

Time	Sunday, May 28 th	Monday, May 29 th	Tuesday, May 30 th	Wednesday, May 31 st
9 ⁰⁰ - 10 ⁰⁰				
10 ⁰⁰ - 11 ⁰⁰		Plenary Lecture 2 9 ³⁰ - 10 ³⁰	Plenary Lecture 3 10 ⁰⁰ - 11 ⁰⁰	Regular Session 15 10 ⁰⁰ - 11 ³⁰
11 ⁰⁰ - 12 ⁰⁰		Coffee Break 10 ³⁰ - 11 ⁰⁰	Coffee Break 11 ⁰⁰ - 11 ³⁰	Regular Session 16 10 ⁰⁰ - 11 ³⁰
12 ⁰⁰ - 13 ⁰⁰		Regular Session 4 11 ⁰⁰ - 12 ³⁰	Regular Session 13 11 ³⁰ - 13 ⁰⁰	Regular Session 17 10 ⁰⁰ - 11 ³⁰
13 ⁰⁰ - 14 ⁰⁰		Regular Session 5 11 ⁰⁰ - 12 ³⁰	Regular Session 14 11 ³⁰ - 13 ⁰⁰	Closing Ceremony 11 ³⁰ - 11 ⁴⁵
14 ⁰⁰ - 15 ⁰⁰		Regular Session 6 11 ⁰⁰ - 12 ³⁰	Poster Session 11 ³⁰ - 13 ⁰⁰	Lunch 12 ⁰⁰ - 13 ³⁰
15 ⁰⁰ - 16 ⁰⁰	Opening Ceremony 14 ⁴⁵ - 15 ⁰⁰	Lunch 12 ³⁰ - 14 ⁰⁰	Lunch 13 ⁰⁰ - 14 ³⁰	
16 ⁰⁰ - 17 ⁰⁰	Plenary Lecture 1 15 ⁰⁰ - 16 ⁰⁰			
17 ⁰⁰ - 18 ⁰⁰	Coffee Break 16 ⁰⁰ - 16 ³⁰	Regular Session 7 14 ³⁰ - 16 ⁰⁰	Optional Program Bran Castle / Peleş Castle 15 ⁰⁰ - 20 ⁰⁰	
18 ⁰⁰ - 19 ⁰⁰		Regular Session 8 14 ³⁰ - 16 ⁰⁰		
19 ⁰⁰ - 20 ⁰⁰		Regular Session 9 14 ³⁰ - 16 ⁰⁰		
20 ⁰⁰ -	Regular Session 1 16 ³⁰ - 18 ⁰⁰	Coffee Break 16 ⁰⁰ - 16 ³⁰		
	Regular Session 2 16 ³⁰ - 18 ⁰⁰	Regular Session 10 16 ³⁰ - 18 ⁰⁰		
	Regular Session 3 16 ³⁰ - 18 ⁰⁰	Regular Session 11 16 ³⁰ - 18 ⁰⁰		
	Regular Session 12 16 ³⁰ - 18 ⁰⁰	Regular Session 12 16 ³⁰ - 18 ⁰⁰		
	Welcome Party 19 ³⁰ -	Social Event 19 ⁰⁰ -	Dinner 20 ⁰⁰ -	

Conference Program

Sunday, May 28th, 2017

- 13³⁰ - 18⁰⁰ Registration
- 14⁴⁵ - 15⁰⁰ Opening Ceremony (George Enescu Hall)
- 15⁰⁰ - 16⁰⁰ Plenary Lecture 1 - **Sliding modes in continuous and discrete time domains** (George Enescu Hall)
- 16⁰⁰ - 16³⁰ Coffee Break
- 16³⁰ - 18⁰⁰ Regular Session 1 – Theory and application of control systems (George Enescu Hall)
- 16³⁰ - 18⁰⁰ Regular Session 2 – Automation, mechatronics, robotics (Nicolae Iorga Hall)
- 16³⁰ - 18⁰⁰ Regular Session 3 – Intelligent embedded systems, instrumentation and Internet of things (IoT) (Mihai Eminescu Hall)
- 19³⁰ - Welcome Party

Monday, May 29th, 2017

- 9⁰⁰ - 18⁰⁰ Registration
- 9³⁰ - 10³⁰ Plenary Lecture 2 - **On the Use of Feedback Controllers for Stock Trading** (George Enescu Hall)
- 10³⁰ - 11⁰⁰ Coffee Break
- 11⁰⁰ - 12³⁰ Regular Session 4 – Theory and application of control systems (George Enescu Hall)
- 11⁰⁰ - 12³⁰ Regular Session 5 – Automation, mechatronics, robotics (Nicolae Iorga Hall)
- 11⁰⁰ - 12³⁰ Regular Session 6 – Measurement, sensors, monitoring and diagnostic systems (Mihai Eminescu Hall)
- 12³⁰ - 14⁰⁰ Lunch

14 ³⁰ – 16 ⁰⁰	Regular Session 7 – Theory and application of control systems (George Enescu Hall)
14 ³⁰ – 16 ⁰⁰	Regular Session 8 – Automation, mechatronics, robotics (Nicolae Iorga Hall)
14 ³⁰ – 16 ⁰⁰	Regular Session 9 – (Mihai Eminescu Hall)
16 ⁰⁰ - 16 ³⁰	Coffee Break
16 ³⁰ - 18 ⁰⁰	Regular Session 10 – Software Tools and Methods (George Enescu Hall)
16 ³⁰ - 18 ⁰⁰	Regular Session 11 – Automation, mechatronics, robotics (Nicolae Iorga Hall)
16 ³⁰ - 18 ⁰⁰	Regular Session 12 – Measurement, sensors, monitoring and diagnostic systems (Mihai Eminescu Hall)
19 ⁰⁰ -	Social Event

Tuesday, May 30th, 2017

9 ⁰⁰ - 13 ⁰⁰	Registration
10 ⁰⁰ - 11 ⁰⁰	Plenary Lecture 3 - PID tuning: design tradeoffs and unified perspectives (George Enescu Hall)
11 ⁰⁰ - 11 ³⁰	Coffee Break
11 ³⁰ - 13 ⁰⁰	Regular Session 13 – Engineering application of informatics (George Enescu Hall)
11 ³⁰ - 13 ⁰⁰	Regular Session 14 – Identification, modeling, simulation of processes and systems (Nicolae Iorga Hall)
11 ³⁰ - 13 ⁰⁰	Poster Session (Mihai Eminescu Hall)
13 ⁰⁰ - 14 ³⁰	Lunch
15 ⁰⁰ - 20 ⁰⁰	Optional Program – Bran Castle / Peleş Castle
20 ⁰⁰ -	Dinner

Wednesday, May 31st, 2017

- 10⁰⁰ - 11³⁰ Regular Session 15 – Identification, modeling, simulation of processes and systems (George Enescu Hall)
- 10⁰⁰ - 11³⁰ Regular Session 16 – Engineering education in control and computer systems (Nicolae Iorga Hall)
- 10⁰⁰ - 11³⁰ Regular Session 17 – Measurement, sensors, monitoring and diagnostic systems (Mihai Eminescu Hall)
- 11³⁰ – 11⁴⁵ Closing Ceremony (George Enescu Hall)
- 12⁰⁰ - 13³⁰ Lunch

Sunday, May 28th, 2017

Opening Ceremony

14⁴⁵ - 15⁰⁰ – George Enescu Hall

Chairmen: Dan POPESCU, Radim FARANA, Karol KOSTÚR, Bogdan SAPIŃSKI, József VÁSÁRHELYI

Plenary Lecture 1 - Sliding modes in continuous and discrete time domains

Prof. Andrzej BARTOSZEWICZ, Technical University of Lodz

15⁰⁰ - 16⁰⁰ – George Enescu Hall

Chairman: Vladimir RÁSVAN

Regular Session 1 - Theory and application of control systems

16³⁰ – 18⁰⁰ – George Enescu Hall

Chairman: Vladimir RÁSVAN

Co-chairman: Sergiu CARAMAN

- 16³⁰ - 16⁴⁵ Hana VAŠKOVÁ and Karel KOLOMAZNÍK – *Mathematical model of expenses for collagen hydrolyzate production*
- 16⁴⁵ - 17⁰⁰ Mihaela SBARCIOG, George IFRIM, Sergiu CARAMAN and Alain Vande WOUWER – *Multivariable Predictive Control of a Photobioreactor System*

- 17⁰⁰ - 17¹⁵ Joanna **ZIETKIEWICZ** and Adam **OWCZARKOWSKI** – *Direct Nonlinear Model Predictive Control and Predictive Control with Feedback Linearization. A Comparison of Approaches*
- 17¹⁵ - 17³⁰ Vladimir **RĂSVAN**, Daniela **DANCIU** and Dan **POPESCU** – *On Huygens synchronization. Application to Van der Pol oscillators with distributed couplings*

Regular Session 2 – Automation, mechatronics, robotics

16³⁰ – 18⁰⁰ – Nicolae Iorga Hall

Chairman: Josef **CERNOHORSKY**

Co-chairman: Frank E. **SCHNEIDER**

- 16³⁰ - 16⁴⁵ Martin **VOJÍŘ**, Leoš **BERAN** and Václav **ZÁDA** – *Mobile Robot Concept with Walking Wheels Made of Rotary Segments*
- 16⁴⁵ - 17⁰⁰ Frank E. **SCHNEIDER** and Dennis **WILDERMUTH** – *Using Robots for Firefighters and First Responders – Scenario Specification and Exemplary System Description*
- 17⁰⁰ - 17¹⁵ Josef **CERNOHORSKY**, Ondrej **MACH** and Pavel **JANDURA** – *Mobile robot localization and object description*
- 17¹⁵ - 17³⁰ Jan **ČEJKA** and Josef **CERNOHORSKY** – *Inverse Kinematic Problem Solved By New Heuristic Algorithm Length Relaxation Method*

Regular Session 3 – Intelligent embedded systems, instrumentation and Internet of things (IoT)

16³⁰ – 18⁰⁰ – Mihai Eminescu Hall

Chairman: József **VÁSÁRHELYI**

Co-chairman: Tomas **ZITTA**

- 16³⁰ - 16⁴⁵ Aleksejs **ZACEPINS**, Aldis **PECKA**, Vitalijs **OSADCUKS** and Armands **KVIESIS** – *Development of Internet of Things concept for Precision Beekeeping*
- 16⁴⁵ - 17⁰⁰ Simona Vasilica **OPREA**, Adela **BARA** and Marinela **MIRCEA** – *Data acquisition solutions for electricity consumer with connected to smart grids*

- 17⁰⁰ - 17¹⁵ Ahmed **BOUZID** and József **VÁSÁRHELYI** – *Implementation of Dead Reckoning Solution on Zynq Target*
- 17¹⁵ - 17³⁰ Jakub **KOLARIK** and Zdenek **SLANINA** – *Fuzzy Control Application in Swarm Robotic Cars*
- 17³⁰ - 17⁴⁵ Tomas **ZITTA**, Marek **NERUDA** and Lukas **VOJTECH** – *The Security of RFID Readers with IDS/IPS Solution Using Raspberry Pi*
- 17⁴⁵ - 18⁰⁰ Nicolae **PĂTRĂȘCOIU**, Rus **COSMIN** and Ioana Camelia **BARBU** – *Virtual instrumentation for data acquisition and remote control*

Monday, May 29th, 2017

Plenary Lecture 2 - On the Use of Feedback Controllers for Stock Trading

Prof. B. Ross BARMISH, University of Wisconsin, Madison

9³⁰ - 10³⁰ – George Enescu Hall

Chairman: Dan **POPESCU**

Regular Session 4 - Theory and application of control systems

11⁰⁰ – 12³⁰ – George Enescu Hall

Chairman: Renata **WAGNEROVÁ**

Co-chairman: Piotr **LEŚNIEWSKI**

- 11⁰⁰ - 11¹⁵ Mihai **LUNGU** and Romulus **LUNGU** – *The Control of Airplane Landing in Longitudinal and Lateral-directional Planes by using the H-inf Control*
- 11¹⁵ - 11³⁰ Mihai **LUNGU** and Romulus **LUNGU** – *Complete Landing Autopilot having Control Laws Based on Neural Networks and Dynamic Inversion*
- 11³⁰ - 11⁴⁵ Jan **GEBAUER** and Renata **WAGNEROVÁ** – *Enhanced UAV Propulsion System.*
- 11⁴⁵ - 12⁰⁰ Piotr **LEŚNIEWSKI** – *Sliding mode control with time-varying sliding hyperplanes: a survey*

- 12⁰⁰ - 12¹⁵ Marian **BARBU**, Ramon **VILANOVA**, Ignacio **SANTIN** and Montse **MENESES** – *Decentralized Control Strategies Evaluation On an Integrated Urban Wastewater System*
- 12¹⁵ - 12³⁰ Karla **SLADKÁ** and Miroslav **MAHDAL** – *Behaviour of 2DOF Controller in the Closed-loop Control with Pneumatic Actuator*

Regular Session 5 – Automation, mechatronics, robotics

11⁰⁰ – 12³⁰ – Nicolae Iorga Hall

Chairman: Dorin **POPESCU**

Co-chairman: Tomáš **KOT**

- 11⁰⁰ - 11¹⁵ Florin Daniel **ANTON** and Silvia **ANTON** – *Trajectory Generation for Robot Engraving and Milling Tasks*
- 11¹⁵ - 11³⁰ Radu Gheorghe **CHETAN**, Roxana **BOTH-RUSU**, Eva-Henrietta **DULF** and Clement **FESTILA** – *Physical Model of a Quarter-car Active Suspension System*
- 11³⁰ - 11⁴⁵ Dorin **POPESCU**, Florin **MANTA**, Ligia **RUSU**, Taina-Elena **AVRAMESCU**, Mihaela **ZĂVĂLEANU** and Anca **PETRIȘOR** – *Medical and technical requirements analysis for upper limb rehabilitation system*
- 11⁴⁵ - 12⁰⁰ Tomáš **KOT**, Babjak **JAN** and Petr **NOVÁK** – *Analysis and Prevention of Selected Risks of Remotely and Autonomously Controlled Mobile Robot TeleRescuer*
- 12⁰⁰ - 12¹⁵ Tomáš **KOT**, Milan **MIHOLA**, Jan **BABJAK** and Petr **NOVÁK** – *Gripper with Precisely Adjustable Gripping Force*
- 12¹⁵ - 12³⁰ Roland **BARTÓK** and József **VÁSÁRHELYI** – *Two Methods for Autonomous Robot Obstacle Sensing and Application Programming Interface for Fuzzy Rule Interpolation*

Regular Session 6 - Measurement, sensors, monitoring and diagnostic systems

11⁰⁰ - 12³⁰ - Mihai Eminescu Hall

Chairman: Jiří KULHÁNEK

Co-chairman: Honoriu VĂLEAN

- 11⁰⁰ - 11¹⁵ Vladimír ZBOŽÍNEK, Petr TOMČÍK, Jiří KULHÁNEK, Petr FOJTÍK, Michal BURÁŇ and Miroslav SUCHÁNEK – *Car Axle Testing on Hydropulse*
- 11¹⁵ - 11³⁰ Jiří KULHÁNEK and Jaromír ŠKUTA – *Calibration of MEMs accelerometer with digital output*
- 11³⁰ - 11⁴⁵ Martin DIBLÍK, Jan PODRAPSKÝ and Leoš BERAN – *On The Accuracy Of Indirect Torque Measurement Using Frequency Converter*
- 11⁴⁵ - 12⁰⁰ Vlastimil ŠETKA, Roman ČEČIL and Miloš SCHLEGEL – *Triple Inverted Pendulum System Implementation Using a New ARM/FPGA Control Platform*
- 12⁰⁰ - 12¹⁵ Adela PUȘCAȘIU, Silviu FOLEA, Honoriu VĂLEAN, Alexandra FANCA and Teodora SANISLAV – *Monitoring the on-site contribution to the greenhouse effect by distributed measurement of carbon dioxide*
- 12¹⁵ - 12³⁰ Pavel TRNKA, Milan HOFREITER and Jan SOVA – *Combination of Techniques for the Fault Diagnostics*

Regular Session 7 - Theory and application of control systems

14³⁰ - 16⁰⁰ - George Enescu Hall

Chairman: Paolo MERCORELLI

Co-chairman: Farshad KHORRAMI

- 14³⁰ - 14⁴⁵ Paolo MERCORELLI – *Combining Flatness Based Feedforward Action with a Fractional PI Regulator to Control the Intake Valve Engine*
- 14⁴⁵ - 15⁰⁰ Paolo MERCORELLI – *A Geometric Approach for the Design and Control of an Electromagnetic Actuator to Minimise Vibrations and Disturbances*

- 15⁰⁰ - 15¹⁵ Prashanth **KRISHNAMURTHY** and Farshad **KHORRAMI** – *Global Output-Feedback Control for Strict-Feedback-Like Systems with Time-Delayed Input Unmodeled Dynamics*
- 15¹⁵ - 15³⁰ Martin **JURÁNEK**, Petr **TOMČÍK** and Jiří **KULHÁNEK** – *The anti slip control system on electric car independent axle*
- 15³⁰ - 15⁴⁵ Mohammad **TABATABAEI** – *CRA based control of incommensurate fractional order systems*
- 15⁴⁵ - 16⁰⁰ Altuğ **İFTAR** – *Decentralized Robust Control of Infinite-dimensional Systems*

Regular Session 8 – Automation, mechatronics, robotics

14³⁰ – 16⁰⁰ – Nicolae Iorga Hall

Chairman: Bogdan **SAPIŃSKI**

Co-chairman: Janusz **GOLDASZ**

- 14³⁰ - 14⁴⁵ Agata **NAWROCKA**, Marcin **NAWROCKI** and Andrzej **KOT** – *Advanced control algorithms for mobile robot*
- 14⁴⁵ - 15⁰⁰ Łukasz **JASTRZEBSKI** and Bogdan **SAPIŃSKI** – *Electrical Interface For An MR Damper-based Vibration Reduction System With Energy Harvesting Capability*
- 15⁰⁰ - 15¹⁵ Václav **ZÁDA** – *Exponentially Stable Tracking Control in Terms of Hamiltonian Mechanics*
- 15¹⁵ - 15³⁰ Janusz **GOLDASZ** – *Study of a Modular Magnetorheological Valve*
- 15³⁰ - 15⁴⁵ Nguyen Van Dong **HAI**, Mircea **IVĂNESCU** and Mircea **NIȚULESCU**. *Controller based on Lyapunov for a Class of Running Robot*
- 15⁴⁵ - 16⁰⁰ Martin **GOUBEJ**, Tomáš **POPULE** and Alois **KREJČÍ** – *Friction Compensation in Mechatronic Systems*

Regular Session 9 - Theory and application of control systems

14³⁰ - 16⁰⁰ - Mihai Eminescu Hall

Chairman: Mathaus Ferreira Da **SILVA**

Co-chairman: Miroslav **PAWLENKA**

- 14³⁰ - 14⁴⁵ Vinícius Ferreira **VIDAL**, Leonardo De Mello **HONÓRIO**, Murillo Ferreira Dos **SANTOS**, Mathaus Ferreira Da **SILVA**, Augusto Santiago **CERQUEIRA** and Edmar José De **OLIVEIRA** – *UAV Vision Aided Positioning System for Location and Landing*
- 14⁴⁵ - 15⁰⁰ Mathaus Ferreira Da **SILVA**, Augusto Santiago **CERQUEIRA**, Vinícius Ferreira **VIDAL**, Leonardo De Mello **HONÓRIO** and Murillo Ferreira Dos **SANTOS** – *Landing Area Recognition by Image Applied to an Autonomous Control Landing of VTOL Aircraft*
- 15⁰⁰ - 15¹⁵ João Marcos Simões **RIBEIRO**, Murillo Ferreira Dos **SANTOS**, Marlon José Do **CARMO** and Mathaus Ferreira Da **SILVA** – *Comparison of PID Controller Tuning Methods: Classical Techniques versus Optimization Algorithms*
- 15¹⁵ - 15³⁰ Murillo Ferreira Dos **SANTOS**, Vinícius Silva **PEREIRA**, André Cruz **RIBEIRO**, Mathaus Ferreira Da **SILVA**, Marlon José Do **CARMO**, Vinícius Ferreira **VIDAL**, Leonardo De Mello **HONÓRIO**, Augusto Santiago **CERQUEIRA** and Edmar José De **OLIVEIRA** – *Simulation and Comparison Between a Linear and Non-linear Technique Applied to Altitude Control in Quadcopters*
- 15³⁰ - 15⁴⁵ Jiří **TŮMA**, Pavel **ŠURÁNEK**, Jaroslav **LOS** and Miroslav **MAHDAL** – *Simulation study of using a cascade of all-pass filters for active vibration control of mechanical structures*
- 15⁴⁵ - 16⁰⁰ Miroslav **PAWLENKA** and Miroslav **MAHDAL** – *Automatically Tunable Bandpass Filter*

Regular Session 10 – Software Tools and Methods

16³⁰ – 18⁰⁰ – George Enescu Hall

Chairman: Mihai MOCANU

Co-chairman: Marius BREZOVAN

- 16³⁰ - 16⁴⁵ Călin CONSTANTINOV, Nicoleta-Florina BĂRBULESCU, Mihai MOCANU, Elvira POPESCU and Andrei MOCANU – *MovieRate: Considerations on applying a custom social reputation engine for movie reviews*
- 16⁴⁵ - 17⁰⁰ Faiq BAJI and Mihai MOCANU – *Connected components Objects Feature for CBIR*
- 17⁰⁰ - 17¹⁵ Brice Evrard TAREHY, Thomas MAHATODY, Josvah Paul RAZAFIMANDIMBY and Jean Luc RAZAFINDRAMINTSA – *Reuse environment based on elaborate Lexicon Extend Language*
- 17¹⁵ - 17³⁰ Bogdan POPA – *Study about the edge detection algorithm and its applications*
- 17³⁰ - 17⁴⁵ Teodora SANISLAV and George MOIS – *A Dependability Analysis Model in the Context of Cyber-Physical Systems*
- 17⁴⁵ - 18⁰⁰ Eugen GANEA, Ionuț RESCEANU and Nicu George BÎZDOACĂ – *Haptic Devices Synchronization into a Software Simulator*

Regular Session 11 – Automation, mechatronics, robotics

16³⁰ – 18⁰⁰ – Nicolae Iorga Hall

Chairman: Radim FARANA

Co-chairman: Radek ŠTOHL

- 16³⁰ - 16⁴⁵ Ivo FORMÁNEK and Radim FARANA – *Design and Synthesis of Control Systems of Material Flow in Industrial Companies*
- 16⁴⁵ - 17⁰⁰ Ivo FORMÁNEK and Radim FARANA – *Experimental Identification of Mechanical Properties of Variable Speed Drives*
- 17⁰⁰ - 17¹⁵ Radek ŠTOHL and Karel STIBOR – *The CIP Safety Protocol in Connecting Single Machines to Create Production Lines*

- 17¹⁵ - 17³⁰ Ata Jahangir **MOSHAYEDI** and D.C **GHARPURE** – *Evaluation Of Bio Inspired Mokhtar: Odor Localization System*
- 17³⁰ - 17⁴⁵ Jan **DEDEK**, Matej **GOLEMBIOVSKY** and Zdenek **SLANINA** – *Sensoric system for navigation of SWARM robotics platform*
- 17⁴⁵ - 18⁰⁰ Tomas **DOCEKAL** and Zdenek **SLANINA** – *Control system based on FreeRTOS for data acquisition and distribution on SWARM robotics platform*

Regular Session 12 - Measurement, sensors, monitoring and diagnostic systems

16³⁰ - 18⁰⁰ – Mihai Eminescu Hall

Chairman: János VÉGH

Co-chairman: Liviu MICLEA

- 16³⁰ - 16⁴⁵ Péter **MOLNÁR** and János **VÉGH** – *Measuring performance of processor instructions and operating system services in soft processor based systems*
- 16⁴⁵ - 17⁰⁰ János **VÉGH** and Péter **MOLNÁR** – *How to measure perfectness of parallelization in hardware/software systems*
- 17⁰⁰ - 17¹⁵ Pavel **TOMASEK** – *Estimation of Permittivity of Materials using Sub-Millimeter Waves*
- 17¹⁵ - 17³⁰ Dušan **KROKAVEC**, Anna **FILASOVÁ** and Tibor **KOČÍK** – *Proportional-Difference Observers in Additive Fault Estimation*
- 17³⁰ - 17⁴⁵ Radana **KAHANKOVA**, Radek **MARTINEK** and Petr **BILIK** – *Fetal ECG Extraction from Abdominal ECG Using RLS based Adaptive Algorithms*
- 17⁴⁵ - 18⁰⁰ Bianca **ZAHARIE**, Liviu **MICLEA**, Gökçe **IŞLAK** and Cătălin **DEHELEAN** – *A Hierarchical Approach of Order Acceptance and Delivery Date Setting Problems in the Apparel Industry*

Tuesday, May 30th, 2017

Plenary Lecture 3 - PID tuning: design tradeoffs and unified perspectives

Prof. Ramon VILANOVA, Universitat Autònoma de Barcelona

10⁰⁰ - 11⁰⁰ – George Enescu Hall

Chairman: Dan SELIȘTEANU

Regular Session 13 – Engineering application of informatics

11³⁰ – 13⁰⁰ – George Enescu Hall

Chairman: Stanislav PALÚCH

Co-chairman: Judit Mária PINTÉR

11³⁰ - 11⁴⁵ Stanislav PALÚCH and Tomáš MAJER – *Effective and Fast Implementation of k-shortest paths algorithms*

11⁴⁵ - 12⁰⁰ Štefan PEŠKO and Tomáš MAJER – *Inverse Optimization for Bus Scheduling Problems*

12⁰⁰ - 12¹⁵ Tomáš MAJER, Stanislav PALÚCH and Štefan PEŠKO – *Algorithms for Vehicle and Crew Scheduling in Regular Bus Transport*

12¹⁵ - 12³⁰ Jiří CZEBE and Jaromír ŠKUTA – *Usage of single-chip computers for control MIMO systems*

12³⁰ - 12⁴⁵ László CZAP, Judit Mária PINTÉR and Attila K. VARGA – *Segmentation the Speech of Hard of Hearing Children*

12⁴⁵ - 13⁰⁰ Răzvan MOCANU and Alexandru ONEA – *Robust Optimal Control of Externally Excited Synchronous Machine Based on Passivity Theory*

Regular Session 14 – Identification, modeling, simulation of processes and systems

11³⁰ – 13⁰⁰ – Nicolae Iorga Hall

Chairman: Karol KOSTUR

Co-chairman: Huseyin AKCAY

11³⁰ - 11⁴⁵ Alexandru-Nicolae TUDOSIE – *Hydro-Mechanical Fuel Flow Controller for Aircraft Jet Engines*

- 11⁴⁵ - 12⁰⁰ Alexandru-Nicolae **TUDOSIE** – *Aircraft Single-Jet Engine with Hydro-Mechanical Fuel Flow Controller*
- 12⁰⁰ - 12¹⁵ Jiří **HOLÍK**, Michal **DORDA**, Vojtěch **GRAF** and Dušan **TEICHMANN** – *Roundabout capacity analysis based on cloud simulation in Witness*
- 12¹⁵ - 12³⁰ Huseyin **AKCAY** and Semiha **TURKAY** – *Parallel Track Models from Road Measurements*
- 12³⁰ - 12⁴⁵ Vlad **MUREȘAN**, Mihail **ABRUDEAN**, Honoriu **VĂLEAN**, Iulia **CLITAN**, Mihaela-Ligia **UNGUREȘAN**, Tiberiu **COLOȘI**, Diana **SAS**, Adela **PUȘCAȘIU**, Alexandra **FANCA** – *Pipes Temperature Control in an Annealing Furnace*
- 12⁴⁵ - 13⁰⁰ Karol **KOSTUR**. *Mathematical model for optimisation of a thickness of furnace lining*

Poster Session

11³⁰ – 13⁰⁰ – Mihai Eminescu Hall

Chairman: Monica **ROMAN**

Co-chairman: Marius **MARIAN**

Elena **DRABIKOVÁ**, Erika **FECKOVÁ SKRABUL'ÁKOVÁ**–
Decision Trees - a Powerful Tool in Mathematical and Economic Modeling

Diana **RÁŠKAYOVÁ**, Marek **LACIAK**, Tawfik **MUDARRI** –
The System of Optimization Quantity of Oxidizers in UCG Process with Thermodynamic Model

Miluse **VITECKOVA**, Antonin **VITECEK**, Karla **SLADKA**–
Controller Tuning by Desired Model Method

Matej **LUKAC**, Jan **TERPAK**, Pavel **HOROVCAK** – *The Modelling of Processes in the Area of the Raw Material Processing using Service Oriented Architecture*

Ján **KAČUR**, Marek **LACIAK**, Milan **DURDÁN**, Patrik **FLEGNER**–
Utilization of Machine Learning Method in Prediction of UCG Data

Jan **TERPAK**, Pavel **HOROVCAK**, Matej **LUKAC** – *Numerical Solution for Time Fractional-Order Diffusion-Wave Equation Using Explicit Finite Difference Method in Web Service Form*

Přemysl **STRAKOŠ**, Jiří **TŮMA** – *Mathematical Modelling and Controller Design of Inverted Pendulum*

Radim **HÝL**, Renata **WAGNEROVÁ** – *Fast development of controllers with Simulink Coder*

Marius **MARIAN**, Florin **STÎNGĂ**, Valentin **KESE** and Lucian **BĂRBULESCU** – *A case study in real-time implementations of a predictive control algorithm*

Piotr **SULIGA** and Andrzej **SIOMA** – *Surface structure reconstruction using a multispectral variable angle light source*

Dorina **PURCARU**, Anca **PURCARU** and Virginia **RĂDULESCU** – *Temperature Measurement and Control System for Engineering Education*

Dorina **PURCARU**, Anca **PURCARU** and Ioan Mircea **GORDAN** – *Study, Testing and Application of Proximity Sensors for Experimental Training on Measurement Systems*

Wednesday, May 31st, 2017

Regular Session 15 - Identification, modeling, simulation of processes and systems

10⁰⁰ – 11³⁰ – George Enescu Hall

Chairman: Emil **PETRE**

Co-chairman: Dorin **ŞENDRESCU**

10⁰⁰ - 10¹⁵ *Constantin **MARIN**, Dan **POPESCU**, Emil **PETRE** and Monica **ROMAN** – Mathematical modelling of belt drying plants with several temperature zones*

10¹⁵ - 10³⁰ *Emil **PETRE**, Dan **SELIŞTEANU**, Dorin **ŞENDRESCU**, Marian **BARBU** and Sergiu **CARAMAN** – An Adaptive Control Structure for an Anaerobic Digestion Process with Unknown Inputs*

- 10³⁰ - 10⁴⁵ Radu-Lucian **CONSTANTINESCU**, Monica **ROMAN** and Dan **SELIȘTEANU** – *Simplified numerical methods used for the approximations of chaotic solutions of dynamical systems*
- 10⁴⁵ - 11⁰⁰ Marius **BREZOVAN** and Liana **STĂNESCU** – *Using High-Level Petri Nets with Object-Oriented for Modeling Flexible Manufacturing Systems*
- 11⁰⁰ - 11¹⁵ Dorin **ȘENDRESCU**, Emil **PETRE** and Dan **SELIȘTEANU** – *Nonlinear PID Controller for a Bacterial Growth Bioprocess*
- 11¹⁵ - 11³⁰ Florin Andrei **RUSU** and Gheorghe **LIVINT** – *H_∞ Controller for power sources applied to electrical vehicles*

Regular Session 16 - Engineering education in control and computer systems

10⁰⁰ – 11³⁰ – Nicolae Iorga Hall

Chairman: Marco **TEMPERINI**

Co-chairman: Elvira **POPESCU**

- 10⁰⁰ - 10¹⁵ Cristian **MIHĂESCU**, Oana Maria **TEODORESCU**, Paul Ștefan **POPESCU** and Mihai **MOCANU** – *Learning Analytics Solution for Building Personalized Quiz Sessions*
- 10¹⁵ - 10³⁰ Alex **BECHERU** and Elvira **POPESCU** – *Design of a Conceptual Knowledge Extraction Framework for a Social Learning Environment based on Social Network Analysis Methods*
- 10³⁰ - 10⁴⁵ Sabin **SIMIONESCU**, Dana **ŠUNÍKOVÁ** and Zuzana **KUBINCOVÁ** – *Gamification of peer-assessment in learning management system*
- 10⁴⁵ - 11⁰⁰ Paolo **DI GIAMBERARDINO** and Marco **TEMPERINI** – *Adaptive access to robotic learning experiences in a remote laboratory setting*

Regular Session 17 - Measurement, sensors, monitoring and diagnostic systems

10⁰⁰ - 11³⁰ - Mihai Eminescu Hall

Chairman: Ciprian LUPU

Co-chairman: Marian POPESCU

- 10⁰⁰ - 10¹⁵ Dan SECUIANU, Cosmin MIHAI, Andrei VULPE and Ciprian LUPU – *Implementation of an autonomous mobile platform based on computer vision*
- 10¹⁵ - 10³⁰ Lavinius Ioan GLIGA, Ciprian LUPU, Houcine CHAFOUK and Dumitru POPESCU – *Innovations in Fault Detection and Tolerant Control for a Wind Farm, using Wireless Sensor Networks*
- 10³⁰ - 10⁴⁵ Ciprian LUPU, Cosmin MIHAI, Dan SECUIANU and Andrei VULPE – *Improvement precision for fault detection system in fluids transfer infrastructures*
- 10⁴⁵ - 11⁰⁰ Jan WEGEHAUPT and Dariusz BUCHCZIK – *Moisture measurement of bulk materials in an electromagnetic mill*
- 11⁰⁰ - 11¹⁵ Bogdan POPA and Marian POPESCU. *The analysis parameters for the A.C. engine for actuating of a grinding wheat system*
- 11¹⁵ - 11³⁰ Mircea Catalin CONSTANTINESCU, Lucian GRUIONU and Cătălin CERBULESCU – *Low cost and easy to use programmable driver for DC micromotors used in high precision multi axis motion system*

Closing Ceremony

11³⁰ - 11⁴⁵ - George Enescu Hall

Chairmen: Dan POPESCU, Radim FARANA, Karol KOSTÚR, Bogdan SAPIŃSKI, József VÁSÁRHELYI