities and Exchange Commission's (SEC) investigation of fraudulent financial reporting. Two prominent nonlinear approaches, i.e. neural network and fuzzy sets, are applied to detection of SEC investigation targets and compared with the conventional statistical methods (11 References).

RESULTADO <77>

Score
  ****-
Accession Number
  5275091
Author
  Yager RR.
Author/Editor Affiliation
  Machine Intelligence Inst., Iona Coll., New Rochelle, NY, USA.
Title
  Fuzzy set methods for uncertainty representation in risky financial decisions.
Source

Proceedings of the IEEE/IAFE 1996 Conference on Computational Intelligence for Financial Engineering (CIFEr) (Cat. No.96TH8177). IEEE. 1996, pp. 59-65. New York, NY, USA.
Conference Information
  IEEE/IAFE 1996 Conference on Computational Intelligence for Financial Engineering (CIFEr). New York City, NY, USA. IEEE Neural Networks Council. Int. Association of Financial Eng. 24-26 March 1996.

Abstract
  The problem of selecting an investment option in the face of uncertainty with respect to the payoff is considered. Methods for the representation of uncertainty based on the theory of fuzzy sets and the Dempster-Shafer belief structure are described. Approaches for comparing alternatives under various kinds of uncertainty are discussed (9 References).

RESULTADO <78>

Score
  ****-
Accession Number
  5205331
Author
  Ramakrishna G. Rao ND.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Calgary Univ., Alta., Canada.
Editor
  Gagnon F.
Title
  A fuzzy logic framework for control of switched capacitors in distribution systems.
Source
  1995 Canadian Conference on Electrical and Computer Engineering (Cat. No.95TH8103). IEEE. Part vol.2, 1995, pp. 676-9. New York, NY, USA.
Conference Information
  Proceedings 1995 Canadian Conference on Electrical and Computer Engineering. Montreal, Que., Canada. IEEE Canada. 5-8 Sept. 1995.

Abstract
  This paper proposes a fuzzy expert system for the multilevel control of switched capacitors installed on a distribution system with a nonconforming load profile. The control objectives are minimization of power system losses without violating the voltage security of the power system. Expert systems enhanced by fuzzy sets are used to determine the control variables corresponding to the given load values. The rules are adapted using a neural learner to build the rule set and train the membership functions. A load flow determines the corresponding state of the power system. The knowledge base chooses the design from a set of suboptimal solutions obtained from the load flow. The method is based on the application of fuzzy sets to sensitivities in expert systems to refine the solution. Initial trial runs using the above approach on a 30-bus distribution system are very encouraging. Simplicity, processing speed and ability to model load uncertainities make this approach a viable!
  option for online VAr control (11 References).

RESULTADO <79>

Score
  ****-
Accession Number
  5177407
Author
  Rees NW. Cheng CM.
Author/Editor Affiliation
  Sch. of Electr. Eng., New South Wales Univ., Sydney, NSW, Australia.
Title
  Some perspectives on fuzzy automatic control part 1-theory and software.
Source

Electrical Engineering Congress 1994. Enabling Technologies - Developing Industry. Preprints. Instn. Eng. Australia. Part vol.2, 1994, pp. 619-26. Barton, ACT, Australia.
Conference Information
  Proceedings of Electrical Engineering Congress. EEC 94. Sydney, NSW, Australia. 24-30 Nov. 1994.
Abstract
  Fuzzy control has been implemented on some industrial processes for 20 years. The idea of fuzzy systems was broached by L.A. Zadeh in 1965 and the first application to automatic control was by Mamdani and Assilian on a stream engine in 1973. Since then, many researchers and engineers have successfully applied fuzzy control to various processes. Fuzzy logic, which is the logic on which fuzzy control is based, is much closer to the spirit of human thinking and natural language than traditional logic systems. The compositional "IF-THEN" rules coupled with fuzzy sets form the basis for an algorithm that can convert the linguistics of the expert into an automatic control strategy. This paper reveals some of the basic ideas and issues, and illustrate them by using examples from the authors' own research work (16 References).

RESULTADO <80>

Score
  ****-
Accession Number
  5051213
Author
  Dubois D. Prade H.
Author/Editor Affiliation
  Inst. de Recherche en Inf., Univ. Paul Sabatier, Toulouse, France.
Title
  Comparison of two fuzzy set-based logics: similarity logic and possibilistic logic.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.3, 1995, pp. 1219-26. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  Fuzzy sets can be viewed as a convenient way for expressing a rank-ordering over a set of possible worlds, or equivalently, of possible interpretations. This use can be encountered in two fuzzy set-based logics, with different semantics, developed in the last past years; namely a logic of similarity or closeness introduced by Ruspini (1991), and a logic of preference, called possibilistic logic, previously proposed by the authors. The former accounts for some metrics on possible worlds while the latter distinguishes between more or less plausible interpretations. The basic principles underlying the two logics are restated and a comparative study of their semantics is provided. Links between Ruspini's proposal and the idea of a fuzzy rough set (a rough set based on a fuzzy similarity relation rather than on a crisp equivalence relation) are also emphasized (18 References).

RESULTADO <81>

Score
  ****-
Accession Number
  5051211
Author
  Catania V. Ascia G. Vita L.
Author/Editor Affiliation

Istituto di Inf. e Telecommun., Catania Univ., Italy.
Title
  Design issues of an asynchronous parallel fuzzy processor.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.3, 1995, pp. 1205-12. New York, NY,
USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  The paper presents the design of a VLSI fuzzy processor which is capable of performing fuzzy inferences
based on the a-level sets theory. The use of the a-level sets family to represent fuzzy sets allows a
considerable saving of memory resources if compared with conventional fuzzy inference methods which
use membership functions to represent fuzzy sets. The main features of the architecture presented are
parallelism and scalability. The processor comprises a set of units which work parallelly and
asynchronously to process the various rules. The structure is easy to scale up, as an increase in the
number of processing units does not produce bottlenecks in performance. The performance obtainable is
about 310 KFLIPS, with a clock frequency of 60 MHz, 8 input variables, either crisp or fuzzy, and an 8-bit
resolution (10 References).

RESULTADO <82>
Score
  ****-
Accession Number
  5051204
Author
  Sakawa M. Kato K.
Author/Editor Affiliation
  Dept. of Ind. & Syst. Eng., Hiroshima Univ., Japan.
Title
  An interactive fuzzy satisficing methods for large-scale multiobjective linear programs with fuzzy
numbers.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.3, 1995, pp. 1155-62. New York, NY,
USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  In this paper, by considering the experts' imprecise or fuzzy understanding of the nature of the
parameters in the problem-formulation process, large-scale multiobjective block-angular linear
programming problems involving fuzzy numbers are formulated. Using the a-level sets of fuzzy numbers,
the corresponding nonfuzzy a-programming problem is introduced. The fuzzy goals of the decision maker
for the objective functions are quantified by eliciting the corresponding membership functions including
nonlinear ones. Through the introduction of an extended Pareto optimality concept, if the decision maker
specifies the degree a and the reference membership values, the corresponding extended Pareto optimal
solution can be obtained by solving the minimax problems for which the Dantzig-Wolfe decomposition

method is applicable. Then a linear programming-based interactive fuzzy satisficing method for deriving a satisficing solution for the decision maker efficiently from an extended P!
 areto optimal solution set is presented (19 References).

RESULTADO <83>
Score
 ****-
Accession Number
 5044749
Author
 Tai Wai Cheng. Goldgof DB. Hall LO.
Author/Editor Affiliation
 Dept. of Comput. Sci. & Eng., Univ. of South Florida, Tampa, FL, USA.
Title
 Fast clustering with application to fuzzy rule generation.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 2289-95. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
 This paper presents a multistage random sampling fuzzy c-means based clustering algorithm, which significantly reduces the computation time required to partition a data set into c classes. A series of subsets of the full data set are used for classification in order to provide an approximation to the final cluster centers. The quality of the final partitions is equivalent to that of fuzzy c-means. The speed-up is normally a factor of 2-3 times, which is especially significant for high dimensional spaces and large data sets. Clustering has been used to generate fuzzy rules for control. In this paper, we show that the multistage random sampling fuzzy c-means based clustering algorithm can be effectively used to create fuzzy rules in the domain of magnetic resonance images where over 60,000 patterns and 3 features or attributes are common (8 References).

RESULTADO <84>
Score
 ****-
Accession Number
 5044724
Author
 Sato M. Sato Y.
Author/Editor Affiliation
 Hokkaido Musashi Women's Junior Coll., Sapporo, Japan.
Title
 Fuzzy clustering model for fuzzy data.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 2123-8. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International

Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract

  In a clustering problem in which the observations of the objects are given by the values involving vagueness, the ordinary fuzzy clustering methods are not available. In this paper, these data are treated as fuzzy data which are defined by convex and normal fuzzy sets (CNF sets), and a new fuzzy clustering model for the fuzzy data is proposed. We define a conical membership function to represent the CNF sets, and propose a fuzzy dissimilarity between a pair of fuzzy observations, which is an extension of the fuzzy distance proposed by L.T. Koczy et al. (1993). This dissimilarity, discussed in this paper, becomes asymmetric. Therefore, we obtain two different clustering results with respect to each asymmetric part. To achieve consistent clustering results, an additive fuzzy clustering model is used to obtain a solution by a multicriteria clustering technique (10 References).

RESULTADO <85>
Score
  ****-
Accession Number
  5044723
Author
  Yan Shi. Mizumoto M.
Author/Editor Affiliation
  Div. of Inf. & Comput. Sci., Osaka Electro-Commun. Univ., Neyagawa, Japan.
Title
  Some considerations on Koczy's fuzzy interpolative reasoning method.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 2117-22. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract

  In the sparse fuzzy rule bases, conventional fuzzy reasoning methods encounter difficulty because of the lack of inference evidence. To tackle this problem, Koczy and Hirota have proposed a new fuzzy reasoning method called a linear interpolative reasoning method. In this paper, we analyze their reasoning method and find out that the reasoning consequences by the method become sometimes abnormal fuzzy sets. The reasoning conditions of the reasoning method also discussed analytically (6 References).

RESULTADO <86>
Score
  ****-
Accession Number
  5044720
Author
  Baldwin JF.
Author/Editor Affiliation
  Dept. of Eng. Math., Bristol Univ., UK.
Title
  Fuzzy rule automation from data using mass assignment theory.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International

Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1879-84. New York, NY, USA.

Conference Information

Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract

The Fril language contains a data browser which can automatically determine the appropriate fuzzy rules from a database to answer a query. We consider in this paper rules of the form-head: most of weighted features in body satisfied where the features in the body of the rule take the form; feature is fi where fi is a fuzzy set defined on the space for feature i. We show how to obtain both the fuzzy sets and the weights automatically from the database (19 References).

RESULTADO <87>

Score
****-

Accession Number
5044718

Author
Sekine S. Imasaki N. Endo T.

Author/Editor Affiliation
Syst. & Software Eng. Lab., Toshiba Corp., Kawasaki, Japan.

Title
Application of fuzzy neural network control to automatic train operation and tuning of its control rules.

Source
Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1741-6. New York, NY, USA.

Conference Information
Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract

We have proposed two-degree-of-freedom fuzzy neural network control systems. It has a hierarchical structure of two sets of control knowledge, thus it is easy to extract and refine fuzzy rules before and after the operation has started, and the number of fuzzy rules is reduced. This paper shows an example application of automatic train operation and presents a rule tuning method (7 References).

RESULTADO <88>

Score
****-

Accession Number
5039467

Author
Pokorny M.

Author/Editor Affiliation
Dept. of Meas. & Control, Tech. Univ. Ostrava, Czech Republic.

Title
Fuzzy non-linear regression method for intensification of the object's vagueness representation.

Source
Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International

Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 2051-6. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  The paper deals with problems of structural and parameters identification of nonlinear production models, which are based on regression methods and use the theory of fuzzy sets for representation of indeterminacy. The aim is to present a new generalized fuzzy nonlinear analysis and to formulate appropriate methodology of modeling and identification method. The paper presents the corresponding computer program module for real-time new nonlinear regression analysis and to carry out a numerical experiment (4 References).

RESULTADO <89>

Score
  ****-
Accession Number
  5039451
Author
  Narazaki H. Turksen IB.
Author/Editor Affiliation
  Process Technol. Res. Lab., Kobe Steel Ltd. , Japan.
Title
  A multi-objective decision-making approach to syllogistic reasoning with consistency maintenance.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1935-42. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  We discuss a syllogistic reasoning problem of the type $Q_1(AB)$, $Q_2(BC)Q_3(AC)$ where Q_i, i=1, 2, 3, are imprecise quantifiers such as "most" and "usually", and A, B, and C are fuzzy sets such as "big cars". We propose a new approach that integrates reasoning with evaluation of knowledge based on the framework of multi-objective decision-making. The reasoning process is formulated as a maximization of the compatibility degree of knowledge with observed data (6 References).

RESULTADO <90>

Score
  ****-
Accession Number
  5039447
Author
  Ralescu A. Hartani R.
Author/Editor Affiliation
  LIFE, Yokohama, Japan.
Title
  Some issues in fuzzy and linguistic modeling.

Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1903-10. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  We discuss some issues arising in fuzzy logic based quantitative modeling. A linguistic model is a fuzzy in which the fuzzy sets are labelled, usually by elements of a dictionary. The issues presented are of general interest, and for illustration we refer to our previous work (1994) on facial expression modeling (13 References).

RESULTADO <91>

Score
  ****-
Accession Number
  5039444
Author
  Kosco B.
Author/Editor Affiliation
  Dept. of Electr. Eng., Univ. of Southern California, Los Angeles, CA, USA.
Title
  Combining fuzzy systems.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1855-63. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  The paper shows how to combine any number of fuzzy systems and compares this new method with a weighted arithmetic mean. The new method combines the throughputs of the fuzzy systems and thus combines before it defuzzifies. The mean combines just the defuzzified outputs. The new method adds the output fuzzy set of each fuzzy system and then defuzzifies this sum in a higher-level additive fuzzy system. The combined fuzzy systems need not be additive fuzzy systems. The paper derives the exact form of the additive combiner. It reduces to an unweighted mean of centroids when all fuzzy sets have the same volume and all systems either have the same credibility weights or have binary credibility weights. The weighted mean ignores the inherent weighting information in the relative volumes. Its constant normalizer leads to scale defects when it combines weighted fuzzy systems even when all the weights are the same. The paper derives the first-order and second-order statistics of the!
  general additive system and shows how fuzzy systems act as adaptive model-free statistical estimators (5 References).

RESULTADO <92>

Score
  ****-
Accession Number

5039441
Author
  Kundu S. Jianhua Chen.
Author/Editor Affiliation
  Dept. of Comput. Sci., Louisiana State Univ., Baton Rouge, LA, USA.
Title
  Problems with the defuzzification method and a new representation using Lukasiewicz logic.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1833-40. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  We show that the common defuzzification method has some major deficiencies in regard to certain formal logical properties among rules like AND-equivalence, contrapositive-equivalence, chaining-property, etc. To correct this problem, we present a new method for representing a function $y=g(x)$ using a rule set based on Lukasiewicz's logic L_{aleph}. The method introduces two sets of normalized fuzzy concepts $\{A_j: 1<=j<=N\}$ and $\{C_j: 1<=j<=N\}$, a set of rules of the form $r_j=$"if x is A_j then y is C_j" or "if x is ~A_j then y is C_j" where A_j and C_j have non-decreasing linear membership functions, and an AND/OR formula phi(r_1, r_2, ..., r_N) over the rules r_i, without involving negation, which describes how to combine the results of inference from the individual rules r_j to obtain the final value of y. Our rules satisfy the l!
 ogical properties in regard to the various equivalences when applicable (11 References).

RESULTADO <93>
Score
  ****-
Accession Number
  5039439
Author
  Murata T. Ishibuchi H.
Author/Editor Affiliation
  Dept. of Ind. Eng., Osaka Prefectural Univ., Sakai, Japan.
Title
  Adjusting membership functions of fuzzy classification rules by genetic algorithms.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1819-24. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  In this paper, we propose a genetic algorithm based method for adjusting the membership functions of antecedent fuzzy sets in fuzzy rules for classification problems. The proposed method determines the fuzzy partition of a pattern space for a classification problem. This means that the number of fuzzy rules

and the membership function of each antecedent fuzzy set are simultaneously determined. First we describe how a fuzzy partition of a pattern space is denoted by a string that can be handled in genetic algorithms. In this coding, each axis of a pattern space is partitioned by triangular fuzzy sets and trapezoid fuzzy sets. This coding can also employ the whole domain of each attribute as an antecedent fuzzy set. Next, we show genetic operators for adjusting the membership function of each antecedent fuzzy set. Finally, we demonstrate that our genetic algorithm can construct a classification system with high classification power (9 References).

RESULTADO <94>

Score
*****-

Accession Number
  5039429
Author
  Wei Li.
Author/Editor Affiliation
  Dept. of Comput. Sci., Tsinghua Univ., Beijing, China.
Title
  Neuro-fuzzy systems for intelligent robot navigation and control under uncertainty.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.4, 1995, pp. 1747-54. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  This paper describes neuro-fuzzy systems for intelligent robot navigation and control under uncertainty. First, we present a new neuro-fuzzy system architecture for behavior navigation of a mobile robot in unknown environments. In this neuro-fuzzy system, a neural network is used to process range information for understanding distribution of obstacles in local regions; while fuzzy sets and a rule base are used to quantitatively formulate reactive behavior and to coordinate conflicts and competition among multiple types of behavior. Second, based on open-loop responses of a simplified model, we present a new method for designing a neuro-fuzzy controller for a manipulator with nonlinear dynamics or with unknown structure. The parameters of the fuzzy controller, related to the second-order systems, are off-line optimized, and a neural network is used to train the mapping relationship between the open-loop responses of the second-order systems and the optimized parameters of t!
 heir corresponding fuzzy controllers (16 References).

RESULTADO <95>

Score
 *****-

Accession Number
  5039418
Author
  Demko C. Zahzah E.
Author/Editor Affiliation
  Lab. d'Inf. et d'Imagerie Ind., Univ. de La Rochelle, France.
Title
  Image understanding using fuzzy isomorphism of fuzzy structures.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint

Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.3, 1995, pp. 1665-72. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  We propose a system architecture able to classify objects into models. Each object is represented by 2D color image. The fuzzy sets theory has been a fundamental base to build algorithms presented here. Each image is segmented into semantically annotated regions. In a second step, we extract structural information which are coded into graphs. At the end, we obtain a semantic graph representing the image. The classification will be done after finding the isomorphism between the 2D image graph and the available model graphs (24 References).

RESULTADO <96>

Score
  ****-
Accession Number
  5039411

Author
  Nitta Y. Shimomura K. Sakashita N. Komori S. Kyuma K.
Author/Editor Affiliation
  Semicond. Res. Lab., Mitsubishi Electr. Corp., Itami, Japan.

Title
  A high performance fuzzy inference processor and its evaluation system.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.3, 1995, pp. 1613-20. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  The fuzzy inference microprocessor "FORCE" (Fuzzy Oriented Coprocessing Engine) and its evaluation system are described. In order to achieve high speed inference, antecedent processing and consequent processing are pipelined. To evaluate FORCE, the inference speed for various role sets has been measured on our system. In the case of the two stage inverted pendulum control, whose rule set is composed of thirty rules, the inference is performed in 15.2 mus. This speed is 279 times faster than that of an 8-bit general purpose microcontroller (muC). In FORCE, a special algorithm is employed for calculating the variance of the resultant membership function. Judging from the variance, the reliability of the inference result is examined. Also, the software tools for effectively developing the inference program are studied. A rule/membership function editor is proposed, which helps programmers to make the membership function according to the specifications of target processor (6 R!
 eferences).

RESULTADO <97>

Score
  ****-
Accession Number
  5032662

Author
  Surmann H. Huser J. Peters L.
Author/Editor Affiliation
  German Nat. Res. Center for Comput. Sci., St. Augustin, Germany.
Title
  A fuzzy system for indoor mobile robot navigation.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.5, 1995, pp. 71-6. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  An autonomous mobile robot (AMR) has to cope with uncertain, incomplete or approximate information. Moreover it has to identify sudden perceptual situations to manoeuvre in real time. This paper describes a fuzzy rule based system (FRBS) approach controlling the movement of an autonomous mobile robot (MORIA). Difficult guiding and controlling properties of the robot are achieved by combining local actions and global strategies within the fuzzy controller. Different behaviors and perceptions are detected with the help of fuzzy rules and stored in fuzzy state variables (FSV). These state variables activate different fuzzy rule sets which in turn change the behavior of the fuzzy controller (14 References).

RESULTADO <98>
Score
  ****-
Accession Number
  5032642
Author
  Baldwin JF. Martin TP.
Author/Editor Affiliation
  Dept. of Eng. Math., Adv. Comput. Res. Centre, Bristol, UK.
Title
  Knowledge from data-the fuzzy data browser in Fril.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.5, 1995, pp. 27-8. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  When considering large bodies of data, humans generally prefer to work with heuristic (usually fuzzy) rules which summarise patterns in the data. Forming these rules is often a matter of intuition which may be complicated by missing, noisy, or incorrect data; however, a set of fuzzy rules is a highly compressed summary which can be used to predict or verify the data, and is easily understood by a human. This demonstration shows how Fril can model uncertain and incomplete databases, and generate and test hierarchical rules which summarise the data. Fuzzy sets are created automatically, and the importance of different features is determined using semantic unification. Human expertise can be input at any stage, and different rules can be tested against the known cases in the database. We focus on some simple

examples to illustrate the use of the fuzzy data browser (7 References).

RESULTADO <99>
Score
 ****-
Accession Number
 5010860
Author
 Palm R.
Author/Editor Affiliation
 Corp. Res. & Dev., Siemens AG, Munich , Germany.
Title
 Signal distributions in fuzzy control loops.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 301-8. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
 The paper deals with signal distributions interpreted as fuzzy signals in the control loop. With respect to specific effects coming up with the use of sensory information like noise or spatial distribution of a signal it is of interest how the control loop behaves in the presence of fuzzy signals. In this paper instationary fuzzy sets, especially time variant membership functions and their derivatives, are described. On this basis the control scheme according to Takagi/Sugeno is discussed especially with regard to stability. It is shown that, also in the case of fuzzy signals in the control loop, global stability can be proven (21 References).

RESULTADO <100>
Score
 ****-
Accession Number
 5005291
Author
 Fukuda T.
Author/Editor Affiliation
 Fac. of Econ., Otemon Gakuin Univ., Osaka Univ., Japan.
Title
 On a class of fuzzy random vectors obtained as vague perception of random phenomena.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 963-70. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
 The purpose of this paper is to investigate some of the statistical properties of fuzzy random vectors (FRVCs), which have intrinsically both properties of fuzziness and randomness and they are considered to

be obtained as vague perceptions of ordinary non-fuzzy random vectors. First, the concept of FRVCs is introduced by using the set representation method of fuzzy sets. Secondly, by applying multi-valued logic (extension principle of fuzzy sets), reasonable definitions of expectations of FRVCs are proposed, and finally some of their statistical properties are studied theoretically (12 References).

RESULTADO <101>
Score
 ****-
Accession Number
 5005276
Author
 Sarkodie-Gyan T. Willumeit H-P.
Author/Editor Affiliation
 Sch. of Sci. & Technol., Teesside Univ., Middlesbrough, UK.
Title
 Neuro-fuzzy based autonomous vehicles.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 855-62. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
 One way of dealing with the real world phenomena is qualitative and non-numerical in nature. In decision making processes as in the guidance of vehicles, masses of numerical data are converted into some qualitative form and thus are dealt with only in aggregation, e.g. visual perception-steering activity. This form of aggregation gives rise to a set of linguistic labels and is sometimes referred to as information granules. This aggregation of information makes the partition of space more manageable for further processing. All cognition and inference processing are then carried out at the level of the granules. This process of aggregation or granulation implies that we deal with the relationships of functions between linguistic label rather than with numerical quantities. To cope with this style of cognition, a suitable modelling technique is developed using the theory of fuzzy sets since this theory deals with such granularity of our perception (19 References).

RESULTADO <102>
Score
 ****-
Accession Number
 5005275
Author
 Ozawa J. Yamada K.
Author/Editor Affiliation
 Lab. for Int. Fuzzy Eng. Res., Yokohama , Japan.
Title
 Discovery of global knowledge in a database for cooperative answering.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 849-54. New York, NY, USA.
Conference Information

Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  This paper proposes an approach to discover global knowledge from a large number of data in a database. In this approach, linguistic labels are defined by fuzzy sets, and they are regarded as predefined background knowledge to discover global knowledge. Using the linguistic labels of the background knowledge, the given data are classified into several subclasses. Recursive classification of the process constructs a hierarchy of classes. However, in a database there are some exceptional data that are difficult to be classified into the classes. Therefore, we have introduced exceptional classes, and the exceptional data are grouped into them. Using this technique, we have constructed an intelligent data retrieval system that provides the user with cooperative answers. When too many data are retrieved, our system provides the user with a linguistic answer that summarizes the retrieved data. When no data is retrieved, our system provides the user with a linguistic summary of w!
 hat kinds of data are stored in the database (12 References).

RESULTADO <103>

Score
  ****-
Accession Number
  5005266
Author
  Cao Bing-Yuan.
Author/Editor Affiliation
  Dept. of Math., Changsha Univ. of Electr. Power, Hunan, China.
Title
  Fuzzy geometric programming optimum seeking of scheme for waste-water disposal in power plant.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 793-8. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  In this paper, a fuzzy geometric programming (FGP) model is built for waste-water disposal in a power plant by the aid of fuzzy sets theory. After the model is calculated by a fuzzy dual algorithm, optimal fuzzy technological parameters in different schemes and optimal fuzzy annual total charge are obtained in a waste-water disposal station. Also an optimal scheme is determined by minimising annual total charge (9 References).

RESULTADO <104>

Score
  ****-
Accession Number
  5005265
Author
  Inoue H.
Author/Editor Affiliation
  Sch. of Manage., Sci. Univ. of Tokyo, Japan.
Title

On a fuzzy SLLN and allocation problem.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 787-92. New York, NY,
USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  Artstein and Hart (1981) established a strong law of large numbers (SLLN) for unbounded random sets
and an optimization problem arising in allocation processes under uncertainty. The aim of this study is to
extend the optimization problem and to discuss it explicitly in a framework of fuzzy concepts, applying the
fuzzy SLLN to it (13 References).

RESULTADO <105>

Score
  ****-
Accession Number
  5005260
Author
  Isomoto Y. Yoshine K.
Author/Editor Affiliation
  Comput. Center, Nagoya City Univ., Japan.
Title
  Data structure and retrieval method of scenic image database based on fuzzy set theory.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 749-56. New York, NY,
USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  In this paper, the data structure and information retrieval are discussed for the management of an image
database for storing images of sketches, pictures, paintings, etc. Because their attributes are very much
fuzzy, the authors describe their fuzzy attributes in fuzzy sets and their membership functions.
Corresponding to the fuzzy description, the grade of satisfaction of the information retrieval is defined by
both retrieval condition and its complement. This model is suitable for the storage of fuzzy data (2
References).

RESULTADO <106>

Score
  ****-
Accession Number
  5005248
Author
  Brown M. An PE. Harris CJ.
Author/Editor Affiliation
  Dept. of Electron. & Comput. Sci., Southampton Univ., UK.

Title
  On the condition of adaptive neurofuzzy models.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 663-70. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  Learning within fuzzy and neurofuzzy systems is becomingly increasingly important as researchers try to infer qualitative, vague information from quantitative, numeric data. The fuzzy representation of an adaptive neurofuzzy system is important both for initialisation and validation purposes, where a designer needs to interpret the knowledge stored in a network. Therefore it is important to study the convergence and rate of convergence characteristics of the parameters in a neurofuzzy model and investigate how this depends on the system's structure. This paper considers how the condition of the input fuzzy sets determines the convergence and generalisation abilities of the network and describes several new results about instantaneous least mean square training rules (11 References).

RESULTADO <107>
Score
  ****-
Accession Number
  5005245

Author
  Bridgett NA. Brandt J. Harris CJ.
Author/Editor Affiliation
  Dept. of Electron. & Comput. Sci., Southampton Univ., UK.

Title
  A neurofuzzy route to breast cancer diagnosis and treatment.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 641-8. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  In this paper an outline is given of a modelling approach, using neurofuzzy networks, to be used in an intelligent oncology workstation for the improved treatment and diagnosis of breast cancer. This neurofuzzy approach is intended to assist in the provision of the most suitable treatment and therapy for the individual patient in this important medical domain and to seek to add to knowledge in this vital area to yield improved diagnostic and treatment techniques. The major component of the system is a high-dimensional approximator neurofuzzy network (Adaptive Spline Modelling of Observation Data or AS-MOD) which is a constructive learning algorithm used to automatically generate high-dimensional approximations and to identify complex relationships between input variables and the measured output to form models which may be interpreted as sets of linguistic fuzzy rules (28 References).

RESULTADO <108>

Score
 ****-
Accession Number
 5005232
Author
 Watanabe K.
Author/Editor Affiliation
 Dept. of Mech. Eng., Saga Univ., Japan.
Title
 Stochastic fuzzy control. I. Theoretical derivation.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 547-54. New York, NY,
USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
 A stochastic fuzzy control is proposed by applying the stochastic control theory, instead of using a
traditional fuzzy reasoning. We first solve a control problem of one-step predicted output tracking for linear
stochastic systems. Next, we consider a dynamic multiple model adaptive control (MMAC) for the initial
data distribution, under the uncertainties of the initial states. We further consider a static MMAC that can
be applied for a case of completely unknown plants. It is then shown that a stochastic fuzzy control has
some Gaussian potential functions as membership functions and can assign some a priori probabilities to
the fuzzy sets or to the control rules, if the probability density function with respect to the output error is
replaced by simple characteristic function. It is also cleared that the stochastic fuzzy control becomes a
fuzzy control by assuming that all of the a priori probabilities are set to be equal at any control instant (14
References).

RESULTADO <109>
Score
 ****-
Accession Number
 5005229
Author
 Roychowdhury S. Wang BH. Bastian A.
Author/Editor Affiliation
 Central Res. Lab., GoldStar Co. Ltd., Seoul , South Korea.
Title
 Hierarchical cooperation of neighbors in defuzzification.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 523-30. New York, NY,
USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
 Defuzzification has been viewed as a problem of optimal selection of an element from a fuzzy set. In this

paper we enlarge the concept of defuzzification as selection procedure by associating a belief value to the selected element. Based on analogies in nature, recently an attempt has been made to understand how cooperative elements in a fuzzy set can make a better selection of its representative element. Such a selection of an element from a set is done through a process of selective transformations. In this study an extended scheme of a hierarchical process of defuzzification involving cooperative neighbors defuzzification at each layer is proposed. A fuzzy set is divided into sub-fuzzy sets. Each cooperative module extracts, from a sub-fuzzy set, its representative along with a sub-fuzzy set belief value. At the next higher layer, representatives again form a fuzzy set. At that level the elements poll and elect their most ideal representative of their original fuzzy set!
 . We refer to this structured defuzzification as hierarchical cooperative neighbors in defuzzification (13 References).

RESULTADO <110>
Score
 ****-
Accession Number
 5005226
Author
 Nagasawa S.
Author/Editor Affiliation
 Fac. of Bus. Adm., Asia Univ., Tokyo, Japan.
Title
 Fuzzy sensory evaluation of condominia's facade.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 503-8. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
 Concerns sensory quality or "kansei" quality in relation to living environment amenity in condominium buildings. In order to deal with a ambiguous relationship of preference practically and systematically, the author proposes to create a hierarchy and rearrange the samples by the fuzzy structural modeling method, which is developed on the basis of the fuzzy sets theory. In order to demonstrate how the proposed method works, an sensory evaluation experiment of preference of condominia's facade by paired comparisons was conducted and a practical example of the analysis of the preference is given in which the structure of preference has been successfully identified and necessary conditions of preferable facade have been clarified. In conclusion, the proposed method to analyze fuzzy sensor evaluation of "kansei" quality is found to be applicable to develop "kansei" merchandise for amenity in living environment (4 References).

RESULTADO <111>
Score
 ****-
Accession Number
 5005220
Author
 Yeung DS. Tsang ECC.
Author/Editor Affiliation
 Dept. of Comput., Hong Kong Polytech., Kowloon, Hong Kong.
Title

A weighted fuzzy production rule evaluation method.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.2, 1995, pp. 461-8. New York, NY,
USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  The knowledge base of a fuzzy expert system is usually represented by fuzzy production rules (FPRs)
which can represent fuzzy, vague or imprecise knowledge. However, their knowledge representation
power is somewhat limited if they do not allow each proposition in the antecedent part of a given fuzzy
production rule to have a different degree of significance. In this paper, each proposition in the antecedent
part is assigned a weight, and a fuzzy production rule evaluation method (FPREM) based on point-valued
fuzzy sets and weight assignment is proposed. A weighted FPR is preferred over the non-weighted
version because it is more flexible. In addition, the advantages of our proposed FPREM are: 1) discrete
fuzzy set tables can be used; 2) complex fuzzy relational matrix proposed by Zadeh could be avoided; and
3) the method of calculating the consequent is much easier than Zadeh's compositional rule of inference
because there is no need to set up the fuzzy relation between th!
 e antecedent and the consequent (16 References).

RESULTADO <112>
Score
  ****-
Accession Number
  5005154
Author
  Niimura T. Yokoyama R.
Author/Editor Affiliation
  Dept. of Electr. Eng., British Columbia Univ., Vancouver, BC, Canada.
Title
  Security enhancement of electric power systems by approximate reasoning.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 205-10. New York, NY,
USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint
Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International
Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng.
Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  In this paper the authors present an approach to enhance the security of power systems by
supplementing optimal generation scheduling solutions for reducing branch overload in the case of
contingencies. The supplementary control adjustment is determined by approximate reasoning based on
qualitative rules and fuzzy sets. Fuzzy sets and reasoning procedure are defined for effective security
enhancement of real power generation. Numerical examples prove that this approach yields more secure
conditions against branch overload (11 References).

RESULTADO <113>
Score

****-
Accession Number
  5005142
Author
  Filev D. Yager RR.
Author/Editor Affiliation
  Machine Intelligence Inst., Iona Coll., New Rochelle, NY, USA.
Title
  Simplified methods of reasoning in fuzzy models.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 123-30. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  An obvious reason for the success of the Mamdani method of reasoning was that this method was efficiently simplified. However, it is widely known that the Mamdani method has one major drawback-it cannot work when the partitioning of the input space is not complete, i.e. some gaps in the rule-base exist. This is the reason that one of the basic requirement in fuzzy modeling is the complete partitioning of the input space by the antecedent fuzzy sets. An alternative solution to this problem is simply to replace the Mamdani method by the so-called logical method; but it has one major drawback it requires more calculations and there is no analytical description of the input-output relationship presented by the fuzzy model. Consequently this method is not suitable for learning. In this paper we show that the logical method can be significantly simplified. The result is a new reasoning method that is characterized with an analytical input-output description; in addition, its com!
 putational complexity is comparable to this of the Mamdani method (4 References).

RESULTADO <114>
Score
  ****-
Accession Number
  5005139
Author
  Driankov D. Hellendoorn H.
Author/Editor Affiliation
  Corp. Res. & Technol., Siemens AG, Munich, Germany.
Title
  Chaining of fuzzy IF-THEN rules in Mamdani-controllers.
Source
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 103-8. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
  The problem of chaining of fuzzy IF-THEN rules has so far received a rather theoretic treatment in the

literature on approximate reasoning. In particular, different types of composition operators, fuzzy implication operators, etc., have been identified such that the conclusion obtained via a chain of fuzzy rules coincides with the conclusion derived from the "abbreviated" version of the same chain. This "abbreviated" version is a single fuzzy rule which the rule-antecedent is the rule-antecedent of the first rule in the chain, and its rule-consequent is the rule-consequent of the last rule in the chain. However, in the case of more than one chain of rules and when the fuzzy sets defining the meaning of the rule-antecedents and rule-consequents from different chains overlap, then the above theoretical results do not hold in general. In the present paper we identify two major problems with the chaining of fuzzy rules in the case of more than one chain and overlapping rule-an!
 tecedents and rule-consequents that belong to different chains (3 References).

RESULTADO <115>
Score
 ****-
Accession Number
 5005136
Author
 Surmann H. Huser J. Peters L.
Author/Editor Affiliation
 German Nat. Res. Center for Comput. Sci., St. Augustin, Germany.
Title
 A fuzzy system for indoor mobile robot navigation.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 83-8. New York, NY, USA.
Conference Information
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.
Abstract
 An autonomous mobile robot has to cope with uncertain, incomplete or approximate information. Moreover, it has to identify sudden perceptual situations to manoeuvre in real time. This paper describes a fuzzy rule based system (FRBS) approach for controlling the movement of an autonomous mobile robot (MORIA). Difficult guiding and controlling properties of the robot are achieved by combining local actions and global strategies within the fuzzy controller. Different behaviors and perceptions are detected with the help of fuzzy rules and stored in fuzzy state variables. These state variables activate different fuzzy rule sets which in turn change the behavior of the fuzzy controller (14 References).

RESULTADO <116>
Score
 ****-
Accession Number
 5005130
Author
 Vila L. Godo L.
Author/Editor Affiliation
 Inst. for Res. in Artifical Intelligence, Univ. Autonoma de Barcelona, Bellaterra, Spain.
Title
 Query-answering in fuzzy temporal constraint networks.
Source
 Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International

Fuzzy Engineering Symposium (Cat. No.95CH35741). IEEE. Part vol.1, 1995, pp. 43-8. New York, NY, USA.
Conference Information
  Proceedings of 1995 IEEE International Conference on Fuzzy Systems. The International Joint Conference of the Fourth IEEE International Conference on Fuzzy Systems and The Second International Fuzzy Engineering Symposium. Yokohama, Japan. IEEE Neural Networks Council. Lab. Int. Fuzzy Eng. Res.. Japan Soc. Fuzzy Theory & Syst.. Japan Inf. Process. Dev. Center. 20-24 March 1995.

Abstract
  Temporal constraint networks are a well-known powerful formalism for encoding temporal knowledge based on the CSP techniques. A redefinition of metric temporal constraints to cope with vagueness of temporal relations based on fuzzy sets, called fuzzy temporal constraint networks has been proposed previously. In this paper the authors identify those queries on a fuzzy temporal constraint network relevant to a knowledge-based reasoning system. The authors provide definitions for their answering and explore the functions on which they are based by discussing the different choices for them. These results can be useful to those interested in defining a system for temporal reasoning under uncertainty. For instance, the authors satisfactorily applied them to the definition of a possibilistic temporal reasoning system (17 References).

RESULTADO <117>

Score
  ****-
Accession Number
  5004982
Author
  Groom CG. Chan KW. Dunn RW. Daniels AR.
Author/Editor Affiliation
  Sch. of Electron. & Electr. Eng., Bath Univ., UK.
Title
  Fuzzy logic techniques applied to power system control.
Source
  29th Universities Power Engineering Conference. Conference Proceeding. UPEC '94. Univ. Coll. Galway. Part vol.2, 1994, pp. 832-5. Galway, Ireland.
Conference Information
  1994 Universities Power Engineering Conference (UPEC). Galway, Ireland. ESB Int.. APC. Dranetz. Power Electron. 14-16 Sept. 1994.

Abstract
  This paper describes the use of fuzzy sets in the area of power system security assessment which includes identification of electromechanical modes of operation, contingency screening and evaluation and subsequent alarm processing. The application of this technique as part of a complete real-time dynamic security assessment system written at the University of Bath is discussed and results are presented for an IEEE test network, together with a reduced UK National Grid system. Comparisons are made between this new method and more traditional numerical approaches, illustrating the improvements that can be made in the operation of complex power systems (17 References).

RESULTADO <118>

Score
  ****-
Accession Number
  4911139
Author
  Jun Zhou. Raju GVS.
Author/Editor Affiliation
  Div. of Eng., Texas Univ., San Antonio, TX , USA.
Title
  Fuzzy rule-based approach for robot motion control in the presence of obstacles.

Source
  Conference Proceedings. 1993 International Conference on Systems, Man and Cybernetics. Systems Engineering in the Service of Humans (Cat. No.93CH3242-5). IEEE. Part vol.4, 1993, pp. 662-7. New York, NY, USA.
Conference Information
  Proceedings of IEEE Systems Man and Cybernetics Conference - SMC . Le Touquet, France. 17-20 Oct. 1993.

Abstract
  In this paper, a fuzzy rule based approach for robot motion control has been proposed to eliminate the computational complexity of the inverse kinematics problem associated with the conventional mathematical algorithm and facilitate the control of redundant robots to avoid obstacles. Strategies for formulating the fuzzy rule sets for motion and obstacle avoidance have been proposed. A hierarchy is used in structuring the rules to reduce the number of rules needed for a complete fuzzy rule set. Simulations have shown that by consulting the fuzzy rule sets, a robot can follow the user specified trajectory (26 References).

RESULTADO <119>

Score
  ****-
Accession Number
  4897171
Author
  Petrosino A. Feng Pan.
Author/Editor Affiliation
  Istituto per la Ricerca sui Sistemi Inf. Paralleli, CNR, Naples, Italy.
Title
  A fuzzy hierarchical neural network for image analysis.
Source
  Conference Proceedings. 1993 International Conference on Systems, Man and Cybernetics. Systems Engineering in the Service of Humans (Cat. No.93CH3242-5). IEEE. Part vol.2, 1993, pp. 657-62. New York, NY, USA.
Conference Information
  Proceedings of IEEE Systems Man and Cybernetics Conference - SMC . Le Touquet, France. 17-20 Oct. 1993.

Abstract
  An highly parallel neural structure suitable for image analysis is proposed. Each neuron is connected to a windowed area of neurons in the previous layer. The operations involved follow a method for representing and manipulating fuzzy sets, called composite calculus. The local features extracted by the consecutive layers are combined in the output layer in order to separate the output neurons in groups in a self-organizing manner. In this paper we focus our attention on the application of the proposed model to the edge detection based segmentation, reporting results on real images and comparing our results with those obtained by the classical Prewitt-Canny edge operators (19 References).

RESULTADO <120>

Score
  ****-
Accession Number
  4847251
Author
  Tzafestas SG. Stamou GB.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Athens Nat. Tech. Univ., Greece.
Editor
  Rzevski G; Pastor J; Adey RA.
Title

A neuro-fuzzy inference system with improved performance.
Source
  Applications of Artificial Intelligence in Engineering VIII. Eighth International Conference. Comput. Mech. Publications. Part vol.1, 1993, pp. 353-66. Southampton, UK.
Conference Information
  Proceedings of Artificial Intelligence in Engineering VIII. Toulouse, France. Conseil Regional Midi Pyrenees. Mairie de Toulouse. INSERM CJF 89-08. 29 June-1 July 1993.

Abstract
  Fuzzy systems and neural systems belong to the class of model free estimators and possess a high degree of parallelism. Due to these features several investigators have tried to produce several models of neuro-fuzzy inference systems with combined properties. The purpose of the present paper is to extend and improve one of these neuro-fuzzy structures such that to obtain better inferences. The system is based on the Keller-Yager-Tahani (1992) neuro-fuzzy model and uses Hamacher's intersection function $f_H(a,b)$ or Sugeno's complement function $c_{lambda}(a)$. The operation of the system is briefly described and it's features are established in the form of four theorems. The capabilities of the system are shown by a set of simulation results derived for the case of trapezoidal fuzzy sets. These results are shown to be better than the ones obtained with the original neuro-fuzzy system of Keller, Yager and Tahani (19 References).

RESULTADO <121>
Score
  ****-
Accession Number
  4840611
Author
  Postlethwaite B.
Author/Editor Affiliation
  Dept. of Chem. Eng., Strathclyde Univ., Glasgow, UK.
Editor
  Rzevski G; Pastor J; Adey RA.
Title
  Aspects of structural definition and data gathering for fuzzy modelling.
Source
  Applications of Artificial Intelligence in Engineering VIII. Eighth International Conference. Comput. Mech. Publications. Part vol.2, 1993, pp. 345-59. Southampton, UK.
Conference Information
  Proceedings of Artificial Intelligence in Engineering VIII. Toulouse, France. Conseil Regional Midi Pyrenees. Mairie de Toulouse. INSERM CJF 89-08. 29 June-1 July 1993.

Abstract
  Some of the problems involved in generating a fuzzy relational model are considered in the context of a real model generation for a model-based controller. Amongst the issues considered are; the choice of the number and the spacing of reference sets, structural identification, and the problems encountered when periodic i/o data is used for identification (7 References).

RESULTADO <122>
Score
  ****-
Accession Number
  4754850
Author
  Liu Pelin. Yie Deming. Shi Yonghuan.
Author/Editor Affiliation
  Dept. of Syst. & Eng., Nat. Univ. of Defense Technol., Hunan, China.
Editor
  Yuan Baozong.

Title
  Application of fuzzy neural networks in fuzzy adaptive control.
Source
  Proceedings TENCON '93. 1993 IEEE Region 10 Conference on `Computer, Communication, Control and Power Engineering' (Cat. No.93CH3286-2). IEEE. Part vol.2, 1993, pp. 830-3. New York, NY, USA.
Conference Information
  Proceedings of TENCON '93. IEEE Region 10 International Conference on Computers, Communications and Automation. Beijing, China. 19-21 Oct. 1993.

Abstract
  In recent years, studies on fuzzy neural networks (FNN) have been developed on the basis of the theory of neural networks and fuzzy sets. In this paper, we introduce the concept of fuzzy neurons and neural nets constructed from fuzzy neurons, present a new kind of FNN, and give its structure and its adaptive learning algorithm. Then we apply the FNN to fuzzy adaptive control. By simulation, we prove the effectiveness and feasibility of applying the FNN in fuzzy adaptive control (5 References).

RESULTADO <123>

Score
  ****-
Accession Number
  4645866
Author
  Dettmer R.
Title
  Fuzzy control-engineering for empiricists.
Source
  IEE Review, vol.40, no.1, 20 Jan. 1994, pp. 17-20. UK.

Abstract
  The author discusses the development of fuzzy sets in control. The importance of fuzzy sets in control is that they support the formulation of control rules that reflect an operator's natural ambiguity about the meaning of linguistic values, avoiding forced and specious precision in the specification of control rules. In addition, because sharp transitions across set boundaries are eliminated, then the changes in control actions can be smooth and graduated. The key elements in the design of a fuzzy controller are the definitions of fuzzy sets for the input and control variables, and the IF-THEN rules that link these variables. Given that the sets and rules have been defined, then the operation of the controller follows a basic three-step sequence: fuzzification, inference and defuzzification. The author discusses this using the example of a simple controller with two input variables. The author also discusses artificial neural nets and fuzzy control applications (3 Referen!
 ces).

RESULTADO <124>

Score
  ****-
Accession Number
  4422841
Author
  Shao Shihuang. Xiong Ning.
Author/Editor Affiliation
  Dept. of Electr. Eng., China Textile Univ., Shanghai, China.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Representing and path planning in fuzzy environments.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 741-7. Amsterdam, Netherlands.

Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract

  Mobile robot may work in an uncertain environment. In order to function properly, they must be able to represent, account for and reason about the imprecise or fuzzy environment. An approach is proposed to model the imprecision by using fuzzy sets. The authors assume that a fuzzy obstacle is represented by a set of fuzzy half-planes. Based on this representation, a decision function which aims towards finding an acceptable collision-free path is constructed. The local minus gradient information is used to guide the robot to search for its goal. The approach has been implemented in Turbo Pascal on a simulator running on PC-386 (8 References).

RESULTADO <125>
Score
  ****-
Accession Number
  4418198
Author
  Flikop Z.
Author/Editor Affiliation
  Nynex Science & Technology Inc., White Plains, NY, USA.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Uncertainty and management of cellular telephone networks.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 929-34. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract

  A discussion is given on some aspects of the development of the management system for the cellular telephone networks. The system is intended to analyze and optimize cellular networks performance. Networks are considered as loosely coupled heterogeneous distributed nonstationary nonlinear stochastic systems. Fuzzy sets terminology is used for the network analysis (5 References).

RESULTADO <126>
Score
  ****-
Accession Number
  4418187
Author
  Kanagawa A. Tamaki F. Ohta H.
Author/Editor Affiliation
  Dept. of Ind. Eng., Osaka Prefectural Univ. , Japan.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Fuzzy control charts for linguistic data.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 644-54. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract

  The control charts for linguistic variables have been discussed by Wang and Raz (1988). This paper

deals with the construction of control charts for linguistic data based on fuzzy sets theory from the different viewpoint of them. The presented control charts aim at controlling the process average and the process variability based on the probability distribution existing behind the linguistic data. A method for determining the central line and the control limits are also presented (7 References).

RESULTADO <127>

Score
  ****-
Accession Number
  4418185
Author
  Hirota K. Pedrycz W. Yuda M.
Author/Editor Affiliation
  Dept. of Instrum. & Control Eng., Hosei Univ., Tokyo, Japan.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Fuzzy set-based models of sensor fusion.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 623-33. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  The authors exploit a framework of fuzzy sets to represent processes of sensor fusion. Taking advantage of strongly interactive fuzzy set operations such as product and probabilistic sum a nonlinear model of fusion of information coming from individual sensors will be developed. The resulting learning problem with its solutions leading to an optimal type of fusion model is solved. The question of inoperative sensors causing losses of information is addressed and a relevant performance index is introduced. Furthermore, the use of a nonadditive measure (fuzzy measure) is proposed and clarified with respect to the problem of variable credibility of fusion related with the amount of information available from the sensors (9 References).

RESULTADO <128>

Score
  ****-
Accession Number
  4418176
Author
  Ishibuchi H. Tanaka H.
Author/Editor Affiliation
  Dept. of Ind. Eng., Osaka Prefectural Univ. , Japan.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Determination of fuzzy regression models by neural networks.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 523-34. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  The authors propose simple but powerful methods for fuzzy regression analysis using neural networks. Since neural networks have high capability as an approximator of nonlinear mappings, the proposed methods can be applied to more complex systems than the existing LP based methods. First the authors

propose learning algorithms of neural networks for determining a nonlinear interval model from the given input-output patterns. A nonlinear interval model whose outputs approximately include all the given patterns can be determined by two neural networks. Next the authors show two methods for deriving nonlinear fuzzy models from the internal model determined by the proposed algorithms. Nonlinear fuzzy models whose h-level sets approximately include all the given patterns can be derived. Last the authors show an application of the proposed methods to a real problem (16 References).

RESULTADO <129>
Score
 ****-
Accession Number
 4418175
Author
 Takagi T. Nakanishi S.
Author/Editor Affiliation
 Dept. of Electr. Eng., Tokai Univ., Kanagawa, Japan.
Editor
 Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
 Pattern recognition based on the extraction of features by neural networks and fuzzy set theory.
Source
 Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 515-22. Amsterdam, Netherlands.
Conference Information
 Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
 The authors propose a neural network system to recognize extremely noisy patterns, in which typical feature parts remained, by clustering methods and fuzzy set theory. The clustering methods are used to grasp the typical feature parts of the patterns, and they make some neural networks based on the results of the clustering. Moreover, the membership functions of the fuzzy sets are used as the filter of the noise of any noisy patterns (2 References).

RESULTADO <130>
Score
 ****-
Accession Number
 4418174
Author
 Homenda W.
Author/Editor Affiliation
 Inst. of Math., Warsaw Univ. of Technol. , Poland.
Editor
 Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
 Fuzzy relational equations with cumulative composition operator as a form of fuzzy reasoning.
Source
 Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 277-85. Amsterdam, Netherlands.
Conference Information
 Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
 The paper deals with the problem of fuzzy reasoning in diagnosis models and fuzzy relational equations that are related to them. The problem of sensitivity of fuzzy relational equations is considered. The new `cumulative' operators on fuzzy sets are introduced and relevant composition operator of fuzzy relational equations is defined to avoid a kind of lack of sensitivity of `selective' max-min composition operator (12

References).

RESULTADO <131>
Score
  ****-
Accession Number
  4418163
Author
  Pedrycz W. Hirota K. Takagi T.
Author/Editor Affiliation
  Dept. of Electr. & Comput. Eng., Manitoba Univ., Winnipeg, Man., Canada.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Fuzzy associative memories: concepts, architectures and algorithms.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 163-74. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  The authors address generic issues of associative memories built in a framework of the technology of fuzzy sets. Three general approaches are studied and compared. They are: a Hebbian (correlation-like) learning realized in terms of max-min composition and Cartesian product operators; fuzzy relational equations; and optimized encoding scheme. The comparison is performed with respect to mechanisms of encoding and recall used in these schemes. Various aspects of recalling noisy and incomplete patterns are discussed as well. The authors also derive an interesting interpretation of fuzzy controllers as associative memories involving Hebbian learning (16 References).

RESULTADO <132>
Score
  ****-
Accession Number
  4418159
Author
  Xiao Luo. Mian Li. Zhendong Lei.
Author/Editor Affiliation
  Huazhong Univ. of Sci. & Technol., Hubei, China.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Fuzzy rational choice.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 122-6. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  This paper introduces two new types of fuzzy choice functions, sets up the corresponding fuzzy rational concepts, and investigates some properties about these fuzzy choice functions. Some open problems are pointed out (5 References).

RESULTADO <133>
Score
  ****-

Accession Number
  4418151
Author
  Ruspini EH.
Author/Editor Affiliation
  Artificial Intelligence Center, SRI International, Menlo Park, CA, USA.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  On truth, utility, and similarity.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 42-50. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.

Abstract
  The author explores relations between the notions of utility, similarity, and multivalued truth that extend the logics of preference of Rescher (1967). Emphasis is placed on the development of constructive procedures leading to solutions of control and decision-making problems that may be explicitly justified and explained. His departure point is the well-known interpretation of fuzzy sets on a solution space (i.e. a universe of possible worlds) as soft-constraint measures that quantify the relative desirability of alternative solutions. He proposes also new procedures for the relaxation of problem-solving goals that are based solely on a conventional order relation defined among problem-solving constraints. He explores mechanisms, based on multivalued logic, for the combination of desirability functions into more complex measures of solution quality and discusses differential preference relations between alternative state of affairs and, on the bases of certain formal rel!
 ationships between them and desirability measures, he proposes mechanisms for their logical combination. He introduces and explores structures for the representation of ignorance about the utility of alternative solutions. These structures are based on generalizations of model-logic notions of possible and necessary truth. Finally, he discusses relations between these concepts and similarity-based semantic models of fuzzy logic (12 References).

RESULTADO <134>
Score
  ****-
Accession Number
  4412640
Author
  Sosnowski ZA.
Author/Editor Affiliation
  Inst. for Inf. Technol., Nat. Res. Council of Canada, Ottawa, Ont., Canada.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  A fuzzy extension of CLIPS rule-based shell.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 503-12. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.

Abstract
  The paper describes changes made on top of the CLIPS rule-based shell to implement a fuzzy expert system shell. The modifications made to CLIPS contain the capability of handling fuzzy concepts and reasoning. In addition to the CLIPS functionality, this extended version can deal with exact, fuzzy (or inexact), and combined reasoning, allowing fuzzy and normal terms to be freely mixed in the rules and

facts of an expert system. It enables domain experts to express rules by their own fuzzy terms. The system uses two basic inexact concepts, fuzziness and uncertainty. It employs fuzzy logic and fuzzy numbers for its inexact reasoning. Fuzzy sets and relations deal with fuzziness in approximate reasoning, while fuzzy numbers manipulate the uncertainty. The run-time user interface uses a textual interface of CLIPS which can display the facts base, rules, and the current agenda (17 References).

RESULTADO <135>
Score
  ****-
Accession Number
  4412636
Author
  Di Nola A. Pedrycz W. Sessa S.
Author/Editor Affiliation
  Istituto Matematico, Naples Univ., Italy.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Knowledge representation and processing in frame-based structures.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 461-70. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  The authors discuss an essential issue for knowledge handling in frame-based structures pertaining to influence unknown values of slots in frames. It shall be shown that the result of filling in the missing content is heavily affected by known values of the remaining slots, both in the exemplar and prototype frame. Following the formalism of fuzzy set theory, capable of coping with linguistic labels, it is clarified how interval-valued fuzzy sets can be derived. The problem of overall matching for the prototype and exemplar frame is posed and underlying optimization procedure is developed (6 References).

RESULTADO <136>
Score
  ****-
Accession Number
  4412628
Author
  Watanabe H.
Author/Editor Affiliation
  Dept. of Comput. Sci., North Carolina Univ., Chapel Hill, NC, USA.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Some consideration on design of fuzzy information processors-from a computer architectural point of view.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 387-98. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  The majority of the fuzzy inference processors have been designed as application specific IC's (ASIC's). They are extremely fast but limited in generality. Many aspects of the design are limited or fixed. This paper explores and evaluates possible architectures of the fuzzy inference processor as an application

specific processor. The basic architecture proposed consists of a reduced instruction set computer (RISC) as a core processor with special hardware functional units for fuzzy logic related operations. In particular, the paper considers the following three issues: instruction set architecture for fuzzy information processing; number representation for fuzzy sets; and vector instruction for fuzzy theoretic operations (40 References).

RESULTADO <137>

Score
  ****-
Accession Number
  4412627
Author
  Yamamoto S. Inoue Y. Yasunobu S.
Author/Editor Affiliation
  Lab. for Int. Fuzzy Eng. Res., Yokohama , Japan.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  Object-oriented approaches for fuzzy information processing.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 375-86. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  Representation and manipulation of fuzzy sets on computer systems are important matters for the establishment of fuzzy information processing which is the integration of fuzzy set processing and symbolic processings. Fuzzy set manipulation system FOPS and fuzzy software architecture MoNo are designed, based on the idea that the object-oriented paradigm is effective for fuzzy set manipulation. In this particle, merits of the object-oriented paradigm for fuzzy set manipulation and the merits of the developed systems are discussed (9 References).

RESULTADO <138>

Score
  ****-
Accession Number
  4412626
Author
  Smithson M.
Author/Editor Affiliation
  Sch. of Behavioural Sci., James Cook Univ., Townsville, Qld., Australia.
Editor
  Terano T; Sugeno M; Mukaidono M; Shigemasu K.
Title
  FUZ^{zy}STAT: fuzzy set software for behavioral and social sciences.
Source
  Fuzzy Engineering Toward Human Friendly Systems. IOS Press. 1992, pp. 361-74. Amsterdam, Netherlands.
Conference Information
  Fuzzy Engineering Toward Human Friendly Systems. Yokohama, Japan. 13-15 Nov. 1991.
Abstract
  Describes FUZ^{zy}STAT, a software tool for research in the human sciences that enables users to analyze various relations among fuzzy sets, and presents some examples of its applications to research problems in psychology and sociology. It concludes with a forward look to what the author hopes will be near-future developments in fuzzy set software tools for behavioral and social science research.

These include linguistic and graphic fuzzy data input interfaces, user-defined and context-sensitive fuzzy membership functions over numerical support sets, the implementation of more statistical functions on fuzzy data, and inter-application communication with spreadsheets, databases, and conventional statistics packages (7 References).

RESULTADO <139>
Score
  ****-
Accession Number
  4386593
Author
  Textor W. Wessel S. Hoffgen K-U.
Author/Editor Affiliation
  Lehrstuhl Inf. II, Dortmund Univ., Germany.
Editor
  Dewilde P; Vandewalle J.
Title
  Learning fuzzy rules from artificial neural nets.
Source
  CompEuro 1992 Proceedings. Computer Systems and Software Engineering (Cat. No.91CH3121-1). IEEE Comput. Soc. Press. 1992, pp. 121-6. Los Alamitos, CA, USA.
Conference Information
  CompEuro 1992 Proceedings. Computer Systems and Software Engineering (Cat. No.91CH3121-1). The Hague, Netherlands. IEEE. 4-8 May 1992.
Abstract
  An algorithm is given for extracting fuzzy rules from a neural net model called a self-organizing feature map. These rules can also be transformed into a linguistic form. The algorithm gives an interpretation of the map after the learning process by describing its end configuration with fuzzy rules. This approach can be used in the area of knowledge acquisition if only a vast set of unclassified data of a given domain is available. The underlying ideas of the knowledge extraction algorithm are presented. The generation of membership functions is depicted. The process of creating rules out of these membership functions is described. The results of testing the algorithm with some real data sets are presented (7 References).

RESULTADO <140>
Score
  ****-
Accession Number
  4208940
Author
  Simpson PK.
Author/Editor Affiliation
  General Dynamics Electron. Div., San Diego, CA, USA.
Title
  Fuzzy min-max classification with neural networks.
Source
  IEEE Conference on Neural Networks for Ocean Engineering (Cat. No.91CH3064-3). IEEE. 1991, pp. 291-300. New York, NY, USA.
Conference Information
  IEEE Conference on Neural Networks for Ocean Engineering (Cat. No.91CH3064-3). Washington, DC, USA. IEEE. 15-17 Aug. 1991.
Abstract
  A feedforward neural network classifier that uses min-max vector pairs to define classes is described. This two-layer neural network utilizes a supervised learning rule to build a set of classes. Each node in the output layer of the network represents a class. During recall each class node produces an output value that represents the degree to which the input pattern fits within the represented classes. This fuzzy neural

network is ideally suited to applications that have very little data available to define classes. The author provides a brief overview of fuzzy sets and fuzzy pattern classification, a description of fuzzy min-max classification and its neural network implementation, and an example of the classification operation (6 References).

RESULTADO <141>
Score
  ****-
Accession Number
  3986612
Author
  Lambert-Torres G. Olivier G. Mukhedkar D.
Author/Editor Affiliation
  Dept. of Electr. Eng., Ecole Polytech. de Montreal, Que., Canada.
Title
  Short-term power system planning using a fuzzy knowledge-based system.
Source
  Tenth International Workshop. Expert Systems and their Applications. Specialized Conference: Artificial Intelligence and Electrical Engineering. EC2. 1990, pp. 193-202. Nanterre, France.
Conference Information
  Tenth International Workshop. Expert Systems and their Applications. Specialized Conference: Artificial Intelligence and Electrical Engineering. Avignon, France. 28 May-1 June 1990.
Abstract
  Describes a fuzzy expert system prototype for power system planning. This expert system has been divided into three parts, namely transmission networks design, generation production and load profile. The mathematical tool chosen was fuzzy sets theory because of its capacity to operate on quantitative semantics and exact values (13 References).

RESULTADO <142>
Score
  ****-
Accession Number
  3907412
Author
  Manzoul MA. Rao VB.
Author/Editor Affiliation
  Dept. of Electr. Eng., Southern Illinois Univ., Carbondale, IL, USA.
Title
  Multi-input fuzzy inference engine on a systolic array.
Source
  Proceedings. The First International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems IEA/AIE - 88. ACM. 1988, pp. 958-64. New York, NY, USA.
Conference Information
  Proceedings. The First International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems IEA/AIE - 88. Tullahoma, TN, USA. Univ. Tennessee. 1-3 June 1988.
Abstract
  Technological progress in VLSI has made algorithm oriented architectures, such as systolic arrays, appear to be very effective, feasible, and economic. Systolic arrays have received particular attention because of their simple control and timing, local interconnection between processors, and modular design. The paper presents a systolic architecture for inference mechanisms in expert systems that are based on fuzzy sets theory. The algorithm used provides for more than one fuzzy input. The introduced array speeds up the inference mechanism by exploiting the inherent parallelism present in the inference algorithm. A comparison between the design systolic array and a uniprocessor is discussed (18 References).

RESULTADO <143>

Score
 ****-

Accession Number
 3428004

Author
 Wang Xianyu.

Author/Editor Affiliation
 Dept. of Appl. Math., Chengdu Univ. of Sci. & Technol., Sichuan, China.

Editor
 Cheng Weimin.

Title
 Fuzzy linear programming.

Source
 Proceedings of International Conference on Systems Science and Engineering (ICSSE'88). Int. Acad. Publishers. 1988, pp. 292-6. Beijing, China.

Conference Information
 Proceedings of International Conference on Systems Science and Engineering (ICSSE'88). Beijing, China. Syst. Eng. Soc.of China. Int. Inst. Appl. Syst. Analysis. 25-28 July 1988.

Abstract
 The nonsymmetric fuzzy linear programming with regular fuzzy coefficients is studied. First the author gives distinct formulation of the feasible region of fuzzy constraint, which are based on different backgrounds. Secondly, he discusses the fuzzy maximum of a fuzzy linear function on a feasible region. The maximal solution sets are two fuzzy sets and the maximal value is a regular fuzzy number. The computational method is discussed. Further more, he gives the definition of the dual problem of fuzzy linear programming and discusses the weak duality theorem (15 References).

RESULTADO <144>

Score
 ****-

Accession Number
 3247243

Author
 Serpico SB. Sturaro F. Vernazza G. Dellepiane S.

Author/Editor Affiliation
 Dept. of Biophys. & Electron. Eng., Genoa Univ., Italy.

Title
 Fuzzy-reasoning approach to understanding of 2D NMR images.

Source
 Proceedings of the Ninth Annual Conference of the IEEE Engineering in Medicine and Biology Society (Cat. No.87CH2513-0). IEEE. 1987, pp. 1980-1. New York, NY, USA.

Conference Information
 Proceedings of the Ninth Annual Conference of the IEEE Engineering in Medicine and Biology Society (Cat. No.87CH2513-0). Boston, MA, USA. IEEE. 13-16 Nov. 1987.

Abstract
 A fuzzy approach is applied to the recognition of biomedical NMR (nuclear magnetic resonance) images using a knowledge-based system. Pattern-recognition methods are integrated with artificial intelligence techniques, and the use of fuzzy-sets algebra and logics makes it possible to deal with approximate information and analysis. The system can be used for the recognition of other kinds of images by modifying the domain knowledge (3 References).