
Plenary talks and Room A - Tomas Rivera Conference Center
Room B - Templeton Suite
Room C - University Suite

Monday, October 31, 2016

9:00- 4:00 pm Symposium on Interdisciplinary Approaches to Cyber-Security, Room B (Templeton Suite)
6:00- 7:30 pm welcome reception and registration, Room A

Tuesday, November 1, 2016

8:00- 8:40 am registration
8:40- 8:45 am official opening and welcome
8:45- 9:30 am plenary talk, Chair: Martine Ceberio
   Dongrui Wu, "Fuzzy logic and machine learning for brain-computer interface (BCI)"
9:30- 9:45 am official welcome by Dr. Diana Natalicio, President of the University of Texas at El Paso
9:45-10:05 am coffee break
10:05-12:10 pm parallel sessions

10:05-12:10 pm Applications to Economics and Decision making
   Co-chairs: Anna Maria Gil Lafuente and Worrawate Leela-Apiradee (Room A)

10:05-10:30 am Fabio Blanco, Jose Maria Merigo Lindahl and Anna Maria Gil Lafuente, "A Bibliometric Analysis of Fuzzy Decision Making Research"
10:30-10:55 am Ernesto Leon Castro, Ezequiel Aviles Ochoa, Jose Maria Merigo Lindahl, and Anna Maria Gil Lafuente, "Heavy moving averages in exchange rate forecasting"
11:45-12:10 pm Luis Alessandri Perez Arellano, Ernesto Leon Castro, Ezequiel Aviles Ochoa, and Jose Maria Merigo Lindahl, "Prioritized induced probabilistic OWA for dispute resolution methods"

10:05-12:10 pm Inter-Relation Between Interval and Fuzzy Techniques
   Co-chairs: Martine Ceberio and Vladik Kreinovich (Room B)

10:05-10:30 am Leobardo Valera and Martine Ceberio, "Using interval constraint solving techniques to understand and predict future behaviors of dynamic problems"
10:30-10:55 am Fernando Cervantes, Brian Usevitch, and Vladik Kreinovich, "Why 1"p-Methods in Signal and Image Processing: A Fuzzy-Based Explanation"
11:20-11:45 am Juan Carlos Figueroa-Garcia, "On alpha-representation of Type-2 Fuzzy sets"
11:45-12:10 pm Angel F. Garcia Contreras and Martine Ceberio, "Comparison of Strategies for Solving Global Optimization Problems Using Speculation and Interval Computations"

12:10- 1:35 pm lunch
1:35- 2:20 pm plenary talk, Chair: Barnabas Bede
Samir Abou-Samra, "Calibrating a Video Game Using Fuzzy Logic"
2:25- 4:05 pm parallel sessions

2:25- 4:05 pm Fuzzy Logic Applications in Construction Engineering and Management (Room A)
Co-chairs: Aminah Robinson Fayek and Chrysostomos Stylios

2:25- 2:50 pm Mohammad Raoufi, Nima Gerami Seresht, and Aminah Robinson Fayek, "Overview of Fuzzy Simulation Techniques in Construction Engineering and Management"
2:50- 3:15 pm Hanouf M. Alhumaidi, "Fuzzy Weighted Average Approach to Ranking Projects in Contractor Initial Bidding"

2:25- 4:05 pm Inter-Relation Between Interval and Fuzzy Techniques
Co-chairs: Martine Ceberio and Vladik Kreinovich (Room B)

2:50- 3:15 pm Fabio Blanco and Jose Maria Merigo-Lindahl, "Bonferroni distances with OWA operators"
3:15- 3:40 pm Andrzej Pownuk and Vladik Kreinovich, "Which Point From an Interval Should We Choose?"

4:05- 4:20 pm coffee break
4:20- 5:00 pm panel, Chair: Hung T. Nguyen
5:05- 6:45 pm parallel sessions

5:05- 6:45 pm Engineering Applications
Co-chairs: Benjamin Bedregal and Herbert Costa (Room C)

5:05- 5:30 pm Herbert Costa and Alessandro La Neve, "A study on the application of regression trees and Adaptive Neuro-Fuzzy Inference System in glass manufacturing process for packaging"
5:30- 5:55 pm Herbert Costa and Alessandro La Neve, "Modeling of an Air Conditioning System through techniques of soft-computing"
6:20- 6:45 pm Antonio Diego Silva Farias, Valdigleis S. Costa, Regivan H. N. Santiago, and Benjamin Bedregal, "The Image Reduction Process Based on Generalized Mixture Functions"
5:05- 6:20 pm Computational Intelligence in Biomedical Applications
Co-chairs: Phuong Nguyen Hoang and Olga Kosheleva (Room B)

5:05- 5:30 pm Tran Manh Tuan, Nguyen Hai Minh, Nguyen Van Tao, Tran Thi Nhan, and To Huu Nguyen, "Medical Diagnosis from Dental X-Ray Images: A Novel Approach Using Clustering Combined with Fuzzy Rule-based Systems"
5:30- 5:55 pm Phan Anh Phong, Tran Dinh Khang, and Dinh Khac Dong, "A Fuzzy Rule-based Classification System using Hedge Algebraic Type-2 Fuzzy Sets"
5:55- 6:20 pm Nguyen Hoang Phuong, "FuzzRESS: A Fuzzy Rule-based Expert System Shell combining Positive and Negative Knowledge for Consultation of Vietnamese Traditional Medicine"

6:20- 6:45 pm Applications Beyond Engineering
Co-chairs: Phuong Nguyen Hoang and Olga Kosheleva (Room B)

Wednesday, November 2, 2016

8:30- 9:00 am registration
9:00- 9:45 am plenary talk, Chair: William Melek
Martine De Cock, "Fuzzy Answer Set Programming: from Theory to Practice"
9:45-10:05 am coffee break
10:05-12:10 pm parallel sessions

10:05-12:10 pm Applications Beyond Engineering (Part 1)
Co-chairs: Fernando Gomide and Mila Kwiatkowska (Room A)

10:05-10:30 am Dalila Kouloughli, Allel Hadjali and Idir Rassoul, "Handling Query Answering in Crowdsourcing Systems: A Belief Function-Based Approach"
10:30-10:55 am Mila Kwiatkowska and Frank Pouw, "The Role of Conceptualization and Operationalization in the Use of Secondary Data"
10:55-11:20 am Marc Osswald, Marcel Wehrle, Edy Portmann, and Alex Denzler, "Transforming Fuzzy Graphs into Linguistic Variables"
11:20-11:45 am Ranyeri Lago Rocha and Fernando Gomide, "Performance Evaluation of Evolving Classifier Algorithms in High Dimensional Spaces"
11:45-12:10 pm Ondrej Vaverka, "Relation-Valued Attributes in Rank-Aware Databases and Related Concepts"

10:05-12:10 pm Fuzzy Pattern Recognition with High Uncertainty (P)
co-chairs Mohammad H. Fazel Zarandi, Burhan Turksen, and Behshad Lahijanian (Room B)

10:05-10:30 am Claudia I. Gonzalez, Juan R. Castro, Olivia Mendoza, Patricia Melin, and Oscar Castillo, "General type-2 fuzzy edge detectors applied to face recognition systems"
10:30-10:55 am B. Lahijanian, M. H. Fazel Zarandi, and F. Vasheghani Farahani, "Double Coverage Ambulance Location Modeling using Fuzzy Traveling Time"
10:55-11:20 am B. Lahijanian, M. H. Fazel Zarandi, and F. Vasheghani Farahani, "Proposing a Model for Operating Room Scheduling Based on Fuzzy Surgical Duration"
11:20-11:45 am Gabriela E. Martinez, Olivia Mendoza, Juan R. Castro, A. Rodriguez-Diaz, Patricia Melin, and Oscar Castillo, "Comparison between Choquet and Sugeno Integrals as aggregation operators for pattern recognition"

11:45-12:10 pm Shima Soltanzadeh, Mohammad Hosein Fazel Zarandi, and Mojtaba Barzegar Astanj, "A Hybrid Fuzzy Clustering Approach for Fertile and Unfertile Analysis"

12:10- 1:35 pm lunch

1:35- 2:20 pm plenary talk, Chair: Vladik Kreinovich
Piero Bonissone, "Analytics for Industrial Internet Applications"

2:20- 3:00 pm general meeting of NAFIPS

3:00  pm buses leave for a banquet
* first, we visit the Dia de los Muertes exhibits at the El Paso Museum of Art
* then, we go to Stateline for the banquet

Thursday, November 3, 2016

8:30- 9:00 am registration
9:00- 9:45 am plenary talk
Christian Servin, "Fuzzy Techniques Help on All Stages of Knowledge and Data Processing: Applied Case Studies"

9:45-10:05 am coffee break

10:05-12:10 pm parallel sessions

10:05-12:10 pm Mathematics and Foundations of Fuzzy
Co-chairs: Barnabas Bede and Thomas Whalen (Room A)

10:05-10:30 am Salem B. Bacha and Barnabas Bede, "On Takagi-Sugeno Approximations of Mamdani Fuzzy Systems"

10:30-10:55 am Mahdokht Afravi and Vladik Kreinovich, "What If We Use Different 'And'-Operations in the Same Expert System"

10:55-11:20 am Srinivasan Raghavendran, "Properties of Intuitionistic Fuzzy Sets of Third Type"

11:20-11:45 am Antonio Diego Silva Farias, Valdigleis S. Costa, Regivan H. N. Santiago, and Benjamin Bedregal, "A Residuated Function in a Class of Mealy type L-Valued Finite Automaton"

11:45-12:10 pm Thomas Whalen, "Caring About Uncertainty"

10:05-12:10 pm High Level Fuzzy Social Networks and Social Media
Co-chairs: Susan Bastani, Mohammad H. Fazel Zarandi, Burhan Turksen, and Mansoureh Naderipour (Room B)

10:05-10:30 am Hosein Hamisheh Bahar, Mohammad H. Fazel Zarandi, and Akbar Esfahanipour, "Generating Ternary Stock Trading Signals Using Fuzzy Genetic Network Programming"

10:30-10:55 am Mahbobeh Es-haghi and Susan Bastani, "Evaluating Coordination in Emergency Response Team by using Fuzzy logic through Social Network Analysis"

10:55-11:20 am Mansoureh Naderipour, Susan Bastani, Mohammad Fazel Zarandi, and Burhan Turksen, "A Fuzzy Classification Using a Type-2 Fuzzy Model in Social Networks"

11:20-11:45 am Hoda Safaeipour, M. H. Fazel Zarandi, and Susan Bastani, "Crisp to Fuzzy Ontology Conversion in the Context of Social Networks: A New Approach"

11:45-12:10 pm Ali Akbar Sadatasl, Mohammad Hossein Fazel Zarandi, and Abolfazl Sadeghi, "A combined facility location and network design model with multi-type of capacitated links and backup facility and non-deterministic demand by fuzzy logic"
12:10- 1:35 pm lunch
1:35- 2:20 pm plenary talk, Chair: Patricia Melin
   Ildar Batyrshin, "Fuzzy Logic Based Analysis of Similarity and
   Association Measures"
2:25- 4:05 pm parallel sessions

2:25- 4:05 pm Engineering Applications
   Co-chairs: Miguel Argaez and Oscar Castillo (Room A)

2:25- 2:50 pm Miguel Argaez and Martin Ceberio, "A model reduction
   for highly non-linear problems using wavelets and Gauss-Newton
   method"
2:50- 3:15 pm Roberto Camacho Barranco and Patricia J. Teller,
   "Resource Consumption Prediction Using Neuro-Fuzzy Modeling"
3:15- 3:40 pm Horacio Florez and Miguel Argaez, "Applications and
   Comparison of Model-Order Reduction Methods based on Wavelets and
   POD"
3:40- 4:05 pm Patricia Ochoa, Oscar Castillo and Jose Soria,
   "Type-2 fuzzy logic in a Fuzzy Differential Evolution method with
   dynamic parameter adaptation"

2:25- 4:05 pm Computing with Words
   Co-chairs: Victor Raskin and Julia M. Taylor-Rayz (Room B)
2:25- 2:50 pm James A. Crowder, "AI Abductive Learning Models"
2:50- 3:15 pm Christian F. Hempelmann, Max Petrenko, and
   Gavin Matthews, "Automatic Discovery of Degrees of Fuzzy Set
   Membership in Ontologies"
3:15- 3:40 pm Julia M. Taylor and Victor Raskin, "Conceptual
   Defaults in Fuzzy Ontology"
3:40- 4:05 pm Yingxu Wang, "From Computing with Words (CW) to
   Reasoning with Fuzzy Concepts (RFC)"

4:05- 4:25 pm coffee break

4:25- 5:40 pm Applications Beyond Engineering (Part 2)
   Co-chairs: Valerie Cross and Mark Wierman (Room A)

4:25- 4:50 pm Emer Bernal, Oscar Castillo, and Jose Soria, "Fuzzy
   Logic for dynamic adaptation in the Imperialist Competitive
   Algorithm"
4:50- 5:15 pm Valerie Cross, "Constructing a Measure of Information
   Content for an Ontological Concept"
5:15- 5:40 pm Mark Wierman, "Solving Games"

4:25- 5:40 pm Miscellaneous
   Co-chairs: Weldon Lodwick and Chrysostomos D. Stylios (Room B)

4:25- 4:50 pm Weldon Lodwick, "A Selected Survey of Useful
   Approaches to Fuzzy and Possibilistic Methods From Data
   Representation to Solution Interpretation: What does 'Produce a
   fuzzy 300 units' mean to an assembly line foreman?"
4:50- 5:15 pm Denise M. Case and Chrysostomos D. Stylios
   "Fuzzy Cognitive Map to Model Project Management Problems"

5:40- 5:55 pm closing of the conference, welcome to NAFIPS'2017

Friday, November 4, 2016
8:00- 5:00 pm trip to Carlsbad Caverns