CSCS21
21st INTERNATIONAL CONFERENCE ON CONTROL SYSTEMS AND COMPUTER SCIENCE

May 29-31, 2017
University POLITEHNICA of Bucharest
Romania

PROGRAMME

FACULTATEA DE
AUTOMATICĂ ȘI
CALCULATOARE
Universitatea **POLITEHNICA** din București

21st INTERNATIONAL CONFERENCE ON CONTROL SYSTEMS AND COMPUTER SCIENCE

WELCOME

We are honored and delighted, on behalf of the CSCS21-2017 Organizing Committee, to welcome you to the 21st International Conference on Control Systems and Computer Science, which takes place in Bucharest, on the University *Politehnica* of Bucharest, Romania, from May 29 to May 31, 2017. The CSCS21 Conference continues a tradition of more than 42 years as a biennial international event.

The main scope of CSCS21 is to cluster the latest research topics relevant to both Control Systems and Computer Science, and to encourage the submission of ongoing work, as well as position papers and case studies of existing projects. The 2017 edition of CSCS is mainly focused on Intelligent Information Technologies, as a common thread, which leads advances in fundamental and applied research in Control Systems and Computer Science. Moreover, the conference offers a forum for both academics and practitioners to share their experience and identify new and emerging trends, to cooperate and share new research directions and innovative programs.

This edition of CSCS has 104 accepted papers (for the main track and workshops) from all over the world. Each submission was peer-reviewed by program committee members or invited external reviewers. This edition we have 4 invited talks, 12 sessions for CSCS main track, 7 workshops, and one special session.

Organizing this international conference for many years is a collective effort. We are honored to thank all of the members of the organization committee and program committee, as well as all of the reviewers, for their hard work in finalizing the reviews on time, and the authors for submitting their papers. We want to thank workshops organizers and workshops committee members for carefully reviewing the papers. This wonderful community of researchers contributes to the success of this event. We also express our gratitude and thank to all members of local organizing committee for their valuable contribution to this successful event.

We hope you will enjoy the conference together with us and have a great time in Bucharest and also in Romania.

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General Chair

Adina Magda Florea, *University Politehnica of Bucharest, Romania*
General Co-Chair

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INVITED TALKS

1. **Decision Support Systems in Water Management: Challenges and Future Prospects**
   Andreja Jonoski – Professor of Hydroinformatics, UNESCO-IHE Institute for water education, Delft, the Netherlands
2. **Artificial Intelligence and Machine Learning - The Unreasonable Effectiveness of Data**
   Dan Cautis – Associate Vice President at Georgetown University, USA
3. **Trust Nothing. Run Encrypted. The Emergence of Tamper-Proof Secure Cloud Computing**
   Radu Sion – Professor at Stony Brook University, the Director of the National Security Institute, and the CEO of Private Machines Inc., USA
4. **Simulation, Computer Aided Decision-making, and The New Information and Communication Technologies**
   Acad. Florin Gheorghe Filip – The Romanian National Academy of Sciences, Romania

CSCS21 SESSIONS

- **A01 - Advanced Control Strategies**
  Session Chair: *Ciprian Lupu* (University Politehnica of Bucharest, Romania)
  Daniel Moga (Technical University of Cluj-Napoca, Romania)

- **A02 - Systems and Signals, Adaptive Control**
  Session Chair: *Octavian Păstrăvanu* (Technical University "Gheorghe Asachi" of Iași, Romania)
  Janetta Culiță (University Politehnica of Bucharest, Romania)

- **A03 - Bio-technologies**
  Session Chair: *Emil Petre* (University of Craiova, Romania)
  *Mihai Caramihai (*University Politehnica of Bucharest, Romania*)*

- **A04 - Intelligent Manufacturing**
  Session Chair: *Adrian Korodi* (University Politehnica of Timişoara, Romania)
  Simona Caramihai (University Politehnica of Bucharest, Romania)

- **C01 - Cloud and Grid Computing**
  Session Chair: *Nicolae Ţăpuş* (University Politehnica of Bucharest, Romania)

- **C02 - Mobile and Pervasive Computing**
  Session Chair: *Ciprian Dobre* (University Politehnica of Bucharest, Romania)

- **C03 - Big Data and Analytics**
  Session Chair: *Răzvan Rughiniş* (University Politehnica of Bucharest, Romania)

- **C04 - Human Machine Interfaces and Machine Learning**
  Session Chair: *Nirvana Popescu* (University Politehnica of Bucharest, Romania)

- **C05 - Computational Intelligence**
  Session Chair: *Adina Magda Florea* (University Politehnica of Bucharest, Romania)

- **C06 - Computer Vision and Computer Graphics (I)**
  Session Chair: *Florica Moldoveanu* (University Politehnica of Bucharest, Romania)

- **C07 - Computer Vision and Computer Graphics (II)**
  Session Chair: *Irina Mocanu* (University Politehnica of Bucharest, Romania)

- **C08 - Security and System Software**
  Session Chair: *Florin Rădulescu* (University Politehnica of Bucharest, Romania)

WORKSHOPS

The 8th International Workshop on Interdisciplinary Approaches in Fractal Analysis – IAFA-2017 (http://www.iafa2017.aii.pub.ro)

Workshop organizer: *Radu Dobrescu*, University Politehnica of Bucharest, Romania

- **IAFA-1: Medical Images Processing**
  Workshop Chair: *Nebojša T. Milošević* (University of Belgrade, Serbia)

- **IAFA-2: Structural Complexity**
  Workshop Chair*: Radu Dogaru* (University Politehnica of Bucharest, Romania)

- **IAFA-3: Complexity in Process Control**
  Workshop Chair: *Gheorghe Florea* (University Politehnica of Bucharest, Romania)

- **IAFA-4: Applications of Fractal Analysis**
  Workshop Chair: *Dan Popescu* (University Politehnica of Bucharest, Romania)

***IAFA Final Discussion (Round table). New insights in fractal based complexity modeling – moderator Mircea Rusu, Tuesday, 30 May 2017, 16.00-17.00

The 5th International Workshop on Cyber Physical Systems – IWoCPS-2017 (http://iwocps.hpc.pub.ro)

Workshop organizer:
  Ioan Dumitrache (University Politehnica of Bucharest, Romania)

The 4th International Workshop on Agent Technology for Ambient Intelligence – AgTAmI-2017 (http://aimas.cs.pub.ro/AgTAmI2017)

Workshop organizers:
  Andrei Olaru (University Politehnica of Bucharest, Romania)
  Irina Mocanu (University Politehnica of Bucharest, Romania)

The 3rd International Workshop on Design and Spontaneity in Computer-Supported Collaborative Learning – DS-CSCL-2017 (http://ds-cscl-workshop.org)

Workshop organizers:
  Răzvan Rughiniş (University Politehnica of Bucharest, Romania)
  Ştefan Trăuşan-Matu (University Politehnica of Bucharest, Romania)
  Mihai Dascălu (University Politehnica of Bucharest, Romania)

The 3rd International Workshop on Cyberinfrastructures for Natural Resources Management – CyRM-2017 (http://cyrm.hpc.pub.ro)

Workshop organizers:
  Mariana Mocanu (University Politehnica of Bucharest, Romania)
  Ciprian Dobre (University Politehnica of Bucharest, Romania)

International Workshop on Advance Control in Smart Grid – ACSG-2017
(http://shiva.pub.ro/acsg2017)

Workshop organizers:
> *Sergiu Stelian Iliescu* (University Politehnica of Bucharest, Romania)
> *Ioana Făgărăşan* (University Politehnica of Bucharest, Romania)
> *Iulia Stamatescu* (University Politehnica of Bucharest, Romania)
> *Nicoleta Arghira* (University Politehnica of Bucharest, Romania)

International Workshop on Smart Services for Edge and Cloud Computing – SSECC-2017 (http://ssecc.hpc.pub.ro)

Workshop organizers:
> *Gabriel Neagu* (ICI Bucharest, Romania)
> *Nirvana Popescu* (University Politehnica of Bucharest, Romania)
> *Florin Pop* (University Politehnica of Bucharest, Romania)

CSCS21 SPECIAL SESSION

Special Session on Environment Control Systems – ENV-2017
Session organizers:
> *Costică Nitu* (University Politehnica of Bucharest, Romania)
> *Alexandru Dumitraşcu* (University Politehnica of Bucharest, Romania)

ORGANIZERS

CSCS21 International Conference is organized and technically supported by:
- Romanian Society of Control Engineering and Technical Informatics (SRAIT)
- Faculty of Automatic Control and Computers, University *POLITEHNICA* of Bucharest

CONFERENCE WEB SITE and E-MAIL

http://cscs21.hpc.pub.ro
cscs21@aut.pub.ro

CSCS21 TIMETABLE

Monday, May 29, 2017

09.00 – 17.00	Registration
09.00 – 09.30	Opening Ceremony (PR001)
09.30 – 10.30	Invited Talk (Plenary Session, PR001)
10.30 – 11.00	Coffee break
11.00 – 12.30	Parallel sessions
12.30 – 14.00	Lunch
14.00 – 15.00	Invited Talk (Plenary Session, PR001)
15.00 – 15.30	Coffee break
15.30 – 17.30	Parallel sessions
19.00 – 21.00	Cocktail

Tuesday, May 30, 2017

09.00 – 17.00	Registration
09.30 – 10.30	Invited Talk (Plenary Session, PR001)
10.30 – 11.00	Coffee break
11.00 – 12.30	Parallel sessions & RDA
12.30 – 14.00	Lunch
14.00 – 15.30	Parallel sessions
15.30 – 16.00	Coffee break
16.00 – 17.30	Parallel sessions
19.00 – 21.00	Conference Dinner

Wednesday, May 31, 2017

09.00 – 14.00	Registration
09.30 – 10.30	Invited Talk (Plenary Session, PR001)
10.30 – 11.00	Coffee break
11.00 – 12.30	Parallel sessions
12.30 – 14.00	Round Table and Closing Ceremony (PR001)

Monday, May 29, 2017

INVITED TALK 1
Room PR001, Date: 29 May 2017, 09.30-10.30

Decision Support Systems in Water Management: Challenges and Future Prospects
Andreja Jonoski – Professor of Hydroinformatics, UNESCO-IHE Institute for water education, Delft, the Netherlands

CSCS21-C01: Cloud and Grid Computing
Room 1, Date: 29 May 2017, 11.00-12.30
Session Chair: *Nicolae Ţăpuş* (University Politehnica of Bucharest, Romania)

Scalability of a Web Server: How Does Vertical Scalability Improve the Performance of a Server?
Ancuţa-Petronela Barzu, Mihai Carabas, Nicolae Ţăpuş

Cloud Providers' Services Evaluation Using Triangular Fuzzy Numbers
Constanţa Zoie Rădulescu

RT_Vivaldi: A Symmetric & Equality RTT Prediction Algorithm in Networks
Huijun Dai, Zhaosheng Dai, Xiaolin Gui, Min Zhu, Kuncai Zhong, ShuMing Liu

Selection-based Scheduling Algorithms under Service Level Agreement Constraints
George-Valentin Iordache, Florin Pop, Christian Esposito, Aniello Castiglione

CSCS21-A01: Advanced Control Strategies
Room 2, Date: 29 May 2017, 11.00-12.30
Session Chair: *Ciprian Lupu* (University Politehnica of Bucharest, Romania)
         Daniel Moga (Technical University of Cluj-Napoca, Romania)

Real-time Temperature Control of a One Dimensional Metal Plate
Dan S. Necsulescu, Bilal A. Jarrah

Sensitivity of Piecewise Control Laws with Respect to Perturbation of the State-space Partition
Rajesh Koduri, Sorin Olaru, Pedro Rodriguez-Ayerbe

Self-adaptation in Genetic Algorithms for Control Engineering: the Case of Time Delay Systems
Monica Pătraşcu, Andreea Ion

Modelling a Temperature Calibration System for Medical Probes
Cristian-Bogdan Rusu, Corneliu Lungoci, Daniel Moga, Gloria Cosovici, Nicoleta Stroia

IAFA 1: Medical Images Processing
Room 3, Date: 29 May 2017, 11.00-12.30
Workshop Chair: *Nebojša T. Milošević* (University of Belgrade, Serbia)

The Effect of Oligohydramnios on Tissue and Cellular Morphometry in the Developing Fetal Murine Lung
Tanbir Najrana, Juan Sanchez-Esteban, Rasha Abu Eid

Box-counting Method in Quantitative Analysis of Images of the Brain
Nebojsa Milosevic, Antionio Di Ieva, Herbert Jelinek, Nemanja Rajkovic

Analysis of Histopathology Images by the use of Monofractal and Multifractal Algorithms
Nemanja Rajković, Marko Radulović, Bojana Stojadinović, Dragica Nikolić Vukosavljević, Ksenija Kranjer, Nebojsa Milosevic

Deterministic Chaos and Mitochondrial Synthesis of Reactive Oxygen Species
Przemyslaw Waliszewski, Ryszard Skwarek

Generative Adversarial Neural Networks for Pigmented and Non-Pigmented Skin Lesions Detection in Clinical Images
Andreea Udrea, George Daniel Mitra

AgTAmI-2017
Room 4, Date: 29 May 2017, 11.00-12.30
Workshop Chairs: *Irina Mocanu* and *Andrei Olaru* (University Politehnica of Bucharest, Romania)

LED Smart Illumination With DFID Indoor Positioning
Aurel-Dorian Floarea, Valentin Sgârciu

Experiencing Native Mobile Health Applications Development
Liliana Dobrică, Radu Pietraru

A Negotiation Framework with Strategies based on Agent Preferences
Şerban Radu

Multimodal Interface for Elderly People
Imad Alex Awada, Irina Mocanu, Adina Magda Florea, Bogdan Cramariuc

INVITED TALK 2
Room PR001, Date: 29 May 2017, 14.00-15.00

Artificial Intelligence and Machine Learning - The Unreasonable Effectiveness of Data
Dan Cautis – Associate Vice President at Georgetown University, USA

CSCS21-C02: Mobile and Pervasive Computing
Room 1, Date: 29 May 2017, 15.30-17.30
Session Chair: *Ciprian Dobre* (University Politehnica of Bucharest, Romania)

A Quantitative Research to Decide the User Requirements for the i-Light System
Ionuţ-Cătălin Drăghici, Monica Nastasia Mihăilescu, Laurenţiu Ilie Guta, Andrei Vasilăţeanu, Ionel-Bujorel Păvăloiu, Iuliana Bocicor, Arthur Molnar, Nicolae Goga

Environmental Monitoring Using Heterogeneous Wi-Fi and IEEE 802.15.4 Networks
Cristian Cocioabă, Dan Tudose

Droidsentry: Efficient Code Integrity and Control Flow Verification on TrustZone Devices
Darius-Andrei Suciu, Radu Sion

Indoor Positioning Inside an Office Building Using BLE
Ioana Rădoi, Gabriel Gutu, Traian Rebedea, Cristian Neagu, Marius Popa

Enablement of CoAP Stack on Sparrow Wireless Sensor Network
Dan Drăgan, Dan Tudose, Dan Dragomir

CSCS21-A02: Systems and Signals, Adaptive Control
Room 2, Date: 29 May 2017, 15.30-17.30
Session Chair: *Octavian Păstrăvanu* (Technical University "Gheorghe Asachi" of Iași, Romania)
          Janetta Culiţă (University Politehnica of Bucharest, Romania)

Improved M-Government based on Mobile WiMAX
Iuliana Marin, Naseer Abdulkarim Jaber Al-Habeeb, Nicolae Goga, Andrei Vasilateanu, Ionel-Bujorel Păvăloiu, Costin-Anton Boiangiu

Fault Detection and Identification for Fire and Explosion Detection
Lavinius Ioan Gliga, Houcine Chafouk, Dumitru Popescu, Ciprian Lupu

On Spectrum Location of Discrete-Time Systems with Polytopic Uncertainties
Ștefan-Cristian Nechita, Codrin Alexandru Lupaşcu, Octavian Păstrăvanu

Multi-Model Identification of Pumping System in ASTANK2 Plant
Janetta Culiţă, Dan Ştefănoiu

IAFA 2: Structural Complexity
Room 3, Date: 29 May 2017, 15.30-17.30
Workshop Chair: *Radu Dogaru* (University Politehnica of Bucharest, Romania)

The Company's Internal Audit Seen as a Piece of a Complex System
Lavinia Costan, Ștefan Popa

Novel Applications of Complexity Inspired RDT Transform for Low Complexity Embbeded Speech Recognition in Automotive Environments
Mihai Bucurică, Ioana Dogaru, Radu Dogaru

Context-aware Adaptive System for Intelligent Transport Management
Celestin Drăgănescu, Cosmin Popa, Adrian-Costin Ţundrea

Integrating Intelligent Transport Systems in a Risk Management System of Systems
Adrian-Costin Ţundrea, Celestin Drăgănescu, Cosmin Popa

A New Approach to Improve Performance of Routing Protocols for Voice, Video Conferencing and FTP Services
Liana Denisa Cîrciumărescu, Gabriel Preduşcă, Nicoleta Angelescu, Dan Constantin Puchianu

ACSG-2017
Room 4, Date: 29 May 2017, 15.30-17.30
Workshop Chair: *Ioana Făgărăşan* (University Politehnica of Bucharest, Romania)

Robustness of Power Systems in the Context of Cyber Attacks
Delia Ioana Dogaru, Ioan Dumitrache

Control Techniques and Strategies for Microgrids: Towards an Intelligent Control
Ioana Făgărăşan, Iulia Stamatescu, Nicoleta Arghira, Daniela Hossu, Andrei Hossu, Sergiu Stelian Iliescu

PV Panel - Wind Turbine Hybrid System Modelling
Mihaela Puianu, Ramona-Oana Flangea, Nicoleta Arghira, Sergiu Stelian Iliescu

Smart Grid, Integration of Renewable Sources and Improvement of Power Quality
Ștefan Gheorghe, Nicolae Golovanov, George-Cristian Lăzăroiu, Radu Porumb

Enabling Smart Integration of Renewable Energy in National Energy Transport Infrastructures
Alina Marinică, Oana Chenaru, Gheorghe Florea, Manea George Marian

High Performance Computing Based on a Smart Grid Approach
Alexandru Mihai Vulcan, Maximilian Nicolae

Tuesday, May 30, 2017

INVITED TALK 3
Room PR 001, Date: 30 May 2017, 09.30-10.30

Trust Nothing. Run Encrypted. The Emergence of Tamper-Proof Secure Cloud Computing
Radu Sion – Professor at Stony Brook University, the Director of the National Security Institute, and the CEO of Private Machines Inc., USA

CSCS21-C04: Human Machine Interfaces and Machine Learning
Room 1, Date: 30 May 2017, 11.00-12.30
Session Chair: *Nirvana Popescu (*University Politehnica of Bucharest, Romania*)*

A Framework to Assess Cortical Activity of Visually Impaired Persons during Training with a Sensory Substitution Device
Florina Ungureanu, Robert Gabriel Lupu, Simona Caraiman, Andrei Stan

Use of Acoustic and Vibration Sensor Data to Detect Objects in Surveillance Wireless Sensor Networks
Selver Ezgi Küçükbay, Mustafa Sert, Adnan Yazici

Mood Detector – On Using Machine Learning to Identify Moods and Emotions
Alexandra Cernian, Adriana Olteanu, Dorin Cârstoiu, Cristina Mareş

Brain Computer Interface Architectures and Classification Approaches
Mihaela Mărăcine, Alexandra Radu, Vlad Ciobanu, Nirvana Popescu

Multimodal Interface for Ambient Assisted Living
Alexandru Florin Gavril, Mihai Trascău, Irina Mocanu

DS-CSCL-2017
Room 2, Date: 30 May 2017, 11.00-12.30
Workshop Chairs: *Ştefan Trăuşan-Matu and Mihai Dascălu* (University Politehnica of Bucharest, Romania)

Capturing the Evolution of Characters in Novels
Andreea Macovei

Detecting Bridge Anaphora in Novels
Daniela Gîfu, Mihaela Onofrei

How Adequate is your CV? Analyzing French CVs with ReaderBench
Gabriel Guţu, Mihai Dascălu, Ştefan Trăuşan-Matu, Olivier Lepoivre

Semantic Similarity versus Co-authorship Networks: A Detailed Comparison
Ionuţ Cristian Paraschiv, Mihai Dascălu, Ştefan Trăuşan-Matu, Nicolae Nistor, Ambar Murillo Montes de Oca, Danielle S. McNamara

Using Brain Computer Interface Technology in Connection with Google Street View
Angela Chan, Sergiu Dascălu

Model Architecture for Automatic Translation and Migration of Legacy Applications to Cloud Computing Environments
Andrei Ionuţ Damian, Nicolae Ţăpuş

IAFA-3: Complexity in Process Control
Room 3, Date: 30 May 2017, 11.00-12.30
Workshop Chair: *Gheorghe Florea* (University Politehnica of Bucharest, Romania)

Communication Technologies for Complex Industrial Systems
Giorgiana Geampalia, Florin Hartescu, Oana Chenaru, Gheorghe Florea

Fractal Organization in Healthcare Information Systems
Cristina-Elena Poenaru, Radu Dobrescu, Daniel Merezeanu

Integrated Decision Making Platform Modelled after the Human Anatomy
Adelin Manuel Manolache

Bayesian Networks Applications extended to evaluate the Reliability of EMS and DMS Software Systems
Victor Ursianu, Florica Moldoveanu, Radu Ursianu, Emiliana Ursianu

Emergence in Hierarchical Complex Systems Structured as Social Networks
Aimee-Theodora Dumitrescu, Ecaterina Oltean, Daniel Merezeanu, Radu Dobrescu

RDA – Research Data Alliance
Room 4, Date: 30 May 2017, 11.00-12.30
Link: https://www.rd-alliance.org/rda-meets-romanian-researchers-30-may-2017-bucharest-romania

CSCS21-C03: Big Data and Analytics
Room 1, Date: 30 May 2017, 14.00-15.30
Session Chair: *Răzvan Rughiniş* (University Politehnica of Bucharest, Romania)

Low Grade Sensor Data Based Annotation of Topological Railway Maps
Vlad Doru Colceriu, Teodor Ştefănuţ, Victor Bâcu, Dorian Gorgan

Big Data, Old Users, Personal Worlds. A Survey of Challenges and Resistance to Big Data Analytics in the EU
Ştefania Matei, Cosima Rughiniş, Răzvan Rughiniş

Expression of Political Opinions in Press
Costin-Gabriel Chiru, Tudor Dimcica, Stere Caciandone

Survey of Standardized Protocols for the Internet of Things
Iulia Florea, Răzvan Rughiniş, Laura Ruse, Dan Dragomir

CSCS21-A03: Bio-technologies
Room 2, Date: 30 May 2017, 14.00-15.30
Session Chair: *Emil Petre* (University of Craiova, Romania)
           Mihai Caramihai (University Politehnica of Bucharest, Romania)

High Performance Low Cost Impedance Spectrometer for Biosensing
Mihnea Rosu-Hamzescu, Sergiu Oprea, Cristina Polonschii, Eugen Gheorghiu, Mihaela Gheorghiu

Development of a Control System for an Innovative Parallel Robot Used in Prostate Biopsy
Paul Tucan, Florin Craciun, Călin Vaida, Bogdan Gherman, Doina Pisla, Corina Radu, Nicolae Crişan

Control Strategy Based on Sensitivity Analysis. Application for Anaerobic Digestion Bioprocess
Eugen Iancu, Emil Petre

IAFA-4: Applications of Fractal Analysis
Room 3, Date: 30 May 2017, 14.00-15.30
Workshop Chair: *Dan Popescu* (University Politehnica of Bucharest, Romania)

Texture Classification Algorithm Using Elements of Fractal Analysis
Jan-Iliuţă-Romeo Cojocaru, Dan Popescu, Loretta Ichim

Fixed Point Theorem on High Dimensional Apollonian Networks
Simon Levente, Soós Anna

Towards Practical Integration of WSN in Cloud Dedicated to Smart Environments
Mihai Crăciunescu, Ştefan Mocanu, George Manea

Secure Communication Method Based on Encryption and Steganography
Andrei Duluţă, Ştefan Mocanu, Radu Pietraru, Daniel Merezeanu, Daniela Saru

Fractal Compression with GPU Support
Alexandru Mihai Vulcan, Maximilian Nicolae

SSeCC-2017
Room 4, Date: 30 May 2017, 14.00-15.30
Workshop Chair: *Liviu Badea* (ICI Bucharest, Romania)

Security in the Internet of Things: A Survey on Application Layer Protocols
Lavinia Năstase

Blockchain Based Distributed Control System for Edge Computing
Alexandru Stanciu

Crash Detection Using IMU Sensors
Alexandru Cismas, Ioana Matei, Vlad Ciobanu, George Casu

Parallel Earth Data Tasks Processing on a Distributed Cloud Based Computing Architecture
Constantin Ioan Nandra, Victor Bâcu, Dorian Gorgan

Smart City Mobility Simulation and Monitoring Platform
George Suciu, Cristina Butca, Ciprian Dobre, Cornel Popescu

Corona Discharge Classification Based on UAV Data Acquisition
Cristian Vidan, Mihaela Mărăcine

Multi-agent Based E-health System
Cosmin Gabriel Toader

CSCS21-C05: Computational Intelligence
Room 1, Date: 30 May 2017, 16.00-17.30
Session Chair: *Adina Magda Florea* (University Politehnica of Bucharest, Romania)

Random Projection based Representations for Learning Policies in Deterministic Atari Games
Tudor Berariu, Florin Gogianu, Adina Magda Florea

Comparative Study on Feature Selection Methods rooted in Swarm Intelligence for Intrusion Detection
Adriana-Cristina Enache, Valentin Sgârciu, Mihai Togan

A Comparative Study on Classification of Working Memory Tasks Using EEG Signals
Corina Cîmpanu, Florina Ungureanu, Vasile Ion Manta, Tiberius Dumitriu

NLCP: Towards a Compiler for Natural Language
Radu Iacob, Traian Rebedea, Ştefan Trăuşan-Matu

IWoCPS-2017
Room 2, Date: 30 May 2017, 16.00-17.30
Workshop Chairs: *Ioan Dumitrache* (University Politehnica of Bucharest, Romania)
Florin Gheorghe Filip (Romanian Academy, Romania)

Cyber Physical Systems - Oriented Design of Cooperative Control for Vehicle Platooning
Alexandru Ţigănaşu, Corneliu Lazar, Constantin Florin Căruntu

Holistic Approach for Process Model Discovery
Dragoş Repta, Aurelian Mihai Stănescu

Modelling Inverse Kinematics for Virtual Environment Robot Simulation
Victor Vlădăreanu, Sergiu B. Cononovici, Radu I. Munteanu, Hongbo Wang, Yongfei Feng, Luige Vlădăreanu

A Cyber Physical Systems Approach for Agricultural Enterprise and Sustainable Agriculture
Ioan Dumitrache, Simona Iuliana Caramihai, Ioan Ştefan Sacală, Mihnea Alexandru Moisescu

Management of IoT Devices in a Physical Network
Jose Ferreira, Joao Nuno Soares, Ricardo Jardim-Goncalves, Carlos Agostinho

A Cyber-Physical Systems Oriented Transaction Platform
Eugen Pop, Mihnea Alexandru Moisescu, Ioan Ştefan Sacală

CSCS21-C06: Computer Vision and Computer Graphics (I)
Room 3, Date: 30 May 2017, 16.00-17.30
Session Chair: *Florica Moldoveanu* (University Politehnica of Bucharest, Romania)

3D Model Generation of Human Musculoskeletal System Based on Image Processing: An Intermediary Step while Developing a Learning Solution Using Virtual and Augmented Reality
Alexandra Voinea, Florica Moldoveanu, Alin Moldoveanu

Comparison between incompressible SPH solvers
Claudiu Baronea, Adrian Cojocaru, Mihai Frâncu, Anca Morar, Victor Asavei

Low-cost Distributed Video Surveillance with Discarded Mobile Phones
Alexandru Emilian Susu

Invited Session ENV-2017
Room 4, Date: 30 May 2017, 16.00-17.30
Session Chairs: *Costică Nitu* and *Alexandru Dumitraşcu* (University Politehnica of Bucharest, Romania)

An Expert Systems for the Aquatic Systems Investigation
Vladimir F. Krapivin, Ferdenant A. Mkrtchyan, Vladimir Yu. Soldatov, Vasile M. Tovarniţchi

Cloud-based Architectures for Environment Monitoring
Vasile M. Tovarniţchi

Multi-functional Informational – Instrumental Technology for the Hydrochemical Monitoring
Costică Nitu, Vladimir F. Krapivin, Ferdenant A. Mkrtchyan, Vladimir Yu. Soldatov, Anda Sabena Dobrescu

Geoecological Information-Modeling System as a Tool for Global Environmental Diagnostics
Vladimir F. Krapivin, Vladimir Yu. Soldatov, Costică Nitu, Alexandru Dumitraşcu

Wednesday, May 31, 2017

INVITED TALK 4
Room PR 001, Date: 31 May 2017, 09.30-10.30

Simulation, Computer Aided Decision-making, and The New Information and Communication Technologies
Acad. Florin Gheorghe Filip – The Romanian National Academy of Sciences, Romania

CyRM-2017
Room 1, Date: 31 May 2017, 11.00-12.30
Workshop Chairs: *Mariana Mocanu and Ciprian Dobre* (University Politehnica of Bucharest, Romania)

Modeling the Effects of Leaks on Measured Parameters in a Water Distribution System
Alexandru Predescu, Mariana Mocanu, Ciprian Lupu

A Decision Support System on the Cyberwater Platform
Lucia Văcariu, Anca Hangan, Octavian Creţ, Andrei Creţu

Supporting Resilience Management of Water Distribution Networks through Network Analysis and Hydraulic Simulation
Antonio Candelieri, Ilaria Giordani, Francesco Archetti

Unified Intelligent Water Management using Cyberinfrastructures based on Cloud Computing and IoT
George Suciu, Laurenţiu Bezdedeanu, Andrei Vasilescu, Victor Suciu

SCENT: Citizen Sourced Data in Support of Environmental Monitoring
Athanasia Tserstou, Andreja Jonoski, Ioana Popescu, Thaine Herman Asumpcao, George Athanasiou, Andreas Kallioras, Iulian Nichersu

Storage Solution of Spatial-Temporal Data for Water Monitoring Infrastructures used in Smart Cities
Cătălin Negru, Florin Pop, Mariana Mocanu, Valentin Cristea

CSCS21-C07: Computer Vision and Computer Graphics (II)
Room 2, Date: 31 May 2017, 11.00-12.30
Session Chair: *Irina Mocanu* (University Politehnica of Bucharest, Romania)

Real-time Indoor Staircase Detection on Mobile Devices
Andrei Ciobanu, Anca Morar, Florica Moldoveanu, Lucian Petrescu, Oana Ferche, Alin Moldoveanu

Near Infrared Imaging for Tissue Analysis
Andreea Racoviţă, Anca Morar, Oana Bălan, Florica Moldoveanu, Alin Moldoveanu

A Parallel Version of the OneCut Image Segmentation Algorithm
Alexandru Pruncu, Irina Mocanu

CSCS21-C08: Security and System Software
Room 3, Date: 31 May 2017, 11.00-12.30
Session Chair: *Florin Rădulescu* (University Politehnica of Bucharest, Romania)

Feature Extraction and Visualization for Network PcapNg Traces
Radu Velea, Casian Ciobanu, Florina Gurzău, Victor-Valeriu Patriciu

Database Encryption Using Asymmetric Keys: a Case Study
Alexandru Boicea, Florin Rădulescu, Ciprian-Octavian Truică, Cristina Costea

SecCollab - Improving Confidentiality for Existing Cloud- based Collaborative Editors
Florin-Alexandru Stancu, Mihai Chiroiu, Răzvan Rughiniş

CSCS21-A04: Intelligent Manufacturing
Room 4, Date: 31 May 2017, 11.00-12.30
Session Chair: *Adrian Korodi* (University Politehnica of Timișoara, Romania)
        Simona Caramihai (University Politehnica of Bucharest, Romania)

IGSS Higher-Level SCADA Optimal Resource Allocation to Integrate Water and Waste Water Pumping Stations
Adrian Korodi, Teodor Huple, Ioan Silea, Octavian Ştefan

Automatic Determination of Optimal Length of Casting Steel Blocks in the Context of an Imprecise Manufacturing
Iulia Clitan, Vlad Mureşan, Mihail Abrudean, Diana Monica Sas
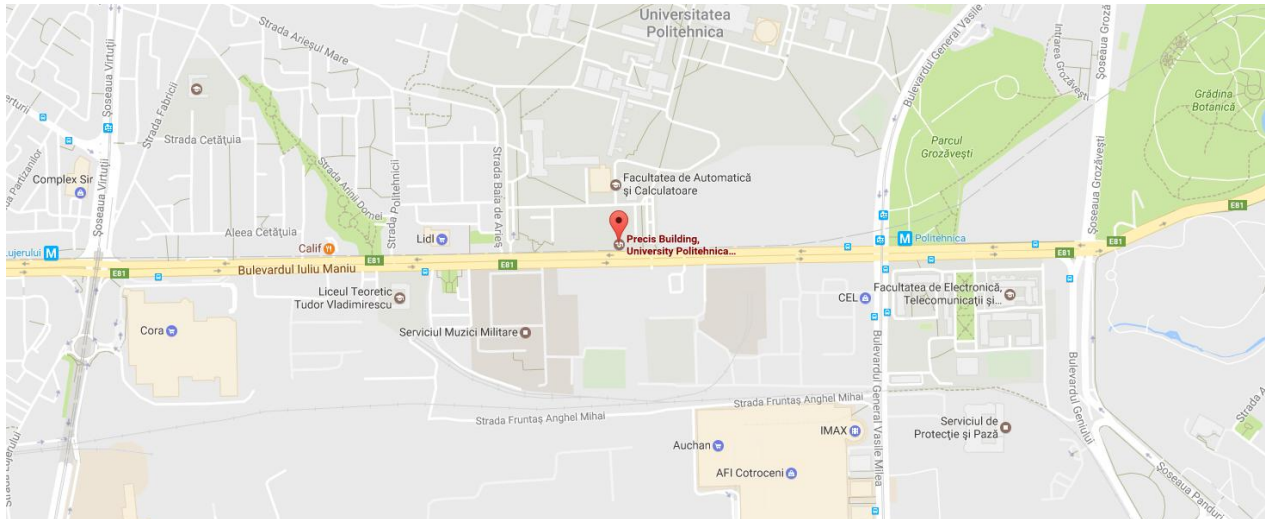
Autonomous Flexible Low Power Industrial IoT Controller for Solar Panels Cleaning Systems
Dumitru-Cristian Trancă, Daniel Rosner, Alexandru-Viorel Pălăcean

GENERAL INFORMATION

LOCATION

CSCS21 will be held at the Faculty of Automatic Control and Computers, University *Politehnica* of Bucharest, 313 Spl. Independenței, Bucharest, Romania. The formal Opening Ceremony will be organized in the PR 001 room at the new building of 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, 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, in the university campus.

MAIL

Correspondence in connection to the CSCS21 Conference should be addressed as it follows:

CSCS21 - SRAIT
University "POLITEHNICA" of Bucharest
Faculty of Automatic Control and Computers
313 Spl. Independenței, Sector 6
77206 Bucharest, Romania
Phone: +(40) 21 402 91 67
Fax: +(40) 21 402 95 87

CONFERENCE LITERATURE

The conference bag, containing all accepted papers, will be distributed to all registered participants.

WORKING LANGUAGE

The working language of CSCS21 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.

COCKTAIL PARTY

A Cocktail Party will be held on Monday, May 29, 2017 from 19:00 hours at *Casa Oamenilor de Ştiinţă* Restaurant (http://www.cos-restaurant-bucuresti.ro).
The cost of attendance is covered by the registration fee.

REFRESHMENTS

Refreshments will be available at the Conference site daily.

LUNCHES

Self-lunches will be available in the Faculty of Automatic Control and Computers. The price for a lunch varies between 3 Euros and 6 Euros.

CONFERENCE DINNER

The Conference Dinner will be held on Tuesday, May 30, 2017 from 19:00 hours, at the restaurant on campus of the University *Politehnica*, in the building of Central Administration, 5th floor. The cost of attendance is covered by the registration fee. All information will be available at registration desk.

REGISTRATION AND INFORMATION DESK

The CSCS21 Registration Desk will be open at the Conference site at the new building of Faculty of Automatic Control and Computers, starting from May 29th 2017, 09:00 hrs.

Registration fee for CSCS21-2017 is 300 Euro and includes participation, Conference proceedings and CD, coffee breaks, cocktail and dinner. The fee for PhD students is 150 Euro (a scanned proof will be needed).

NOTE: At the CSCS21 Conference are not accepted more than 2 papers with the same single/first author. For the second paper, the registration fee is 150 Euro.

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.

CSCS21 – QR code

For the 21th International Conference on Control Systems and Computer Science, we have prepared the CSCS21 Conference QR code which will guide you throughout the conference website. The application will augment your conference experience by displaying the conference schedule and detailed information.

Application Link: http://cscs21.hpc.pub.ro/

International Conference on Control Systems and Computer Science - CSCS21
29-31 May 2017

	Monday 29 May 2017					Tuesday 30 May 2017					Wednesday 31 May 2017			
09.00-09.30	Opening Ceremony (PR001) & Registration				09.00-09.30	Registration				09.00-09.30	Registration			
09.30-10.30	Keynote 1 (Prof. Andreja Jonoski)				09.30-10.30	Keynote 3 (Prof. Radu Sion)				09.30-10.30	Keynote 4 (Acad. Florin Filip)			
10.30-11.00	Coffee Break				10.30-11.00	Coffee Break				10.30-11.00	Coffee Break			
11.00-12.30	C01 (Room 1)	A01 (Room 2)	IAFA-1 (Room 3)	AgTAmI (Room 4)	11.00-12.30	C04 (Room 1)	DS-CSCL (Room 2)	IAFA-3 (Room 3)	RDA	11.00-12.30	CyRM (Room 1)	C07 (Room 2)	C08 (Room 3)	A04 (Room 4)
12.30-14.00	Lunch				12.30-14.00	Lunch				12.30-14.00	Round Table and Closing Ceremony (PR001)			
14.00-15.00	Keynote 2 (Prof. Dan Cautis)				14.00-15.30	C03 (Room 1)	A03 (Room 2)	IAFA-4 (Room 3)	SSeCC (Room 4)					
15.00-15.30	Coffee Break				15.30-16.00	Coffee Break								
15.30-17.30	C02 (Room 1)	A02 (Room 2)	IAFA-2 (Room 3)	ACSG (Room 4)	16.00-17.30	C05 (Room 1)	IWoCPS (Room 2)	C06 (Room 3)	ENV (Room 4)					
19.00-21.00	Cocktail				19.00-21.00	Conference Dinner								