

# November 21, 2011, Monday

**8:00 -16:00 Registration**

**9:00 – 9:20 Opening Ceremony** **Room F09**

**9:20 – 10:15 Plenary Session I** **Room F09**

Session Chair: Imre J. Rudas

Major Challenges in Computational Intelligence and Informatics for Success of Future Space Missions  
**Antal K. Bejczy**

**10:15 – 11:00 Plenary Session II** **Room F09**

Session Chair: Imre J. Rudas

Network Q-Learning Controls Prevent Cyber Intrusion Risks: Computational Intelligence, Communications, and Control Synergy  
**Georgi Dimirovski**

11:00 – 11:15 Coffee break

**11:15 – 11:45 Invited talk** **Room F09**

Session Chair: János Fodor

ANDINO: Automata Network Model for the Diffusion of Nitric Oxide in Biological and Artificial Neural Systems. A Preliminary Study  
**Suárez-Araujo C. P., Fernández-López P., García-Báez P.**  
*Universidad de Las Palmas de Gran Canaria, Spain*

**11:45 – 12:30 Parallel Session A** **Room F09**

Session Chair: János Fodor

11:45 Inequalities for Integrals Based on Nonadditive Measures

**Endre Pap**

*University of Novi Sad, Serbia, and  
Óbuda University, Budapest, Hungary*

12:00 Project Selection with Interval-Valued Fuzzy Numbers

**Christer Carlsson\*, Robert Fullér \*,\*\*, József Mezei\*\*\***

*\* IAMSR, Åbo Akademi University, Finland*

*\*\* Óbuda University, Budapest, Hungary*

*\*\*\* Turku Centre for Computer Science, Åbo, Finland*

12:15 Uninorms - State of the Art with Recent Results

**Sándor Jenei**

*University of Pécs, Hungary*

*Johannes Kepler University, Linz, Austria*

**11:45 - 12:30 Parallel Session B****Room F08**Session Chair: Zoltán Puklus

- 11:45 Controlled Bidirectional Energy Transfer by Ultracapacitors in Electric Drive  
**Zoltán Puklus, A. Fehér**  
*Széchenyi István University, Győr, Hungary*
- 12:00 Small Qualitative Talking with Members of Economic Softbot Population  
**Ladislav Andrášik**  
*University of Economics, Bratislava, Slovakia*
- 12:15 TS Fuzzy Observer-based Residual Generators for a Class of Nonlinear Systems  
**D. Krokavec, A. Filasová, V. Hladký**  
*Technical University of Košice, Slovakia*

**11:45 - 12:30 Poster Session**

A New Anti-Collision Method for RFID Systems

**Yinghua Cui, Huiyang Wang***Beijing Information Science and Technology University, Beijing, China*

A Rough Set Theory-based Predictive Model for Stock Prices

**Msizi Khoza, Tshilidzi Marwala***University of Johannesburg, South Africa*

12:30 – 14:00 Lunch

**14:00 - 15:30 Parallel Session C****Room F09**Session Chair: Endre Pap

- 14:00 Fuzzy Parameter Tuning in the Stabilization of an RFPT-based Adaptive Control for an Underactuated System  
**Teréz A. Várkonyi, József K. Tar, Imre J. Rudas**  
*Óbuda University, Budapest, Hungary*
- 14:15 Trajectory-based Fuzzy Controller for Indoor Navigation  
**V. Raudonis, R. Maskeliunas**  
*Kaunas University of Technology, Kaunas, Lithuania*
- 14:30 Product Variation Sequence Modelling Using Feature Diagrams and Modal Logic  
**R. Burbaitė, R. Damaševičius, V. Štuikys, K. Bespalova, P. Paškevičius**  
*Kaunas University of Technology, Kaunas, Lithuania*
- 14:45 How Elderly Users of a Socially Interactive Robot Experience Adaptiveness, Adaptability and User Control  
**Marcel Heerink**  
*Windesheim Flevoland University for Professional Education, The Netherlands*
- 15:00 State Feedback Fuzzy Control Solution for BLDC Drives

**Alexandra-Iulia Stînean\*, Stefan Preitl\*, Radu-Emil Precup\*, Claudia-Adina**

**Dragoş\*, Mircea-Bogdan Rădac\* and Emil M. Petriu\*\***

\* "Politehnica" University of Timișoara, Timișoara, Romania

\*\* University of Ottawa, Ottawa, Canada

- 15:15 An Adaptive Compression Algorithm for ECG Signals  
**Beatrice Arvinti, Alexandru Isar, Marius Costache**  
*"Politehnica" University of Timișoara, Timișoara, Romania*

**14:00 - 15:30 Parallel Session D** **Room F08**  
Session Chair: Zhengmao Ye

- 14:00 Comparative Study of Linear and Nonlinear Color Model Identification Based Optimal Feature Extraction  
**Zhengmao Ye\*, Habib Mohamadian\* and Yongmao Ye\*\***  
*\* Southern University, Baton Rouge, Louisiana, USA*  
*\*\* Liaoning Radio and Television Station, Shenyang, China*
- 14:15 Simulation of a Segregation Strategy in a Warehouse of Dangerous Goods by a Multi-Agent System  
**O. Gaci\* and H. Mathieu\*\***  
*\* Petrel Research Team, Engineer School of Logistics - ISEL, Le Havre, France*  
*\*\* LITIS - Petrel Research Team, Engineer School of Logistics - ISEL, Le Havre, France*
- 14:30 Quantitative Comparison of Two Nonlinear Approaches for Synthetic Biometric Verification  
**Zhengmao Ye\*, Habib Mohamadian\* and Yongmao Ye\*\***  
*\* Southern University, Baton Rouge, Louisiana, USA*  
*\*\* Liaoning Radio and Television Station, Shenyang, China*
- 14:45 Justified Performance Measurement of Schema Matching Solutions  
**Balázs Villányi, Péter Martinek**  
*Budapest University of Technology and Economics, Hungary*
- 15:00 Spectral Feature Extraction and Characterization via Simple Linear and Nonlinear Technology Integration  
**Zhengmao Ye, Habib Mohamadian**  
*Southern University, Baton Rouge, Louisiana, USA*
- 15:15 Optimization of the Painting Problem by a Genetic Approach using Interval-Values  
**Lajos Zámbó, Benedek Nagy**  
*University of Debrecen, Debrecen, Hungary*

**14:00 - 15:30 Poster Session**

Appliance of Neural Networks in Basketball - Basketball Board for Basketball Referees

**B. Markoski\*, P. Pecev\*\*, L. Ratgeber\*\*\*, M. Ivković\* and Z. Ivanković\***

\* University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia

\*\* University of Novi Sad, Serbia

\*\*\* Ratgeber Academy, Pecz, Hungary

Fuzzy Logic Controller Development for a Solid Oxide Fuel Cell SYSTEM  
**Jenica Ileana Corcau, Liviu Dinca, Teodor Lucian Grigorie**  
*University of Craiova, Craiova, Dolj, Romania*

Computing Economic Equilibria by a Homotopy Method  
**Zoltan Pap**  
*Subotica Tech – College of Applied Sciences, Subotica, Serbia*

15:30 – 16:00 Coffee break

**16:00 – 17:30 Parallel Session E** **Room F09**  
Session Chair: Sándor Jenei

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|-------|--|
| 16:00 | Nonlinear Queue Management in TCP/IP Networks<br><b>Gyula Max</b><br><i>Budapest University of Technology and Economic, Hungary</i>  |
| 16:15 | Temperature and Climate Chamber Automated Control<br><b>Roland Szabó, Aurel Gontean, Ioan Lie</b><br><i>"Politehnica" University of Timisoara, Timisoara, România</i>  |
| 16:30 | Functional Decomposition Method Reveals the Number of Possible Specifications of Multi-Robot System<br><b>Vitālijs Komašilovs, Egils Stalidzāns</b><br><i>Latvia University of Agriculture, Jelgava, Latvia</i>      |
| 16:45 | Enhancement of Safety and Economy of the Vehicle Consideration of Delays and Disturbances<br><b>András Mihály, Balázs Németh and Péter Gáspár</b><br><i>Budapest University of Technology and Economics, Hungary</i> |
| 17:00 | Benchmark of Efficient Data Structures for Recognising Movable Objects<br><b>Andreas Bilke, Jürgen Sieck</b><br><i>HTW Berlin (University of Applied Sciences), Germany</i>  |
| 17:15 | Neural Models for an Intelligent Greenhouse – A CMAC Global Greenhouse Model<br><b>P. Eredics, K. Gáti, T. P. Dobrowiecki, G. Horváth</b><br><i>Budapest University of Technology and Economics, Hungary</i>         |

**16:00 – 17:30 Parallel Session F** **Room F08**  
Session Chair: Sebastian Hommel

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|-------|---|
| 16:00 | Comparing Possibilistically Multidimensional Risk Aversions<br><b>Irina Georgescu</b><br><i>Academy of Economic Studies, Bucharest, Romania</i> |
| 16:15 | AAM-based Continuous Facial Expression Recognition for Face Image Sequences   |

**Sebastian Hommel, Uwe Handmann**  
*Hochschule Ruhr West, Germany*

- 16:30 Credibilistic Index of Riskiness  
**I. Georgescu\* and J. Kinnunen\*\***  
*\* Academy of Economic Studies, Bucharest, Romania*  
*\*\* Institute for Advanced Management Systems Research, Turku, Finland*

- 16:45 ISpace Robot Room for Improved Life Comfort  
**Balázs Tusor\*, Annamária R. Várkonyi-Kóczy\*\***  
*\* Integrated Intelligent Systems Japanese-Hungarian Laboratory, Budapest, Hungary*  
*\*\* Óbuda University, Budapest, Hungary*

- 17:00 Uncertainty Modeling and Control Design Suspension of Variable-Geometry  
**Balázs Németh, Péter Gáspár**  
*SZTAKI, Budapest, Hungary*

- 17:15 Adaptive Backstepping for Trajectory Tracking of Nonlinearly Parameterized Class of Nonlinear Systems  
**Hakim Bouadi, F. Mora-Camino**  
*Automation and Operational Research Laboratory (LARA) in the National Civil Aviation Institute, Toulouse, France*

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| 16:00 - | Annual MFT meeting | Room F07 |
| 18:00   | Welcome Reception  |          |

## November 22, 2011, Tuesday

**8:00 -16:00 Registration**

**9:00 - 10:30 Parallel Session G** **Room F09**  
Session Chair: Apostolos Tsagaris

- 9:00 Intelligent Invariance Techniques for Music Gesture Recognition Based on Skin Modelling  
**Apostolos Tsagaris\*, Sotiris Manitsaris\*\*\*, Kosmas Dimitropoulos\*\*, Athanasios Manitsaris\***  
*\*University of Macedonia, Thessaloniki, Greece*  
*\*\*Centre of Research & Technology, Informatics & Telematic Institute, Thessaloniki, Greece*  
*\*\*\*Université Pierre et Marie Curie, ESPCI ParisTech, SIGMA Lab, Paris, France*

- 9:15 Building an E-Contract Management System Using Google Docs  
**Gabriela Visinari, Adrian Groza**  
*Technical University of Cluj Napoca, Romania*

9:30 Convergence Dynamics of Biochemical Pathway Steady State Stochastic Global Optimization  
**Ivars Mozga, Egils Stalidzans**  
*Latvia University of Agriculture*

9:45 User-Centered Design of Data Entry Forms for Semi-Structured Data  
**D. D. Nagy, B. Kővári**  
*Budapest University of Technology and Economics, Hungary*

10:00 Forecasting Total Health Expenditures with a Hybrid Heuristic Method  
**Cagdas Hakan Aladag\* and Sibel Aladag\*\***  
*\* Hacettepe University, Ankara, Turkey*  
*\*\* Republic of Turkey Social Security Institution, Ankara, Turkey*

10:15 Analysis to Forecast The Spread of Phytophthora of Potato Leaf With Contour  
**Zoltán Horváth**  
*University of Pécs, Hungary*

**9:00 - 10:30 Parallel Session H** **Room F08**  
Session Chair: Szilveszter Kovács

9:00 Precision Improvement for a Tunneling Accelerometer by Using an Intelligent Controller to Close its Loop  
**T. L. Grigorie, J. Corcău, M. Lungu, I. R. Edu, R. Obreja**  
*University of Craiova, Craiova, Romania*

9:15 Advanced Approaches in Diagnostics of the Turbojet Engine MPM-20  
**T. Karol, V. Gašpar, Ladislav Madarász, Rudolf Andoga, Ladislav Főző, J. Judičák**  
*Technical University of Košice, Košice, Slovakia*

9:30 Forming Well-balanced Collaborative Learning Teams According to the Roles of Their Members: An Evolutionary Approach  
**V. D. Yannibelli, A. Amandi**  
*ISISTAN Research Institute, UNCPBA, Tandil, Buenos Aires, Argentina*  
*CONICET, Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina*  
*Campus Universitario, Paraje Arroyo Seco, Tandil, Buenos Aires, Argentina*

9:45 Performance Improvement of the Fuzzy Rule Interpolation Method LESFRI  
**Zsolt Csaba Johanyák**  
*Kecskemét College, Kecskemét, Hungary*

10:00 Infinite Horizon LQ Optimal Output Tracking from Development to Real Flight Tests  
**Péter Bauer, József Bokor**  
*Computer and Automation Research Institute, Hungarian Academy of Sciences, Budapest, Hungary*

10:15 Applying a New Similarity Measure between General Type-2 Fuzzy Sets to Clustering  
**Saida S. Mohamed, Areeg S. AbdAla**

**9:00 - 10:30 Poster Session**

Using Cellular Automata to Model Social Networking Behavior

**Robert Hunt\*, Engin Mendi\*\*, and Coskun Bayrak\*\****\* , \*\*Computer Science Department, University of Arkansas at Little Rock**\*\* Computer Engineering Department, Istanbul Kultur University**\* , \*\*Little Rock, United States**\*\*Istanbul, Turkey*

Improving Learning Automata based Particle Swarm: An Optimization Algorithm

**Mohammad Hasanzadeh, Mohammad Reza Meybodi and Saeed Shiry Ghidary***Amirkabir University of Technology, Tehran, Iran*

Guidelines on Accessible Web Portal Design

**Dragica Radosav, Dijana Karuovic, Branko Markoski, Zdravko Ivankovic***University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia*

A New Method to Improve the Particle Swarm Optimization using Cellular Learning Automata (CLAPSO)

**M. J. Fattahi Hasan Abad\*, S. M. Salari \*\*, M. A. Saadatjoo \*\*\****\* Islamic Azad University, Yazd, Iran**\*\* Elmi-Karbordi University, Yazd, Iran**\*\*\* University of Debrecen, Hungary*

10:30 – 11:00 Coffee break

**11:00 - 12:30 Parallel Session I****Room F09**Session Chair: Márta Takács

11:00 Classifying Social Groups and Change Point Detection for Prioritizing Social Data  
**Kailas Dayanandan\*, Jithendra Vepa\*\***  
*\*GAPG, \*\*ASCG, Samsung India Software Operations, Bangalore, India*

11:15 A Lazy Evaluation Approach for Mobile Reasoning in DSSs  
**A. Minutolo\*, \*\*, M. Esposito\* and G. De Pietro\***  
*\* Institute for High Performance Computing and Networking, ICAR-CNR, Napoli, Italy  
\*\* University of Naples, Naples, Italy*

11:30 Fuzzy Support Vector Machine in Credit Rating Systems  
**József Bozsik**  
*Eötvös Loránd University, Budapest, Hungary*

11:45 Fuzzy Logic Point of View Applied to Diseases Caused by Dynamic Mutations  
**A. Savić\*, K. Jovanović\*\*, J. Mihailović\*\*, K. Radotić\***  
*\* Institute for Multidisciplinary Research, Belgrade, Serbia  
\*\* University of Belgrade, Belgrade, Serbia*

12:00 Fuzzy Neural Networks Stability in Terms of the Number of Hidden Layers  
**Rita Lovassy\*, László T. Kóczy\*\*, \*\*, László Gál\*\* \*\*\*\* and Imre J. Rudas\***

\* *Óbuda University, Budapest, Hungary*

\*\* *Széchenyi István University, Győr, Hungary*

\*\*\* *Budapest University of Technology and Economics, Budapest, Hungary*

\*\*\*\* *University of West Hungary, Szombathely, Hungary*

- 12:30 A Study on Local Binary Pattern for Automated Weed Classification Using Template Matching and Support Vector Machine  
**Faisal Ahmed\*, A. S. M. Hossain Bari\*\*, ASM Shihavuddin\*\*\*, Hawlader Abdullah Al-Mamun\*\*\*\*, Paul Kwan\*\*\*\*\***  
*\* Islamic University of Technology, Gazipur, Bangladesh  
\*\* Samsung Bangladesh R & D Center Ltd, Dhaka, Bangladesh  
\*\*\* Universitat De Girona (UDG), Girona, Spain  
\*\*\*\*, \*\*\*\*\* The University of New England, Armidale, Australia*

#### 11:00 - 12:30 Parallel Session J

Session Chair: László Kovács

**Room F08**

- 11:00 Mathematical Model and Numerical Simulations for Mechanic-Hydraulic Flow Controller  
**Liviu Dinca, Jenica Ileana Corcău, Teodor Lucian Grigorie**  
*University of Craiova, Craiova, Dolj, Romania*
- 11:15 Tabu Search Reconstruction of hv-convex Binary Contours Using Classic Ryser Algorithm and Smart Switching  
**Miklós Póth**  
*Subotica Tech, Serbia*
- 11:30 Some Structural Improvements of the OpenRTM Robot Middleware  
**Zoltán Krizsán, Szilveszter Kovács**  
*University of Miskolc, Miskolc, Hungary*
- 11:45 Mobile Robot Control Using Combined Neuralfuzzy and Neural Network  
**Sasa A. Vukosavljev\*, Dragan Kukolj\*\*, Istvan Papp\*, Branko Markoski \*\***  
*\* RT-RK Institute for Computer Based Systems, Novi Sad, Serbia  
\*\* University of Novi Sad, Novi Sad, Serbia*
- 12:00 A Simple Interface to the Virtual Collaboration Arena for MATLAB Applications  
**Dávid Vincze\*, Szilveszter Kovács\*, Péter Korondi\*\*, Péter Baranyi\*\*\***  
*\* University of Miskolc, Miskolc, Hungary  
\*\* Budapest University of Technology and Economics, Budapest, Hungary  
\*\*\* Computer and Automation Research Institute of the Hungarian Academy of Sciences, Budapest, Hungary*
- 12:15 Pixel Area-based Target Distance Estimating and Corresponding Target Hitting Force Calculating Autonomous Robot Using Single Video Device  
**Astha Jain, Harshul Gandhi, Vikalp Paharia**  
*MANIT Bhopal, India*

#### 11:00 - 12:30 Poster Session

## Value-transformation for Monotone Prediction by Approximating Fuzzy Membership Functions

**Tomáš Horváth\*,\*\*\*\*, Alan Eckhardt\*\*, Krisztián Buza\*\*\*, Peter Vojtáš\*\*, Lars Schmidt-Thieme\***

\* University of Hildesheim, Germany

\*\* Charles University in Prague, Czech Republic

\*\*\* Budapest University of Technology and Economics, Hungary

\*\*\*\* Pavol Jozef Šafárik University in Košice, Slovakia

## Design and Implementation of Incremental Algorithm for Creation of Generalized One-Sided Concept Lattices

**P. Butka\*, J. Pócsova\* and J. Pócs\*, \*\***

\* Technical University of Košice, Košice, Slovakia

\*\* Mathematical Institute, Slovak Academy of Sciences, Košice, Slovakia

## Model Predictive Speed Controller of Permanent Magnet Synchronous Machine

**D. Zámečník, L. Veselý**

Brno University of Technology, Brno, Czech Republic

12:30 – 14:00 Lunch

**14:00 – 15:30 Parallel Session K**

**Room F09**

Session Chair: Jingwen Wu

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|-------|---|
| 14:00 | Parsimonious Gaussian Mixture Models of Diagonal Family for Binned Data Clustering:<br>Mixture Approach<br><b>Jingwen Wu, Hani Hamdan</b><br><i>SUPELEC, Department of Signal Processing and Electronic Systems, France</i>   |
| 14:15 | Compound Local Binary Pattern (CLBP) for Robust Facial Expression Recognition<br><b>Faisal Ahmed*, Emam Hossain**, A. S. M. Hossain Bari*** and ASM Shihavuddin****</b><br><i>* Department of CIT, Islamic University of Technology, Gazipur, Bangladesh<br/>** Department of CSE, Prime University, Dhaka, Bangladesh<br/>*** Samsung Bangladesh R &amp; D Center Ltd, Dhaka, Bangladesh<br/>**** Universitat De Girona (UDG), Girona, Spain</i> |
| 14:30 | Granular Interval Type-2 Membership Functions and Modeling Application on a Nonlinear System<br><b>Cenk Ulu, Müjde Güzelkaya, İbrahim Eksin</b><br><i>Istanbul Technical University, Istanbul, Turkey</i>   |
| 14:45 | A New Deterministic Source Coding Method in Peer-to-Peer Systems<br><b>Attila Balaton, Tamás Lukovszki, Ádám Agócs</b><br><i>Eötvös Loránd University, Budapest, Hungary</i>  |
| 15:00 | On Types of Parallelism, Conflicts and Cooperation in Grammar Systems<br><b>Alica Kelemenová</b><br><i>Silesian University in Opava, Institute of Computer Science and</i>  |

*Research Institute of the IT4Innovations Centre of Excellence, Opava, Czech Republic*

- 15:15 ANFIS-based Parameter Estimation of One-Diode Equivalent Circuit Model of PV Modules  
**A. A. Kulaksız**  
*Selcuk Universit, Konya, Turkey*

**14:00 - 15:30 Parallel Session L** **Room F08**  
Session Chair: György Strausz

- 14:00 On Genetic Algorithm Methodology for Robust System Design  
**A. M. Shamsieva, V. U. Arkov**  
*Ufa State Aviation Technical University, Ufa, Russia*
- 14:15 Methodology of Implementing Information Technologies in Education  
**Zsolt Námesztovszki\*, Márta Takács\*, Dragana Glušac\*\***  
*\* University of Novi Sad, Hungarian Teacher Training Faculty, Subotica; and Óbuda University, Budapest, Hungary*  
*\*\* University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin*
- 14:30 An Integrated Intelligent Inventory Control System for a Marble Plant  
**Suat Kasap**  
*Hacettepe University, Turkey*
- 14:45 Soft Clustering Algorithms based on Neural Networks  
**Lenka Skovajsová\*, Michal Rojček\*\***  
*\* Institute of Informatics, Slovak Academy of Sciences, Slovakia*  
*\*\* Catholic University in Ružomberok, Ružomberok, Slovakia*
- 15:00 An Ontology-based Rule Chaining Algorithm for Legal Expert Systems  
**András Förhész\* and György Strausz\*\***  
*\* Multilogic Ltd., Budapest, Hungary*  
*\*\* Budapest University of Technology and Economics, Hungary*
- 15:15 Adaptive Sliding Mode Control for Quadrotor Attitude Stabilization and Altitude Tracking  
**Hakim Bouadi\*, S. Simoes Cunha\*\*, A. Drouin\*\*\* and F. Mora-Camino\*\*\*\***  
*\* Automation and Operational Research Laboratory (LARA) in the National Civil Aviation Institute-ENAC. Toulouse-France*  
*\*\* Federal University of Itajuba Brazil*  
*\*\*\* Automation and Operational Research Laboratory (LARA) in the National Civil Aviation Institute-ENAC*  
*\*\*\*\* National Civil Aviation Institute*

**14:00 - 15:30 Poster Session**

- Extending Mathematical Model of Permanent Magnet Syncronous Motors in alpha-beta Coordinate System for EKF  
**L. Vesely, D. Zamecnik**

*Brno University of Technology, Czech Republic*

Organizing COBIT Control Objectives for Effective Information Technology Compliance

**S. Topçu, B. Metin**

*Boğaziçi University, Istanbul, Turkey*

Parameter Extraction of FMCW Modulated Radar Signals using Wigner-Hough Transform

**Taylan Ozgur Gulum, Ahmet Yasin Erdogan, Tulay Yildirim, Lutfiye Durak Ata**

*Yildiz Technical University, Yildiz, Besiktas, İstanbul, Turkey*

15:30 – 16:00 Coffee break

**16:00 – 17:30 Parallel Session M**

**Room F09**

Session Chair: Zoltán Vámossy

16:00 Determining Optimal Distribution of Transmitters in Heterogeneous Wireless Network by Using Genetic Algorithm

**Marko Vučićević, Aleksandar Miljković, Dragan Samardžija, Dragan Kukolj**  
*University of Novi Sad, Serbia*

16:15 Parameter Optimization for BIRCH Pre-Clustering Algorithm

**László Kovács, László Bednarik**  
*University of Miskolc, Hungary*

16:30 Multi-Criterion Mining Algorithm for Efficient Home Energy Management System

**S. Veleva\* and D. Davcev\*\***

\**University Ss. "Cyril and Methodius", Skopje, Macedonia*

\*\**University for Information Science and Technology, "St Paul the Apostle", Ohrid, Macedonia*

16:45 An Ethological Motion Capture System

**Viktor Devecseri\*, Antal Dóka\*\*, József Molnár\* and Péter Tamás\***

\**Budapest University of Technology and Economics, Budapest, Hungary*

\*\**Eötvös Loránd University, Budapest Hungary*

17:00 GPGPU-based Data Parallel Region Growing Algorithm for Cell Nuclei Detection

**Sándor Szénási\*, Zoltán Vámossy\*, Miklós Kozlovszky\*\***

\**Óbuda University, Budapest, Hungary*

\*\**MTA SZTAKI, Budapest, Hungary*

17:15 Triadic Patterns of Friendships in YouTube Groups

**Haris Memic, Alma Husagic-Selman, Kanita Hadziabdic**

*International University of Sarajevo, Bosnia and Herzegovina*

**16:00 – 17:15 Parallel Session N**

**Room F08**

Session Chair: Annamária R. Várkonyi-Kóczy

16:00 Fuzzy Set-based Navigation's Area Application for Mobile Robots

**István Nagy**

*Óbuda University, Budapest, Hungary*

- 16:15 Evaluation of User Perceived Quality Based on User Behaviour  
**Hamid Reza Hasani, Naser Movahhedinia, Behrouz Shahgholi Ghahfarokhi**  
*University of Isfahan, Iran*
- 16:30 Improvement of the Colour Discrimination Ability of Colour Deficient People by Modifying the Parameters of the Illumination  
**Ingrid Langer**  
*Óbuda University, Budapest, Hungary*
- 16:45 Swarm Intelligence-based Sizing Methodology for CMOS Operational Amplifier  
**Revna Acar Vural, Tulay Yildirim**  
*Yildiz Technical University, Istanbul, Turkey*
- 17:00 Automatic Control of Ball and Beam System Using Particle Swarm Optimization  
**Muhammad Asif Rana, Zubair Usman, Zeeshan Shareef**  
*Lahore University of Management Sciences, Lahore, Pakistan*

#### **16:00 – 17:30 Poster Session**

Application of Medical Thermography in The Diagnostics of Carpal Tunnel Syndrome  
**J. Živčák, Ladislav Madárasz, R. Hudák**  
*Technical University of Košice, Košice, Slovakia*

Advanced Approaches in Modeling of Complex Electromechanical Systems  
**Ladislav Madárasz, Rudolf Andoga, M. Češkovič, M. Laššák, M. Šmelko, Ladislav Főző**  
*Technical University of Košice, Slovakia*

Development of Autonomous Explorer Mobile Robot for a Specified Environment  
**Csongor Márk Horváth, Róbert Tamás Fekete**  
*Budapest University of Technology and Economics, Budapest, Hungary*

Óbuda University  
Doctoral School for Applied Informatics

### First PhD Student Workshop on Applied Informatics in Computational Intelligence

Parallel event at the 12th IEEE International Symposium on Computational Intelligence and Informatics

Workshop Chair: Gyula Hermann  
Working language: English

## November 22, Tuesday

### 14:15 - 15:30 First Workshop Session

Room F07

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|----------------------------|---|
| 14:15                      | Modeling Loaded Starter Motor with Neural Network<br><b>V. Füvesi, E. Kovács</b><br><i>University of Miskolc, Miskolc, Hungary</i>  |
| 14:30                      | Improvement for Anytime Systems with Modular Architecture<br><b>Dániel Kristóf Kiss*, ** Annamária R. Várkonyi-Kóczy*, András Rövid*</b><br><i>* Óbuda University, Budapest, Hungary</i><br><i>** Mentor Graphics Corp. Budapest, Hungary</i>     |
| 14:45                      | Inherited SAP Development Concepts Using Genuine IT Programming Tools<br><b>István Orosz*, Túri Balázs **, Tamás Orosz*</b><br><i>* Óbuda University, Hungary</i><br><i>** Budapest University of Economic Sciences and Public Administration</i> |
| 15:00                      | Theory of the Biometric-based Technology in the Field of e-commerce<br><b>Arnold Őszi, Tibor Kovács</b><br><i>Óbuda University, Budapest, Hungary</i>   |
| 15:15                      | Mobility and Multihoming Possibilities in Network Layer, Using Smartphones<br><b>Viktor Rébay</b><br><i>Óbuda University, Budapest, Hungary</i>   |
| 15:30 – 16:00 Coffee break |   |

### 16:00 - 17:00 Second Workshop Session

Room F07

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| 16:00 | Practical Application of Fuzzy Logic: Experiences and Current State in Software Engineering<br><b>Norbert Sram</b><br><i>Óbuda University, Budapest, Hungary</i> |
| 16:15 | Risk Level Calculation for Body Physical Exercise with Different Fuzzy Based Methods<br><b>Edit Tóth-Laufer, Márta Takács</b>                                    |

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16:30	Applying Prereduction to Reduce the Time Cost of TBL Algorithm <b>Zsolt Tóth, László Kovács</b> <i>University of Miskolc, Hungary</i>
16:45	Robust Fixed Point Transformations-based Model Reference Adaptive Control of Inverted Pendulums <b>Teréz A. Várkonyi, József K. Tar, Imre J. Rudas</b> <i>Óbuda University, Budapest, Hungary</i>
17:30	Closing Ceremony and Invitation to CINTI 2012
18:00	Banquet