

CSCS-16
16th INTERNATIONAL CONFERENCE ON
CONTROL SYSTEMS AND COMPUTER
SCIENCE

May 22-25, 2007
POLITEHNICA University of Bucharest

PROGRAMME

16th INTERNATIONAL CONFERENCE ON CONTROL SYSTEMS AND COMPUTER SCIENCE

CSCS16 is the 16th biennial conference to be held at “POLITEHNICA” University of Bucharest, Bucharest, Romania, from 22 to 25 May 2007. The technical programme reflects the aims of the Conference. It consists of specialized sections dedicated to major topics in theory and applications of systems science and computer science.

ORGANIZERS

CSCS16 is organized by:

- Romanian Society of Control Engineering and Technical Informatics (SRAIT)
- Romanian Academy – "Information Science and Technology" Section
- IEEE Region 8
- Faculty of “AUTOMATIC CONTROL AND COMPUTERS” of the “POLITEHNICA” University of Bucharest.

INTERNATIONAL PROGRAMME COMMITTEE

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S.I. dr. ing. Ion BUCUR

TIMETABLE

Tuesday, May 22, 2007

12.00 – 16.00 Registration

Wednesday, May 23, 2007

8.00 – 18.00 Registration
9.00 – 9.30 Open Ceremony
9.30 – 10.30 Invited Paper
10.30 – 11.00 Coffee break
11.00 – 13.00 Conference sessions
13.00 – 14.30 Lunch
14.30 – 16.15 Conference sessions
16.15 – 16.30 Coffee break
16.30 – 18.15 Conference sessions
19.30 Get Acquainted Cocktail Party

Thursday, May 24, 2007

8.00 – 18.00 Registration
9.00 – 11.00 Conference sessions
11.00 – 11.15 Coffee break
11.15 – 13.00 Conference sessions
13.00 – 14.30 Lunch
14.30 – 16.15 Conference sessions
16.15 – 16.30 Coffee break
16.30 – 18.15 Conference sessions
19.30 Dinner

Friday, May 25, 2007

8.00 – 13.00 Registration
9.00 – 11.00 Conference sessions
11.00 – 11.15 Coffee break
11.15 – 13.00 Conference sessions
13.00 – 13:15 Coffee break
13.15 – 15.00 Round Table
15.00 – 15.30 Closing Ceremony

**Invited Paper - NETWORKS AND GRIDS FOR GLOBAL E-SCIENCE AND THE
DIGITAL DIVIDE**

Author: Harvey Newman – Caltech - California Institute of Technology, USA

Wednesday, May 23, 2007, 09.30 – 10.30, Room EC105

Invited Session IS1. ADVANCED PROCESS CONTROL

Session Chairs: Dumitru POPESCU – ROMANIA, P. BORNE – FRANCE

Wednesday, May 23, 2007, 11.00 – 13.00, Room EC105

IS1.1. Remote Control and Power Line Communications

A. Nakrachi – FRANCE, N. Christov, C. Chera, C. Petrescu – ROMANIA

IS1.2. Advanced Control for Steel Plant Heating Installations

D. Popescu, V. Voinea, C. Dimon – ROMANIA, J. Lottin – FRANCE

IS1.3. Advanced Procedures For Bond Graph Model Adaptation

Anca-Maria Pirvu – ROMANIA, Geneviève Dauphin-Tanguy, Philippe Kubiak – FRANCE

IS1.4. Multi-model Adaptive Control Systems

P. Borne – FRANCE, D. Popescu, C. Lupu – ROMANIA

IS1.5. Fault Detection and Diagnosis for Thermo-energetic Processes

B. Ciubotaru, A. Fanea – ROMANIA, C. Christophe – FRANCE

Session A1. CONTROL APPLICATIONS (I)

Session Chairs: Toma-Leonida DRAGOMIR, Clement FEȘTILĂ – ROMANIA

Wednesday, May 23, 2007, 11.00 – 13.00, Room EC001

A1.1. Modelling and Extremum Seeking Control of a Cascade of Two Anaerobic Bioreactors

Ivan Simeonov, S. Stoyanov – BULGARY

A1.2. Interpolation in Data Sets Regarding the Health Status of a Population

Toma-Leonida Dragomir, Dorin Berian – ROMANIA

A1.3. Simplified Model of the (13c) Isotope Separation Column

Eva-Henrietta Dulf, Clement Festila – ROMANIA

A1.4. Decentralized Multimodel Control of a Wastewater Treatment Process with Activated Sludge

Marian Barbu, Sergiu Caraman – ROMANIA

A1.5. On-Off Robust Speed Control for Two-Phase Induction Motor

Clement Festila, Eva Dulf, Mihai Gligan – ROMANIA

Session A2. SYSTEMS AND SIGNALS (I)

Session Chairs: Dan ȘTEFĂNOIU, Mihail ABRUDEAN – ROMANIA

Wednesday, May 23, 2007, 11.00 – 13.00, Room EC002

A2.1. Collaborative Networks for Complex Adaptive Systems

Ioan Dumitrache, Aurelian Mihai Stănescu – ROMANIA

- A2.2.** Truncation Errors of the Operator Matrix M_{dpx} for Numerical Modelling and Simulation of the Distributed Parameter Processes
Mihail Abrudean, Tiberiu Coloși, Mihaela-Ligia Unguresan – ROMANIA
- A2.3.** Numerical Modelling and Simulation of Control Systems, With Distributed Parameter Processes
Mihail Abrudean, Mihaela-Ligia Unguresan, Tiberiu Coloși – ROMANIA
- A2.4.** Calibration Algorithms for Two Videocameras
Elena Corina Cipu, Romeo Bercia – ROMANIA
- A2.5.** Stability and Programming in Hybrid Systems
Lavinia Bejenaru – ROMANIA

Session C1. ARTIFICIAL INTELLIGENCE & EXPERT SYSTEMS

Session Chairs: Cristian GIUMALE, Ioan Alfred LEȚIA – ROMANIA

Wednesday, May 23, 2007, 11.00 – 13.00, Room EC004

- C1.1.** An Argumentative System for Online Dispute Resolution
Ioan Alfred Leția, Adrian Groza – ROMANIA
- C1.2.** Improved Performance of Imagery Tasks Classification Based on Support Vector Machine
Ștefan Cososchi, Mihaela Ungureanu, Rodica Strungaru – ROMANIA
- C1.3.** Fast Multi-View Human Detection and Pose Estimations
Vajda Tamás, Sergiu Nedevschi – ROMANIA
- C1.4.** A Multi-Agent System for Data Mining in Geospatial Data
Dana Persa, Eugen Claudiu Persa – ROMANIA
- C1.5.** Argumentation Protocols for Defeasible Inter-Agent Communication
Ioan Alfred Leția, Raluca Vartic – ROMANIA
- C1.6.** Knowledge and Data Management in Business Intelligence
Marius Guran, Aref Mehanna, Sebastian Roșu – ROMANIA

Invited Session IS2. HYBRID SYSTEMS

Session Chairs: Hassane ALLA – FRANCE, Simona CARAMIHAI – ROMANIA

Wednesday, May 23, 2007, 14.30 – 16.15, Room EC105

- IS2.1.** Dynamic Control of a Flow-Rack Automated Storage and Retrieval System
Khalid Hachemi, Hassane Alla – FRANCE
- IS2.2.** On Hybrid Timed Event Graphs With Multipliers in Dioid
Samir Hamaci, Jean-Louis Boimond, Sebastien Lahaye – FRANCE
- IS2.3.** Hybrid Petri Net Model Based Decision Support System
Janetta Culita, Simona Caramihai, Calin Munteanu – ROMANIA
- IS2.4.** Timed Membrane Differential Petri Nets for Performance Modelling of Reconfigurable and Mobile Hybrid Systems
Emilian Guțuleac – REP. MOLDOVA, Mihai L. Mocanu – ROMANIA, Iurie Turcanu – REP. MOLDOVA
- IS2.5.** A Multi-Agents System Applied to an e-Platform of the Spare-parts Management
A. Benaouda, N. Zerhouni – FRANCE
- IS2.6.** Hierarchical Control of Grid Connected Wind Power Systems as Hybrid Dynamic Systems
Antoneta Iuliana Bratcu, Iulian Munteanu, Daniela Cristina Cernega – ROMANIA

Session A3. CONTROL APPLICATIONS (II)

Session Chairs: Jose Sa da COSTA – PORTUGAL, Silviu DUMITRIU – ROMANIA

Wednesday, May 23, 2007, 14.30 – 16.15, Room EC001

- A3.1.** Internal Model Control Applied to the Archimedes Wave Swing
Jose Sa da Costa, Pedro Beirao, Duarte Valerio – PORTUGAL
- A3.2.** Modeling a Can-Based Road Traffic Monitoring System
Mariana Mocanu, Vasile Lungu – ROMANIA
- A3.3.** Feedback Linearization Control of DC Drive Tracking System with Friction
Teodor Dumitriu – ROMANIA
- A3.4.** An Application of Agent-Based Systems in Environmental Protection
Mihaela Oprea, Constantin Nichita – ROMANIA
- A3.5.** Adaptive Predictive Control of a Distillation Column
Alina Simona Băieșu – ROMANIA

Session A4. SYSTEMS AND SIGNALS (II)

Session Chairs: Dan ȘTEFĂNOIU, Bogdan DUMITRESCU – ROMANIA

Wednesday, May 23, 2007, 14.30 – 16.15, Room EC002

- A4.1.** Times Series Prediction and Compression Through Wavelet Packets
Dan Ștefanoiu, Janetta Culita – ROMANIA
- A4.2.** Robust Control for Switched Piecewise Affine Systems Subject to Parameter Variations
Jean Thomas - EGYPT, Sorin Olaru, Didier Dumur, Jean Buisson – FRANCE
- A4.3.** Adaptive Control Strategy for Motor Drive Systems
Felicia Neghină, Emil Pop, Monica Leba – ROMANIA
- A4.4.** Numerical Modelling and Simulation Variant for Pollutants Spatial Dispersion
Livia Buzdugan, Tiberiu Coloși – ROMANIA

Session C2. COMPUTER ARCHITECTURES (I)

Session Chairs: Nicolae CUPCEA, Costin ȘTEFĂNESCU – ROMANIA

Wednesday, May 23, 2007, 14.30 – 16.15, Room EC004

- C2.1.** Message Logging Solutions for Fault Tolerant Computers and Software Reliability
Costin Ștefănescu, Nicolae Cupcea, Adrian Surpățeanu – ROMANIA
- C2.2.** Applications Development Environment for Ap-Mini Programmable Automata
Mihail Schitcu, Lucia Vacariu, Octavian Creț – ROMANIA
- C2.3.** FPGA Implementation of a 32-bit RISC Microcontroller
Ștefan-Robert Stanciu, Florin Moldoveanu, Cătălin Ionuț Fălcescu, Constantin Suciu – ROMANIA
- C2.4.** Optimal Logic Design of K-Lut Based FPGAs
Ion I. Bucur – ROMANIA

Invited Session IS3. GRID AND ADVANCED COMPUTING IN APPLICATIONS

Session Chairs: Horia-Nicolai TEODORESCU, Mitică CRAUS – ROMANIA

Wednesday, May 23, 2007, 16.30 – 18.15, Room EC105

IS3.1. Parallelizing and Distributing Computation for Fuzzy Economic Models

Horia-Nicolai Teodorescu, Marius Zbancioc – ROMANIA

IS3.2. An Academic Grid for Complex Applications – GRAI

Mitica Craus, Horia-Nicolai Teodorescu, Cornelius Croitoru, Octav Brudaru, Dragos Arotaritei, Marius Calin, Alexandru Archip – ROMANIA

IS3.3. The Service Layer of the Academic Grid GRAI

Mitica Craus, Horia-Nicolai Teodorescu, Cornelius Croitoru, Octav Brudaru, Dragos Arotaritei, Marius Calin, Alexandru Archip – ROMANIA

IS3.4. Equipment for the Determination of Calorie Consumption by Walk Analysis in Patients with Chronic Diseases

Georgeta Capriș, Anghel Constantin, Rodica Strungaru, Sever Pașca – ROMANIA

IS3.5. Design Considerations for a System for the Measurement and the Computerized Processing of Two Variables of a Technological Process – SIMVAR System

Tom Savu, Ileana Tăcutu, Anghel Constantin – ROMANIA

Session A5. INDUSTRIAL SYSTEMS, BIO & ECOLOGICAL SYSTEMS

Session Chairs: Nicolae CUPCEA, Emil POP – ROMANIA

Wednesday, May 23, 2007, 16.30 – 18.15, Room EC001

A5.1. Microcontroller-Based System for Liquid Level Measuring

Costin Ștefănescu, Nicolae Cupcea, Adrian Surpățeanu – ROMANIA

A5.2. VISI Embedded Controller Versus Software Oriented Design

Monica Leba, Emil Pop, Petre-Marian Vamvu, Camelia Tăbăcaru-Barbu – ROMANIA

A5.3. Approaches in the Management of Virtual Enterprises

Marius Guran, Vladimir Florian – ROMANIA

A5.4. A Multimedia Support for the Simulation of Navigational Processes

Marius Guran, Gheorghe Popescu – ROMANIA

Session C3. COMPUTER ARCHITECTURES (II)

Session Chairs: Adrian PETRESCU, Nicolae ȚĂPUȘ – ROMANIA

Wednesday, May 23, 2007, 16.30 – 18.15, Room EC004

C3.1. Forest Watcher – An Embedded System for the Protection of Forests

Cristian Pop, Ioana Bratie, Omar Choudary, Mircea Gheorghe, Decebal Popescu – ROMANIA

C3.2. Resistive Bridge Connections Controlled by Virtual Instrumentation

Nicolae Pătrășcoiu, Adrian Marius Tomuș – ROMANIA

C3.3. Embedded System for Saving Dolphins Caught in Shark Nets

Ancuța Onofrei, Vlad Cârnu, Mihai Ciuraru, Mihai Cârnu, Nirvana Popescu – ROMANIA

C3.4. Hardware Accelerator for Gate Array Placement

Cătălin-Eugen Nițipir, Adrian Petrescu – ROMANIA

Invited Session IS4. ELECTRICAL POWER SYSTEMS

Session Chairs: R. MĂGUREANU, S. S. ILIESCU – ROMANIA

Thursday, May 24, 2007, 9.00 – 11.00, Room EC105

IS4.1. Advanced Technologies in Active Electrical Networks

R. Măgureanu, Mihaela Albu – ROMANIA

IS4.2. Modelling and Simulation of Gas Turbines

S. S. Iliescu, Ioana Făgărășan – ROMANIA, V. Popescu – GERMANY, Călin Soare – ROMANIA

IS4.3. Three-Machines Power System Control by Smooth Sliding-Mode Observer-Controller

A. Filipescu, A. Stancu, S. Filipescu – ROMANIA

IS4.4. High Efficiency Power Quality Monitoring Solutions for Dedicated Virtual Instrumentation

Costin Ștefănescu, Nicolae Cupcea, Adrian Surpățeanu – ROMANIA

IS4.5. Model and Control of Some Cryogenic Power Cables

Dan-Alexandru Iordache – ROMANIA

IS4.6. Operational Management System for a Hydropower Plant Dispatching (Principles)

Mircea Ordean, Clement Feștilă – ROMANIA

Invited Session IS5. GRID COMPUTING (I)

Session Chairs: Valentin CRISTEA, Nicolae ȚĂPUȘ – ROMANIA

Thursday, May 24, 2007, 9.00 – 11.00, Room EC004

IS5.1. Intelligent Strategies for Dag Scheduling Optimization in Grid Environments

Florin Pop, Valentin Cristea – ROMANIA

IS5.2. Monitoring and Resource Usage Accounting in the Open Science Grid with The Monalisa Framework

Corina Stratan, Alexandru Costan – ROMANIA, Costin Grigoraș – SWITZERLAND, Iosif Legrand – U.S.A.

IS5.3. Monitoring and Automating Actions in the Alice Grid with the Monalisa Repository

Costin Grigoraș – SWITZERLAND, Alexandru Costan – ROMANIA, Cătălin Cîrstoiu – SWITZERLAND, Iosif Legrand – U.S.A.

IS5.4. A Distributed Agent Based System to Control and Coordinate Large Scale Data Transfers

Dobre Ciprian Mihai – ROMANIA, Ramiro Voicu – U.S.A., Adrian Muraru – SWITZERLAND, Iosif Legrand – U.S.A.

IS5.5. On the Accuracy of Off-Line Monitoring Information in Grids

Corina Stratan – ROMANIA, Cătălin Cîrstoiu – SWITZERLAND, Alexandru Iosup – NETHERLANDS

Session A6. ROBOTICS (I)

Session Chairs: Theodor BORANGIU, Cătălin BUIU – ROMANIA

Thursday, May 24, 2007, 9.00 – 11.00, Room EC001

A6.1. Exploration for Teams of Mobile Robots

Nicolae Moanță, Alexandru Dumitrașcu – ROMANIA

A6.2. Intelligent Job Shop Assembling with Holonic Robot Control

Theodor Borangiu, Florin Daniel Anton, Nick Ivănescu, Silvia Tunaru, Anamaria Dogar – ROMANIA

- A6.3.** Developing of a Service Robot to Recognize and Sort Waste
Cătălin Buiu, Florin Cazan, Radu Ciurlea – ROMANIA
- A6.4.** Concept of Control System for an Innovative Mobile Robot Chassis
Michal Zajac – POLAND, Ralf Stetter, Andreas Paczynski – GERMANY, Dariusz Uciński – POLAND
- Some Considerations Regarding Modelling and Control of
- A6.5.** the Two-Wheel Differential Drive Mobile Robot
Mircea Nițulescu – ROMANIA
- A6.6.** Ontological Communication in Cooperative Mobile Robots System
Lucia Văcariu, Mihai Chintoanu, Gheorghe Lazea, Octavian Creț – ROMANIA

Session IAFA1. COMPLEXITY, MODELLING AND DATA RETRIEVAL

Session Chairs: Florin IONESCU – GERMANY, Dan IORDACHE – ROMANIA

Thursday, May 24, 2005, 9:00 – 11.00, Room EC002

- IAFA1.1.**Complex Modeling in Mechatronics
Florin Ionescu – GERMANY
- IAFA1.2.**Complexity and Information
Dan Iordache – ROMANIA
- IAFA1.3.**Intelligent Control of Piezoactuated Robot Using an Approximated Hysteresis Model
Florin Ionescu – GERMANY, I. Talapananu – USA, D. Arotăriței – ROMANIA, R. Hradynarski, K. Kostadinov – BULGARY
- IAFA1.4.**Statistical Features Based Method for Textured Image Classification
Dan Popescu, Nicoleta Angelescu, Ion Căciulă, Iulian Udroiș – ROMANIA
- IAFA1.5.**Image Retrieval System Inspired from Antispam Filters
Alexandru Cătălin Cosoi, Mădălin Ștefan Vlad, Valentin Sgârțiu – ROMANIA
- IAFA1.6.**Image Comparison Using Fractal Techniques
Ștefan Mocanu, Carmen Negoescu, Radu Caprescu – ROMANIA

Invited Session IS6. GRID COMPUTING (II)

Session Chairs: Valentin CRISTEA, Dorian GORGAN – ROMANIA

Thursday, May 24, 2007, 11.15 – 13.00, Room EC004

- IS6.1.** Towards an IO Intensive Grid Application Instrumentation in Mediogrid
Dacian Tudor, Florin Pop, Valentin Cristea, Vladimir Crețu – ROMANIA
- IS6.2.** GRID Services Based on Heuristic Methods for Multi-Objective Optimization Problems
Dana Petcu, Daniela Zaharie, Horia Popa, Marc Frîncu, Andrei Eckstein – ROMANIA
- IS6.3.** Satellite Image Processing by MedioGRID Platform Kernel
Dorian Gorgan, Ovidiu Mureșan, Victor Bacu, Cornelia Melenti, Daniel Safta – ROMANIA
- IS6.4.** A Data Model View on Mediogrid
Dacian Tudor, Vladimir Crețu – ROMANIA
- IS6.5.** Formal Definition of SCAR-ACE Role-Based Access Control Model
Mihaela Ordean, Dorian Gorgan – ROMANIA

Session A7. FAULT DETECTION

Session Chairs: Andras VARGA – GERMANY, Jose Sá da COSTA – PORTUGAL

Thursday, May 24, 2007, 11.15 – 13.00, Room EC105

- A7.1.** On Designing Least Order Residual Generators for Fault Detection and Isolation
Andras Varga – GERMANY
- A7.2.** Fault Isolation Based on Wavelets Transform
S. Lesecq, S. Gentil – FRANCE, I. Făgărășan – ROMANIA
- A7.3.** A Design Approach to FDI/FTC of Complex Networked Control Systems
Jose Sá da Costa, B. M. S. Santos, M.J.G.C. Mendes – PORTUGAL
- A7.4.** Design Method for Control System in Fault Condition
Eugen Iancu, Matei Vinătoru – ROMANIA
- A7.5.** Fault Detection and Control in the Steam Overheater
Camelia Maican, Matei Vinătoru, Eugen Iancu, Gabriela Canureci – ROMANIA

Session A8. ROBOTICS (II)

Session Chairs: Mircea IVĂNESCU, Cătălin BUIU – ROMANIA

Thursday, May 24, 2007, 11.15 – 13.00, Room EC001

- A8.1.** Grasping Function Control System for a Hyperredundant Robot
Ivănescu Mircea, Florescu Mihaela Cecilia – ROMANIA
- A8.2.** Interaction Control Experiments with a Compliant Surface for a Rigid-Flexible Link Robot Manipulator
J.M.M. Martins, L.F. Baptista, A.N. Paris, P. Pires, J.M.G. Sa da Costa – PORTUGAL
- A8.3.** A Real-Time Solution for Target Reach in a Static Environment
Răzvan Tudor Tănăsie, Dorian Cojocaru, Mircea Ivănescu – ROMANIA
- A8.4.** A Remote Control System for a Radioguided Vehicle-Like Robot
Alexandru Cazan, Ana Lucia Vârbănescu, Radu Vârbănescu – ROMANIA
- A8.5.** Evaluation of Scale Invariant Features for Visual Servoing Tasks
Adrian Burlacu, Corneliu Lazăr – ROMANIA
- A8.6.** Autonomous Electric Vehicle Control - Software and Applications
Andreea Udrea – ROMANIA

Session IAFA2. FRACTAL APPLICATIONS IN MEDICINE AND BIOLOGY

Session Chairs: Paul FLONDOR, Cătălin VASILESCU – ROMANIA

Thursday, May 24, 2005, 11:15 – 13.00, Room EC002

- IAFA2.1.** Scenarios of LPS Signaling Based on ODE Models in Spesis
Paul Flondor, Mircea Olteanu, Cătălin Vasilescu – ROMANIA
- IAFA2.2.** The Bifurcation Study of a System Modeling Inflammation and Septic Shock
Cristina Bercia – ROMANIA
- IAFA2.3.** State-space Partition and the Lattice Paradigm in Biological Modeling
Radu Dobrescu, Loretta Ichim, Virginia Ecaterina Oltean – ROMANIA
- IAFA2.4.** Computer Modeling of Two-Dimensional Tumour Growth
Radu Dobrescu, Loretta Ichim, Daniela Crișan – ROMANIA
- IAFA2.5.** Nonlinear Dynamics of Proteomic Signals in Transcriptional Regulatory Cascades
A. S. Cârstea, D. Grecu, A. T. Grecu – ROMANIA
- IAFA2.6.** Fractal Analysis of Electronographic Images
Vasilică Voinea, Daniela Alexandra Crișan, Cătălina Popescu-Mina – ROMANIA

Session A9. INTELLIGENT SYSTEMS AND COMMUNICATIONS (I)

Session Chairs: Ioan DUMITRACHE, Radu DOBRESCU – ROMANIA

Thursday, May 24, 2007, 14.30 – 16.15, Room EC105

A9.1. A Hybrid Medical Decision Support System

Ioan Dumitrache, Ioana Mihu, Monica Voinescu – ROMANIA

A9.2. Intelligent Transportation Systems for Disabled People

Monica Dragoicea – ROMANIA

A9.3. A Hardware Oriented RBF Classifier with a Simple Constructive Training Algorithm Based on Support Vectors

Radu Dogaru – ROMANIA

A9.4. Interpolative Control Versus Fuzzy Control for a Forth Order Plant

Sanda Dale, Toma Leonida Dragomir – ROMANIA

A9.5. Matlab Genetic Programming Toolbox for System Identification

Lavinia Ferariu, Mihaela Şendrea – ROMANIA

A9.6. Genetic Optimization of Fuzzy Controllers for Mobile Robots

Fadi Halal, Ioan Dumitrache – ROMANIA

Invited Session IS7. ENVIRONMENT PROCESSES, MONITORING AND CONTROL (I)

Session Chairs: Costică NITU – ROMANIA, Vladimir F. KRAPIVIN – RUSSIA

Thursday, May 24, 2007, 14.30 – 16.15, Room EC001

IS7.1. The Gims-Based Method for Vegetation Microwave Monitoring

Costică Nitu - ROMANIA, Vladimir F. Krapivin, Vladimir Yu. Soldatov - RUSSIA

IS7.2. An Adaptive Geoinformation Technology Based Approach to The Monitoring and Prediction of the Natural Disasters

Vladimir F. Krapivin – RUSSIA, Costica Nitu – ROMANIA, Vladimir Yu. Soldatov – RUSSIA

IS7.3. Wireless Sensor Networks Tool for Studying Environmental Systems

Gabriel Costache – ROMANIA

IS7.4. Neural Networks Implications in Ecology

Radu Curcă – ROMANIA

IS7.5. The Environmental Variables in the Prediction of Energy Consumption

Anda Dobrescu – ROMANIA

IS7.6. Geographic Information Systems in Ecology

Oana C. Iancovici – ROMANIA

Session IAFA3. COMPLEX MODELS IN APPLIED SCIENCES

Session Chairs: Peter PLANINŠIČ – SLOVENIJA, Dan IORDACHE - ROMANIA

Thursday, May 24, 2005, 14:30 – 16.15, Room EC002

IAFA3.1. Electrochemical Noise Signals Discrimination Using Wavelet-Based Fractal Analysis

Peter Planinšič, Aljana Petek - SLOVENIJA

IAFA3.2. Features of Organized Complexity of Certain Industrial Magnetic Materials

Dan Iordache, Viorica Iordache – ROMANIA

- IAFA3.3** Classification of Temporal Sequences with Excitable Membranes Based on Semitotalistic Cellular Automata
Radu Dogaru – ROMANIA
- IAFA3.4** An Approach for Executions Continuation in Zeno Hybrid Systems
Virginia Ecaterina Oltean - ROMANIA
- IAFA3.5** Study of Some Complexity Features of the Universe Structure and Evolution
Dumitru Daniel, Cristian Zmarandache, Dan Alexandru Iordache – ROMANIA
- IAFA3.6** Fractal Theory and Morphogenesis
Mircea Rusu, Radu Dobrescu – ROMANIA

Session C4. SOFTWARE ENGINEERING AND APPLICATIONS (I)

Session Chair: Valentin CRISTEA, Ștefan TRĂUȘAN-MATU – ROMANIA

Thursday, May 24, 2007, 14.30 – 16.15, Room EC004

- C4.1.** Towards an Evaluation Methodology for Collaborative Learning
Valentin Cristea, Ștefan Trăușan-Matu, Vlad Posea, Alexandru Gartner – ROMANIA
- C4.2.** Delivering IT Services as Web Utilities
Cornelia V. Oprean, Șerban C. Ghenea – ROMANIA
- C4.3.** A SOA/BPEL Based Approach for Financial Services
Liviu Gherman, Ovidiu Achim – ROMANIA
- C4.4.** Integration of GRID Infrastructure in E-Learning Systems
Felicia Ionescu, Vlad Nae, Alexandru Gherega – ROMANIA
- C4.5.** RMI Access to Learning Objects Repository
Costin Bădică, Dumitru Dan Burdescu, Marian Cristian Mihăescu – ROMANIA

Session A10. INTELLIGENT SYSTEMS AND COMMUNICATIONS (II)

Session Chairs: Ioan DUMITRACHE, Radu DOBRESCU – ROMANIA

Thursday, May 24, 2007, 16.30 – 18.15, Room EC105

- A10.1.** Analysis of Routing Protocols for Wireless Sensor Networks
Radu Dobrescu, Maximilian Nicolae, Dan Popescu, Radu Varbanescu – ROMANIA
- A10.2.** Automatic System Control Over Time Delayed Communication Systems
Daniel Bogdan Irimia, Ciprian Lupu – ROMANIA
- A10.3.** Fuzzy Control of Two Liquid Tanks
Fadi Halal, Messaouda Azzouzi – ROMANIA
- A10.4.** Future Security Systems - Storing Biometrics on Smart Cards
Madalin Ștefan Vlad, Razvan Tatoi, Valentin Sgarciu – ROMANIA
- A10.5.** Product Traceability - Simulation with Contactless Smart Cards
Madalin Ștefan Vlad, Mihai Ceaparu, Valentin Sgarciu – ROMANIA
- A10.6.** Using the Neural Network to Prevent Waste Material Pollution Near the Urban Settings or Transfrontier Area
Valeriu Lupu, Cătălin Lupu – ROMANIA

Invited Session IS8. ENVIRONMENT PROCESSES, MONITORING AND CONTROL (II)

Session Chairs: Costică NITU – ROMANIA, Vladimir F. KRAPIVIN – RUSSIA

Thursday, May 24, 2007, 16.30 – 18.15, Room EC001

- IS8.1.** A Remote Sensing-Based Modelling System to Study the Aral-Caspian Water Regime
Vladimir F. Krapivin - RUSSIA, Gary W. Phillips – U.S.A., Costica Nitu – ROMANIA
- IS8.2.** Genetic Algorithms Implications in Ecology
Radu Curcă – ROMANIA
- IS8.3.** Distributed Network for Increasing the Energy Efficiency in Irrigation
Costica Nitu, Anda Dobrescu – ROMANIA
- IS8.4.** Semantic Networks Application in Environment Information Systems
Dan Vasile Olinici – ROMANIA
- IS8.5.** From Data to Information: Lessons Learned from the Monitoring, Laboratory Analysis and Information Management Activities in the Danube Catchment Area
Liviu N. Popescu, Octavian Dumitrescu, Oana C. Iancovici – ROMANIA
- IS8.6.** Multimodal Biometrics for Access Control in an Intelligent Car
Catalin Lupu, Valeriu Lupu – ROMANIA

Session IAFA4. STOCHASTIC APPROACHES IN COMMUNICATION NETWORK THEORY

Session Chairs: Ciprian Doru GIURCĂNEANU – FINLAND, Radu DOBRESCU – ROMANIA

Thursday, May 24, 2005, 16:30 – 18.15, Room EC002

- IAFA4.1.** On the Stochastic Complexity for Order-1 Markov Chains and the Catalan Constant
Ciprian Doru Giurcăneanu – FINLAND, Dumitru Mihalache, Marian Tetiva - ROMANIA, Moubinool Omarjee – FRANCE
- IAFA4.2.** Self-similarity of Scale-free Graphs
Radu Ursianu, Adina Sandu – ROMANIA
- IAFA4.3.** The Characterization and Modeling of Fractal and Multifractal Networks
Dan Constantin Puchianu, Henri George Coanda – ROMANIA
- IAFA4.4.** Remote Control Device Manager for Smart Transducers Based on HART Communication Protocol
Mădălina Argeșeanu, Valentin Sgârciu – ROMANIA
- IAFA4.5.** Parallel Processing Procedure for Simulation of Scale Free Networks Traffic
Taralunga Sebastian, Mihai Hangiu, Ion Hangiu, Roland Ulrich – ROMANIA
- IAFA4.6.** Voronoi and Fractal Complex Networks
Roland Ulrich, Bogdan Droașcă – ROMANIA

Session C5. SOFTWARE ENGINEERING AND APPLICATIONS (II)

Session Chair: Florin RĂDULESCU, Alexandrina DRAGOMIR – ROMANIA

Thursday May 24, 2007, 16.30 – 18.15, Room EC004

- C5.1.** Locality Sensitive Search: A Fast Approach
Florin Rădulescu – ROMANIA
- C5.2.** A Performance Test Tool for a Metasearch Engine
Mihai L. Mocanu, Mihail M. Popa - ROMANIA
- C5.3.** Rhythm and Learning Style in Human Computer Interaction
Alexandrina Dragomir – ROMANIA

C5.4. Security Architectures for Internet Protocol Telephony

Nitu Cornel – CANADA

C5.5. Quality of Service Assurance for Multiple Connected Services in Network Management Systems

Nitu Loredana – CANADA

Invited Session IS9. BIOINFORMATICS AND SYSTEMS BIOLOGY

Session Chairs: Paul CRISTEA, Rodica TUDUCE – ROMANIA

Friday, May 25, 2007, 9.00 – 11.00, Room EC105

IS9.1. Phase Analysis of Multiresistant Mycobacterium Tuberculosis Genomic Signals

Paul Cristea, Rodica Tuduce, Dorina Bănică – ROMANIA, Karin Rodewald – GERMANY

IS9.2. Information Transfer & The Living State: What Might Be Expected Beyond Molecular Concepts?

Ralf Neurohr – ROMANIA

IS9.3. Detection of Multidrug-Resistant Mycobacterium Tuberculosis by Line Probe Assay and Real-Time PCR Technology

Dorina Bănică, Dan Oțelea, Paul Cristea, Rodica Tuduce – ROMANIA

IS9.4. Specific Epigenetic Code in Reproduction

Liliana Burlibasa, Natalia Cucu, Mihai Burlibasa, Lucian Gavrilă – ROMANIA

IS9.5. The Identification of VDR (Vitamin D Receptor) Gene Polymorphisms: ApaI and TaqI

Veronica Stoian, Nicoleta Constantin, Alexandru Simon-Gruita, Georgiana Duta-Cornescu, Florin Stanciu, Dorina Bănică, Paul Cristea, Rodica Tuduce – ROMANIA

IS9.6. New Antimicrobial Strategies Based on the Modulation of Intercellular Signalling Mechanisms in Bacteria Mediated by Quorum-Sensing

Mariana Carmen Chifiriuc, Carmen Iordache, Olguța Dracea, Marcela Bucur, Cristina Larion, Mihaela Gheorghe, Roxana Pispiris, Ani Cotar, Mihai Burlibasa, Veronica Lazăr – ROMANIA

IS9.7. Multiresolution Analysis of ECG Signals. Application to the Poly-spectrum12 Evaluation

Mihaela Albu, Marcel Stanciu, Anatolie Boev – ROMANIA

Session A11. DESIGN METHODS (I)

Session Chairs: Corneliu POPEEA, Bogdan DUMITRESCU – ROMANIA

Friday May 25, 2007, 9.00 – 11.00, Room EC001

A11.1. L_2 - Norm Order Reduction

Corneliu Popeea, Boris Jora - ROMANIA

A11.2. Uncertainty Quantification of Eigenvalue Problems Using Stochastic Finite Element

Mihai Anitescu – USA

A11.3. Variable Structure System for the Control of Multidimensional Nonstationary Linear Object

Alexander V. Lebedev, Vladimir F. Filaretov – RUSSIA

A11.4. Robust Control of Constrained Systems over a Communication Network with Queues

Vojislav Z. Filipovic – SERBIA

A11.5. Off-Line Method for Improving Robustness of Model Predictive Control Laws

Cristina Stoica, Pedro Rodriguez-Ayerbe, Didier Dumur – FRANCE

Session C6. ALGORITHMS

Session Chairs: Cristian GIUMALE, Liliana DOBRICĂ – ROMANIA

Friday May 25, 2007, 9.00 – 11.00, Room EC004

- C6.1.** An Approach to a Systematic Analysis of Product Line Architectures
Liliana Dobrică – ROMANIA, Eila Niemela – FINLAND
- C6.2.** Common-sense Reasoning and Hypothesizing with Constraints
Cristian Giumale – ROMANIA
- C6.3.** Algorithms for Pipelined Parallelism Scheduling Problem
Carmen Odubășteanu, Călin Munteanu, Cătălin Tudose – ROMANIA
- C6.4.** Automatic Licence Plate Recognition Solution Targeting Mobile Devices
Mihai Tanase, Lucian Burja, Victor Paraschiv, Adrian Vasile, Marian Gheorghe – ROMANIA
- C6.5.** g(n) - Comparable Complexity Functions
Andrei-Horia Mogos – ROMANIA

Invited Session IS10. CONTROL EDUCATION

Session Chairs: Mihail VOICU – ROMANIA, Robin De KEYSER – BELGIUM

Friday, May 25, 2007, 11.15 – 13.00, Room EC105

- IS10.1.** Experience in Teaching Physical Modeling by the Bond-Graph Method
O. Pastravanu, M. Voicu – ROMANIA
- IS10.2.** Teaching Control: a Cross-Disciplinary Adventure
Robin De Keyser – ROMANIA
- IS10.3.** Case Studies in Teaching Advanced Control Strategies
Stefan Preitl, Radu-Emil Precup, Zsuzsa Preitl, Simona Vaivoda – ROMANIA
- IS10.4.** Multivariable Remote Control on Didactical Platform
A. Nakrachi - FRANCE, D. Popescu, C. Dimon, C. Chera – ROMANIA
- IS10.5.** Level and Temperature Control Using the Educational Kit Festo
Matei Vinatoru, Gabriela Canureci, Eugen Iancu, Camelia Maican – ROMANIA
- IS10.6.** Networked Control Systems Laboratory Development
Corneliu Lazar, Sorin Carari, Cristina Halauca – ROMANIA

Session A12. DESIGN METHODS (II)

Session Chairs: Bogdan DUMITRESCU, Octavian PĂSTRĂVANU – ROMANIA

Friday May 25, 2007, 11.15 – 13.00, Room EC001

- A12.1.** Optimal Design of Positive Realness Stability Domains
Bogdan Dumitrescu – ROMANIA
- A12.2.** Invariant Sets with Arbitrary Time-Dependence in the Dynamics of Linear Systems with Interval-Type Uncertainties
M.H.Matcovschi, O. Pastravanu, M. Voicu – ROMANIA
- A12.3.** A Mixed H₂/H_∞ Type Problem for a Class of Stochastic Systems with Finite Jumps
Adrian-Mihail Stoica – ROMANIA
- A12.4.** Nonlinear Predictive Method for Boiler Drum Level Control
Cristina Halaucă, Corneliu Lazăr – ROMANIA

Session C7. COMPUTER NETWORKS AND DISTRIBUTED SYSTEMS

Session Chairs: Nicolae ȚĂPUȘ, Radu DOBRIN – ROMANIA

Friday May 25, 2007, 11.15 – 13.00, Room EC004

- C7.1.** Handling Non-Periodic Events Together with Complex Constrained Tasks in Distributed Real-Time Systems
Radu Dobrin – SWEDEN, Gerhard Fohler – GERMANY
- C7.2.** The Problems of Time-Stamping Revisited
Cristian Marinescu, Nicolae Țăpuș – ROMANIA
- C7.3.** Collaborative Route Planning in Vehicular Ad-hoc Networks
Raluca Diaconescu, Cristian Gorgorin, Victor Gradinescu, Valentin Cristea – ROMANIA, Liviu Iftode – U.S.A.
- C7.4.** Towards a Governmental Platform for Citizen Safety and Crisis Management using Advanced Mobile Technologies
Mihai Tanase, Lucian Burja, Dan Mazare – ROMANIA
- C7.5.** Mobile Web Service Agents for Mobile Applications
Andrei Földi, Alin Moldoveanu, Florica Moldoveanu, Alexandru Soceanu – ROMANIA
- C7.6.** Towards a Middleware Architecture Supporting the Development of Context Aware Mobile Applications
Mihai Cristian Enescu – ROMANIA
- C7.7.** Strategies for Optimizing Shared Traffic Protection in G/Mpls Networks
Răzvan Rughiniș – ROMANIA

GENERAL INFORMATION

LOCATION

CSCS16 will be held at the Faculty of Automatic Control, "POLITEHNICA" University of Bucharest, Spl. Independentei nr.313, Bucharest, Romania. The formal Opening Ceremony will be organized in the EC105 room, Faculty of Automatic Control and Computers.

ACCESS TO CONFERENCE SITE

The Conference site can be accessed by the following means of transportation:

By underground - The Conference site is at 5 minutes walk from
POLITEHNICA underground station

By bus - Nos. 136, 236, 336 (UPB Stop)

By trolley bus - Nos. 61, 62 (UPB Stop)

CAR PARKING

There are ample parking facilities in the immediate vicinity of the Conference site.

MAIL

Correspondence in connection to the CSCS16 Conference should be addressed as it follows:

CSCS16 - SRAIT
"POLITEHNICA" University of Bucharest
Faculty of Control and Computers
Spl. Independentei nr.313, Sector 6
77206 Bucharest
ROMANIA
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CONFERENCE LITERATURE

The text of the contributions included in the final programme will be published and distributed to all registered participants who have paid the registration fee and presented their papers.

WORKING LANGUAGE

The working language of CSCS16 is English and will be used for presentations and discussions.

NAME BADGE

An admission badge bearing the participant's name will be issued to all registered participants, thus authorizing access to all Conference sessions.

GET ACQUAINTED COCKTAIL PARTY

A Get Acquainted Cocktail Party will be held on Wednesday, 23 May 2007 from 19:30 hours at Casa Oamenilor de Știință (COȘ) Restaurant. The cost of attendance is covered by the registration fee.

LUNCHESES

Self-lunches will be available in the "Leu" Complex. The price for a lunch varies between 5 Euros and 8 Euros.

DINNER

Dinner will be served Thursday night at 19:30 hrs. The price of a dinner will be around 35 Euros. Please note that dinner will only be organized for a minimum group of 25 participants.

REGISTRATION AND INFORMATION DESK

The CSCS16 Registration Desk will be open at the Conference site, Faculty of Automatic Control and Computers starting from 22 May 2007, 12:00 hrs.

CLIMATE

The weather in Bucharest is warm in May. Temperatures between 20°C to 30°C are to be expected.

INSURANCE

The organizers cannot be held liable for accidents to participants or for damage to or loss their personal property, howsoever caused. Participants are advised to make their own insurance arrangements.