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IBM T.J. Watson Research Center
Chenyang Lu
Washington University in St. Louis
Anders Robertsson
Lund University

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FeBID 2007

Second IEEE International Workshop on Feedback Control Implementation and Design in Computing Systems and Networks

Co-located with IM 2007, Munich, Germany, 25 May 2007

<http://www.controlofsystems.org/febid2007/>

Call for Papers

As today's IT systems, networks, and services become increasingly complex, the demand to manage and control them has grown rapidly. Traditional practice for run-time resource management and control largely relies on ad-hoc techniques. As a result, changes in workloads and configurations often result in poor quality of service (QoS) or even instabilities. In recent year, there has been considerable success with applying feedback control theory to analyzing and designing run-time IT control systems. Areas addressed include computer networks, middleware, Internet services, virtual environment management, workload management, load balancing, and power management.

The Second IEEE International Workshop on Feedback Control Implementation and Design in Computing Systems and Networks (FeBID 2007) will be held on 25 May 2007 in Munich, Germany. Building on the success of the first FeBID workshop that took place in Vancouver, Canada (<http://www.controlofsystems.org/febid2006/>), FeBID 2007 offers a unique opportunity for researchers and practitioners working in this area to discuss recent and innovative results of applying control theory to computing systems and networks, to exchange ideas and experience on practical control system design and implementation, and to identify future directions and challenges in aligning feedback control techniques to business values.

Topics of interest to this workshop include, but are not limited to, the following:

Control engineering and applications

- Automated resource allocation
- Virtual environment management
- Centralized or distributed load balancing
- Workload management
- Power management
- Automated application configuration and tuning
- Congestion control and queue management
- Control of IT services and business operations
- Control of networks (overlay networks, sensor networks, wireless networks, ...)
- Control of middleware (Web servers, application servers, database servers, ...)
- Case studies and implementation issues

Control models and paradigms

- Control system architecture
- System identification and modeling techniques
- Controllability and observability issues
- Actuator and sensor design
- Control performance evaluation
- Analysis of system stability and convergence

Control algorithms and functions

- Adaptive control design
- Optimal control design
- Robust control design
- Control of nonlinear systems
- Decentralized and distributed control
- Supervisory control and discrete event systems

The structure of this workshop will include paper presentations and panels to encourage discussions and foster future collaborations. We encourage papers that position research directions in new areas, or share lessons learned in practical applications. Attendance will be limited to 50 participants.

Authors are invited to submit original contributions in PDF through the workshop website. All submissions should be formatted according to the standard IEEE two-column conference guidelines and not exceed 6 pages in length. Manuscript templates are available for download at <http://www.im2007.org/>. Accepted papers will be available on the workshop website (no transfer of copyright).

Important Dates:

Submission: 16 February 2007

Notification: 15 March 2007

Final paper: 6 April 2007