



International Conference on Modelling and Simulation in Engineering, Economics and Management (MS'10)

Barcelona, 15 – 17 July 2010

CONFERENCE PROGRAM

Note that the Best Paper Award and the Best Student Paper Award will be given during the Closing Ceremony, Friday, 17:30h – 18:00h.

Each presentation should be about 20 minutes (17–18 min. presentation + 2–3 min. questions).

THURSDAY, July 15th, 14:30h – 16:30h

Room 101: Modelling in Economics and Politics (English Presentations)

Chairman: Iyd Eqqab Maree

- Modelling of Economic Risk and Uncertainty in Large Infrastructure Projects
Hans Schjaer-Jacobsen
- Based Presentation of Macroeconomic Systems Evolution
Leonid A. Kuznetsov
- Modelling of Selected Economic Time Series using the N-Regime Models
Anna Petrickova, Jana Lencuchova
- Macroeconomic Flows in CEFTA Countries
Milica Bulajic, Dragana Kragulj, Sandra Jednak
- Simulation Approach to Testing Regime-Switching Models for Slovak Alpine River Flows
Magda Komornikova, Danusa Szokeova, Jozef Komornik
- Algorithm Applied in the Identification of Stakeholders
Anna M. Gil-Lafuente, Luciano Barcellos Paula

Room 102: Modelling and Simulation (English Presentations)

Chairman: Christian Berger-Vachon

- Support Vector Machine for Modelling Design Parameters in Circular and Triangular Microstrip Patch Antennas
M. Cacciola, G. Megali, S. Calcagno, M. Versaci, F.C. Morabito
- Parallel-Hierarchical Transformation as the System Model of Effective Artificial Intelligence Tools
L.I. Timchenko, N.I. Kokriatskaia, I.D. Ivasyuk, G.L. Kosenko, R.V. Makarenko
- Modelling, Simulation and VHDL Implementation of Distributions Based PWM Controller
Emil Pop, Monica Leba
- Simulating the Stimulation Rate Effects on Speech Recognition for Unilateral and Bilateral Cochlear Implant Modes, in Quiet and in Noise
Fathi Kallel, Ahmed Ben Hamida, Christian Berger-Vachon
- Modelling and Simulation as Integrated Tool for Research and Development
Florin Ionescu
- Stability Theory Methods in Modelling Problems
Lyudmila K. Kuzmina

Room 104: Aggregation Operators & Decision Making (English Presentations)

Chairman: José M. Merigó

- Creating Truth-telling Incentives with the Bayesian Truth Serum
Drazen Prelec, Ray Weaver
- The Induced Generalized OWAWA Distance Operator
José M. Merigó, Anna M. Gil-Lafuente
- Decision Making in Strategic Business Management
Aras Keropyan, Anna M. Gil-Lafuente
- 2G: A Classification Algorithm based on Pattern Recognition and Decision Trees
María de Guadalupe Cota, Pedro Flores
- Decision Making Techniques in a Unified Model between the Weighted Average and the OWA Operator
José M. Merigó, Anna M. Gil-Lafuente
- Artificial Intelligence on the Routing Process Optimization
Omar Danilo Castrillón, Diana María Cardenas, Jaime Alberto Giraldo, Lina Eliana Ávila

Room 105: Fuzziness in Marketing & Sports (English or Spanish Presentations)

Chairman: Jaime Gil Lafuente

- Model for the Estimation of Variables that Take Part in the Decision Making Process of the Population Towards Attitudes of Social Commitment
Anna M. Gil-Lafuente, M^a Luisa Solé Moro
- The Optimization in Pos Advertising through a Fuzzy Model based on the Application of Neuromarketing Techniques
Jaime Gil-Lafuente, Josep Maria Tortosa Vidal, Jordi Aymerich Martínez
- Main Factors to Mainstream Debt for Shaping Capital Structure in Service, Trade, Transformation Construction Sectors, Mining Industry and Telecommunications in Mexico
Juan Gaytán Cortés, José Sánchez Gutiérrez, Joel Bonales Valencia
- A Model for Junior Football Players Valuation
José M. Brotons
- The Selection of the Pilot Product Best Suited to a Target Segment
Jaime Gil-Lafuente, Julio Rojas-Mora
- Model of Hierarchical Structuring Variables of Exporting Companies
Joel Bonales Valencia, Juan Gaytán Cortés, José Sánchez Gutiérrez

Room 106: Fuzziness in Finance & Tourism (English or Spanish Presentations)

Chairman: Federico González Santoyo

- A Nanotechnology Joint Investment Framework
María Teresa Casparri, Javier Garcia Fronti
- Fuzzy Analysis for Assets Replacement
Federico González Santoyo, Beatriz Flores Romero, Juan J. Flores, Anna M. Gil-Lafuente, R. Chávez
- Introducing Fuzzy Numbers in the Study of the Viability of a Treasury Forecast
Salvador Linares Mustarós, Joan Carles Ferrer Comalat, Elvira Cassú Serra, Dolors Corominas Coll
- Validating the Pecking Order Theory in the Spanish Chemical Industry
Xavier Càmara-Turull, Xavier Borràs Balsells, María Teresa Sorrosal Forradellas, María Ángeles Fernández Izquierdo
- Choice of Market Entry Mode into a Foreign Market: The Case of Balearic Hotel Chains in the Caribbean Region and Gulf of Mexico
Onofre Martorell Cunill, Carles Mulet Forteza, Antonio Socías Salvá

- A Study on the Stability of Beta Coefficients of Sectorial and Subsectorial Portfolios in an Uncertain Environment
Antonio Terceño, Gloria Barberà, Hernán Vigier, Yanina Laumann

Room 107: Modelling & Simulation: Applications (English Presentations)

Chairman: A. Oulad Said

- Effect of Soil Fertility on Growth and Oil Content of Bio-diesel Plant *Jatropha Curcas L* in Ambikapur India
H.D. Mahar, Rijwan Ulla, Divya Tripathi, Jitedra Soni
- Labview Simuling Program for Automation of the Aggressive Waters Neutralization, Waters Resulted from some Technological Processes
Stelian Valentin Casavela, Visalon Dan
- Measurement of Ecological Parameters of Parthenium Hysterophorus weed and its socio-economic impacts in India
Kaushalya Bhagat, H.D. Mahar, Rijwan Ulla, J.J. Gupta
- Medicinal Plants of Surguja Forest in India and their Biomedical Application in Arthritis Cure
Rijwan Ulla, Anit Chatterjee, Itendra Soni, H.D. Mahar, Sangeeta Ghose, Harkesh Jaiswal
- Conception and Simulation of the Quarter Wave Rectangular Patch Antenna in the Band “S”
A. Oulad Said, A. El Ouadih, A. Latif
- Distribution of Medicinal Plants and their Application by Tribes of Chhattisgarh State in India
A.K. Chatterjee, Sangeeta Ghose, H.D. Mahar, J.K. Soni, H.K. Jaiswal

Room 108: Modelling & Simulation in Engineering (English Presentations)

Chairman: Pablo Sebastián García

The session in Room 108 is from 14:30h – 15:30h.

- Fundamental Matrix Approach in Solving Practical Stability for Distributed Parameter Systems
Djordje N. Dihovicni, Miroslav Medenica
- Thermomechanical Treatment of 7020 A1 Alloy
Shawnim R. Jalal
- Fast Fourier Transform Ensemble Kalman Filter with Application to a Coupled Atmosphere-Wildland Fire Model
Jan Mandel, Jonathan D. Beezley, Volodymyr Y. Kondratenko

FRIDAY, July 16th, 08:30h – 10:30h

Room 101: Financial Modelling (English Presentations)

Chairman: Jorge de Andrés

- Realistic Agent-Based Simulation of Financial Crises: The 1998 Turmoil
Bárbara Llacay, Gilbert Peffer
- Financial Relations of National Park Agencies in Latvia: Opportunities for ICT and Dynamic Modelling
Iluta Berzina, Agita Livina
- Claim Reserving with Fuzzy Regression and the Two Ways of ANOVA
Jorge de Andrés Sánchez
- A Business Intelligence Software Made in Romania: A Solution for Romanian Companies during the Economic Crisis
Eduard Edelhauser, Andreea Ionica, Lucian Lupu-Dima
- Duration and Uncertainty: A Comparative Analysis for Indexed Bonds
Aurelio Fernández, María-José Garbajosa-Cabello, María-Belén Guercio
- Media Audiences Prediction: A Model
Anna M. Gil-Lafuente, Luis Amiguet Molina

Room 102: Fuzzy Systems (English Presentations)

Chairman: Yuriy Kondratenko

- On Hybridization of Probabilistic and Fuzzy Approaches to Propagate Randomness and Epistemic Uncertainty in Risk Assessment Models
Vasile Georgescu
- Fuzzy Decision Making with Probabilities and Induced Aggregation Operators
José M. Merigó, Kurt J. Engemann
- Structural Optimization of Linguistic Knowledge Base of Fuzzy Controllers
Yuriy P. Kondratenko, Leonid P. Klymenko, Eyad Yasin Mustafa Al Zu'bi
- Integrating Sustainability through Fuzzy Logic: Fortune Global 100 Sustainability Rating
Elena Escrig-Olmedo, Juana María Rivera-Lirio, María Jesús Muñoz-Torres, María Ángeles Fernández-Izquierdo
- Fuzzy and PID Controls of FES-Assisted Walking with Body Weight Transfer: Simulation Studies
R. Jailani, M.O. Tokhi, S.C. Gharooni

- Decision Making with the Generalized Probabilistic Weighted Averaging Distance Operator
José M. Merigó, Montserrat Casanovas

Room 104: Modelling & Simulation (English Presentations)

Chairman: Lyudmila Kuzmina

- Modelling, Simulation and Power Management of a Stand-Alone Wind/Photovoltaic Energy System
Djamila Rekioua, Toufik Rekioua
- Symbolic Computations in Design and Modelling of Nonlinear Control
A.A. Dyda, E.V. Lubimov, S. Di Gennaro
- Digital Controller Modelling, Simulation and Design using Logic Neural Networks
Monica Leba, Emil Pop
- Solution of Applied Problems: Formalization, Methodology and Justification
Victor Krasnoproshin, Vladimir Obraztsov, Herman Vissia
- Functional Coordinates
Samir Zaki Mohamed Mehrez
- Projecting Demographic Scenarios for a Southern Elephant Seal Population
Mariano A. Ferrari, Claudio Campagna, Mirtha N. Lewis

Room 105: Engineering Applications (English Presentations)

Chairman: Egils Ginters

- Towards a Framework for Road Network Vulnerability Assessment
Sjoerd Mevissen, Edwin Dado
- The Influence of Barrel Rifling Twist on the Stability of a Projectile
Iyd Eqqab Maree
- Easy Communication Environment for Distributed Simulation
Artis Silins, Egils Ginters, Dace Aistrauta
- The Effect of Space Environments Factors on Spacecraft Structure
Safeen Yaseen Ezaldeen
- Agent-Based Tempermod Approach for Applicants Character Recognition
Ieva Lauberte, Egils Ginters
- Towards an Advanced Virtual Testing Environment for Concrete Materials
Edwin Dado, Eddie Koenders, Sjoerd Mevissen

Room 106: Business Administration (English or Spanish Presentations)

Chairman: Joan Carles Ferrer

- Level of Influence of the Variables in the Process of the Knowledge Management: A Quantification over the Theory of Uncertainty
Gerardo Gabriel Alfaro Calderón
- The Improvement of the Key Processes in a Terminal of Containers: An Application of the Discrete Simulation
Ileana Pérez Vergara, Rosario Garza Ríos
- Analysis of Contract Flexibility by using Modelling and Simulation
Wendy Haddad Carraro, Joao Luiz Becker
- Searching for Entrepreneurial Excellence: An Approach to ELECTRE II Philosophy
Giselle Pino León, Rosario Garza Ríos, Ileana Pérez Vergara
- Hybrid Modelling of Capillary Distribution System in the Food Chain of Different Locations South of Bogota
Oscar Javier Herrera Ochoa
- Decision Support Model for Early Alert of Meteorological Severe Events
Alaín Calzadilla Rivero, José A. Díaz Batista

Room 107: Management (English Presentations)

Chairman: Johnnie E.V. Johnson

- Strategies of Improvement for the Supply Chain of the Granadilla in Tolima's and Cundinamarca Departments -Colombia-
Ever Angel Fuentes
- Modeling Competitive Events to Explore Market Inefficiency: Evidence from the UK Horserace Betting Market
Ming-Chien Sung, Johnnie E.V. Johnson
- Simulation of a Multi-Product Inventory Model for Importation and Distribution of Line Products Companies in Bogotá D.C.
Jorge Luis Sandoval, Ever Angel Fuentes, Luis Enrique Rojas
- An Analysis Procedure for Economic Investment Plans in Indian Society
Pratibha Singh
- Modelling the Manner in which Sporadically Changing Information is Accounted for by Traders in a Betting Market
J.E.V. Johnson, M. Sung, R.J. O'Brien

- Application of Genetic Algorithm for Scheduling Call Center Servers
Luz Adriana Aragón, Ever Angel Fuentes, Ana Gabriela Canón

Room 108: General Applications (English Presentations)

Chairman: Emilio Vizuete

- Approach of Evaluation of Environmental Impacts using Backpropagation Neural Network
Jelena Jovanovic, Zdravko Krivokapic, Sabrija Ramovic, Aleksandar Vujovic
- Effect of Heat Input and Environmental Temperature on the Welding Residual Stresses using ANSYS APDL Program Comparison with Experimental Results
Nazhad A. Hussein
- Magnetic Field Effect on the Near and Far Cylinder Wakes
M. Aissa, A. Bouabdallah, H. Oualli
- 5 Gb/s Low-Noise and High Bandwidth 0.35 μm CMOS Transimpedance Amplifier
Escid Hammoudi, Attari Mokhtar
- Sphalerite Dissolution Activity in the Presence of Sulphuric Acid by using the Pitzer's Model
Begar Abdelhakim, M.A. Djeghlal, A. Begar, A. Douair
- Implementation of a Filter Technique with Simulation Software Promodel
Jaime Alberto Giraldo, William Ariel Sarache, Omar Danilo Castrillón

FRIDAY, July 16th, 16:00h – 17:00h

Room 101: Human Resources (English Presentations)

Chairman: Aras Keropyan

- Quality Evaluation of the Human Action Performing in a Working System using Fuzzy Logic
Andreea Ionica, Monica Leba, Eduard Edelhauser
- A Personnel Selection Model within the Strategic Human Resource Management Process using the Galois Group Theory
Aras Keropyan, Anna M. Gil-Lafuente
- Methods of Proximity for Personnel Selection through Competitions
Rosario Garza Ríos, Ileana Pérez Vergara, Caridad González Sánchez

Room 102: Computational Intelligence Techniques (English Presentations)

Chairman: Luciano Barcellos

- Induced Generalized Aggregation Operators in the Probabilistic OWAWA Operator
José M. Merigó
- Probabilistic Modelling using Copula Functions based Bayesian Approach
Pranesh Kumar
- Job Shop Problem Analysis through an Evolutionary Algorithm
Omar Danilo Castrillón, William Ariel Sarache, Jaime Alberto Giraldo

Room 104: Marketing (English Presentations)

Chairman: Carolina Luis Bassa

- Impact of Campaigns for the Prevention of Alcohol Abuse in Adolescence
Agustí Casas Romeo, Rubén Huertas García, Ester Subirà Lobera
- The Use of Expertons for Complaint Handling in a CRM Strategy
Anna M. Gil-Lafuente, Carolina Luis Bassa
- Business Modelling for e-CRM Systems: Applying UML Specifications
Calin Gurau

Room 105: Fuzzy Systems (English or Spanish Presentations)

Chairman: Josefa Boria

- Optimal Planification of Bidimensional Tables with Fuzzy Numbers and Summatory Restrictions
Xavier Bertran Roure, Joan Bonet Amat, Guillem Bonet Carbó, Salvador Linares Mustarós
- A Tool for Objectives Definition in the MKDD Methodology for Data Mining Studies
Anna M. Gil-Lafuente, Emilio Vizuete, Josefa Boria
- Decision Support Model for Information Systems Integration in Supply Chains: A Fuzzy Approach
Dania Pérez Armayor, José A. Díaz Batista

Room 106: Economics and Politics (English or Spanish Presentations)

Chairman: M^a Luisa Solé

- Linguistic Approach for Evaluating Basic Needs Dissatisfaction
Luisa L. Lazzari, María J. Fernández
- Causal Structure and Systemic Approach in Economics
Pablo S. García
- Chaotic Dynamics and Macroeconomics Shock Amplification
Esteban Otto Tomasz, María Teresa Casparri

Room 107: Engineering Modelling (English Presentations)

Chairman: Xavier Bertrán

- Nonlinear Theory of Simple Microelastic Solids: Application to Concrete
O. Bélaidi Chabane, M. Almansaba, N.E. Hannachi, Y. Labadi
- Three Parallel Jets Interaction with High Velocity Ratio
Nassira Nouali, Amina Mataoui
- Multiple Criteria Decision Making Modeling: An AHP Application to Production Layout
Ricardo de Carvalho, Fernando Augusto Silva, Valério Antonio Pamplona

Room 108: General Applications (English Presentations)

Chairman: Prakesh Kumar

- Spring Brake Orthosis for FES-Assisted Walking with Wheel Walker
R. Jailani, M.O. Tokhi, S.C. Gharooni

- The Computer Executive-Aided Simulation of Chemical Plans: A Case Study of the Synthesis of Cumene
I.S. Ike, L.E. Aneke, K.B. Oyoh
- Fuzzy Logic Based SVC Controller for Power System Dynamic Stability Enhancement
Subir Datta, Anjan Kumar Roy