

**SVCS International Symposium on Stability, Vibrations and
Control of Systems**

June 16 – 18, 2016

BME, Bld. Q BF14-15

<http://svcs2016.structronics.org/>

PROGRAM

June 16, 2016, Thursday

9^h- 9²⁰ Opening remarks
Ardeshir Guran
Dean: László Vajta
Hassan Charaf - Bálint Kiss

9²⁰ – 10 Keynote 1. László Keviczky
On Some Philosophical Paradigms of Modeling and Control
Chair: Ruth Bars

10 -10³⁰ Coffee break

Session 1. Control Paradigms

Chair: István Harmati Vice chair: Ruth Bars

10³⁰-10⁵⁰ Zuzana Dideková, Slavomír Kajan and Štefan Kozák: Fuzzy Non-Linear
System Modeling and Control

10⁵⁰-11¹⁰ Péter Polcz, Gábor Szederkényi, Katalin M. Hangos: Computational
Stability Analysis of an Uncertain Bioreactor Model

11¹⁰-11³⁰ Alena Kozakova and Michal Kocur: Observer-Based Digital Reference
Tracking: FPGA Realization

11³⁰-11⁵⁰ Ján Cigánek and Štefan Kozák: Comparison of Controller Design
Methods for Electro-Pneumatic Servosystem

11⁵⁰-12¹⁰ I. Harmati, G. Kovács, B. Kiss, G. Vámos: A Store-and-Forward Model
for Passenger Flows at the Departure Side of an Airport Terminal

Lunch 12¹⁵-13²⁵

13³⁰-14¹⁰ Keynote 2. Ardeshir Guran, M. Esmaelnejad Ganjee

System Outlook in Human Locomotion

Chair: Ruth Bars

Session 2. Medical Applications

Chair: Balázs Benyó

Vice chair: Luca Szegletes

14²⁰-14⁴⁰ Balazs Benyo, Kent Stewart, Jozsef Homlok, Christopher G. Pretty, J. Geoffrey Chase, Bela Palancz: Clinical Data Based Validation of the Stochastic Version of ICING Model

14⁴⁰-15¹⁰ Behnaz Yousefghari, Ardeshir Guran, Afra Vahidi – Shams: Design of Shoes for Diabetic Foot Patients

15¹⁰-15³⁰ Luca Szegletes, Mate Koles, Bertalan Forstner: Multi-Source Classification - A Mental Effort Study

15³⁰-15⁵⁰ Sanja Djurdevic, Aleksandar Damjanovic, Zilijeta Krivokapic, Rosa Sapic, Sreten Vicentic, Ardeshir Guran: The Influence of Personality Traits on Severity of Offence in Criminal Convict

15⁵⁰-16²⁰ Coffee break

Session 3. Machines, robots, vehicles, sensors

Chair: Gábor Péter

Vice chair: H. Madokoro

16²⁰-16⁴⁰ Gábor Péter, Bálint Kiss: Cooperative Landmark Localization Using Differential Driven Agents

16⁴⁰-17 A. Mihály, P. Gáspár, B. Németh: In-wheel Vehicle Control Implementation with Energy and Safety Considerations

17-17²⁰ Jakub Osusky: Design of Generalized Predictive Control for Interconnected Couple of DC Motors

17²⁰-17⁴⁰ H. Madokoro, N. Shimoi, K. Sato, and L. Xu: Development of Unrestrained and Hidden Sensors Using Piezoelectric Films for Recognition and Prediction of Bed-Leaving Behaviors

**Evening program: Boat tour on Danube river. Expected start:
19:00, duration: approx. 60 minutes**

June 17, 2016, Friday

9-9⁴⁰ Keynote 3. Štefan Kozák

Multidisciplinary Approach in Research and Education of
Control Engineering for Mechatronics

Chair: Hassan Charaf

9⁴⁰-10¹⁰ Coffee break

Session 1. Modelling, Tracking and Robust control

Chair: Alena Kozakova

Vice chair: Danica Rosinova

10¹⁰-10³⁰ Danica Rosinova, Peter Balko: Decentralized Robust Control of a
Three Tank Laboratory Plant

10³⁰-10⁵⁰ Ján Cigánek, Michal Kocúr and Štefan Kozák: FPGA Realization of
Robust Controller Design

10⁵⁰-11¹⁰ József Homlok: Maintaining Initial Conditions in the Case of LTI
Systems with a Constant Excitation Signal

11¹⁰-11³⁰ Ján Cigánek: Trajectory Tracking of Shape Optimized Model with
Variable Sampling

11³⁰-11⁵⁰ Jakub Osusky ,Teofana Puleva: Robust Switch Control: Hydraulic
Turbine Application

11⁵⁰-12¹⁰ Sadaf Shariati, Dirk Abel: Educating Model Predictive Control: Theory
and Practice in Two Days

Lunch 12²⁰-13²⁰

13³⁰-14¹⁰ Keynote 4. Janos Gertler

Persistent Excitation in Diagnostics

Chair: Jenő Hetthéssy

Session 2. Phenomena in Composite Materials

Chair: Ardeshir Guran Vice chair: Ruth Bars

- 14¹⁰-14³⁰** Claudia Timofte: Multiscale Analysis of Heat Transfer Problems in Composite Media
- 14³⁰-14⁵⁰** Jan Krmla, Vladimíra Krmlevá: Design of Method for Cyclic Tensile Loading of Composites
- 14⁵⁰-15¹⁰** Ardeshir Guran, Simonović, Nemanja D Zorić, Nebojša S Lukić, Slobodan : Estimation the Changes in Modal Parameters of Piezoelectrical Actuators and Sensors: a Rectangular Plate With Embedded

15³⁰ – 17³⁰ Visiting the laboratories of AUT and IIT Departments (optional)

June 18, 2016, Saturday

Sightseeing tour

3 hours, starting at 9^h from Hotel Flamenco