ICCC-CONTI 2010

Timișoara, Romania
May 27-29, 2010

Final Program

General Information

Date and Place

The ICCC-CONTI 2010 will take place on May 27-29, 2010, at Faculty of Automation and Computers, “Politehnica” University of Timișoara, Romania.

Official Language

The official language of the conference is English. All presentations, including discussions and submissions, must be made in the official language. No translation will be provided.

Proceedings

Each accepted paper reaching us in time will be published in the Volume of CD Proceedings that will be distributed at the conference registration desk to everyone who has paid the registration fee.

Cancellation and Refund

Cancellation regarding registration fee is possible in written form received no later than May 20, 2010. In this case 90% of the received sum will be transferred back. No reimbursement is possible after this deadline.

Opening Hours of the Registration Desk

The registration desk will be open during the conference.

Presentation

All the presentations can be made by using OHP or Power Point. All authors are kindly asked to take their presentation on CD or USB drive. To present the paper it is not allowed to use own computer.
All conference rooms are supplied with OHP and data projector with PC.

Smoking

Please, be so kind to your lungs and your colleagues by not smoking in the building and social events of the conference.
May 27, 2010, Thursday

8:30 – 14:00  **Registration**  Room A107

10:00 – 10:15  **Opening Ceremony**  Room D1

10:15 – 11:00  **Plenary Session I**  Room D1

**Session Chair:**  **Vladimir Cretu**  
"Politehnica" University of Timișoara, Romania

**Grid Computing an Optimistic Survey**

**Nicolae Tapus**  
Politehnica University of Bucharest, Romania

11:00 – 11:15  **Coffee Break**

11:15 – 12:45  **Parallel Sessions**

11:15 – 12:30  **Session on Systems Analysis, Modeling and Identification**  Room A115

**Session Chairs:**  **Gyula Hermann**  
Obuda University, Budapest, Hungary
**Vladimir Răşvan**  
University of Craiova, Romania

11:15  **Retrofitting a Length Measuring Machine for Linear Scale Calibration**  
**Gyula Hermann**, **Kálmán Tomanyiczka**
*Obuda University, Budapest, Hungary  
**Hungarian Trade Licensing Office Metrology Division

11:30  **PIO II - a Unifying Point of View**  
**Vladimir Răşvan**, **Daniela Danciu**  
University of Craiova, Romania

11:45  **Continuous Time Nonlinear Systems Identification in Real Generalized Fock Space**  
**C. Marin**, **D. Selisteau**, **D. Sendrescu**, **V. Finca**, **R. Zglimbea**  
University of Craiova, Romania

12:00  **An Interpolative-based Dynamical Model for the Vestibular Nucleus**  
**V. Ceregan**, **A. Korodi**, **T. L. Dragomir**, **A. Codrean**  
"Politehnica" University of Timișoara, Romania

12:15  **Observer-based Safe Operation of the 13C Cryogenic Separation Column**  
**Cl. Festila**, **E. H. Dulf**, **A. Baldea**  
*Technical University of Cluj-Napoca, Romania  
** National Institute of Research and Development for Isotopes and Molecular Technologies, Cluj Napoca, Romania
11:15 – 12:45  Session on Intelligent Systems I  

**Room A110**

**Session Chairs:**  
László Horváth  
Obuda University, Budapest, Hungary  
Stefan Preitl  
"Politehnica" University of Timişoara, Romania

**11:15** Human Controlled Intelligence at Contextual Definition of Engineering Objects  
*László Horváth, Imre J. Rudas*  
Obuda University, Budapest, Hungary

**11:30** A Comparative Study of Various Evolutionary Algorithms Used for Fuzzy Rule-based Inference and Learning Systems  
*Zsolt Dányádi*, *Krisztián Balázs*, László T. Kóczy*  
*Budapest University of Technology and Economics, Hungary  
**Széchenyi István University, Győr, Hungary

**11:45** Takagi-Sugeno Fuzzy Controller for a Magnetic Levitation System Laboratory Equipment  
*"Politehnica" University of Timişoara, Romania  
**Transilvania University of Brașov, Romania  
***Széchenyi István University, Győr, Hungary  
****Obuda University, Budapest, Hungary

**12:00** A Novel Takagi-Sugeno-Based Robust Adaptive Fuzzy Synchronization of Discrete-Time Chaotic Systems  
**Feng-Chia University, Taichung, Taiwan, R.O.C.,  
**Aurel Vlaicu University, Arad, Romania  
***FARS Research and Science-Islamic Azad University, Shiraz, Iran

**12:15** Vehicle-Following Modeling Utilizing Neuro-Fuzzy Networks  
*T. Oprica, M. Vinatoru*  
University of Craiova, Romania

**12:30** Modelling the Inter-Stand Tension of a Steel Cold Mill Based on Dynamic High Order Neural Networks  
*E. Arinton, S. Caraman*  
"Dunărea de Jos" University, Galați, Romania

11:15 – 12:45  Session on Software Engineering and Applications  

**Room A109**

**Session Chairs:**  
Vladimir Crețu, Ioana Şora  
Politehnica University of Timişoara, Romania

**11:15** Accuracy of Arbitrary Subdomain Reconstruction Inside Finite Element Simulations  
*Anton Alin-Adrian, Crețu Vladimir-Ioan*  
"Politehnica" University of Timişoara

**11:30** A New Method for Reducing the Storage Requirements of Numerical Simulation Data  
*Anton Alin-Adrian*  
"Politehnica" University of Timişoara

**11:45** Spatial Representation and Reasoning in Breast Cancer Grading Ontology  
*A. E. Tutac*, ****, ***V. I. Crețu***, D. Racoceanu***  
*Politehnica University of Timişoara, Romania  
**University of Franche-Comté, Besançon, France  
***French National Research Center (CNRS) - IPAL (Image & Pervasive Access Lab), Singapore

**12:00** Automatic Putamen Detection on DTI Images. Application to Parkinson’s Disease  
*Anda Sabau*, Roxana Oana Teodorescu*,**, Vladimir Ioan Crețu*  
*Politehnica University of Timişoara, Romania  
**University of Franche-Comté, Besançon, France

**12:15** Towards Logic Based Representation of XML Models  
*Călin Jebelean, Ciprian-Bogdan Chirila, Vladimir Crețu, Marieta Fășie*  
University Politehnica of Timişoara, Romania

**12:30** Towards Programs Logic Based Representation Driven by Grammar and Conforming to a Metamodel  
*Ciprian-Bogdan Chirila, Călin Jebelean*  
University Politehnica of Timişoara, Romania
11:15 – 12:45  **Session on Computer Engineering I**  
**Room A116**

**Session Chairs:**  
*Mircea Vladutiu, Mircea Stratulat*  
University Politehnica Timișoara, Romania

**11:15**  
Software Emulation of Boundary Scan Architecture  
*Stelian-Ilie Dolha*  
Politehnica University Timișoara, Romania

**11:30**  
Evaluation of DES, 3 DES and AES on WINDOWS and UNIX Platforms  
*Tomoiaga Radu, Stratulat Mircea*  
University Politehnica Timișoara, Romania

**11:45**  
AES Behavior on Several Programming Environments and Different Operating Systems or Computational Platforms  
*Tomoiaga Radu, Stratulat Mircea*  
University Politehnica Timișoara, Romania

**12:00**  
The Influence of the Phase Current of a Linear Array over the Directivity Pattern  
*A. Vesa*, A. Iozsa**, F. Alexa*  
*Politehnica University/Communications, Timișoara, Romania  **Alcatel-Lucent/CCSE BIDS, Timișoara, Romania

**12:15**  
A Simulation Framework for PSoC-based Cyber Physical Systems  
*Madalin Gavrilescu*, Gabriela Magureanu*, Dan Pescaru*, Alex Doboli**  
*Politehnica University of Timișoara, Romania  **State University of New York at Stony Brook, USA

11:15 – 12:45  **Poster Session I**  
**Ground floor**

**Session Chairs:**  
*Igor Škrjanc*  
University of Ljubljana, Slovenia  
*Radu-Emil Precup*  
"Politehnica" University of Timișoara, Romania

**Fuzzy Predictive Functional Control with Adaptive Fuzzy Model**  
*Dejan Dovžan, Igor Škrjanc*  
University of Ljubljana, Slovenia

**Optimal Fuzzy Sliding Mode Control with a Time-Varying Sliding Surface**  
*Dragan Antić, Marko Milojković, Saša Nikolić, Staniša Perić*  
Faculty of Electronic Engineering, Niš, Republic of Serbia

**Functions Approximation based on Locally Learning Techniques**  
*Nicolae Constantin, Silviu Dumitriu*  
University Politehnica of Bucharest, Romania

**Double Inverted Pendulum Control by Linear Quadratic Regulator and Reinforcement Learning**  
*Sándor Biro*, *Radu-Emil Precup**, **Doru Todinca**  
*Crabel Capital Research, Timișoara, Romania  **"Politehnica" University of Timișoara, Romania

**Intelligent Control of a Low Power D.C. Servodrive**  
*Silviu Dumitriu, Nicolae Constantin*  
University Politehnica of Bucharest, Romania

**Distribution Factors with AC Power Flow for Electric Energy Transmission Cost Allocation**  
*St. Kilyeni, O. Pop, C. Craciun, C. Barbulescu, D. Jigoria-Oprea*  
"Politehnica" University of Timișoara, Romania

**Contact Pressure Measurement in Trunk Orthoses**  
*M. Krištof*, R. Hudák*, A. Takáčová*, J. Žižčák*, L. Fiška**, R. Takáč*  
*Technical University of Košice, Slovakia  **Center of Orthopedics and Prosthetics, Košice, Slovakia

**Control System for Catenary – Pantograph Dynamic Interaction Force**  
*Politehnica University of Timișoara, Romania  **Blaise Pascal University Clermont – Ferrand, France
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<th>Time</th>
<th>Session/Event</th>
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<tr>
<td>13:00 – 14:30</td>
<td>Lunch Restaurant CP1</td>
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<tr>
<td>14:30 – 16:00</td>
<td>Parallel Sessions</td>
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<tr>
<td>14:30 – 15:45</td>
<td><strong>Session on Control Applications</strong> Room A115</td>
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<tr>
<td>Session Chairs:</td>
<td>Balázs Benyó, Ioan Silea “Politehnica” University of Timișoara, Romania</td>
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<tr>
<td>14:30</td>
<td>Control Solutions of Aerobic Industrial Wastewater Treatment</td>
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<tr>
<td>M. Vinatour</td>
<td>University of Craiova, Craiova, Romania</td>
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<tr>
<td>14:45</td>
<td>Modeling and Control Aspects of Long Distance Telesurgical Applications</td>
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<tr>
<td>Tamás Haidegger, Levente Kovács, Stefan Preitl, Radu-Emil Precup, Adalbert Kovács, Balázs Benyó, Zoltán Benyó</td>
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<tr>
<td>15:00</td>
<td>Mathematical Modelling and Numerical Simulation of the Temperature Control System in a Furnace with Rotary Hearth</td>
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<td>Vlad Muresan</td>
<td>Technical University of Cluj-Napoca, Romania</td>
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<tr>
<td>15:15</td>
<td>Acceleration of a Model Based Scatter Correction Technique for Positron Emission Tomography Using High Performance Computing Technique</td>
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<td>Ákos Szlávecz, Zoltán Puskás, Balázs Benyó</td>
<td>Budapest University of Technology and Economics, Hungary</td>
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<tr>
<td>15:30</td>
<td>Improving Productivity by Computer-aided Manufacturing in Five Axis</td>
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<td>Adrian But, Ioan Silea</td>
<td>“Politehnica” University of Timișoara, Romania</td>
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<td>14:30 – 16:00</td>
<td><strong>Session on Bio-Medical Informatics</strong> Room A110</td>
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<tr>
<td>Session Chairs:</td>
<td>Lacramioara Stoicu-Tivadar, Vasile Stoicu-Tivadar “Politehnica” University of Timișoara, Romania</td>
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<tr>
<td>14:30</td>
<td>Interoperability Solution for an EMR System Applied in a Cardiology Department Supported by Mobile Communication</td>
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<tr>
<td>R. Pintea*, V. M. Vida*, L. Stoicu-Tivadar*, V. D. Moga**, M. Moga**</td>
<td>* Politehnica University, Timișoara, Romania **County Hospital Emergency, Timișoara, Romania</td>
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<tr>
<td>14:45</td>
<td>A Computer Simulation Study of Cell Seeding of a Porous Biomaterial</td>
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<tr>
<td>A. P. Robu*, A. Neagu**, L. Stoicu-Tivadar*</td>
<td>**Politehnica” University of Timișoara, Romania **Victor Babes University of Medicine and Farmacy Timișoara, Romania</td>
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<tr>
<td>15:00</td>
<td>An Information Management System Supporting Academic Activity</td>
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<tr>
<td>L. Giurgiu, L. Stoicu-Tivadar</td>
<td>University “Politehnica”/Applied Informatics, Timișoara, Romania</td>
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<tr>
<td>15:15</td>
<td>Technical Aspects of Implementing a Telecare System</td>
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<td>D. Berian, V. Stoicu-Tivadar, V. Gomoi</td>
<td>University “Politehnica” of Timișoara, Romania</td>
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<tr>
<td>15:30</td>
<td>A New Method in Automatic Generation of Medical Protocols Using Artificial Intelligence Tools and a Data Manager</td>
</tr>
<tr>
<td>V. Gomoi, V. Stoicu-Tivadar</td>
<td>“Politehnica” University of Timișoara, Romania</td>
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</tbody>
</table>
**14:30 – 16:00 Session on Software Engineering and Applications II**

**Room A109**

**Session Chairs:** Ioana Şora  
Politehnica University of Timișoara, Romania  
Costin Bădică  
University of Craiova, Romania

**14:30 Detecting Patterns and Antipatterns in Software using Prolog Rules**  
Alescsandar Stoianov, Ioana Şora  
Politehnica University of Timişoara, Romania

**14:45 Software Architecture Reconstruction: An Approach Based on Combining Graph Clustering and Partitioning**  
Ioana Şora, Gabriel Glodean, Mihai Gligor  
Politehnica University of Timişoara, Romania

**15:00 Semantic Logging in a Distributed Multi-Agent System**  
Sorin Ilia, Miheea Scafeş, Costin Bădică  
University of Craiova, Romania  
Thomas Neidhart, Rani Pinchuk  
Space Applications Services NV, Zaventem, Belgium

**15:15 Migrating 2D Barcode Technology to the Online in-browser Environment**  
Ovidiu Pârvu*, Andrei G. Bîlan**, Ionel Jian*  
*"Politehnica" University of Timişoara, Romania  
**Ufo Media Design, Timişoara, Romania

**15:30 Incremental OCL to C# Code Generation**  
Tamás Vajk, Gergely Mezei  
Budapest University of Technology and Economics, Hungary

**15:45 An Overlapped Execution Technique for Graph Rewriting Rules**  
Tamás Mészáros, Márk Asztalos, Gergely Mezei  
Budapest University of Technology and Economics, Hungary

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**14:30 – 15:45 Session on Computer Engineering II**

**Room A116**

**Session Chairs:** Voicu Groza, Dan Ionescu  
University of Ottawa, Canada

**14:30 Effects of Compartmentalized Hydraulic Conditions on Geological Disposal Systems**  
Zoltán Bőthi  
Obuda University, Budapest, Hungary

**14:45 Fault Detection Methods for Wireless Sensor Networks Using Neural Networks**  
C. Vasar, I. Filip, I. Szeider, I. Borza  
Politehnica University of Timişoara, Romania

**15:00 QoS Parameters Mapping for the E-learning Traffic Mix in LTE Networks**  
V. H. Muntean*, M. Otesteanu*, G.-M. Muntean**  
*"Politehnica" University Timişoara, Romania  
**Dublin City University, Ireland

**15:15 The Use of Social Media Tools in ViCaDiS Virtual Campus**  
Diana Andone, Radu Vasiu, Andrei Ternauciuc, Bogdan Dragulescu  
"Politehnica" University of Timişoara, Romania

**15:30 Database Replication Driven Communication Model for Distributed Dedicated Web Hosting Systems**  
A. Gudiu, E. Voşan, F. Drăgan  
University of Timişoara, Romania
14:30 – 16:00  **Poster Session II**

**Session chairs:**  
*Mircea Stratulat*  
"Politehnica" University of Timişoara, Romania  
*Adrian Graur*  
Stefan cel Mare University of Suceava, Romania

**Analysis of RFID Security and Privacy by Means of Identification and Authentication Protocols**
*Cristina Hurjui, Adrian Graur*  
Stefan cel Mare University of Suceava, Romania

**Towards using Particle Filtering for Increasing Error Correction Accuracy in Traffic Surveillance Applications**
*Victor Gavrila, Florica Naghiu, Dan Pescaru*  
Politehnica University of Timişoara, Romania

**Review of PSK and QAM - Digital Modulation Techniques on FPGA**
*S. O. Popescu, G. Budura, A. S. Gontean*  
University Politehnica Timişoara, Romania

**Monitoring Framework for Large-Scale Software Projects**
*Ciprian Stanciu, Vladimir-Ioan Crețu, Ruxandra Cireș-Mariescu*  
"Politehnica" University of Timişoara, Romania

**Obtaining Highly Localized Edges using Phase Congruency and Ridge Detection**
*M. Făgădar-Cosma, M. V. Micea, V. Crețu*  
"Politehnica" University of Timişoara, Romania

**Steganography on New Generation of Mobile Phones with Image and Video Processing Abilities**
*Daniela Stanescu, Valentin Stangaciu, Mircea Stratulat*  
"Politehnica" University of Timişoara, Romania

**Segment Compression Steganographic Algorithm**
*Daniela Stanescu, Ioan-Gabriel Bucur, Mircea Stratulat*  
"Politehnica" University of Timişoara, Romania

**Accuracy Analysis of the Parallel Composition for the Block Diagram-based Reliability Assessment of Quantum Circuits**
*O. Boncalo, M. Vladutiu, A. Amaricai*  
University Politehnica Timişoara, Romania

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15:30 – 17:30  **Registration**  
Room A107

16:00 – 16:15  **Coffee break**

16:15 – 18:00  **Poster Session III**

**Session chairs:**  
*Dragan Antić*  
Faculty of Electronic Engineering, Niš, Republic of Serbia  
*Gabriela Prostean*  
"Politehnica" University of Timişoara, Romania

**On a Correlation between Sensitivity and Identifiability of Dynamical Systems**
*Bratislav Danković, Dragan Antić, Zoran Jovanović, Darko Mitrić*  
Faculty of Electronic Engineering, Niš, Republic of Serbia

**Minimum Vicinity Interpolation Algorithms for Calculation of Trajectory Processing for a Model of CNC Machine Tool**
*Dan Ungureanu-Anghel*, Doru-Ion Belci**, Eugen Raduca***, Mihaela Raduca***  
*"Politehnica" University of Timişoara, Romania  
**Student Faculty of Automation and Computers, Timişoara, Romania  
*** "Eftimie Murgul" University of Resita, Romania

**Haptic Devices in Engineering and Medicine**
*R. E. Sofronia, G. Savii, A. Davidescu*  
Politehnica University of Timişoara, Romania
Adaptive Control System of Continuous Casting Process Based on a Fuzzy Logic Mechanism

G. O. Tirian, G. Prostean, S. Rusu-Anghel, D. Cristea
"Politehnica" University of Timișoara, Romania

The Advantages of Using SAP NetWeaver Platform to Implement a Multidisciplinary Project

A. D. Cristea*, O. Prostean*, T. Muschalik**, O. Tirian*
* "Politehnica" University of Timișoara, Romania
** NWCON Technology Consulting GmbH, Germany

The Usefulness and Functionality of Microformats in a Particular eLearning System

Iasmina Ermalai, Bogdan Dragulescu
"Politehnica" University of Timișoara, Romania

Important Characteristics of Course Model for Current Engineering Practice

József Gáti, Gyula Kártýás
Obuda University, Budapest, Hungary

Parallel between two SAP Frameworks that Use MVC Paradigm

A. D. Cristea, A. D. Berdie, M. Osaci
University "Politehnica" Timișoara, Romania

Automatic Gain Control Algorithms for Wireless Sensors

Gábor Gosztolya, Dénes Paczolay
University of Szeged, Hungary

László Tóth
Research Group on Artificial Intelligence of the Hungarian Academy of Sciences, Szeged, Hungary
May 28, 2010, Friday

8:30 – 11:00  Registration
Room A107

9:00 – 9:45  Plenary Session II
Room A109
Session Chair:  János Fodor
Öbuda University, Budapest, Hungary
Towards Incremental Learning for Intelligent Systems
Peter Sinčák
Technical University of Košice, Slovakia

9:45 – 10:00  Coffee break

10:00 – 11:45  Parallel Sessions

10:00 – 11:30  Session on Robotics and Control Applications
Room A115
Session Chairs:  Keith Burnham
Coventry University, United Kingdom
Stefan Preitl
"Politehnica" University of Timișoara, Romania

10:00  Convergence Stabilization by Parameter Tuning in Robust Fixed Point Transformation Based Adaptive
Control of Underactuated MIMO Systems
József K. Tar, Imre J. Rudas, János F. Bitó
Öbuda University, Budapest, Hungary
Stefan Preitl, Radu-Emil Precup
"Politehnica" University of Timișoara, Romania

10:15  On the Errors-in-Variables Extended Kalman Filter
Keith J. Burnham, B. Vinsonneau
Coventry University, United Kingdom
Radu-Emil Precup, Stefan Preitl
"Politehnica" University of Timișoara, Romania

10:30  Compact Image Processing Based Kin Recognition, Distance Measurement and Identification Method in a
Robot Swarm
Kálmán Bolla*, Tamás Kovács*, G. Fazekas**
* Kecskemét College, Hungary
** University of Debrecen, Hungary

10:45  Improved Leak Detection Quality by Automatic Signal Filtering
Raul Ionel, Sabin Ionel, Alimpie Ignea
University "Politehnica" from Timișoara, Romania

11:00  nDSP: A Platform for Audiophile Software Audio Processing
Adrian-Sebastian Paul*, Radu-Emil Precup*, Claudiu Pozna**, ***, Radu-Corde David*
* "Politehnica" University of Timișoara, Romania
** Transylvania University of Brasov, Romania
*** Széchenyi István University, Győr, Hungary

11:15  Fostering Innovation in Services through Open Education and Advanced IT
Theodor Borangiu, Adrian Curaj, Anamaria Dogar
University Politehnica of Bucharest, Romania
### Special Session on Renewable Energy – Wind Energy Conversion Systems I

**Room A110**

**Session Chairs:** Nicolae Budisan, Octavian Prostean  
"Politehnica" University, Timișoara, Romania

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<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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| 10:00  | The Dual Induction Generator for Renewable Energy Conversion Systems. Experimental Results, Problems and Solutions | N. Budisan*, O. Prostean*, R. Boraci*, I. Szeidert*, V. Muller**  
"Politehnica" University, Timișoara, Romania **  
"Aurel Vlaicu" University, Arad, Romania |
| 10:15  | Wind Aggregate's Mathematical Modeling Method based on Wind Tunnel Test Results and Regression Functions | Iosif Szeidert, Ioan Filip, Cristian Vasar, Gabriela Prostean  
"Politehnica" University of Timișoara, Romania |
"Politehnica" University, Timișoara, Romania |
| 10:45  | On-line Tuning Procedure of a Recursive Parameter Estimator Used for a Synchronous Generator Adaptive Control | I. Filip, I. Szeidert, L. Mihet-Popa, C. Vasar  
"Politehnica" University from Timișoara, Romania |
| 11:00  | Modeling and Simulation of a Soft-Start for Large Wind Turbine Induction Generators | L. Mihet-Popa, I. Filip  
Politehnica University, Timișoara, Romania |
"Politehnica" University, Timișoara, Romania |
"Politehnica" University, Timișoara, Romania |

### Session on Software Engineering and Applications III

**Room A109**

**Session Chairs:** Voicu Groza  
University of Ottawa, Canada  
István Vajk  
Budapest University of Technology and Economics, Hungary

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| 10:00  | Localized Spectro-Temporal Features for Noise-Robust Speech Recognition | György Kovács, László Tóth  
Research Group on Artificial Intelligence, University of Szeged and Hungarian Academy of Sciences Szeged, Hungary |
| 10:15  | Implicit Model Fitting to an Unorganized Set of Points | Levente Hunyadi and István Vajk  
Budapest University of Technology and Economics, Hungary |
| 10:30  | Formal Verification of Model Transformations: an Automated Framework | Márk Asztalos, István Madari, Tamás Vajk, László Lengyel, Tihomér Levendovszky  
Budapest University of Technology and Economics, Hungary |
| 10:45  | Towards Better Modeling of Supermarkets | K. Buza*, Antal Buza**, Piroska B. Kis**  
* University of Hildesheim, Germany  
** College of Dunaújvaros, Hungary |
| 11:00  | Available Transfer Capacity Evaluation within Complex Power Systems. Theory, Software Tool and Case Study | St. Kilyeni, C. Barbulescu, C. Craciun  
"Politehnica" University of Timișoara, Romania |
## Session on Sensor Networks

**Session Chairs:** Mircea Popa, Aurel Gontean  
"Politehnica" University of Timișoara, Romania

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<td>10:00</td>
<td>Real-Time Collaborative Intelligent Services for Sensor Networks</td>
<td>Cristian Gadea, Bogdan Ionescu, Dan Ionescu</td>
<td>University of Ottawa, Canada</td>
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<tr>
<td>10:30</td>
<td>A Glance on WSN Lifetime and Relevant Factors for Energy Consumption</td>
<td>G. Gîrban, Mircea Popa</td>
<td>Politehnica University, Timișoara, Romania</td>
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<tr>
<td>10:45</td>
<td>A Solution for Integrating Sensors and Mobile Devices</td>
<td>Bogdan Stratulat, Mircea Popa</td>
<td>&quot;Politehnica&quot; University, Timișoara, Romania</td>
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<tr>
<td>11:00</td>
<td>Modeling and Simulation of Wireless Sensor Networks for Event Detection</td>
<td>Ruxandra-Ioana Rusnac, Aurel Gontean</td>
<td>Politehnica University of Timișoara, Romania</td>
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</tbody>
</table>

### Coffee break

#### Parallel Sessions

#### Session on Intelligent Systems II

**Session Chairs:** Igor Škrjanc  
University of Ljubljana, Slovenia  
Florin Dragan  
University of Timișoara, Romania

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
<th>Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00</td>
<td>Analyzing the Accuracy of Lines’ Covariances in the EKF-based Localization of a Mobile Robot</td>
<td>Luka Teslić, Igor Škrjanc, Gregor Klančar</td>
<td>University of Ljubljana, Slovenia</td>
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<tr>
<td>12:15</td>
<td>Graph Genetic Programming for Hybrid Neural Networks Design</td>
<td>L. Ferariu, B. Burlacu</td>
<td>&quot;Gheorghe Asachi&quot; Technical University of Iasi, Romania</td>
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<tr>
<td>12:30</td>
<td>Mapping a Fuzzy Logic Approach for QoS-aware Service Selection on Current Web Service Standards</td>
<td>Ioana Șora, Gabriel Lazăr, Silviu Lung</td>
<td>Politehnica University of Timișoara, Romania</td>
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<tr>
<td>12:45</td>
<td>Improved Neural Network OCR based on Preprocessed Blob Classes</td>
<td>Lucian-Ovidiu Fedorovici, Emil Voisan, Florin Dragan, Daniel Iercan</td>
<td>University of Timișoara, Romania</td>
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</tbody>
</table>
| 13:00      | Compass and Odometry Based Navigation of a Mobile Robot Swarm Equipped by Bluetooth Communication | Attila Pásztor*, Tamás Kovács,*, Zoltán Istenes** | * Kecskemét College, Hungary  
**Eötvös Loránd University, Budapest, Hungary |
12:00 – 14:00  **Special Session on Renewable Energy – Wind Energy Conversion Systems II**  Room A110

**Session Chairs:**  Petru Andea, Stefan Kilyeni  
"Politehnica" University of Timișoara, Romania

12:00  **Blade Design Using CAD Technique for Small Power Wind Turbine**  
*Teodor Mîlăs, Adi Baj, Eugen Dobândă, A. Manea, R. Bădăriu, Daniel Stroșă*  
"Politehnica" University of Timișoara, Romania

12:15  **Computational Graph Theory for Finding Optimal Routes of Pipeline Supply**  
*Teodor Mîlăs, Eugen Dobândă, A. Manea, R. Bădăriu, Daniel Stroșă*  
"Politehnica" University of Timișoara, Romania

12:30  **The Control of the Diesel-Synchronous Generator Electro-Energetic System**  
*M. Babescu, R. Boraci, O. Gana, C. Koch-Ciobotaru*  
"Politehnica" University, Timișoara, Romania

*Ioan Borlea, Stefan Kilyeni, Constantin Barbulescu, Dan Cristian*  
"Politehnica" University of Timișoara, Romania

13:00  **Substation Ancillary Services Fuel Cell Power Supply. Part 2. Case Study**  
*Gheorghe Vuc, Constantin Barbulescu, Stefan Kilyeni, F. Solomonesc*  
"Politehnica" University of Timișoara, Romania

*Petru Andea, Dumitru Mnerie, Dan Cristian, Oana Pop, Dan Jigoria-Oprea*  
"Politehnica" University of Timișoara, Romania

13:30  **Conventional vs. Alternative Energy Sources Overview. Part II. European Strategies**  
*Petru Andea, Alin V. Mnerie, F. Solomonesc, Oana Pop, Dan Cristian*  
"Politehnica" University of Timișoara, Romania

13:45  **Conventional vs. Alternative Energy Sources Overview. Part III. Perspectives in Romania**  
*Petru Andea, Gabi V. Mnerie, Oana Pop, F. Solomonesc, Attila Simo*  
"Politehnica" University of Timișoara, Romania

12:00 – 13:45  **Session on Software Engineering and Applications IV**  Room A109

**Session Chairs:**  Alexandru Cicortas, Daniela Zaharia  
West University of Timișoara, Romania

12:00  **Considerations on the Roles and Ontology in Modeling Workflow Management Systems**  
*A. Cicortas, V. Iordan*  
West University of Timișoara, Romania

12:15  **Evolutionary Task Scheduling in Static and Dynamic Environments**  
*Flavia Zamfirache, Daniela Zaharie, Ciprian Crăciun*  
West University of Timișoara, Romania

12:30  **A New Algorithm for Mapping XML Schema to XML Schema**  
*Laurentiu Checiu, Dan Ionescu*  
University of Ottawa, Canada

12:45  **Designing Autonomic Management Systems for Cloud Computing**  
*Bogdan Solomon*, *Dan Ionescu*, *Marin Litoiu**, **Gabriel Iszlai***  
*University of Ottawa, Canada  
**York University, Toronto, Ontario, Canada  
***IBM Center for Advanced Studies, Toronto, Ontario, Canada

13:00  **A Reconfigurable Architecture for IP Multimedia Subsystem Session Setup**  
*Raymond Peterkin, Fadi El-Hassan, Dan Ionescu*  
University of Ottawa, Canada

13:15  **A New Search Method for Ranking Short Text Messages Using Semantic Features and Cluster Coherence**  
*Mircea Trifan, Dan Ionescu*  
University of Ottawa, Canada

13:30  **A New Method for 3D Object Reconstruction in Real-Time**  
*Dan Ionescu, Bodgan Ionescu, Shahidul Islam, Cristian Gadea*  
University of Ottawa, Canada
<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Activity</th>
<th>Room</th>
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<tbody>
<tr>
<td>12:00</td>
<td>Session on Sensor Networks, Networking and Communication</td>
<td>Room A116</td>
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<td>Session Chairs:</td>
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<tr>
<td></td>
<td>Valentin Sgarciu</td>
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<td></td>
<td>Faculty of Automatic Control and Computers, Bucharest, Romania</td>
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<td></td>
<td>Dan Pescaru</td>
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<td>&quot;Politehnica&quot; University of Timişoara, Romania</td>
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<td>12:00</td>
<td>Wireless Monitoring System in a Safe City with Safe Mobile</td>
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<td>Dorel Nasui*, Florentina A. Oana**, Valentin Sgarciu**</td>
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<td>* American International Radio, Illinois, USA</td>
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<td></td>
<td>** Faculty of Automatic Control and Computers, Bucharest, Romania</td>
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<td>12:15</td>
<td>Performance Improvements of Video WSN Surveillance in Case of Traffic Congestions</td>
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<td>Codruta Istin, Dan Pescaru, Horia Ciocarlie</td>
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<td>&quot;Politehnica&quot; University of Timişoara, Romania</td>
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<td>12:30</td>
<td>Predicting Indoor Temperature Variation through Sensor Data Pattern Analysis</td>
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<td>Cristian Martin, Dan Pescaru</td>
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<td>Politehnica University of Timişoara, Romania</td>
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<tr>
<td>12:45</td>
<td>VoIP Communication QOS Analysis System</td>
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<td>Nadya Ghiata, Marius Marcu</td>
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<td>Politehnica University of Timişoara, Romania</td>
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<td>13:00</td>
<td>Using Constant Traffic to Specific IP Destinations for Detecting Spoofed MAC Addresses in Local Area Networks</td>
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<td>E. C. Sasu, Octavian Prostean</td>
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<td>&quot;Politehnica&quot; University, Timişoara, Romania</td>
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<tr>
<td>13:15</td>
<td>Proving the Efficiency of DTF Method in a Local Area Network</td>
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<td>E. C. Sasu*, Octavian Prostean*, V. Groza**</td>
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<td>* &quot;Politehnica&quot; University, Timişoara, Romania</td>
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<td></td>
<td>** University of Ottawa, Canada</td>
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<tr>
<td>14:00</td>
<td>Demo presentation on Virtual Collaboration Arena</td>
<td>Room A109</td>
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<td>Demo Chairs:</td>
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<td></td>
<td>Péter Baranyi, Barna Reskó</td>
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<td>MTA SZTAKI, Hungary</td>
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<td>The demonstration is about a software system named Virtual Robot Collaboration Arena (VIRCA). The goal of this software system is to allow a human user to interact and collaborate with distant, real robots and other intelligent agents by the means of the virtual world. The system integrates the advantages of a virtual environment, the information density of cognitive infocommunication channels, including 3D visual perception, and allows the combination of the precision and speed of AI with the high levels of human intelligence.</td>
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<td>14:30</td>
<td>Closing Ceremony</td>
<td>Room A109</td>
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<tr>
<td>14:40</td>
<td>Lunch</td>
<td>Restaurant CP1</td>
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