**SAPIENTIA UNIVERSITY**
DEPARTMENT OF ELECTRICAL ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

**1st International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics**


www.ms.sapientia.ro/~macro2009

# CONFERENCE PROGRAM

March 20-21, 2009
Tîrgu Mureş, Romania

**March 20, 2009**

| | | |
|---|---|---|
| $9^{00}$-$10^{00}$ | Registration | |
| $10^{00}$-$10^{30}$ | Opening ceremony (Room 114) | Welcome from the Organizing committee and foreword from:<br>Hollanda Dénes, Dean of Technical and Human Sciences Faculty<br>Dávid László, Rector of SAPIENTIA University |
| $10^{30}$-$11^{00}$ | Plenary lecture (Room114) | Patkó Gyula, Ádám Döbröczöni, Endre Jakab<br>Past, Present and Future of Teaching Mechatronics at the Faculty of Mechanical Engineering and Informatics of the University of Miskolc |
| **$11^{00}$-$11^{15}$ Coffee break** | | |
| **Mechatronics - Industrial reality** | | |
| $11^{15}$-$11^{55}$ | Room 114 | Alexandru Vava – BoschRexroth Sp.z.o.o. – representance Romania<br>Linear guides with integrated measuring system |
| $11^{55}$-$12^{35}$ | Room 114 | Somlay Gergely - Gamax Kft<br>SimMechanics - Model and simulate mechanical systems with MathWorks tools |
| $12^{35}$-$13^{15}$ | Room 114 | Vlad Zileriu – National Instruments<br>Design Mechatronic Systems Faster - Selecting the Right Tools for Embedded System Design |
| **$13^{30}$ Lunch** | | |
| **$15^{00}$ – Parallel sections** | | |
| **$18^{30}$ – Conference dinner** | | |

| $15^{00}$ - Computer Science section (Room 230)<br>Chair: Márton László Ferenc | | |
|---|---|---|
| $15^{00}$-$15^{15}$ | | David Iclănzan, Béat Hirsbrunner, Michèle Courant, Péter-István Fülöp, D. Dumitrescu<br>Marginal Product Model Assisted Local Search |
| $15^{15}$-$15^{30}$ | | Genge Bela, Haller Piroska<br>Extending WS-Security to Implement Security Protocols for Web Services |
| $15^{30}$-$15^{45}$ | | Magyari Attila, Genge Bela, Haller Piroska<br>Certificate-Based Single Sign-On Mechanism for Multi-Platform Distributed Systems |
| $15^{45}$-$16^{00}$ | | Domokos József, Gavril Toderean<br>Text Conditioning and Statistical Language Modeling Aspects for Romanian Language |
| $16^{00}$-$16^{15}$ | **Coffee break** | |
| $16^{15}$-$16^{30}$ | | László Szilágyi<br>Application of Hybrid c-Means Clustering Models in Inhomogeneity Compensation and MR Brain Image Segmentation |
| $16^{30}$-$16^{45}$ | | László Zsolt Szabó, János Vincze, Péter Szentesi, László Csernoch<br>Fine tuning of algorithms using the à trous wavelet transform in confocal microscopy line scan image analysis |
| $16^{45}$-$17^{00}$ | | Zoltán GERMÁN-SALLÓ<br>Adapted Discrete Wavelet Function Design For Ecg Signal Analysis |
| $17^{00}$-$17^{15}$ | | Péter Szoboszlai, Jan Turán, JÓZSEF VÁSÁRHELYI, Péter Serfőző<br>The Mojette Transform Tool and it's feasibility |
| $17^{15}$-$17^{30}$ | **Coffee break** | |
| $17^{30}$-$17^{45}$ | | Bence Formanek, Tihamér Ádám<br>Rate Control in Open-Loop MPEG Video Transcoder |
| $17^{45}$-$18^{00}$ | | Dénes DALMI, Tihamér ÁDÁM, Bence FORMANEK<br>Subjective Video Quality Measurements of Digital Television Streams with Various Bitrates |
| $18^{00}$-$18^{15}$ | | S. SZÉKELY, T. SZÁSZ, Z. SZAPPANYOS, ZS. TÓFALVI<br>Challenges in a Web-based Personalized IPTV Service |

| $15^{00}$ - Automation, Mechatronics and Robotics section (Room 231)<br>Chairs: Dávid László, Hollanda Dénes | | |
|---|---|---|
| $15^{00}$-$15^{15}$ | | András KELEMEN, Nimród KUTASI<br>Lyapunov-Based Frequency-Shift Power Control of Induction-Heating Converters with Hybrid Resonant Load |
| $15^{15}$-$15^{30}$ | | Maria IMECS, Ioan Iov INCZE, Csaba SZABÓ<br>Comparative Analysis of Speed and Flux Control Structures for Induction Motor Drives |
| $15^{30}$-$15^{45}$ | | Sándor Tihamér Brassai<br>FPGA Implementation of Fuzzy Controllers and Simulation Based on a Fuzzy Controlled Mobile Robot |
| $15^{45}$-$16^{00}$ | | László Bakó<br>Partially Serialized Computation in Networks of Pulse-based Artificial Neurons |
| $16^{00}$-$16^{15}$ | **Coffee break** | |
| $16^{15}$-$16^{30}$ | | Sándor M. Szilágyi<br>A Weighted Patient Specific Electromechanical Model of the Heart |
| $16^{30}$-$16^{45}$ | | Levente Kovács, András György, Balázs Benyó<br>Investigating a novel model of human blood glucose system at molecular levels from control theory point of view |
| $16^{45}$-$17^{00}$ | | Béla VARGA, Ioan SZÁVA<br>Phase Transformations in the Heat Treated and Untreated Zn-Al Alloys |
| $17^{00}$-$17^{15}$ | | Ioan SZÁVA, András KAKUCS, Béla VARGA, Sorin-Codrel POPA, Botond-Pál GÁLFI, Péter DANI<br>Experimental Investigations on Cylinder-Head Gasket Materials Mechanical Properties Used In Numerical Analysis |