

Curriculum Vitae

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Dr. Maikel Leon Espinosa

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Education

Hasselt University, Belgium:
- Doctor of Science, 2012.
Central University of Las Villas, Cuba:
- M.S. in Computer Science, "*Summa Cum Laude*", 2007.
- B.S. in Computer Science, "*Summa Cum Laude*", 2006.

Experience

- Lecturer at Department of Business Technology, School of Business, University of Miami, Florida, US, 01/2015-Present.
- Professor II at Bachelor of Applied Science (BAS) Program in Information Management, Palm Beach State College, Florida, US, 01/2014-12/2014.
- Visiting Lecturer at Department of Information Systems and Management, South University, Palm Beach, Florida, US, 2013-2014.
- Visiting Researcher at Belgian Nuclear Research Centre SCK•CEN, Mol, Belgium, 2012.
- Visiting Researcher at Transportation Research Institute (IMOB), Hasselt University, Belgium, 2008-2012.
- Assistant Professor at Department of Computer Science, Central University of Las Villas, Santa Clara, Cuba, 2006-2012.

Experience

- Graduate Subject Areas Taught:
 - Database Management Systems.
 - Business Intelligence.
 - Management Information Systems.
- Undergraduate Subject Areas Taught:
 - Fundamentals of Business Technology & Innovation.
 - Introduction to Databases.
 - Computer Programming (C++, C#, Java).
 - System Analysis and Design.
 - Human-Computer Interaction.
 - Foundations of Computer Science.
 - Business Analytics.
- Theses Chaired/Supervised: (Area of research or title, date)
 - B.S & M.S theses supervised in Technology/Education and Computer Science.
- Committee Memberships (Area of research/title, date, role)
 - Board member in several theses in Computer Science and Artificial Intelligence (B.S; M.S, Ph.D.).

Scholarly Accomplishments

Research summary, investigations conducted:

- A Fuzzy Cognitive Maps based model for Individual Travel Behavior.
- Modeling, simulation and experimentation software framework based on Fuzzy Cognitive Maps.
- Behavioral aspects in Safety Culture assessment using an approach based on Fuzzy Cognitive Maps.
- Automated Survey for Knowledge Engineering to acquire Individuals Mental Representation about Travel Behavior.
- Human-Computer Interaction, Intelligent Teaching-Learning Systems, Student Model, Software validation and usability, Web-based applications.

List of Publications

2018

- "FCM Expert: Software Tool for Scenario Analysis and Pattern Classification Based on Fuzzy Cognitive Maps". International Journal on Artificial Intelligence Tools Vol. 27, No. 07, 1860010. ISSN (print): 0218-2130 | ISSN (online): 1793-6349. <https://doi.org/10.1142/S0218213018600102>
- "Fuzzy Cognitive Maps Based Models for Pattern Classification: Advances and Challenges". In: Pelta D., Cruz Corona C. (eds) Soft Computing Based Optimization and Decision Models. Studies in Fuzziness and Soft Computing, vol 360. Springer, Cham. DOI: https://doi.org/10.1007/978-3-319-64286-4_5. Print ISBN: 978-3-319-64285-7. Online ISBN: 978-3-319-64286-4.

2017:

- "Fuzzy Cognitive Maps Tool for Scenario Analysis and Pattern Classification". ICTAI 2017: 29th IEEE International Conference on Tools with Artificial Intelligence, Nov. 6-8, 2017, Boston, Massachusetts, USA. *Best paper award*.

2016:

- "Analyzing the Impact of the Adaptive Clearing Mechanism on Algorithm Accuracy". IEEE Symposium Series on Computational Intelligence. Athens, Greece.
- "Modeling and Experimentation Framework for Fuzzy Cognitive Maps". AAAI 2016: Thirtieth Conference on Artificial Intelligence, pp. 4361-4362.

2015:

- "A computational tool for simulation and learning of Fuzzy Cognitive Maps". FUZZ-IEEE 2015: 1-8.

2014:

- "Learning and Clustering of Fuzzy Cognitive Maps for Travel Behaviour Analysis". Knowledge and Information Systems. ISSN: 0219-1377. Springer-Verlag London.

2013:

- "Tackling Travel Behaviour: An approach based on Fuzzy Cognitive Maps". International Journal of Computational Intelligence Systems. Vol. 6, No. 6, pp. 1012-1039.
- "A Travel Behaviour Study through Learning and Clustering of Fuzzy Cognitive Maps". Decision Aid Models for Disaster Management and Emergencies. Atlantis Computational Intelligence Systems. Vol. 7, pp. 259-293. Atlantis Press. ISSN: 1875-7650.
- "Fuzzy Cognitive Maps with Rough Concepts". Artificial Intelligence Applications and Innovations. IFIP Advances in Information and Communication Technology. Springer. Vol. 412, pp. 527-536.

2012:

- "Mental maps and travel behaviour: meanings and models". Journal of Geographical Systems, Vol. 14, No. 2, pp. 143-165. ISSN: 1435-5930.
- "Learning Method Inspired on Swarm Intelligence for Fuzzy Cognitive Maps: Travel Behaviour Modelling". Artificial Neural Networks and Machine Learning, Part I. Lecture Notes in Computer Science. Vol. 7552, pp. 718-725. Springer-Verlag Berlin Heidelberg. ISSN: 0302-9743.
- "Fuzzy Cognitive Maps for modelling, predicting and interpreting HIV drug resistance". Advances in Artificial Intelligence. Lecture Notes in Computer Science. Vol. 7637, pp. 31-40. Springer-Verlag Berlin Heidelberg.
- "Modelling, aggregation and simulation of a dynamic biological system through Fuzzy Cognitive Maps". Mexican International Conference on Artificial Intelligence. Lecture Notes in Artificial Intelligence. Springer-Verlag Berlin Heidelberg. *Best paper award*.
- "Clustering of Fuzzy Cognitive Maps for Travel Behavior Analysis". Advances in Intelligent and Soft-Computing series. Vol. 171, pp. 57-66. Springer Berlin Heidelberg. ISBN: 978-3-642-30864-2.

2011:

- "A Fuzzy Cognitive Maps Modeling, Learning and Simulation Framework for studying Complex System". New challenges on Bioinspired applications, Part II. Lecture Notes in Computer Science. Vol. 6687, pp. 243-256. Springer-Verlag Berlin Heidelberg.
- "Two steps Individuals Travel Behavior Modeling through Fuzzy Cognitive Maps Pre-definition and Learning". Advances on Artificial Intelligence, Part II. Lecture Notes in Artificial Intelligence. Vol. 7095, pp. 82-94. Springer-Verlag Berlin Heidelberg.
- "Mapas Cognitivos Difusos aplicados a un problema de Comportamiento de Viajes". III Taller Internacional de Descubrimiento de Conocimiento, Gestión del Conocimiento y Toma de Decisiones. Eureka Iberoamérica. Universidad de Cantabria, Santander, España.
- "Clustering Fuzzy Cognitive Maps for Travel Behavior Analysis". CF-WML-KD Cuba-Flanders Workshop on Machine Learning and Knowledge Discovery. Cuba.
- "Fuzzy Cognitive Maps with Rough Concepts". CF-WML-KD Cuba-Flanders Workshop on Machine Learning and Knowledge Discovery. Cuba.
- "Aprendizaje inspirado en Optimización basada en Partículas de Mapas Cognitivos Difusos". COMPUMAT Congreso de Matemática y Computación. Cuba.
- "Individual Travel Behavior modeling through Fuzzy Cognitive Maps". Informática 14th International Convention and Fair. Ministerio de Informática y Comunicaciones. Cuba.
- "Aplicaciones de HESEI, herramienta para el desarrollo de sistemas de enseñanza-aprendizaje inteligentes". Informática 14th International Convention and Fair. Ministerio de Informática y Comunicaciones. Cuba.

2010:

- "Fuzzy Cognitive Maps for modeling Complex Systems". Advances on Artificial Intelligence, Part I. Lecture Notes in Artificial Intelligence. Vol. 6437, pp. 166-174. Springer-Verlag Berlin Heidelberg.
- "Cognitive Mapping and Knowledge Engineering in Travel Behavior Sciences". CEDI Congreso Español de Informática (SICO Simposio de Inteligencia Computacional). Universidad Politécnica de Valencia. Capítulo Español de la IEEE Computational Intelligence Society. IBERGARCETA. ISBN: 978-84-92812-62-2.
- "A Revision and Experience using Cognitive Mapping and Knowledge Engineering in Travel Behavior Sciences". "POLIBITS" Research journal on Computer Science and Computer Engineering with Applications. ISSN: 1870-9044.

Dr. Maikel Leon Espinosa

- "Automatic Knowledge Representation in a case study of Travel Behavior". DBDBD Dutch-Belgian Data Base Day. Hasselt, Belgium.

2009:

- "Considering Artificial Intelligence Techniques to perform Adaptable Knowledge Structures". World Scientific Series on Computer Engineering and Information Science - Vol. 2. Intelligent Decision Making Systems, pp. 88-93.
- "Cognitive Maps in Transport Behavior". MICAI Mexican International Conference on Artificial Intelligence. IEEE Computer Society Press.
- "Modelling Multiple Meanings of Mental Maps". IATBR 12th International Conference on Travel Behaviour Research.
- "Mapas mentales y cognitivos difusos para problemas relacionados con decisiones de transporte". II Taller de Descubrimiento de Conocimiento, Gestión del Conocimiento y Toma de Decisiones, Eureka Iberoamérica. Panamá. ISBN: 978-959-261-304-1.

2008:

- "Combining Concept Maps and Petri Nets to Generate Intelligent Tutoring Systems: A Possible Approach". Advances on Artificial Intelligence. Lecture Notes in Artificial Intelligence. Vol. 5317. Springer-Verlag Berlin Heidelberg.
- "La Inteligencia Artificial en la Informática Educativa. Revista de Informática Educativa y Medios Audiovisuales". Vol. 5(10), pp. 11-18. ISSN: 1667-8338. LIE-FI-UBA.

2007:

- "Features Selection through FS-Testors in Case-Based Systems of Teaching-Learning". Advances on Artificial Intelligence. Lecture Notes in Artificial Intelligence. Vol. 4827, pp. 1206-1217. Springer-Verlag Berlin Heidelberg.
- "Concept Maps and Case-Based Reasoning: A perspective for the Intelligent Teaching/Learning Systems". EATIS Euro American Conference on Telematics and Information System. ACM Association for Computing Machinery Digital Library. Portugal. ISBN: 978-1-59593-598-4.
- "Concept Maps Combined with Case-Based Reasoning to Elaborate Intelligent Teaching-Learning Systems". ISDA Seventh International Conference on Intelligent Systems Design and Applications. IEEE Computer Society Press. Brasil. ISSN: 0-7695-2976-3.
- "Generating Intelligent Teaching-Learning Systems using Concept Maps and Case-Based Reasoning". Revista Avances en Sistemas e Informática. Vol.4 No. 1. Colombia. ISSN: 1657-7663.
- "Two Approaches to Generate Intelligent Teaching-Learning Systems using Artificial Intelligence Techniques". MICAI Mexican International Conference on Artificial Intelligence. IEEE Computer Society Press.

Honors and Awards

- Cuban Academy of Sciences National Award to the Most Relevant Research of the Year in Computer Science (2015).
- Several awards from the Cuban Academy of Sciences and other Institutions in Computer Science (2006-2015).