EBCCSP 2015

June 17-19, 2015
KRAKÓW

Keynote Presentations
Panos Antsaklis
University of Notre Dame, USA
Karl Henrik Johansson
KTH Royal Institute of Technology, Sweden
Yannis Tsividis
Columbia University, USA

Plenary Presentations
Tobi Delbrück
ETH Zurich, Switzerland
Maurice Heemels
Eindhoven University of Technology, The Netherlands
Jan Lunze
Ruhr-University Bochum, Germany

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IEEE International Conference on Event-based Control, Communications & Signal Processing

Call for Papers to Special Session SS03

Industrial Event-Based Control

Special Session Organizers

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Aim and scope:

Nowadays development and deployment of industrial control systems introduces into service data networks changing the classical approach of control system design. The closed-loop control systems using field buses, local area networks or even Internet make difficult the adoption of the classic paradigm, where the whole control system structure is driven by constant time events. For such approaches event-based techniques became an alternative for classical time based solutions, since they are not restricted to periodic events occurrence. The presence of the event-driven data flow in control systems requires developing new control techniques that takes advantages of such an approach and compensates drawbacks of the existing solutions.

Considering aforementioned aspects there is a continuous need to improve and adopt the commonly used controllers in industrial areas, focusing mainly on PID and MPC controllers which are widely accepted for industrial applications. In different variants and configurations, those techniques provide the control solutions for almost all industrial processes covering the whole automation pyramid. The PID controllers are the most common controllers for a low and mid-range level industrial applications today. They have an established position due to their feasibility and intelligibility. Moreover, it is likely to be the most important controller also in wireless automation solutions. There are many different architectural options for networked PID controllers to compensate for adaptive and event-based sampling, jitter, packet losses and other network related features. On the other hand, the MPC technology can now be found in a wide variety of application areas covering mid and high level control applications. Because of the MPC's prediction mechanism, it can deal with numerous process constraints what provides an irreplaceable tool for a large scale process optimization. Furthermore, the same prediction mechanism can be used to extend classical approach into networked or event-based configurations. For all that, there exists a great interest in developing event-based counterparts of the PID and MPC that compensate for previously mentioned issues, making the implementation more flexible and robust enough to deal with many industrial control problems.

Topics within the scope of the Special Session:
The focus of the special session is on event-based and time-based system models, architectures, platforms and applications for systems with mixed-criticality requirements. Suggested topics of interest include (but are not restricted to) the following:

- Applications of event-based control systems
- Case studies involving event-based techniques
- Event-driven measurements & control
- Control strategies within event-based framework
- Industrial communication protocols for event-based process control and automation

Submission of Papers: The working language of the conference is English. The special session papers are limited to 8 double column pages in a font no smaller than 10-points. Manuscripts must be submitted electronically in PDF format, according to the instructions contained in the Conference web site.

Further Information: EBCCSP 2015 Conference Secretariat: Tel: + 48 12 617 3034, Fax: + 48 12 633 2398; Email: ebccsp15@agh.edu.pl

Paper Acceptance: Each accepted paper must be presented at the conference by one of the authors. The final manuscript must be accompanied by a registration form and a registration fee payment proof. All conference attendees, including authors and session chairpersons, must pay the conference registration fee, and their travel expenses.

No-show Policy: The EBCCSP 2015 Organizing Committee reserves the right to exclude a paper from distribution after the conference at IEEE Xplore if the paper is not presented at the conference.

Author's Schedule:

Deadline for submission of special sessions papers:	March 15, 2015
Notification of acceptance of special sessions papers:	April 8, 2015
Final manuscripts due – special sessions:	May 15, 2015

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