

# Conference Program



**Madrid, Spain**  
**January 18-19, 2020**

**Conference Location:**

**H10 Tribeca**

**Calle de Pedro Teixeira, 5, 28020, Madrid, Spain**

**<https://www.h10hotels.com/en/madrid-hotels/h10-tribeca>**

Saturday 18th January 2020

Conference Room: A

Time: 09:00-09:30

Plenary Lecture:



**Modern Robots are Cyberphysical Systems: Personal Assistants and Online Shopping Warehouses**

by Professor Angel P. Del Pobil

Department of Engineering and Computer Science,

UJI Robotic Intelligence Laboratory,

Jaume I University, Castelló de la Plana, Castelló, SPAIN.

Conference Room: A

Time: 09:30-10:00

Plenary Lecture:



**Using the Sequences of Linear Operators to Approximate Signals**

by Professor Octavian Agratini

Faculty of Mathematics and Computer Science,

Babeş-Bolyai University, Cluj-Napoca, ROMANIA.

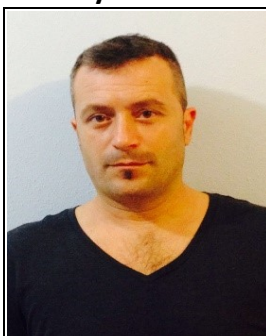
and Tiberiu Popoviciu Institute of Numerical Analysis,

Cluj - Napoca, ROMANIA.

Conference Room: A

Time: 10:00-10:30

Plenary Lecture:



**Applying Image Processing Techniques for Neurodegenerative Diseases**

by Professor Carlos M. Travieso-Gonzalez

University of Las Palmas de Gran Canaria,

Las Palmas de Gran Canaria, SPAIN.

10:30-11:00: Coffee Break

**Saturday 18th January 2020**

**Conference Room: A**

**Time: 11:00-13:00**

**Title: Energy and Environment and Climate Change**

**Chair: Domenico Guida**

Supercritical Fluid Extraction of Lycopene and Omega-3	Maria Margotta, Domenico Guida
Soil Pollution Element Content and Size Distribution of Particles Released by Abused Prismatic Ni-rich Automotive Lithium-Ion Batteries	Hewu Wang, Yajun Zhang, Weifeng Li, Cheng Li, Minggao Ouyang
Air Environment of Premises of the Educational Institution as a Risk Factor of the Development of Diseases among Studying Youth	Nadezhda V. German, Galina A. Sevriukova, Elena E. Nefed'eva, Vladimir F. Zheltobriukhov, Alla A. Okolelova
One-dimensional Modeling of Contaminant Migration in Unsaturated Porous Media with Dispersed Catalyst Particles	Anatolyy Vlasyuk, Viktor Zhukovskyy, Natalya Zhukovska, Rajab Hesham
Halophytic Crops for Soil Desalination of Salty Soils Irrigated with Salty Water of Oasis of Ouargla-Algeria	Yamina BenBessis, Mohamed Taher Halilat, Nesrin Salhi
Determining the Nitrogen Balance of Wheat Fertilizer and Potential Environmental Consequences in the Field of Dukagjini	Kelmendi B., Cacaj I., Berisha D., Elshani A., Gashi V.
Solar Impact on Hydrological Cycle	R. K. Mishra
Biodynamic of Helminths Eggs and Larvae in the Surface Water of Bamenda (North West Region, Cameroon): Influence of Physicochemical Parameters and Health Impact	Mbouombouo Mama, Ajeegah Gideon, Tchakala Ibrahim, Enah Dickson, Kodom Tomkouani, Gnon Baba

**Saturday 18th January 2020**

**Conference Room: A**

**Time: 13:00-15:00**

**Title: Management Systems, Ecosystems and Sustainable Development**

**Chair: Badea Lepadatescu**

Evolution of Trade Credit in Romania – Trends and Challenges	Gheorghe Catalin
Mitsubishi Electric S Robot Teaching Course Design	Whe-Min Wang, Horng-Jinh Chang
Researches Regarding the Influence of Motivation and Reaction Time on the Efficiency of Decision	Popescu Mihaela
Improving Service Quality using Consumers' Complaints Data Mart which Effect on Financial Customer Satisfaction	Alaa Khalaf Hamoud, Hisham Noori Hussien, Eman Talib Jasim, Arwa Akram Fadhil, Zahraa Raad Ekal
Studies on Visibility Embarrassment due to Traffic from the Opposite Direction	Thierheimer Alexandru, Alexandru Cătălin, Sifft Michael, Crauciuc Daniel, Thierheimer Walter Wilhelm
Study Regarding the Driver's Behavior with Respect to the Structure of the Damages in the Automotive Accidents	Ioan Ghimbaseanu
Strategic Purchasing and Health System Efficiency: Prospects for Health Sector Reform in Latvia	Māra Pētersone, Kārlis Ketners, Dainis Krieviņš, Ingars Erins
Multi-Attribute Group Decision Making Method based on Geometric and Average Bonferroni Mean Operators of Triangular Interval Type-2 Intuitionistic Fuzzy Environment	Sukhveer Singh
Simulation Model of Work Motivation and Turnover Intent Estimation	Madara Pratt, Sarma Cakula, Mohcine Boudhane, Nazim Taskin

**15:00-15:30: Coffee Break**

## Saturday 18th January 2020

**Conference Room: A**

**Time: 15:30-17:30**

**Title: Computer Science and Computer Engineering**

**Chair: Ching-Ting Hsu, Nicholas Nechval**

Investigation of Secure Mobile Agents as a Tool in Intrusion Detection Systems	Georgi Tsochev, Roumen Trifonov, Slavcho Manolov, Galya Pavlova
Implementation of IoT Device on Public Fitness Equipment for Health Physical Fitness Improvement	Ching-Ting Hsu, Yang-Hung Chang, Jen-Shi Chen, Wei-Hua Ho, Hau-Han Lin, Jo-Yin Chou
Fog Computing: Characteristics, Challenges and Issues	Muneer Bani Yassein, Ismail Hmeidi, Farah Shatnawi, Saif Rawashdeh, Omar Alzoubi
Intelligent Constructing Exact Tolerance Limits for Prediction of Future Outcomes Coming from Log-Location-Scale Distributions under Parametric Uncertainty	Nicholas Nechval
A New Approach to Mathematical Modeling of Magnetic Coagulation	Menshov Eugene Nikolaevich
Model for Development of Nautical Ports in the Republic of Croatia from 2008 to 2028	Eli Marušić, Maja Račić, Vinko Vidučić
Perimeter Entropy and Its Application to Climate Change	Hongxing Cao, Jie Zhou, Jian Song, Rong Zhi
Comparative Taxa Composition, Biomass and Trophic Level of Foliage Insects among Different Cultivars Viz. Musambi, Fruiter and Kinnow	Hafiza Ammara Tahir, Naureen Rana, Sobia Kanwal, Ahmad Saeed Khan, Mahnoor Ijaz, Shahla Nargis, Muhammad Zafar Iqbal, Senha Nadeem
Comparative Existence of Soil Macro-invertebrate Fauna around Canal and River Bed Territory	Naureen Rana, Saima Skindar, Shahla Nargis, Sobia Kanwal, Somia Afzal, Mahnoor Ijaz, Muhammad Zafar Iqbal, Munawar Ali

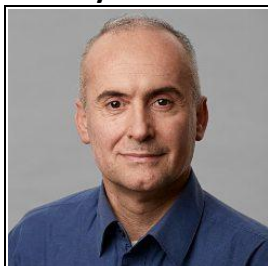
**17:30 Welcoming Drink**

Sunday 19th January 2020

Conference Room: A

Time: 09:00-09:30

Plenary Lecture:



**Optimal Control and Observation of Efficient Motions in Electromagnetic Actuators**

by Professor Paolo Mercorelli  
Institute of Product and Process Innovation - PPI,  
Leuphana University of Lüneburg,  
Lüneburg, GERMANY.

Conference Room: A

Time: 09:30-10:00

Plenary Lecture:



**Control Properties of Multiagent Dynamical Systems Modelling Brain Neural Networks**

by Professor Maria Isabel Garcia-Planas  
Department of Mathematics,  
"Universitat Politecnica de Catalunya,  
Barcelona, SPAIN.

**Sunday 19th January 2020**

**Conference Room: A**

**Time: 10:00-10:30**

**Plenary Lecture:**



**Research and Development of Circular Polarization Radar Antenna for Remote Sensing Schemes**

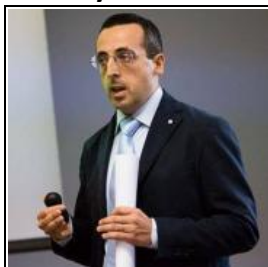
by Professor Atsushi Fukasawa

Chiba University and Technical Adviser Musasino Co. Ltd,  
Tokyo, JAPAN.

**Conference Room: A**

**Time: 10:30-11:00**

**Plenary Lecture:**



**Speech Assessment based on Entropy and Similarity Measures**

by Professor Michele Della Ventura

Music Academy 'Studio Musica',  
Treviso, ITALY.

**11:00-11:30: Coffee Break**



Sunday 19th January 2020

**Conference Room: A**

**Time: 11:30-13:30**

**Title: Circuits, Signal Processing and Electronics**

**Chair: Atsushi Fukasawa**

Circular Polarization Antenna with Elliptic Feed- and Reactance-Elements using Glass Epoxy Substrates	Yumi Takizawa, Atsushi Fukasawa, Cahya Edi Santosa, Josaphat Tetuko Sri Sumantyo
Procedures of Power Distribution in Propulsion System of Torpedo-shaped Underwater Vehicle	Jerzy Garus
Study of Circular Polarization Plane Antenna using Glass Epoxy Substrates for Lowcost Fabrication	Atsushi Fukasawa, Yumi Takizawa, Cahya Edi Santosa, Josaphat Tetuko Sri Sumantyo
The Influence of Covariance Hankel Matrix Dimension on Algorithms for VARMA Models	Celina Pestano-Gabino, Concepción González-Concepción, María Candelaria Gil-Fariña
Towards Smart Cities: A Low-Cost Battery Operating Electronic System for Vehicles Smart Parking	Mirco Muttillio, Gianluca Barile, Tullio Gabriele, Alfiero Leoni, Fabrizio Fiore Don
The Parameter Setting Effects on the Neural Network Image Classification Algorithms	Rich Lee, Ing-Yi Chen, Hsiang-Ying Wang
On the Use of Rail-To-Rail Second Generation Voltage Conveyor for Interfacing Integrated Si-based Photomultipliers	Gianluca Barile, Alfiero Leoni, Mirco Muttillio, Leila Safari, Emanuele D'Amico
RF Energy Harvester Rectifier Block Design Optimization: a Comparison with a Commercial Device	Davide Colaiuda, Alfiero Leoni, Iolanda Ulisse

Sunday 19th January 2020

**Conference Room: A**

**Time: 13:30-15:30**

**Title: Mathematics and Computers in Mechanical Engineering and Applied Physics**

**Chair: Victor Okolnishnikov, Ander Arbelaiz**

On the Behavior of One Stochastic Automaton in a Random Environment	Tariel Khvedelidze
Modelling of Longwall Coal Mining	Victor Okolnishnikov
Thrusters Physical Model Formalization with Regard to Situational and Identification Factors of Motion Modes	Vitalii Budashko
Meta-modeling of Lattice Mechanical Responses via Design of Experiments	Diego Montoya-Zapata, Diego A. Acosta, Camilo Cortés, Juan Pareja-Corcho, Aitor Moreno, Jorge Posada, Oscar Ruiz-Salguero
Fast Spectral Formulations of Thin Plate Laser Heating with GPU Implementation	Daniel Mejia-Parra, Ander Arbelaiz, Aitor Moreno, Jorge Posada, Oscar Ruiz-Salguero
Properties of Theta-Continuous Functions in Topological Spaces	Raja Mohammad Latif
Quarry Limestone Dust as Fine Aggregate for Concrete	L. Cavaleri, R. P. Borg, F. P. La Mantia, V. Liguori

**15:30-16:00: Coffee Break**

Sunday 19th January 2020

**Conference Room: A**

**Time: 16:00-18:00**

**Title: Pure and Applied Mathematics**

**Chair: Ilgar Jabbarov**

On the Number of Lattice Points in the Shifted Circles	Ilgar Jabbarov, Natiga Aslanova, Esmira Jeferli
Bringing Mathematics to Engineering: Online Learning-Teaching Model	J. Bilbao, E. Bravo, O. García, C. Rebollar, C. Varela, A. Uukkivi, O. Labanova, M. Latõnina, E. Safiulina, A. Cellmer, J. Cymerman, Igor Kierkosz, K. Brown, G. Kelly, A.P. Lopes, F. Soares, C. Feniser, V. Bocanet, F. Rusu
Y-continuity and Y-connectedness in Topological Spaces	Raja Mohammad Latif
A New Algebraic Approach to the Graph Isomorphism and Clique Problems	Roman Galay
Characterizations of M-Compactness and M-Connectedness in Topological Spaces	Raja Mohammad Latif
Almost $\alpha$ -Topological Vector Spaces	Raja Mohammad Latif

**Sunday 19th January 2020**

**Conference Room: A**

**Time: 18:00-18:30**

**Plenary Lecture:**



**Assessment of Macro-diversity Systems Performance under the Influence of Specific Shadowing, Fading and Co-channel Interference**

by Professor Dragana Krstic  
Faculty of Electronic Engineering,  
University of Nis, Nis, SERBIA.

**Conference Room: A**

**Time: 18:30-19:00**

**Plenary Lecture:**



**Study Regarding Elaboration of a Theoretical Model of the Grinding Process and Its Influence on the Environment**

by Professor Badea Lepadatescu  
Transylvania University of Brasov,  
Brasov, ROMANIA.

**20:00: Conference Dinner**