### WeA01
**Robotics I** (Regular ISIC Session)

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<td>08:30-08:50</td>
<td>WeA01.1</td>
<td>Several Performance Measures for the Obstacle Detection of an Overlapped Ultrasonic Sensor Ring</td>
<td>Kim, Sungbok, Kim, Hyunbin</td>
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<td>08:50-09:10</td>
<td>WeA01.2</td>
<td>Optimal Design of an Overlapped Ultrasonic Sensor Ring Using a New Composite Design Index</td>
<td>Kim, Sungbok, Kim, Hyunbin</td>
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<td>09:10-09:30</td>
<td>WeA01.3</td>
<td>Reconstructing the 3D Thermal Model of Indoor Environment from Unorganized Data Set Acquired by 3D Laser Scans and Thermal Imaging Camera</td>
<td>Osmanković, Dinko, Velagić, Jasmin</td>
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<td>09:30-09:50</td>
<td>WeA01.4</td>
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<td>Tanoto, Andry, Li, Hanyi, Rückert, Ulrich, Sitte, Joaquin</td>
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<td>WeA01.5</td>
<td>Auction-Based Task Allocation for Teams of Self-Reconfigurable Robots</td>
<td>Butler, Zack</td>
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<td>08:30-08:50</td>
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<td>Multivariable Control Design for Artificial Blood-Gas Exchange with Heart-Lung Machine Support</td>
<td>Misgeld, Leonhardt, Hexamer, Berno Johannes Engelbert</td>
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<td>08:50-09:10</td>
<td>WeA02.2</td>
<td>Joint Axis and Position Estimation from Inertial Measurement Data by Exploiting Kinematic Constraints</td>
<td>Seel, Schauer, Thomas, Raisch, Joerg</td>
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<td>09:10-09:30</td>
<td>WeA02.3</td>
<td>Position and Orientation Control of an Omni-Directional Mobile Rehabilitation Robot</td>
<td>Schauer, Thomas, Raisch, Joerg, Martin, Schauer, Thomas, Raisch, Joerg, Martin, Schauer, Thomas, Raisch, Joerg, Martin, Schauer, Thomas, Raisch, Joerg, Martin</td>
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<td>09:50-10:10</td>
<td>WeA02.5</td>
<td>Control of an Extracorporeal Heart Assistant Device (I), pp. 63-68.</td>
<td>Walter, Marian, RWTH Aachen Univ., Heinke, Stefanie, RWTH Aachen Univ., Schwandtner, Sebastian, Bytec GmbH, Leonhardt, Steffen, RWTH Aachen Univ.</td>
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**WeA03**

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<td>WeA03.1</td>
<td>A Low Pass Filter Model for Offline Estimation of Ring-Down Time for an Experimental Fabry-Perot Optical Cavity, pp. 75-79.</td>
<td>Kallapur, Abhijit, Univ. of New South Wales at the Australian Defence Force Academy, Boyson, Toby, Univ. of New South Wales at the Australian Defence Force Academy, Petersen, Ian R., Univ. of New South Wales at the Australian Defence Force Academy, Harb, Charles, Univ. of New South Wales at the Australian Defence Force Academy</td>
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<td>08:50-09:10</td>
<td>WeA03.2</td>
<td>A Note on a Sampling Mixer under the Coloured Noise Influence, pp. 80-85.</td>
<td>Patil, Nanasaheb S, S V National Inst. of Tech., Sharma, Shambhu N, National Inst. of Tech. Surat, India</td>
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<td>09:10-09:30</td>
<td>WeA03.3</td>
<td>Discrete Time Robust Load Disturbance Torque Estimator for a DC Motor Drive System, pp. 86-91.</td>
<td>Qian, Huijie, Univ. of Windsor, Grignon, Danny, Univ. of Windsor, Chen, Xiang, Univ. of Windsor, Kar, Narayan, Univ. of Windsor</td>
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<td>WeA03.4</td>
<td>Precise Frequency Estimator for Noised Periodical Signals, pp. 92-97.</td>
<td>Pyarkin, Anton, Saint-Petersburg State Univ. of ITMO, Bobtsov, Alexey, Saint Petersburg National Res. Univ. of Information Technology, Kolyubin, Sergey, St. Petersburg National Res. Univ. ITMO, Vedyakov, Alexey, Saint Petersburg State Univ. of Information Technologies Mec</td>
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<td>WeA03.5</td>
<td>Searching the Optimal Order for High Order Models - MIMO Case, pp. 98-103.</td>
<td>Alves, Vitor Alex Oliveira, Maia Inst. of Thechnology, Julianni, Rodrigo C. G., Univ. of Sao Paulo</td>
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<td>Design of Supervisory Integrated Control Based on Driver Models, pp. 124-129.</td>
<td>Gaspar, Peter, Computer &amp; Automation Inst. of HAS; Nemeth, Balazs, Computer and Automation Res. Inst.; Bokor, Jozsef, MTA SZTAKI Hungarian Acad. of Sciences</td>
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<td>Tanelli, Mara, Pol. di Milano; Ferrara, Antonella, Univ. of Pavia; Giani, Paolo, Pol. di Milano</td>
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<td>WeA04.5</td>
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<td>Boukhnifer, Moussa, ESTACA of Paris; Raisemche, Aziz, ESTACA</td>
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<td>Identification and Control of a Motorcycle Electro-Hydraulic Clutch, pp. 142-147.</td>
<td>Giani, Paolo, Pol. di Milano; Tanelli, Mara, Pol. di Milano; Savaresi, Sergio M., Pol. Di Milano; Mario, Santucci, Piaggio &amp; C. S.p.A.</td>
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### WeA05
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<td>Martinez, Miguel Angel, Inst. de Investigaciones Electricas; Sanchez Parra, Marino, Inst. de Investigaciones Electricas</td>
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<td>WeA05.2</td>
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<td>Hladowski, Lukasz, Univ. of Zielona Gora</td>
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**Reliable Finite-Dimensional Models with Guaranteed Approximation Quality for Control of Distributed Parameter Systems, pp. 214-219.**

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Senkel, Luise  
Aschemann, Harald  
Kostin, Georgy V.  
Saurin, Vasily V.

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WeA06.6

**Lyapunov Methods and Manufacturing Systems (Regular CCA Session)**

Chair: Petrovic, Tamara  
Co-Chair: Ito, Atsushi

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WeA07.1

**State Feedback Controller Design to Enlarge the Domain of Attraction in Polynomial Systems, pp. 220-225.**

Saleme, Ahmed  
Tibken, Bernd

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WeA07.2

**Integration of Real-Time and Stability Constraints Via Hybrid Polytopic Partitions, pp. 226-233.**

Spinu, Veaceslav  
Lazar, Mircea

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WeA07.3

**Machine-Job Incidence Matrix Based Analysis of Manufacturing Systems in Time Domain, pp. 234-239.**

Sindicic, Ivica  
Petrovic, Tamara  
Bogdan, Stjepan

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WeA07.4

**High-Precision Liquid Pouring Control While Keeping Lower Ladle Position and Avoiding Clash with Mold, pp. 246-251.**

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Noda, Yoshiyuki  
Terashima, Kazuhiro

10:10-10:30  
WeA07.5

**Matrix Model Based Control of Flexible Manufacturing Systems Using Banker’s Algorithm, pp. 252-257.**

Krnjak, Antonio  
Petrovic, Tamara  
Bogdan, Stjepan

10:30-10:50  
WeA07.6

**Adaptive Learning Structures for Real-Time Optimal Control and Graphical Games (Plenary Session)**

Chair: Bogdan, Stjepan  
Co-Chair: Pasik-Duncan, Bozenna

11:00-12:00  
WePL.1

Adaptive Learning Structures for Real-Time Optimal Control and Graphical Games*. 
WeB01  Identification and Control of Nonlinear Systems (Regular ISIC Session)  Room A

Chair: Kuroe, Yasuaki  Kyoto Inst. of Tech.
Co-Chair: Maquin, Didier  Univ. de Lorraine

13:30-13:50  WeB01.1

An Improved Stabilizing Condition for Polynomial Systems with Bounded Actuators: An SOS-Based Approach, N/A
Jennawasin, Tanagorn  National Chung Hsing Univ.
Kawanishi, Michihiro  Toyota Tech. Inst.
Narikiyo, Tatsuo  Toyota Tech. Inst.
Lin, Chun-Liang  National Chung Hsing Univ.

13:50-14:10  WeB01.2

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Ichalal, Dalil  Univ. d'Evry Val d'Essonne, IBISC Lab.
Marx, Benoit  Ctr de Recherche en Automat. de Nancy
Mammar, Said  Univ. d'Evry LSC-CNRS-FRE2494
Maquin, Didier  Univ. de Lorraine
Ragot, Jose  CRAN-INPL

14:10-14:30  WeB01.3

Approximate Explicit NMPC with Guaranteed Stability Ensured by a Simple Auxiliary Controller, N/A
Schulze Darup, Moritz  Ruhr-Univ. Bochum
Monnigmann, Martin  Ruhr-Univ. Bochum

14:30-14:50  WeB01.4

Haar Wavelet Neural Networks for Nonlinear System Identification N/A
Córdova, Juan José  CINVESTAV-IPN
Yu, Wen  CINVESTAV-IPN
Li, Xiaoyou  CINVESTAV-IPN

14:50-15:10  WeB01.5

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Kuroe, Yasuaki  Kyoto Inst. of Tech.

15:10-15:30  WeB01.6

Fuel Flow Control of a PEM Fuel Cell with MPPT, N/A
Karami, Nabil  LSIS, Aix-Marseille Univ.
Moubayed, Nazih  Lebanese Univ.
Outbib, Rachid  Univ. Paul Cezanne

WeB02  Automotive Control (Invited CCA Session)  Room B

Chair: Deur, Josko  Univ. of Zagreb
Co-Chair: Tseng, Eric  Ford Motor Company
Organizer: Deur, Josko  Univ. of Zagreb
Organizer: Assadian, Francis  Univ. of Cranfield
Organizer: Hrovat, Davor  Ford Motor Company

13:30-13:50  WeB02.1

Hrovat, Davor  Ford Motor Company
Di Cairano, Stefano  Mitsubishi Electric Res. Lab.
Tseng, Eric  Ford Motor Company
Kolmanovsky, Ilya V.  The Univ. of Michigan

13:50-14:10  WeB02.2

The Role and Use of Robust Multivariable Control in Hybrid Electric Vehicle Energy Management - Part I: An Overview (I), pp. 303-309.
### WeB02.3

**A Series-Parallel Hybrid Electric Vehicle Control Strategy Including Instantaneous Optimization of Equivalent Fuel Consumption (I)**, pp. 310-316.

- Fekri, Sajjad, Cranfield Univ.
- Assadian, Francis, Cranfield Univ.

### WeB02.4

**The Role and Use of Robust Multivariable Control in Hybrid Electric Vehicle Energy Management - Part II: Application (I)**, pp. 317-322.

- Fekri, Sajjad, Cranfield Univ.
- Assadian, Francis, Cranfield Univ.

### WeB02.5

**Optimization of Control Variables of a Series-Parallel Hybrid Electric Power Train (I)**, pp. 323-328.

- Cipek, Mihael, Univ. of Zagreb, Faculty of Mechanical Engineering and Naval Architecture
- Kasac, Josip, Fac. of Mech. Eng. and Naval Arch.
- Pavkovic, Danijel, Fac. of Mech. Eng. and Naval Arch.
- Petric, Josko, Univ. of Zagreb, Faculty of Mechanical Engineering and Naval Architecture
- Deur, Josko, Univ. of Zagreb

### WeB02.6


- Deur, Josko, Univ. of Zagreb
- Kasac, Josip, Fac. of Mech. Eng. and Naval Arch.
- Tepes, Bojan, Faculty of Mechanical Engineering and Naval Architecture

### WeB03

**Room C**

#### Estimation II (Regular CCA Session)

- **Chair:** Zhang, Hui, Zhejiang Univ.
- **Co-Chair:** Tolic, Domagoj, Univ. of New Mexico

### WeB03.1


- Haugen, Joakim, Norwegian Univ. of Science and Tech.
- Grøtli, Esten Ingar, Norwegian Univ. of Science & Tech.
- Imsland, Lars, Norwegian Univ. of Science and Tech.

### WeB03.2

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- Sharma, Shambhu N, National Inst. of Tech. Surat, India

### WeB03.3


- Kim, Kwang-Ki, UIUC/MIT
- Braatz, Richard D., Massachusetts Inst. of Tech.

### WeB03.4


- Hidayat, Egi, Uppsala Univ.
- Medvedev, Alexander V., Uppsala Univ.

### WeB03.5


- Sun, Zhen, Aalborg Univ.
- Yang, Zhenyu, Aalborg Univ. Esbjerg Campus

### WeB03.6

15:10-15:30
### WeB04

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- **Idle Speed Controller Design for SI Engine Based on ADRC**, pp. 376-381.
  - Gong, Xin
  - Liu, Qifang
  - Hu, Yunfeng
  - Chen, Hong
  - Jilin Univ.
  - Jilin Univ. (PR China)
  - Jilin Univ. (Campus NanLing)

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  - Naldi, Roberto
  - Gasparri, Andrea
  - Garone, Emanuele
  - Univ. di Bologna
  - Univ. of "Roma Tre"
  - Univ. Libre de Bruxelles

### Room D

**Chair:** Baba, Atsushi  
**Co-Chair:** Gong, Xin  
**Keio Univ.**  

### Room E

**Chair:** Lewis, Frank L.  
**Co-Chair:** Ghadami, Rasoul  
**Univ. of Texas at Arlington**  

---

**Zhang, Hui**

**Zhejiang Univ.**

---

**Gong, Xin**

**Jilin Univ.**

---

**Liu, Qifang**

**Jilin Univ. (PR China)**

---

**Hu, Yunfeng**

**Jilin Univ.**

---

**Chen, Hong**

**Jilin Univ. (Campus NanLing)**

---

**Nemeth, Balazs**

**Computer and Automation Res. Inst.**

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**Gaspar, Peter**

**Computer & Automation Inst. of HAS**

---

**Mendoza-Soto, José Luis**

**Univ. Nacional Autónoma de México**

---

**Alvarez-Icaza, Luis**

**Univ. Nacional Autónoma de México**

---

**Vasiljevic, Goran**

**Univ. of Zagreb**

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**Griparic, Karlo**

**Univ. of Zagreb**

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**Bogdan, Stjepan**

**Univ. of Zagreb**

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**Maruyama, Tsugito**

**Fujitsu Lab. Ltd.**

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**Ejiri, Arata**

**TRANSTRON Inc.**

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**Ikai, Yoshiaki**

**Transtron Inc.**

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**Shimotani, Keiji**

**TRANSTRON INC.**

---

**Baba, Atsushi**

**Keio Univ.**

---

**Adachi, Shuichi**

**Keio Univ.**

---

**Naldi, Roberto**

**Univ. di Bologna**

---

**Gasparri, Andrea**

**Univ. of "Roma Tre"**

---

**Garone, Emanuele**

**Univ. Libre de Bruxelles**

---

**Groot, Noortje**

**Delft Univ. of Tech.**

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**De Schutter, Bart**

**Delft Univ. of Tech.**

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**Hellendoorn, Hans**

**Delft Univ. of Tech.**

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Reverse Stackelberg Games, Part II: Results and Open Issues, pp. 427-432.
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De Schutter, Bart
Hellendoorn, Hans
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Distributed Control of Interconnected Dynamic Systems with Random Link Failures, pp. 433-438.
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Shafai, Bahram
Northeastern Univ.

Hengster-Movric, Kristian
You, Keyou
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Xie, Lihua
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Nanyang Tech. Univ.
Univ. of Texas at Arlington
Nanyang Tech. Univ.

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Chair: Kovacic, Zdenko
Co-Chair: Hartmann, Benjamin
Univ. of Zagreb
Univ. of Siegen

Hartmann, Benjamin
Nelles, Oliver
Univ. of Siegen
Univ. of Siegen

Stoican, Florin
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Norwegian Univ. of Sci & Tech.

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Ohsaki, Hiroshi
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Tokyo Denki Univ.
Tokyo Denki Univ.

Experiment-Based Approach to Reference Trajectory Tracking, pp. 470-475.
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Petriu, Emil M.
Preitl, Stefan
Dragos, Claudia-Adina
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Univ. of Ottawa
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Pol. Univ. of Timisoara

Optimal Control of Multivariate Crystallization Processes with Size-Dependent Growth Kinetics, pp. 476-481.
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TU Berlin

Gain-Scheduled State Estimation and Optimizing NMPC Applied to a Non-Minimum Phase CSTR, pp. 482-487.
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Engell, Sebastian
Tech. Univ. Dortmund
Tech. Univ. Dortmund
**WeB07**  
**Mechanical Systems (Regular CCA Session)**

**Chair:** Baspinar, Cumhur  
**Co-Chair:** Pavkovic, Danijel  
**Applied Univ. of Ostfalia**  
**Faculty of Mechanical Engineering And Naval Architecture**

**13:30-13:50**  
**WeB07.1**  

- Pavkovic, Danijel  
  **Faculty of Mechanical Engineering And Naval Architecture**
- Kranjcevic, Nenad  
  **Faculty of Mechanical Engineering And Naval Architecture**
- Kostelac, Milan  
  **Univ. of Zagreb**
- Herold, Zvonko  
  **Univ. of Zagreb**
- Deur, Josko  
  **Univ. of Zagreb**

**13:50-14:10**  
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- Melnikov, Vitaly  
  **The National Res. Univ. of Information Technologies, Mechanical Engineering**

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*A Novel Haptic Display Based on Curvature Estimation and Its Application to a Machining Support Robot*, pp. 498-503.

- Mizutani, Naoto  
  **Mie Univ.**
- Kato, Norihiko  
  **Mie Univ.**
- Yano, Kenichi  
  **Mie Univ.**

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- Jiang, Jheng-Ying  
  **National Tsing Hua Univ.**
- Tu, Jia-Ying  
  **National Tsing Hua Univ.**
- Yang, Hao-Ting  
  **National Tsing Hua Univ.**

**14:50-15:10**  
**WeB07.5**  

- Baspinar, Cumhur  
  **Applied Univ. of Ostfalia**

**15:10-15:30**  
**WeB07.6**  

- Kotsopoulos, Andreas  
  **Univ. of Patras**
- Antonakopoulos, Theodore  
  **Univ. of Patras**

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**WeC02**  
**Recent Progress on Synthesis of Adaptive Control and Its Practical Applications (Invited CCA Session)**

**Chair:** Mizumoto, Ikuro  
**Co-Chair:** Yanou, Akira  
**Kumamoto Univ.**  
**Okayama Univ.**

**Organizer:** Kaneko, Osamu  
**Kanazawa Univ.**  
**Okayama Univ.**

**16:00-16:20**  
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- Sato, Takao  
  **Univ. of Hyogo**
- Kotani, Tomofumi  
  **Univ. of Hyogo**
- Yamamoto, Toru  
  **Hiroshima Univ.**
- Araki, Nozomu  
  **Univ. of Hyogo**
- Konishi, Yasuo  
  **Univ. of Hyogo**

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- Hou, Yang  
  **Okayama Univ.**
- Yanou, Akira  
  **Okayama Univ.**
- Minami, Mamoru  
  **Univ. of Fukui**
- Matsuno, Takayuki  
  **Okayama Univ.**
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Nonlinear Robust Stage Control of Atomic Force Microscope (I), pp. 539-544.


Observer Based Model Identification of Heat Pumps in a Smart Grid, pp. 569-574.
Minimum Thrust Load Control for Floating Wind Turbine, pp. 587-592.

Multi-Stage Selection Procedure for Investment Portfolio Management, pp. 593-598.


Oscillator Network Synchronization by Distributed Control, pp. 621-626.


Dynamic Programming Based Feedback Control for Systems with Switching Costs, pp. 634-639.
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Benner, Peter Max Planck Inst. for Dynamics of Complex Technical Systems
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Local Condition Monitoring in Integrated Circuits Using a Set of Kolmogorov-Smirnov Tests, pp. 646-651.
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Adaptive Sensor Networks for Consensus Based Distributed Estimation, pp. 652-657.
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Stankovic, Milos S. KTH Royal Inst. of Tech.
Stankovic, Srdjan S. Univ. of Belgrade

Least Angle Regression for Semiconductor Manufacturing Modeling, pp. 658-663.
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Beghi, Alessandro Univ. di Padova

Distributed Measurement and Control System of the Test-Rig of Ram-Compressed Rotor Aero-Engine Based on PLC and PXI Bus, pp. 664-669.
Zhao, Yang Beijing Univ. of Aeronautics and Astronautics
Qiu, Hongzhuan Beijing Univ. of Aeronautics and Astronautics
Song, Hua Beijing Univ. of Aeronautics and Astronautics

Multi-Hinf Controller Design and Illustration on an Overhead Crane, pp. 670-674.
Zavari, Keivan Katholieke Univ. Leuven
Pipeleers, Goele Katholieke Univ. Leuven
Swevers, Jan K. U. Leuven

Bönicke, Holger Ilmenau Univ. of Tech.
Ament, Christoph Ilmenau Univ. of Tech.

SOA-Based Platform Implementing a Structural Modelling for Large-Scale System Fault Detection: Application to a Board Machine (I), pp. 681-685.
Aubrun, Christophe Univ. de Lorraine
Sauter, Dominique D.J. Lorraine Univ.

Senol, Bilal Inonu Univ.
Yeroglu, Celaleddin Inonu Univ.
### ThA01

**Agents and Intelligent Methods** (Regular ISIC Session)

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<td>Oh, Kwang-Kyo, Gwangju Inst. of Science and Tech. (GIST)</td>
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<td>Ahn, Hyo-Sung, Gwangju Inst. of Science and Tech. (GIST)</td>
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<td>Vamvoudakis, Kyriakos, Univ. of California, Santa Barbara</td>
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<td>Lewis, Frank L., Univ. of Texas at Arlington</td>
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<td>09:10-09:30</td>
<td>ThA01.3</td>
<td>The Unbalanced Linguistic Aggregation Operator for Evaluations of Alternatives on the Market, N/A</td>
<td>Zou, Li, School of Computer and Information Tech. Liaoning Normal U</td>
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<td>Pei, Zheng, School of Mathematic and Computer Engineering, XihuaUniversity</td>
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<td>Karimi, Hamid Reza, Univ. of Agder</td>
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<td>Shi, Peng, Univ. of Glamorgan</td>
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<td>Mahyuddin, Muhammad Nasiruddin, Univ. of Bristol</td>
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<td>Herrmann, Guido, Univ. of Bristol</td>
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<td>Na, Jing, ITER Organization</td>
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<td>Lewis, Frank L., Univ. of Texas at Arlington</td>
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<td>Luo, Minnan, Tsinghua Univ.</td>
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<td>Sun, Fuchun, Tsinghua Univ.</td>
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<td>Liu, Hua-ping, Tsinghua Univ.</td>
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### ThA02

**Control Applications I** (Regular CCA Session)

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<td>Alafodimos, Constantinos, Tech. Inst. of Piraeus</td>
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<td>Anthony, Pipe, Univ.</td>
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<td>Khatamianfar, Arash, Univ. of New South Wales</td>
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<td>Khalid, Muhammad, The Univ. of New South Wales</td>
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<td>Savkin, Andrey, Univ. of New South Wales</td>
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<td>Vassilios, Agelidis, Univ. of New South Wales</td>
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Exploiting Object-Oriented Modelling for Scalable-Detail Studies on Control for Energy Efficiency, pp. 770-775.


Kallapur, Abhijit
Schutte, Dirk
Petersen, Ian R.
Boyson, Toby
Huntington, Elanor
Sayed Hassen, Sayed Z.
Song, Hongbin
Heurs, Michele
Univ. of New South Wales at the Australian Defence Force Academy
Leibniz Univ.
Univ. of New South Wales at the Australian Defence Force Academy
Univ. of New South Wales
Univ. of New South Wales @ ADFA
Univ. of New South Wales

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Co-Chair: Bishop, Adrian
Delft Univ. of Tech.
Royal Inst. of Tech. (KTH)

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Fechner, Uwe
Schmehl, Roland
Delft Univ. of Tech.
Delft Univ. of Tech.

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Elnaggar, Mahmoud
Abdel Fattah, Hossam A.
Fathy, Abdel Latif
Faculty of Engineering
Cairo Univ.
Cairo Univ.

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Robust Control and Limit Protection in Aircraft Gas Turbine Engines, pp. 812-819.

Kolmanovsky, Ilya V.
Jaw, Link C.
Merrill, Walt
Tran Van, Hoang
The Univ. of Michigan
Scientific Monitoring, Inc.
Scientific Monitoring, Inc.

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Attitude Control of the Spacecraft with Unknown Inertia Tensor, pp. 820-824.

Surov, Maxim
Pyrkin, Anton
Bobtsov, Alexey
Saint-Petersburg National Res. Univ. of Information Tech.
Saint-Petersburg State Univ. of ITMO
Saint Petersburg National Res. Univ. of Information Tech

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Bishop, Adrian
Summers, Tyler
Anderson, Brian D.O.
Royal Inst. of Tech. (KTH)
ETH Zurich
Australian National Univ.

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Chair: Matcovschi, Mihaela-Hanako
Co-Chair: Kuroiwa, Yohei
Tech. Univ. “Gheorghe Asachi” of Iasi
5972, 5972

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Knoblach, Andreas
Saupe, Florian
German Aerospace Center
German Aerospace Center (DLR)

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Emedi, Zlatko
Karimi, Alireza
Ec. Pol. Federale de Lausanne
EPFL
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Alves, Vitor Alex Oliveira
Maua Inst. of Technology
Juliani, Rodrigo C. G.
Univ. of Sao Paulo
Garcia, Claudio
Pol. School of The Univ. of Sao Paulo

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Tech. Univ.
Matcovschi, Mihaela-Hanako
Tech. Univ. "Gheorghe Asachi" of Iasi

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Tabatabei, Mohammad
Department of Electrical Engineering, Khomeinishahr Branch, Islamic
Haeri, Mohammad
Sharif Univ. of Tech.

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Chair: Fradkov, Alexander
Co-Chair: Taylor, James H.
Univ. of New Brunswick

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Aalborg Univ.
Henningsen, Claus Thy
Aalborg Univ.
Jens, Nielsen
Aalborg Univ.
Pedersen, Rasmus
Aalborg Univ.
Schwensen, John
Aalborg Univ.
Sivabalan, Senthuran
Aalborg Univ.
Larsen, Jesper Abildgaard
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Leth, John
Aalborg Univ.

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Andrievsky, Boris
Inst. for Problems of Mechanical Engineering of RAS
Fradkov, Alexander

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Taylor, James H.
Univ. of New Brunswick
Akerberg, Johan
ABB AB Res. & Development
Ibrahim, Hazem Mohamed Saad
Enterasys Networks
Gidlund, Mikael
ABB AB Res. & Development

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Tolic, Domagoj
Univ. of New Mexico
Fierro, Rafael
Univ. of New Mexico
Ferrari, Silvia
Duke Univ.

09:50-10:10 ThA06.5
Stefan, Octavian
*Pol. Univ. of Timisoara, Faculty of Automation and
Codrean, Alexandru
*Pol. Univ. of Timisoara, Faculty of Automation and
Dragomir, Toma-Leonida
*Pol. Univ. of Timisoara, Faculty of Automation and

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Hanchevici, Adrian-Bogdan
Univ. Pol. of Bucharest
Necoara, Ion
Univ. Pol. of Bucharest
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<td>Advanced Inst. of Industrial Tech.</td>
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<td>Nanjing Univ. of Science and Tech.</td>
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<td>Lille Univ. of Science and Tech.</td>
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<td>Advanced Inst. of Industrial Tech.</td>
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<td>Kawai, Hiroyuki</td>
<td>Kanazawa Inst. of Tech.</td>
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<td>Fujita, Masayuki</td>
<td>Tokyo Inst. of Tech.</td>
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<td>Northeastern Univ.</td>
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<td>Cheng, Yongfang</td>
<td>Northeastern Univ.</td>
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<td>Multi-Model Observer for Position Estimation and Object Contact Detection of a Flexible Robotic Actuator</td>
<td>Huard, Benoit</td>
<td>CEA, LIST</td>
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<td>Grossard, Mathieu</td>
<td>CEA LIST Interactive Robotics Lab.</td>
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<td>Moreau, Sandrine</td>
<td>LAI-ESIP</td>
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<td>Poinot, Thierry</td>
<td>Ec. Nationale Supérieure d'Ingénieurs de Poitiers</td>
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<td>Univ. of Zagreb</td>
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<td>Istanbul Kemerburgaz Univ.</td>
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<td>Dynamical Behavior, Cost and Magic Number in Average Consensus,N/A</td>
<td>Ji, Yiming</td>
<td>The Australian National Univ. Australia</td>
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<td>Yu, CHANGBIN (Brad)</td>
<td>The Australian National Univ.</td>
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<td>Anderson, Brian D.O.</td>
<td>Australian National Univ.</td>
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<td>Bilal, Ibrahim</td>
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<td>Zaidi, Ali Abbas</td>
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<td>Oechtering, Tobias J.</td>
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<td>Skoglund, Mikael</td>
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| Lee, Seung-Ju | GIST |
| Ahn, Hyo-Sung | Gwangju Inst. of Science and Tech. (GIST) |

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### Kalman Filtering in Mobile Consensus Networks, N/A

| Haumann, Dominik | Tech. Univ. Darmstadt |
| Willert, Volker | TU Darmstadt |
| Wahrburg, Arne | Tech. Univ. Darmstadt |

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### Control of Inter-Agent Distances in Cyclic Polygon Formations, N/A

| Park, Myoung-Chul | GIST |
| Kim, Byeong-Yeon | Gwangju Inst. of Science and Tech. (GIST) |
| Oh, Kwang-Kyo | Gwangju Inst. of Science and Tech. (GIST) |
| Ahn, Hyo-Sung | Gwangju Inst. of Science and Tech. (GIST) |

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**ThB02**  

**Control Applications II (Regular CCA Session)**

| Chair: Jugo, Josu | Univ. del Pais Vasco |
| Co-Chair: Mercorelli, Paolo | Leuphana Univ. of Lüneburg |

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| Hovgaard, Tobias Gybel | Vestas Tech. R&D |
| Larsen, Lars Finn Sloth | Vestas A/S |
| Skovrup, Morten Juel | IPU Tech. Development |
| Jorgensen, John Bagterp | Tech. Univ. of Denmark |

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### Control and Room Temperature Optimization of Energy Efficient Buildings, pp. 962-967.

| Sahyoun, Samir | Univ. of Tennessee |
| Nelson, Cale | Univ. of Tennessee |
| Djouadi, Seddik, M. | Univ. of Tennessee |
| Kurugunti, Teja | Oak Ridge National Lab. |

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### Event-Based Temperature Control System in a Penning-Type Ion Source, pp. 968-973.

| Eguiraun, Mikel | ESSBilbao |
| Jugo, Josu | Univ. Basque Country, UPV/EHU |

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### Nonlinear Control of an Electro-Magnetic Actuator under Highly Dynamic Disturbances, pp. 974-979.

| Schwarzgruber, Thomas | Johannes Kepler Univ. Linz |
| Trogmann, Hannes | Johannes Kepler Univ. Linz |
| Passenbrunner, Thomas Ernst | Johannes Kepler Univ. Linz |
| Fizek, Sebastian | JKU Linz |
| Dolovai, Peter | Tech. Univ. of Vienna |

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### A Switching Kalman Filter for Sensorless Control of a Hybrid Hydraulic Piezo Actuator Using MPC for Camless Internal Combustion Engines, pp. 980-985.

| Mercorelli, Paolo | Leuphana Univ. of Lüneburg |

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| Soleimanzadeh, Maryam | Aalborg Univ. |
| Wisniewski, Rafał | Aalborg Univ. |

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Hanjalić, Selma
Jurić, Željko
Univ. of sarajevo
Faculty of Science, Univ. of sarajevo

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Kawaguchi, Ryo
Kogakuin Univ.

Cornoiu, Mihai
Necoara, Ion
"Pol. Univ. of Bucharest
Univ. Pol. Bucharest

Rapaic, Milan R.
Pisano, Alessandro
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Univ. of Cagliari

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Nuñez, Alfredo
Babuska, R.
De Schutter, Bart
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Delft Univ. of Tech.

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Makarov, Maria
Grossard, Mathieu
Rodriguez-Ayerbe, Pedro
Dumur, Didier
CEA LIST
CEA LIST Interactive Robotics Lab.
Supelec
Ec. Superieure d'Electricite

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Asano, Fumihiko
Ikeda, Takashi
Hiroshima Univ.
Japan Advanced Inst. of Science and Tech.
Hiroshima Univ.

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Mutka, Alan
Petric, Frano
Reichenbach, Tomislav
Kovacic, Zdenko
Faculty of EE&C
Univ. of Zagreb, Faculty of EE&C
Faculty of Electrical Engineering and Computing
Univ. of Zagreb

Asano, Fumihiko
Japan Advanced Inst. of Science and Tech.
Asano, Fumihiko
Ohshima, Masataka
Japan Advanced Inst. of Science and Tech. JAIST

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Šlajpah, Sebastjan
Čepon, Peter
Munih, Marko
Univ. of Ljubljana
Univ. of Ljubljana
Univ. of Ljubljana
Univ. of Ljubljana

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Nath, Nitendra
Tatlicioglu, Erver
Dawson, Darren M.
Inonu Univ.
Takata
Izmir Inst. of Tech.
Clemson Univ.

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Levine, William S.
Univ. of Southern California
Univ. of Maryland

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Gebze Inst. of Tech.
Gebze Inst. of Tech.
Izmir Inst. of Tech.

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M. N. National Inst. of Tech. Allahabad
M.N.National Inst. of Tech.

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Univ. of Evry
Univ. of Evry
Pol. School of Tunisia
Ec. Pol. De Tunis

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Univ. of Hong Kong

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Butler, Shane
O'Conner, Frank
Farran, Des
NUI Maynooth
ServusNet Informatics Ltd.
ServusNet Informatics Ltd.
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<td>Robust Discrete-Time Consensus of Multi-Agent Systems with Uncertain Interaction, pp. 1136-1141.</td>
<td>Han, Dongkun, Chesi, Graziano</td>
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<td>14:10-14:30</td>
<td>ThB07.3</td>
<td>Robust Stability and $H_{\infty}$ Control of Uncertain Piecewise Linear Switched Systems with Filippov Solutions, pp. 1142-1147.</td>
<td>Ahmadi, Mohamadreza, Mojallali, Hamed, Wisniewski, Rafal, Izadi-Zamanabadi, Roozbeh</td>
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<td>14:30-14:50</td>
<td>ThB07.4</td>
<td>Robot PD Control with Parallel/serial Neural Network and Sliding Mode Compensations, pp. 1148-1153.</td>
<td>Hernandez, Debbie, Yu, Wen, Li, Xiaoou</td>
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15:10-15:30 ThB07.6
VSS Strategy in Energy Grid Control, pp. 1160-1165.
Jezernik, Karel
Univ. of Maribor

ThC01
Intelligent and Networked Control Architectures (Regular ISIC Session)

Chair: Ahn, Hyo-Sung
Gwangju Inst. of Science and Tech. (GIST)
Co-Chair: Basin, Michael V.
Autonomous Univ. of Nuevo Leon

16:00-16:20 ThC01.1
Predictive Control of Networked Systems with Communication Delays, N/A
Shi, Peng
Univ. of Glamorgan
Yang, Rongni
Univ. of Glamorgan
Basin, Michael V.
Autonomous Univ. of Nuevo Leon
Karimi, Hamid Reza
Univ. of Agder

16:20-16:40 ThC01.2
Multiresolution Wavelet-Based Approach to Identification of Modal Parameters of a Vehicle Full-Scale Crash Test, N/A
Pawlus, Witold
Univ. of Agder
Karimi, Hamid Reza
Univ. of Agder
Robbersmyr, Kjell G.
Univ. of Agder

16:40-17:00 ThC01.3
Smart Valve Actuation for Dynamic Fluid Flow Control with Constraints in the Power Unit, N/A
Zanardo, Gabriele
Johannes Kepler Univ. Linz
Passenbrunner, Thomas Ernst
Johannes Kepler Univ. Linz
Farrokhzad, Babak
HOERBIGER Automatisierungstechnik Holding GmbH
Martinez, Carlos
Hoerbiger Automatisierungstechnik
Groedl, Markus
HOERBIGER Automatisierungstechnik Holding GmbH
Del Re, Luigi
Johannes Kepler Univ. Linz

17:00-17:20 ThC01.4
Gesture Ontology for Informing Service-Oriented Architectures, N/A
Chera, Catalin Marian
Pol. Univ. of Bucharest
Tsai, Wei-Tek
Arizona State Univ.
Vatavu, Radu-Daniel
Univ. Stefan cel Mare of Suceava

17:20-17:40 ThC01.5
Bio-Insect and Artificial Robot Interaction Using Cooperative Reinforcement Learning, N/A
Son, Ji-Hwan
GIST
Ahn, Hyo-Sung
Gwangju Inst. of Science and Tech. (GIST)

17:40-18:00 ThC01.6
Towards a Semantically Enhanced Control Architecture, N/A
M. Milis, Georgios
Univ. of Cyprus
Panayiotou, Christos
Univ. of Cyprus
Polycarpou, Marios M.
Univ. of Cyprus

ThC02
Linear Systems II (Regular ISIC Session)

Chair: Wahrburg, Arne
Tech. Univ. Darmstadt
Co-Chair: Freeman, Christopher T.
Univ. of Southampton

16:00-16:20 ThC02.1
Robust Fault Isolation Using Dynamically Extended Observers, N/A
Wahrburg, Arne
Tech. Univ. Darmstadt
Adamy, Jürgen
Tech. Univ. Darmstadt

16:20-16:40 ThC02.2
Observer-Based Fault Isolation for Statically Non-Isolable Linear Systems, N/A
Robust Higher Order Repetitive Control Applied to Human Tremor Suppression, N/A
Verstappen, Ron
Freeman, Christopher T.
Rogers, Eric
Sampson, Trish
Burridge, Jane
Eindhoven Univ. of Tech.
Univ. of Southampton
Univ. of Southampton
Univ. of Southampton
Univ. of Southampton
16:40-17:00 ThC02.3

Assessment of Gradient-Based Point-To-Point ILC for MIMO Systems with Varying Interaction, N/A
Dinh, Thanh
Freeman, Christopher T.
Lewin, Paul L.
Tan, Ying
Southampton Univ.
Univ. of Southampton
Univ. of Southampton
The Univ. of Melbourne
17:00-17:20 ThC02.4

Two Procedures with Randomized Controls for the Parameters' Confidence Region of Linear Plant under External Arbitrary Noise, N/A
Amelin, Konstantin
Amelina, Natalia
Granichin, Oleg N.
Granichina, Olga
Sankt-Petersburg State Univ.
Saint-Petersburg State Univ.
Sankt-Petersburg State Univ.
Saint Petersburg State Univ.
17:20-17:40 ThC02.5

Indirect M-MRAC for Systems with Time Varying Parameters and Bounded Disturbances, N/A
Stepanyan, Vahram
Krishnakumar, Kalmanje
NASA Ames Res. Center
NASA Ames Res. Center
17:40-18:00 ThC02.6
Technical Program for Friday October 5, 2012

FrA01

Advances in the Theory and Application of Repetitive Processes and Iterative Learning Control (Invited ISIC Session)

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<th>Co-Chair</th>
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<td>Adaptive Reduced-Order Control of Discrete Repetitive Processes with Iteration-Varying Reference Signals (I)</td>
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<td>Moore, Kevin L.</td>
<td>Colorado School of Mines</td>
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<td>Optimal Iterative Learning Control with Uncertain Reference Points (I)</td>
<td>Son, Tong Duy</td>
<td>Ahn, Hyo-Sung</td>
<td>KULeuven</td>
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<td>FrA01.3</td>
<td>Iterative Learning Control under Parameter Uncertainty and Failures (I)</td>
<td>Pakshin, Pavel</td>
<td>Emelianova, Julia</td>
<td>Nizhny Novgorod State Tech. Univ.</td>
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<td>FrA01.4</td>
<td>Iterative Learning Control with Basis Functions for Media Positioning in Scanning Inkjet Printers (I)</td>
<td>Bolder, Joost</td>
<td>Lemmen, Bas Pieter</td>
<td>Eindhoven Univ. of Tech.</td>
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<td>FrA01.5</td>
<td>A New Robust Delay-Variable Repetitive Controller with Application to Media Transport in a Printer (I)</td>
<td>Bajonero Canonico, Ezequiel</td>
<td>van der Laan, Ewout</td>
<td>Eindhoven Univ. of Tech.</td>
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<td>FrA01.6</td>
<td>ILC for FES-Based Stroke Rehabilitation of Hand and Wrist (I)</td>
<td>Soska, Anna</td>
<td>Freeman, Christopher T.</td>
<td>Univ. of Southampton</td>
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FrA02

Control Applications III (Regular CCA Session)

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<th>Co-Chair</th>
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<td>Closed-Loop Evaluation and Redesign of Decentralized PI Controllers Satisfying Classical Robustness Measures</td>
<td>Acioli Junior, George</td>
<td>Rezende Barros, Pericles</td>
<td>Univ. Federal de Campina Grande</td>
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08:50-09:10 FrA01.2

09:10-09:30 FrA01.3

09:30-09:50 FrA01.4

09:50-10:10 FrA01.5

10:10-10:30 FrA01.6

08:30-08:50 FrA02.1
### Performance Improvement of Servo Drives with Mechanical Elasticity Via Extended Acceleration Feedback

Makkapati, Vamsi Prakash  
Reichhartinger, Markus  
Horn, Martin  

09:10-09:30  
FrA02.3

### The Averaging Method for Control Design and Stability Analysis of Practical Switched Systems

Pedicini, Carmen  
Iannelli, Luigi  
Vasca, Francesco  

09:30-09:50  
FrA02.4

### A Numerical-Substructure-Based Approach for the Synthesis and Control of Isolated Structure Dynamically Substructured Systems

Tu, Jia-Ying  
Yang, Hao-Ting  
Lin, Pei-Yang  
Jiang, Jheng-Ying  

09:50-10:10  
FrA02.5

### PD Control with Gain-Scheduling Depending on the Distance for a 3-Dof Network Based Haptic System

Liacu, Bogdan  
Andriot, Claude  
Dumur, Didier  
Niculescu, Silviu-Iulian  
Colledani, Frédéric  
Boucher, Patrick  

10:10-10:30  
FrA02.6

### Locating Leaks & Dumps in Open Channels with Minimal Sensing

Nasir, Hasan  
Muhammad, Abubakr  

FrA03  
Adaptive Control (Regular CCA Session)  
Room C

Chair: Cho, Kwanghyun  
Co-Chair: Wu, Hansheng  

08:30-08:50  
FrA03.1

### Adaptive Asymptotic Tracking Control of Strict-Feedback Nonlinear Discrete-Time System with Periodic Time Delay

Yang, Chenguang  
Xu, Bin  
Ma, Hongbin  
Culverhouse, Phil  

08:50-09:10  
FrA03.2

### The Integrated Vehicle Longitudinal Control System for ABS and TCS

Cho, Kwanghyun  
Kim, Jinsung  
Choi, Seibum Ben  

09:10-09:30  
FrA03.3

### Time Varying Attitude Control Strategies for the Myriade Satellites

Luzi, Alexandru-Razvan  
Biannic, Jean-Marc  
Poucetelle, Dimitri  

09:30-09:50  
FrA03.4
Position Funnel Control with Linear Internal Model, pp. 1334-1339.
Hackl, Christoph M. Tech. Univ. of Munich
Kennel, Ralph Tech. Univ. München

Costa, B. Andrade Inst. Superior Tecnico - Tech. Univ. of Lisbon
Lemos, Joao M. Inesc-id

Open-Loop Control for 2DOF Robot Manipulators with Antagonistic Bi-Articular Muscles, pp. 1346-1351.
Sano, Keisuke Kanazawa Inst. of Tech.
Kawai, Hiroyuki Kanazawa Inst. of Tech.
Murao, Toshiyuki Advanced Inst. of Industrial Tech.
Fujita, Masayuki Tokyo Inst. of Tech.

Force Controlled Knife-Grinding with Industrial Robot, pp. 1356-1361.
Sornmo, Olof Lund Univ.
Robertsson, Anders LTH, Lund Univ.
Wanner, Anders HTW

A Class of Globally Stabilising Controllers for the Control of Wave Energy Devices for Potable Water Production, pp. 1369-1373.
Lekka, Angeliki Univ. of Leicester
Turner, Matthew C. Univ. of Leicester
Ringwood, John V. NUI Maynooth, Ireland

New Hamiltonian Formulation of Rheonomous Affine Constraints Based on the Rheonomous Bracket, pp. 1374-1381.
Kai, Tatsuya Tokyo Univ. of Science

Yashiro, Yusuke Tokyo Inst. of Tech.

Controller Structure for Plants with Combined Saturation and Deadzone/backlash, pp. 1394-1399.


A Parallel Algorithm for Implicit Model Predictive Control with Barrier Function, pp. 1405-1410.

A Differential Flatness Based Model Predictive Control Approach, pp. 1411-1416.


Preview-Based Asymmetric Load Reduction of Wind Turbines, pp. 1424-1429.

Control of Gas Metal Arc Welding by an Extended DMC, pp. 1430-1434.

Parallel Model Predictive Control with Feedback Compensation, pp. 1435-1440.
FrA07

**Stochastic and Uncertain Systems** (Regular CCA Session)

**Chair:** Duncan, Tyrone E.  
**Co-Chair:** Petersen, Ian  
Univ. of Kansas

**08:30-08:50**

*A Stochastic Control Problem in the Two-Sphere*, pp. 1441-1444.

Duncan, Tyrone E.  
Pasik-Duncan, Bozenna  
Univ. of Kansas

**08:50-09:10**


Petersen, Ian R.  
Univ. of New South Wales at the Australian Defence Force Acad.

**09:10-09:30**


Dutta, Parikshit  
INRIA Rhone Alpes

Halder, Abhishek  
Texas A&M Univ.

Bhattacharya, Raktim  
Texas A&M

**09:30-09:50**

*LMI-Based Design of Multichannel Anisotropic Suboptimal Controllers with Application to Control of Gyrostabilized Platform*, pp. 1455-1460.

Tchaikovsky, Michael  
Inst. of Control Sciences of Russian Acad. of Sciences

Kurdyukov, A.P.  
Russian Acad. of Sciences

Nikiforov, Vitaly M.  
Federal State Unitary Acad. Pilyugin Scientific-Production

**09:50-10:10**

*The Tracking Control for a Kind of Hybrid Systems Based on the Double Regulation Control Mechanism*, pp. 1461-1466.

Wang, Wei  
Information School, Renmin Univ. of China

---

FrMPL

**Predicting Epileptic Episodes? a Systems & Information Theoretic Approach** (Plenary Session)

**Chair:** Rogers, Eric  
Univ. of Southampton

**Co-Chair:** Chesi, Graziano  
Univ. of Hong Kong

**11:00-12:00**

*Predicting Epileptic Episodes? a Systems & Information Theoretic Approach*.

Mareels, Iven  
The Univ. of Melbourne

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FrAPL

**Control of Molecular Purity, Crystal Structure, and Particle Size Distribution in Pharmaceutical Crystallization** (Plenary Session)

**Chair:** Zhang, Ji-Feng  
Chinese Acad. of Sciences

**Co-Chair:** Sauter, Dominique D.J.  
Lorraine Univ.

**13:30-14:30**

*Control of Molecular Purity, Crystal Structure, and Particle Size Distribution in Pharmaceutical Crystallization*.

Braatz, Richard D.  
Massachusetts Inst. of Tech.

---

FrB01

**Controller Design** (Regular CCA Session)

**Chair:** Paszke, Wojciech  
Univ. of Zielona Gora

**Co-Chair:** Szabo, Zoltan  
Hungarian Acad. of Sciences

**15:00-15:20**


Bakka, Tore  
Univ. of Agder
FrB01.2


- Karimi, Hamid Reza
- Kim, Jinsung
- Choi, Seibum
- Lee, Heerak
- Koh, Jaeuk

FrB01.3


- Kim, Jinsung
- Choi, Seibum
- Lee, Heerak
- Koh, Jaeuk

FrB01.4


- Paszke, Wojciech
- Galkowski, Krzysztof
- Rogers, Eric
- Szabo, Zoltan
- Gaspar, Peter
- Bokor, Jozsef

FrB02

**Control Applications IV (Regular CCA Session)**

**Chair:** Fekih, Afef
**Co-Chair:** Mutka, Alan

15:00-15:20 FrB02.1


- Fekih, Afef

15:20-15:40 FrB02.2

**A Swarm Aggregation Algorithm for Multi-Robot Systems Based on Local Interaction**, pp. 1497-1502.

- Priolo, Attilio
- Gasparri, Andrea
- Ulivi, Giovanni

15:40-16:00 FrB02.3


- Zakhar'eva, Asay
- Matveev, Alexey S.
- Hoy, Michael
- Savkin, Andrey

16:00-16:20 FrB02.4

**Exact Air Charge Feed Forward Control of a Turbocharged SI Engine**, pp. 1509-1515.

- Beckmann, Robert
- Drewelow, Wolfgang
- Lampe, Bernhard P.
- Dünow, Peter
- Weinhold, Nick
- Schultalbers, Matthias

16:20-16:40 FrB02.5

**Decentralized Control of Heavy Haul Trains with Input Constraints and Communication Delays**, pp. 1516-1521.

- Gao, Kai
- Huang, Zhiwu
- Wang, Jing
- Peng, Jun
- Liu, Weirong

Kamal, Md. Abdus Samad
The Univ. of Tokyo

Imura, Jun-ichi
Tokyo Inst. of Tech.

Ohata, Akira
Toyota Motor Corp.

Hayakawa, Tomohisa
Tokyo Inst. of Tech.

Aihara, Kazuyuki
Univ. of Tokyo

FrB03
Adaptive Control and Identification (Regular CCA Session)

Chair: Zhao, Yanlong
Acad. of Mathematics and SystemsScience, Chinese Academy of Sciences

Co-Chair: Pyrkin, Anton
Saint-Petersburg State Univ. of ITMO

15:00-15:20 FrB03.1

Pyrkin, Anton
Saint-Petersburg State Univ. of ITMO

Bobtsov, Alexey
Saint Petersburg National Res. Univ. of Information Tech

Kolyubin, Sergey
St. Petersburg National Res. Univ. ITMO

Faronov, Maxim
Saint Petersburg State Univ. of Information Technologies Mech

15:20-15:40 FrB03.2
Adaptive LFT Control of a Transport Aircraft on the Lateral Axis, pp. 1534-1540.

Oudin, Simon
AIRBUS Toulouse

Ferreres, Gilles
ONERA-CERT / DCSD

Puyou, Guilhem
Airbus France

Mouyon, Philippe
ONERA-Toulouse

15:40-16:00 FrB03.3
Recursive Model Free Control of Variable Speed Wind Turbine Systems, pp. 1541-1546.

Wang, Haoping
Nanjing Univ. of Science and Tech.

Pintea, Andreea
Univ. "Pol. of Bucharest

Christov, Nicolai
Lille Univ. of Science and Tech.

Borne, Pierre
Ecole Centrale de Lille

Popescu, Dumitru
Univ. "Pol. of Bucharest

16:00-16:20 FrB03.4

Akgül, Emre
Middle East Tech. Univ.

Mutlu, Mehmet
Middle East Tech. Univ.

Saranli, Afsar
METU

Yigit, Yazicioglu
METU

16:20-16:40 FrB03.5
Design of Excitation Signals for the Closed Loop Identification of Industrial Robots, pp. 1553-1560.

Saupe, Florian
German Aerospace Center (DLR)

Knoblach, Andreas
German Aerospace Center

16:40-17:00 FrB03.6
System Identification with Multi-Threshold Quantization Observations and Bounded Persistent Excitation, pp. 1561-1566.

Guo, Jin
Chinese Acad. of Sciences

Zhao, Yanlong
Acad. of Mathematics and SystemsScience, Chinese Academy of Sciences

Zhang, Ji-Feng
Chinese Acad. of Sciences

FrB04
Mobile Robots (Regular CCA Session)

Chair: Michalek, Maciej
Poznan Univ. of Tech.

Co-Chair: Bascarevic, Nenad
Univ. of Belgrade, Faculty of Electrical Engineering, Signals & Systems Department
### FrB04.1


Savkin, Andrey  
Wang, Chao  
Univ. of New South Wales  
Univ. of New South Wales

### FrB04.2


Michalek, Maciej  
Poznan Univ. of Tech.

### FrB04.3


Nonaka, Ryo  
Yamashita, Yuh  
Tsubakino, Daisuke  
Hokkaido Univ.  
Hokkaido Univ.  
Hokkaido Univ.

### FrB04.4


Bascarevic, Nenad  
Jovanovic, Kosta  
Predrag, Milosavljevic  
Potkonjak, Veljko  
Holland, Owen  
Univ. of Belgrade, Faculty of Electrical Engineering  
Univ. of Belgrade, Faculty of Electrical Engineering  
Univ. of Belgrade, Faculty of Electrical Engineering  
Univ. of Belgrade, Faculty of Electrical Engineering  
Univ. of Sussex, School of Informatics

### FrB04.5


Yamada, Masahiro  
Yamashita, Yuh  
Tsubakino, Daisuke  
Hokkaido Univ.  
Hokkaido Univ.  
Hokkaido Univ.

### FrB04.6

**Mobile Manipulation with a Kinematically Redundant Manipulator for a Pick-And-Place Scenario**, pp. 1596-1602.

Berntorp, Karl  
Robertsson, Anders  
Arzen, Karl-Erik  
Lund Univ.  
Lund Univ.

### FrB05

**Nonlinear Systems III** (Regular CCA Session)

Chair: De Keyser, Robin M.C.  
Co-Chair: Gomma, H. W.  
Univ. of Gent  
Univ. of Helwan

### FrB05.1

**Digital PID Type-III Control Loop Design Via the Symmetrical Optimum Criterion**, pp. 1603-1608.

Papadopoulos, Konstantinos G.  
Tselepis, Nikolaos D.  
Margaris, Nikolaos  
ABB Ltd, Switzerland, Department of Medium Voltage Drives  
Aristotle Univ. of Thessaloniki, Department of Electrical &  
Aristotle Univ. of Thessaloniki

### FrB05.2

**Analysis of the Limit Cycles in the PI Control of IPD Processes with Send-On-Delta Sampling**, pp. 1609-1614.

Chacón Sombría, Jesús  
Sánchez Moreno, José  
Viscioli, Antonio  
Dormido, Sebastián  
UNED  
UNED  
Univ. of Brescia  
UNED

### FrB05.3

**Spread Spectrum and Noise Rejection with Application to ILC Controlled Systems**, pp. 1615-1620.

Gomma, H. W.  
Allam, Aly  
Univ. of Helwan  
Helwan Univ.

### FrB05.4

**A Specifications Based PID Autotuner**, pp. 1621-1626.

De Keyser, Robin M.C.  
Univ. of Gent
### FrB05.5
**Utilization of Excitation Signal Harmonics for Control of Nonlinear Systems**, pp. 1627-1632.

- Dutta, Abhishek
- Hernandez, Andres
- Ionescu, Clara

16:00-16:20

### FrB05.6
**Outline of a Fault Diagnosis System for a Large-Scale Board Machine (I)**, pp. 1633-1639.

- Vinther, Kasper
- Rasmussen, Henrik
- Izadi-Zamanabadi, Roozbeh
- Stoustrup, Jakob

16:40-17:00

### FrB06
**Predictive Control II (Regular CCA Session)**

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<td>FrB06.4</td>
<td>Real-Time Virtual Metrology and Control of Etch Rate in an Industrial Plasma Chamber, pp. 1658-1663.</td>
<td>Lynn, Shane A., MacGearailt, Niall, Ringwood, John V.</td>
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### FrB07
**Fault Detection and Accommodation (Regular CCA Session)**

Fault Detection Scheme for Discrete-Time Markov Jump Linear Systems with Mode-Independent Residual, pp. 1674-1679.


