

# 7<sup>th</sup> Mexican Conference on Pattern Recognition MCPR2015

June 24–27, 2015, Mexico City, Mexico

Center for Computing Research of the National Polytechnic Institute (CIC-IPN)

## PROGRAM

<b>Wednesday June 24 (Multipurpose Room)</b>	
9:00-10:00	<b>Registration</b>
10:00-10:20	<b>Opening</b>
10:20-11:20	Keynote Address  <b>New Training Methods for Recurrent Neural Networks</b>  <b>Professor Martin Hagan</b> School of Electrical and Computer Engineering Oklahoma State University, USA
11:20-11:40	<b>Coffee break</b> <b>-Posters</b> (Postgraduate Students' Meeting)& <b>-Demos</b>
	<b>Session 1: Pattern Recognition and Artificial Intelligent Techniques</b>
11:40-12:00	Recommendation of Process Discovery Algorithms Through Event Log Classification Damián Pérez-Alfonso, Osiel Fundora-Ramírez, Manuel S. Lazo-Cortés and Rociel Roche-Escobar
12:00-12:20	Correlation of Resampling Methods for Contrast Pattern based Classifiers Octavio Loyola-González, José Fco. Martínez-Trinidad, Jesus Ariel Carrasco-Ochoa and Milton García-Borroto
12:20-12:40	Classification of hand movements from non-invasive brain signals using lattice neural networks with dendritic processing Leonardo Ojeda, Roberto Vega, Luis Eduardo Falcon Morales, Gildardo Sanchez-Ante, Humberto Sossa and Javier M. Antelis
12:40-13:00	A different approach for pruning micro-clusters in Data Stream Clustering Argenis Aldair Aroche-Villarruel, José Fco. Martínez-Trinidad, Jesus Ariel Carrasco-Ochoa and Airel Pérez Suárez
13:00-13:20	<b>Coffee break</b> <b>-Posters</b> (Postgraduate Students' Meeting)& <b>-Demos</b>
	<b>Session 2: Pattern Recognition and Artificial Intelligence Techniques</b>
13:20-13:40	Computing constructs by using typical testor algorithms Manuel Lazo-Cortés, Jesus Ariel Carrasco-Ochoa, José Fco. Martínez-Trinidad and Guillermo Sanchez-Diaz
13:40-14:00	Improved Learning Rule for LVQ based on Granular Computing Israel Cruz-Vega and Hugo Jair Escalante
14:00-14:20	A modification of the TPVD algorithm for data embedding J A Hernandez Servin, J R Marcial Romero, Vianney Muñoz Jimenez and H A Montes Venegas
14:20-16:00	<b>Lunch</b>
	<b>Session 3: Pattern Recognition and Artificial Intelligence Techniques</b>
16:00-16:20	Boosting the Permutation Based Index for Proximity Searching Karina Figueroa and Rodrigo Paredes
16.20-16:40	Prototype Selection for Graph Embedding using Instance Selection Magdiel Jiménez-Guarneros, Jesús Ariel Carrasco-Ochoa and José Francisco Martinez-Trinidad
16:40-17:00	Multitask Reinforcement Learning in Nondeterministic Environments Maze Problem Case Sajad Manteghi, Hamid Parvin, Ali Heidarzadegan, and Yasser Nemati
17:00-17:20	A New Method Based on Graph Transformation for FAS Mining in Multi-graph Collections Niusvel Acosta-Mendoza, Jesús Ariel Carrasco-Ochoa, José Fco. Martínez-Trinidad, Andrés Gago-Alonso and José E. Medina-Pagola
17:30-19:00	<b>Welcome Cocktail</b>

<b>Thursday June 25 (Multipurpose Room)</b>	
9:00-10:00	<b>Registration</b>
10:00-11:00	<p>Keynote Address</p> <p><b>Key Issues in Performance Evaluation for Document Analysis Systems</b></p> <p><b>Professor Daniel P. Lopresti</b>  Department of Computer Science and Engineering  Lehigh University, USA  IAPR Invited speaker</p>
11:00-11:20	<b>Coffee break</b> <b>-Posters</b> (Postgraduate Students' Meeting)& <b>-Demos</b>
	<b>Session 4: Applications of Pattern Recognition</b>
11:20-11:40	Modified Binary Inertial Particle Swarm Optimization for Gene Selection in DNA Microarray Data Carlos Garibay, Gildardo Sanchez, Luis E. Falcon-Morales and Humberto Sossa
11:40-12:00	Encoding polysomnographic signals into spike firing rate for sleep staging Sergio Valadez Godínez, Juan Humberto Sossa Azuela, Raúl Santiago Montero and Elizabeth Guevara Martínez
12:00-12:20	Improving Bayesian Networks Breast Mass Diagnosis by Using Clinical Data Verónica Rodríguez-López and Raúl Cruz-Barbosa
12:20-12:40	Patrolling Routes Optimization using Ant Colonies Hiram Calvo, Salvador Godoy-Calderon, Marco Antonio Moreno Armendáriz and Victor Martinez
12:40-13:00	<b>Coffee break</b> <b>-Posters</b> (Postgraduate Students' Meeting)& <b>-Demos</b>
	<b>Session 5: Image Processing and Analysis</b>
13:00-13:20	Rotation Invariant Tracking Algorithm Based on Circular HOGs Daniel Miramontes-Jaramillo, Vitaly Kober and Víctor Hugo Díaz-Ramírez
13:20-13:40	Similarity Analysis of Archaeological Potsherds using 3D Surfaces Edgar Roman-Rangel and Diego Jimenez-Badillo
13:40-14:00	Automatic Segmentation of Regions of Interest in Breast Thermographic Images Adrian J. Villalobos-Montiel, Mario I. Chacon-Murguia, Jorge D. Calderon-Contreras and Leticia Ortega-Maynez
14:00-14:20	Automatic detection of Clouds from ortophotographs of Snowy volcanoes Carolina Chang and Fernando Vaca
14:20-16:00	<b>Lunch</b>
	<b>Session 6: Image Processing and Analysis /Robotics and Computer Vision</b>
16:00-16:20	A Comparative Study of Robust Segmentation Algorithms for Iris Verification System of High Reliability Mireya S. García-Vázquez, Eduardo Garea-Llano, Juan M. Colores-Vargas, Luis M. Zamudio-Fuentes, and Alejandro A. Ramírez-Acosta
16.20-16:40	Vision-Based Humanoid Robot Navigation in a Featureless Environment Julio C. Delgado-Galvan, Alberto Navarro-Ramirez, Jose I. Nunez-Varela, Cesar A. Puente-Montejano and Francisco E. Martinez-Perez
16:40-17:00	Evaluation of local descriptors for vision-based localization of humanoid robots Noé G. Aldana-Murillo, Jean-Bernard Hayet and Héctor M. Becerra
17:00-17:20	NURBS based Multi-Objective Path Planning Sawssen Jalel, Philippe Marthon and Atef Hamouda
20:00-22:00	<b>Conference Dinner</b>

<b>Friday June 26 (Multipurpose Room)</b>	
9:00-10:00	<b>Registration</b>
10:00-11:00	<p>Keynote Address</p> <p><b>Biomedical Computer Vision</b></p> <p><b>Professor Xiaoyi Jiang</b>  Department of Computer Science  University of Münster, Germany</p>
11:00-11:20	<b>Coffee break</b> <b>-Posters (Postgraduate Students' Meeting)&amp; -Demos</b>
	<b>Session 7: Natural Language Processing and Recognition</b>
11:20-11:40	Sampled Weighted Min-Hashing for Large-Scale Topic Mining Gibrán Fuentes-Pineda and Ivan Vladimir Meza-Ruíz
11:40-12:00	A Graph-Based Textual Entailment Method Aware of Real-World Knowledge Saúl León, Darnes Vilariño, David Pinto, Mireya Tovar, and Beatriz Beltrán
12:00-12:20	Semi-Supervised Approach to Named Entity Recognition in Spanish Applied to a Real-World Conversational System Víctor R. Martínez, Luis Eduardo Perez, Francisco Iacobelli, Salvador Suarez Bojórquez and Víctor M. Gonzalez
12:20-12:40	Patterns used to identify relations in corpus using Formal Concept Analysis Mireya Tovar Vidal, David Pinto, Azucena Montes, Gabriel González Serna and Darnes Vilariño Ayala
12:40-13:00	<b>Coffee break</b> <b>-Posters (Postgraduate Students' Meeting)&amp; -Demos</b>
	<b>Session 8: Natural Language Processing and Recognition</b>
13:00-13:20	Improving information retrieval through a global term weighting scheme Luis Daniel Cuéllar, Elva Díaz and Eunice E. Ponce-De-Leon
13:20-13:40	Sentiment Groups as Features of a Classification Model using a Spanish Sentiment Lexicon: a hybrid approach Ernesto Gutierrez, Ofelia Cervantes, David Báez-López and J. Alfredo Sánchez
13:40-14:20	<b>Final Meeting</b>
14:20-16:00	<b>Lunch</b>
	<b>Free Afternoon</b>

<b>Saturday June 27</b>			
9:00-10:00	<b>Registration</b>		
10:00-11:30	<b>Tutorial 1 (Multipurpose Room)</b> <b>Using Neural Networks for Pattern Recognition, Function Approximation, Clustering and Prediction</b> <b>Professor Martin Hagan</b>	<b>Tutorial 2 (Room 1)</b> <b>Challenging Pattern Recognition Problems from the Field of Document Analysis</b> <b>Professor Daniel P. Lopresti</b>	<b>Tutorial 3 (Room 2)</b> <b>Depth Image Analysis and Interpretation</b> <b>Professor Xiaoyi Jiang</b>
11:30-11:45	<b>Coffee break</b>		
11:45-13:00	<b>Tutorial 1 (Multipurpose Room)</b> <b>Using Neural Networks for Pattern Recognition, Function Approximation, Clustering and Prediction</b> <b>Professor Martin Hagan</b>	<b>Tutorial 2 (Room 1)</b> <b>Challenging Pattern Recognition Problems from the Field of Document Analysis</b> <b>Professor Daniel P. Lopresti</b>	<b>Tutorial 3 (Room 2)</b> <b>Depth Image Analysis and Interpretation</b> <b>Professor Xiaoyi Jiang</b>
13:00-13:30	<b>Closing snacks</b>		