

## Announcements and calls for papers for conferences and workshops

Material for inclusion in this section can be submitted (email preferred) to:

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### **NICROSP'96 International Workshop on Neural Networks for Identification, Control, Robotics, and Signal/Image Processing** **21–23 August 1996, Venic, Italy**

Sponsored by the IEEE Computer Society and the IEEE CS Technical Committee on Pattern Analysis and Machine Intelligence. In cooperation with: ACM SIGART, IEEE Circuits and Systems Society, IEEE Control Systems Society, IEEE Instrumentation and Measurement Society, IEEE Neural Network Council, IEEE North-Italy Section, IEEE Region 8, IEEE Robotics and Automation Society (pending), IEEE Signal Processing Society (pending), IEEE System, Man, and Cybernetics Society, IMACS, INNS (pending), ISCA, AEI, AICA, ANIPLA, FAST.

This workshop is directed to create a unique synergetic discussion forum and a strong link between theoretical researchers and practitioners in the application fields of identification, control, robotics, and signal/image processing by using neural techniques. The three-days single-session schedule will provide the ideal environment for in-depth analysis and discussions concerning the theoretical aspects of the applications and the use of neural networks in the practice. Invited talks in each area will provide a starting point for the discussion and give the state of the art in the corresponding field. Panels will provide an interactive discussion.

#### *General Chair*

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#### *Program Chair*

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**ANNIE'96 Artificial Neural Networks in Engineering**

**November 10–13, 1996, Marriott Pavilion Hotel, St. Louis, Missouri**

Artificial Neural Networks, Fuzzy Logic and Evolutionary Programming for Designing Smart Engineering Systems

URL: <http://www.umn.edu/~annie/>

ANNIE'96 will be held on November 10–13, 1996, at Marriott's Pavilion Hotel in downtown St. Louis, Missouri, USA. This will be the sixth international gathering of researchers interested in engineering applications of neural networks, fuzzy logic, and evolutionary programming. The previous conferences drew approximately 150 papers each from twenty countries and their proceedings were published by ASME press as hardbound books in five volumes titled *Intelligent Engineering Systems Through Artificial Neural Networks*, *Fuzzy Logic and Evolutionary Programming*, edited by C.H. Dagli et al.

The conference will cover the theory of artificial neural networks, fuzzy logic, and evolutionary programming, and their applications in the engineering domain. The objective of the conference is to bring together researchers in the field of neural networks, fuzzy logic, and evolutionary programming, and exchange ideas on their applications to engineering problems. Presentations dealing with applications of these emerging technologies are encouraged in the areas of: manufacturing engineering, biology and medicine, pattern recognition, image processing, process monitoring, control, recent theoretical developments in artificial neural network architectures, fuzzy logic, evolutionary programming, fractals, chaos, and wavelets that can impact engineering applications.

*Topics of interest***Architectures and Techniques**

- Neurally-Based Network Architectures
- Associative Memory
- Learning Algorithms and Training
- Performance Analysis
- Theoretical Foundations of Architectures
- Hybrid Systems
- Fuzzy Logic and Systems
- Optimization
- Evolutionary Programming
- Genetic Algorithms
- Chaos
- Fractals
- Wavelets
- Complex Systems

**Pattern Recognition**

- Pattern Identification
- Feature Identification
- Machine Vision and Image Processing

**Control**

- Adaptive Control
- Non-linear Systems Modeling
- Diagnosis
- Process Monitoring

**Smart Engineering Systems**

- Manufacturing Engineering
- Biomedical Engineering
  - Time Frequency and Wavelets
  - Exploratory Data Analysis
  - Multi-Channel Signal
  - Virtual Reality
- Engineering Applications

*Keynote speakers*

ANNIE'96 will be seeing to invite distinguished researchers from industry, government and academia as keynote speakers. Suggestions of possible speaker names should be made to the Conference Chair.

*Exhibitors*

ANNIE'96 is inviting companies and research institutions interested in Artificial Neural Network, Fuzzy Logic, and Evolutionary Programming Applications in Engineering, to take part in the ANNIE Exhibition to be held on November 10–13, 1996. Book companies publishing in this area are also welcome. For further information, please contact Conference Chair.

*Industrial panel*

ANNIE 96 is planning to make available data sets for process monitoring and control provided by industry for comparing the performance of various control models proposed by authors. The details of the process will not be disclosed to the researchers. The best model will be selected by the representative of the industry, who knows the real life process. Each researcher will present their results on Wednesday, November 13, 1996, during the industrial panel. If you are interested in participating in this activity as a researcher, you can download the data from ANNIE 96 home page <http://www.umn.edu/~annie/> and indicate your willingness to participate by August 9, 1996 to the Conference Chair.

*Affiliated organizations*

- Office of Naval Research, Arlington, VA
- Dynamic Systems Control Division, ASME
- American Institute of Aeronautics and Astronautics
- McDonnell Douglas Corporation, St. Louis, MO
- Ctr. For Opt. & Cntrl., Washington Univ., MO
- Lockheed-Martin Corporation, Bethesda, MD

*Organizing committee*

Conference Chair:

Prof. Cihan H. Dagli, Engineering Management, University of Missouri-Rolla, Rolla, MO

Conference Chair:

Biology and Medicine: Prof. Metin Akay, Biomedical Engineering, Rutgers University  
 Applications: Prof. C.L. Philip Chen, Computer Science and Engineering, Wright State University  
 Control: Prof. Benito Fernández, Mechanical Engineering, University of Texas at Austin

Pattern Recognition: Prof. Joydeep Ghosh, Electrical and Computer Engineering, University of Texas at Austin  
**NNCM-96 Fourth International Conference Neural Networks in the Capital Markets**  
**November 20–22, 1996, The Ritz-Carlton Hotel, Pasadena, California, USA**

Sponsored by Caltech and London Business School

Neural networks have been applied to a number of live systems in the capital markets, and in many cases have demonstrated better performance than competing approaches. Because of the increasing interest in the NNCM conferences held in the U.K. and the U.S., the fourth annual NNCM is planned for November 20–22, 1996, in Pasadena, California. This is a research meeting where original and significant contributions to the field are presented. In addition, introductory tutorials will be included to familiarize audiences of different backgrounds with the financial and the mathematical aspects of the field.

#### *Areas of Interest*

Price forecasting for stocks, bonds, commodities, and foreign exchange; asset allocation and risk management; volatility analysis and pricing of derivatives; cointegration, correlation, and multivariate data analysis; credit assessment and economic forecasting; statistical methods, learning techniques, and hybrid systems.

#### *Organizing Committee*

Dr. Y. Abu-Mostafa, Caltech (Chairman)  
Dr. A. Atiya, Cairo University  
Dr. N. Biggs, London School of Economics  
Dr. D. Bunn, London Business School  
Dr. M. Jabri, Sydney University  
Dr. B. LeBaron, University of Wisconsin  
Dr. A. Lo, MIT Sloan School  
Dr. I. Matsuba, Chiba University  
Dr. J. Moody, Oregon, Graduate Institute  
Dr. C. Pedreira, Catholic Univ. PUC-Rio  
Dr. A. Refenes, London Business School  
Dr. M. Steiner, Universitaet Munster  
Dr. A. Timermann, UC San Diego  
Dr. A. Weigand, University of Colorado  
Dr. H. White, UC San Diego  
Dr. L. Xu, Chinese University of Hong Kong

#### *Submission of Papers*

Original contributions representing new and significant research, development, and applications in the above areas of interest are invited. Authors should send 5 copies of a 1000-word summary clearly stating their results to:

Dr. Y. Abu-Mostafa, Caltech 136-93, Pasadena, CA 91125, USA.

All submissions must be received before May 1, 1996. There will be a rigorous refereeing process to select the high-quality papers to be presented at the conference.

#### *Location*

The conference will be held at the Ritz-Carlton Huntington Hotel in Pasadena, within two miles from the Caltech campus. The hotel is a 35-minute drive from Los Angeles International Airport (LAX) with nonstop flights from most major cities in North America, Europe, the Far East, Australia, and South America.

#### *Mailing List*

If you wish to be added to the mailing list of NNCM-96, please send your postal address, e-mail address, and fax number to

Dr. Y. Abu-Mostafa, Caltech 136-93, Pasadena, CA 91125, USA

E-mail: [yaser@caltech.edu](mailto:yaser@caltech.edu), Fax: (818) 795-0326

Home page: <http://www.cs.caltech.edu/~learn/nncm.html>