

12th Mexican Conference on Pattern Recognition MCPR2020

June 24–26, 2020, Morelia, Michoacán, Mexico

Virtual conference due to the COVID-19 pandemic

Join with Google Meet at meet.google.com/mhz-vskp-uuf

PROGRAM

Wednesday June 24 (Mexican Time UTC-5)	
9:00-9:20	Opening
Session 1: Pattern Recognition Techniques	
9:20-9:40	Fruit Classification for Retail Stores using Deep Learning Jose Luis Rojas-Aranda, Jose Ignacio Nunez-Varela, Juan Carlos, Cuevas-Tello, and Gabriela Rangel-Ramirez
9:40-10:00	Towards Dendrite Spherical Neurons for Pattern Classification Wilfrido Gómez-Flores and Juan Humberto Sossa-Azuela
10:00-10:20	Comparison of Recurrent Neural Networks for Wind Power Forecasting Erick López, Carlos Valle, Héctor Allende-Cid, and Héctor Allende
10:20-10:40	Classification of Cattleya trianae and its Varieties by Using Colorimetry Manuel G. Forero, Carlos E. Beltrán, Armando Troncoso, and Christian González-Santos
10:40-11:00	Break
11:00-12:00	Keynote Address Mathematics of Deep Learning Prof. René Vidal Herschel Seder Professor of Biomedical Engineering and the Inaugural Director of the Mathematical Institute for Data Science at The Johns Hopkins University, USA.
12:00-12:20	Break
Session 2: Pattern Recognition Techniques	
12:20-12:40	Analysis of Repair Costs of Scholar Buildings Affected by Earthquakes Using Data Mining. Case Study: Earthquakes of 2017 in Mexico García-Rueda Graciela, Valdovinos Rosa M., Valdés-González Jesús, Alejo Roberto, González-Ruiz J. Leonardo, and Marcial-Romero José R.
12:40-13:00	Basic Pattern Graphs for the Efficient Computation of its Number of Independent Sets Guillermo De Ita, Miguel Rodríguez, Pedro Bello, and Meliza Contreras
13:00-13:20	Towards Selecting Reducts for Building Decision Rules for Rule-based Classifiers Manuel S. Lazo-Cortés, José Fco. Martínez-Trinidad, Jesús A. Carrasco-Ochoa, and Nelva N. Almanza-Ortega
13:20-13:40	Towards inpainting and denoising latent fingerprints: A Study on the Impact in Latent Fingerprint Identification Ernesto Ramírez-Sáyago, Octavio Loyola-González, and Miguel Angel Medina-Pérez
13:40-15:00	Break(Lunch)
Session 3: Image Processing and Analysis	
15:00-15:20	New Method for Extreme Color Detection in Images Manuel G. Forero, Julián Ávila-Navarro, and Sergio Herrera-Rivera
15:20-15:40	A Simple Methodology for 2D Reconstruction Using a CNN Model Armando Levid Rodríguez-Santiago, José Anibal Arias-Aguilar, Alberto Elías Petrilli-Barceló, and Rosebet Miranda-Luna
15.40-16:00	Improvement of the Turajlić Method for the Estimation of Gaussian Noise in Images Manuel G. Forero, Sergio L. Miranda, and Carlos Jacanamejoy-Jamioy
16:00-16:20	Spatial α -Trimmed Fuzzy C-means Algorithm to Image Segmentation Virna V. Vela-Rincón, Dante Mújica-Vargas, Manuel Mejía Lavalle, and Andrea Magadán Salazar
16:20-16:40	Restoration of Range Images by the Gaussian Pyramid Method, Testing Different Interpolation Techniques to Select the Best Performance Enrique Chavira Calderón and Alejandra Cruz-Bernal
Added 16:40-17:00	Machine Learning Techniques for Identity Document Verification in Uncontrolled Environments: A Case Study Alejandra Castelblanco, Jesus Solano, Christian Lopez, Esteban Rivera, Lizzy Tengana, and Martín Ochoa

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Thursday June 25 (Mexican Time UTC-5)	
Session 4: Industrial and Medical Applications of Pattern Recognition	
9:00-9:20	Cursive Handwritten OCR System Using Novel Pre-processing Techniques and Deep Learning Models Nidhi, Debasmita Ghosh, Dharmendra Chaurasia, Siddhant Gupta, Asmita Mahajan and Saurav Mondal.
9:20-9:40	A Method for Estimating Driving Factors of Illicit Trade Using Node Embeddings and Clustering Jorge Ángel González Ordiano, Lisa Finn, Anthony Winterlich, Gary Moloney, and Steven Simske
9:40-10:00	Accurate Identification of Tomograms of Lung Nodules using CNN: Influence of the Optimizer, Preprocessing and Segmentation Cecilia Irene Loeza Meja, R. R. Biswal, Eduardo Rodriguez-Tello, and Gilberto Ochoa-Ruiz
10:00-10:20	What the Appearance Channel from Two-Stream Architectures for Activity Recognition is Learning? Reinier Oves García and L. Enrique Sucar
10:20-10:40	Automatic Estrus Cycle Identification System on Female Dogs based on Deep Learning Gustavo Calderón, Cesar Carrillo, Mariko Nakano, Jeanine Acevedo, and José Ernesto Hernández
10:40-11:00	Break
11:00-12:00	Keynote Address Biases in Social Media Data Prof. Ricardo Baeza-Yates Director of Graduate Data Science Programs of Northeastern University, Silicon Valley campus, USA.
12:00-12:20	Break
Session 5: Image Processing and Analysis	
12:20-12:40	A Novel Set of Moment Invariants for Pattern Recognition Applications based on Jacobi Polynomials Rafael Augusto Rocha Angulo, Juan Martín Carpio, Alfonso Rojas-Domínguez, Manuel Ornelas-Rodríguez, and Héctor Puga
12:40-13:00	Orthogonal Local Image Descriptors with Convolutional Autoencoders Edgar Roman-Rangel and Stephane Marchand-Maillet
13:00-13:20	Digital Assisted Image Correlation for Metal Sheet Strain Measurement García-Alcalá Carlos-Eduardo, Padilla-Medina José-Alfredo, and Barranco-Gutiérrez Alejandro-Israel
13:20-13:40	Structured Pointcloud Segmentation for Individual Mangrove Tree Modeling José L. Silván-Cárdenas, José A. Gallardo-Cruz, and Laura M. Hernández-Huerta
13:40-15:00	Break(Lunch)
Session 6: Computer Vision	
15:00-15:20	Vision-based Blind Spot Warning System by Deep Neural Networks Víctor R. Virgilio G., Humberto Sossa, and Erik Zamora
15:20-15:40	Onboard CNN-based Processing for Target Detection and Autonomous Landing for MAVs A. A. Cabrera-Ponce and J. Martinez-Carranza
15.40-16:00	COUPLED: Calibration of a LiDAR and Camera Rig using Automatic Plane Detection Omar Montoya, Octavio Icasio, and Joaquín Salas
16:00-16:20	ModuleNet: A Convolutional Neural Network for Stereo Vision Renteria-Vidales O.I., Cuevas-Tello J.C., Reyes-Figueroa A., and Rivera M.

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Friday June 26 (Mexican Time UTC-5)	
9:00-10:00	Keynote Address Quantum computing: from scientific research to high-tech markets Prof. Salvador Elías Venegas-Andraca Head of the Quantum Information Processing group at Tecnológico de Monterrey, Mexico.
10:00-10:20	Break
Session 7: Natural Language Processing and Recognition	
10:20-10:40	Towards Selecting Reducts for Building Decision Rules for Rule-based Classifiers Manuel S. Lazo-Cortés, José Fco. Martínez-Trinidad, Jesús A. Carrasco-Ochoa, and Nelva N. Almanza-Ortega
10:40-11:00	Not all Swear Words are Used Equal: Attention over Word n-grams for Abusive Language Identification Horacio Jesús Jarquín-Vásquez, Manuel Montes-y-Gómez, and Luis Villaseñor-Pineda
11:00-11:20	Gender Identification in Social Media Using Transfer Learning Aquilino Francisco Sotelo, Helena Gómez-Adorno, Oscar Esquivel-Flores, and Gemma Bel-Enguix
11:20-11:40	Break
Session 8: Computer Vision	
11:40-12:00	Experimental Study on Transfer Learning in Denoising Autoencoders for Speech Enhancement Marvin Coto-Jiménez
12:00-12:20	A Preliminary Study on Score-based Hyper-heuristics for Solving the Bin Packing Problem A. Silva-Gálvez, E. Lara-Cárdenas, I. Amaya, J. M. Cruz-Duarte, and J. C. Ortiz-Bayliss
12:20-12:40	Learning Classifier Systems with Hebbian Learning for Autonomus Behaviors Marco Ramos, Vianney Muñoz-Jiménez, and Félix F. Ramos
12:40-13:20	Final Meeting