

SACI 2007

**4th International Symposium on
Applied Computational Intelligence and Informatics**

Timișoara, Romania

May 17-18, 2007

PROCEEDINGS

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May 17, Thursday

9:00 – 9:20	OPENING CEREMONY	Room A 109
9:20 – 10:00	PLENARY SESSION Human-Machine Interaction and Symbiotic Partnership for Environment Sensing and Perception <i>Emil M. Petriu</i> <i>Session Chair: Stefan Preitl</i>	Room A 109
10:00 – 10:20	COFFEE BREAK	
10:20 – 12:40	SPECIAL SESSION Intelligent Engineering <i>Special session organizer and session chair: Imre J. Rudas</i>	Room A 109
10:20 – 11:00	PLENARY TALK Geometric Approach to Nonlinear Adaptive Control <i>József K. Tar, Imre J. Rudas</i>	
11:00 – 11:20	Migrative Triangular Norms <i>János Fodor, Imre J. Rudas</i>	
11:20 – 11:40	Communication and Knowledge Intensive Engineering Modeling in Virtual Spaces <i>László Horváth, Imre J. Rudas, Simona Vaivoda, Zsuzsa Preitl</i>	
11:40 – 12:00	Axioms of the System Behavior in FLC Using Uninorms <i>Márta Takács</i>	
12:00 – 12:20	Calibration System for Dial Gauges <i>Gyula Hermann</i>	
12:20 – 12:40	Future Transportation: Intelligent Vehicles in Intelligent Environment <i>László Náday, Roland Kovács</i>	
12:40 – 14:00	LUNCH	

14:00 – 15:20 PARALLEL SESSIONS		
Oral Session	Oral Session	Poster Session

14:00 – 15:20 Session Modelling I Room A 109

Session Chair: *László Horváth*

14:00 – 14:20 Towards an Attractor-based Natural Language Modeling
M. Crisan

14:20 – 14:40 Haptic Human Interfaces for Robotic Telemanipulation
Emil M. Petriu, Pierre Payeur, Ana-Maria Cretu

14:40 – 15:00 A Flexible Chronic Care Model Implementation in a GP Software
V. Stoicu-Tivadar, D. Berian, D. Nica

15:00 – 15:20 Interpolative Models Regarding the Health Status of a Population
D. Berian, T. L. Dragomir

14:00 – 15:20 Session Intelligent Control Room A 115

Session Chair: *Ioan Filip*

14:00 – 14:20 Providing Grid Systems' Dependability and Security
Răzvan Bogdan

14:20 – 14:40 Dynamic Policy Based Replication on the Grid
Dacian Tudor, Georgiana Macariu, Vladimir Cretu

14:40 – 15:00 Problem Setting and Modeling in Vehicles and Pedestrians Traffic Control Using Sensor Networks
O. Baniaş, R.-E. Precup, D.-I. Curiac

15:00 – 15:20 Developing a Logopaedic Mobile Device Using an FPGA
Marius Cristian Cerlincă, Adrian Graur, Stefan Gheorghe Pentiuic, Tudor Ioan Cerlincă

14:00 – 15:20 Poster Session

Two-Degree-Of-Freedom Fuzzy Control in Decentralized Trajectory Tracking
R.-E. Precup, Zs. Preitl, S. Preitl, S. Vaivoda, J. K. Tar, M. Takács

Robustness Analysis of a Novel Adaptive Control based on Geometric Approach
József K. Tar, János F. Bitó

A Web Connected Smart Sensor
M. Popa, A. S. Popa, C. Patitoiu

15:20 – 15:35 COFFEE BREAK

15:35 – 16:35 PARALLEL SESSIONS

Oral Session	Oral Session	Poster Session
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15:35 – 16:35 Session Neural Network and AI Room A 109

Session Chair: *László Bakó*

15:35 – 15:55 FPGA Parallel Implementation of CMAC Type Neural Network with on Chip Learning

S. T. Brassai, L. Bakó, Ş. Dan

15:55 – 16:15 Using Plausible Reasoning Theory

Claudiu Pozna

16:15 – 16:35 Expert System for Medical Predictions

Doina Drăgulescu, Adriana Albu

15:35 – 16:35 Session Computational Intelligence Room A 115

Session Chair: *Mircea Popa*

15:35 – 15:55 Fuzzy Logic Controller for the Liénard System

Marius L. Tomescu

15:55 – 16:15 A Computational Intelligence Approach for Ranking Risk Factors in Preterm Birth

Daniela Zahariea, Stefan Holbanb, Diana Lungeanuc, Dan Navoland

16:15 – 16:35 The effect of different fuzzy partition parameterization strategies in gradient descent parameter identification

Zsolt Csaba Johanyák, Szilveszter Kovács

15:35 – 16:35 Poster Session

Towards Scalable Distributed Control of Unmanned Autonomous Vehicles

Meng Wang, Alex Doboli, Thomas Robertazzi, Simona Doboli, Daniel Curiaç

Object Description Based Processes for Higher Education in Global Computer Networks

Radu-Emil Precup, József Gáti, Gyula Kártyás, Stefan Preitl

A Simple Control Solution for Traction Motor Used in Hybrid Vehicles

Zsuzsa Preitl, Péter Bauer, József Bokor

17:00 – 18:00

DHC AWARD

Room A 101

DHC SPEECH

Geometric Theory and Control of Linear Parameter Varying Systems

József Bokor

18:00

RECEPTION

May 18, Friday

9:00 – 9:50

TUTORIAL

Performance Analysis of UML Software Models

Dorina Petriu

10:00 – 11:20

PARALLEL SESSIONS

Oral Session	Oral Session	Poster Session
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10:00 – 11:20

Session Informatics and Network System

Room 109

Session Chair: *Claudiu Pozna*

10:00 – 10:20

Local Wireless Positioning System

Marius Marcu, Sebastian Fuicu, Anania Girban

10:20 – 10:40

Tree-In-Motion Mapping: A Multi-Agent Solution for Environment Monitoring

Rami Abielmona, Emil M. Petriu, Voicu Groza

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11:00 – 11:20

Digital Watermarking using Karhunen-Loeve Transform

Daniela Stanescu, Mircea Stratulat, Bogdan Ciubotaru, Dan Chiciudean, Razvan Cioarga, Daniel Borca

10:00 – 11:20

Session Process Control and Image Processing

Room 115

Session Chair: *János Fodor*

10:00 – 10:20

Map Building and Localization of a Robot Using Omnidirectional Image Sequences

Zoltán Vámosy

10:20 – 10:40

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Fuzzy Control Systems based on Parametric TNorm Function

József Tick

Image Retrieval by Shape Based on Contour Techniques – A Comparative Study

Irina Mocanu

11:30 – 13:00 LUNCH

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Session Chair: *Marius L. Tomescu*

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Alexandru Cicortas, Victoria Jordan

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Daniela Stanescu, Mircea Stratulat, Bogdan Ciubotaru, Dan Chiciudean, Razvan Cioarga, Mihai Micea

13:00 – 14:20 Session Intelligent Mechatronics Room 115

Session Chair: *Stefan Preitl*

13:00 – 13:20 Simulated Fault Injection for Quantum Circuits Based on Simulator Commands

Oana Boncalo, Mihai Udrescu, Lucian Prodan, Mircea Vlăduțiu, Alexandru Amăricăi

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Performance Evaluation for Training a Distributed BackPropagation Implementation
Sorin Babii

An Untimed Petri Net Model for an Automatic Transport System with Accumulation Areas
Dan Ungureanu-Anghel, Octavian Prostean

Measurement of Robot Arm with Stress Investigation Method
Attila L. Bencsik

14:20

CLOSING CEREMONY

Room A 109