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FeBID'06: 1st Workshop on Feedback Control Implementation and Design in Computing Systems and Networks

**April 3, 2006
Vancouver, Canada**

Organizers: Tarek Abdelzaher (University of Illinois)
Joseph L. Hellerstein (IBM Research)
Xiaoyun Zhu (HP Labs)

- 8:45 **Welcome speech, Joe Hellerstein**
- 9:00 – 10:00 **Keynote Speech**
 Robust yet Fragile: Intrinsic Tradeoffs in Layered Architectures
 John Doyle, *California Institute of Technology*
- 10:00 – 10:30 **Poster Session during coffee break**
 - Developing a Tool for Automatic Stability Verification of Hybrid Systems
 Henning Burchardt, Jens Oehlerking, Oliver Theel, *University of Oldenburg*
 - ACTS: Adaptive Control Techniques for Virtualized Servers
 Xiaoyun Zhu, Zhikui Wang, Sharad Singhal, *Hewlett-Packard Laboratories*
 - Dynamic Thermal Control and Management towards Reducing Utility Cost in Data Centers
 Tridib Mukherje, *Arizona State University*
 - Feedback-Based Load Distribution for Web Clusters
 Ying Lu, *University of Nebraska, Lincoln*, Asser N. Tantawi, Malgorzata Steinder, Giovanni Pacifici, *IBM Research*
 - Defining Fuzzy Logic Controllers with Scarce Training Data
 Artur Andrzejak, Stefan Plantiko, *Zuse Institute Berlin*
 - A Promise Theory Perspective on Control Theory
 Mark Burgess, *Oslo University*
 - Adaptive Load Balancing for Scientific Applications on Computational Grids
 Sumanth J.V, David R. Swanson, Hong Jiang, *University of Nebraska, Lincoln*
 - Limited Lookahead Control for Performance Management in Computing Systems
 Sherif Abdelwahed, *Vanderbilt University*, Nagarajan Kandasamy, *Drexel University*



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- 10:30 – 12:00 **Session 1 – Wide Area Distributed Systems**
Session Chair: Jerry Rolia, HP Labs
 - Paper 1: [Dynamic Adaptation of Temporal Event Correlation Rules](#)
Rean Griffith, Gail Kaiser, *Columbia University*
Joseph Hellerstein, Yixin Diao, *IBM T.J. Watson Research Center*
 - Paper 2: [Parameterizing PI Congestion Controllers](#)
Ahmad Al-Hammouri, *Case Western Reserve University*
 - Paper 3: [Verification of Orbitally Self-Stabilizing Distributed Algorithms using Lyapunov Functions and Poincaré Maps](#)
Abhishek Dhama, Jens Oehlerking, Oliver Theel, *University of Oldenburg*
 - Paper 4: [Control of Large Scale Computing Systems](#)
Yixin Diao, Joseph Hellerstein, Sujay Parekh, *IBM T.J. Watson Research Center*
- 12:00 – 1:00 **Lunch**
- 1:00 – 2:30 **Session 2 – Servers & Clusters**
Session Chair: Ying Lu, University of Nebraska, Lincoln
 - Paper 1: [A Control Theory Perspective on Configuration Management and cfengine](#)
Mark Burgess, *University College Oslo*
 - Paper 2: [Feedback Based Real-Time Fault Tolerance -- Issues and Possible Solutions](#)
Xue Liu, Hui Ding, Kihwal Lee, Lui Sha, Marco Caccamo, *University of Illinois at Urbana-Champaign*
 - Paper 3: [Regulating Workload in J2EE Application Servers](#)
Wei Xu, Zhangxi Tan, *University of California, Berkeley*
 - Paper 4: [Online Feedback-Based Estimation of Dynamic Page Service Time](#)
Kaushik Veeraraghavan, Ashwini Kumar, Benjamin Wester, Kang G. Shin, *University of Michigan*
- 2:30 – 3:30 **Poster Session during coffee break**
- 3:30 – 4:15 **Invited Talk**
[Conclusions from the European Roadmap on Control of Computing Systems](#)
Karl-Erik Arzen, Anders Robertsson, Dan Henriksson, *Lund University*, Mikael Johansson, Håkan Hjalmarsson, Karl Henrik Johansson, *Royal Institute of Technology*
- 4:15 – 5:30 **Panel Session**
[Top Three Challenges in Control of Networks and Systems](#)
Moderator: Tarek Abdelzaher
Panelists: John Doyle, *California Institute of Technology*, Mark Burgess, *University College Oslo*, Sujay Parekh, *IBM T.J. Watson Research Center*, Magnus Karlsson, *HP Labs*
- 5:30 **Wrap up**