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Feedback Computing 2012

The 7th International Workshop on Feedback Computing

<http://www.feedbackcomputing.org>

In conjunction with ICAC 2012

<http://icac2012.cs.fiu.edu>

San Jose, California, USA

September 17, 2012

(Paper Submission Deadline Extended: July 6, 2012)

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Following the success of the FeBID workshops over the past six years, we debut the Feedback Computing workshop: a unique forum built around the concepts and technologies of applying, analyzing, designing, and exploiting feedback in computing systems. The creation of this new workshop represents the growing use of feedback in a broader agenda and is a timely response to the following two trends: (1) Computing systems are growing larger, smarter, and more complex, and encompass new fields such as cyber-physical systems, social networks, and mobile applications. While much existing work focuses on individual components and systems, it is time to take a more systematic approach and address the dynamical complexity of interactions that arise system-wide with much large scale. (2) Many research disciplines such as machine learning, mathematical optimization, automatic control, cyber-physical systems, and autonomic computing rely on feedback to achieve goals such as autonomy, learning, adaptation, stabilization, robustness, or performance optimization. However, much of existing work focuses on isolated disciplines. It is time to take a more holistic approach and address the foundations and use of feedback, broadly defined, in computing.

Feedback Computing calls for a holistic and systematic technology to study both feedback-based design patterns as well as theoretical foundations of feedback in computing. Aiming to raise community awareness and to promote the fusion of multiple disciplines and practices, this workshop might lay out the ground work for building a new generation of collaborative computing systems that are adaptive, resilient, and agile, while remaining stable and robust. Application topics include but are not limited to:

- Internet services
- Virtualized environments
- Cloud computing
- IaaS, PaaS, and SaaS environments
- Data center resource, power, and cooling management
- Mobile applications
- Sensor networks
- Cyber-physical systems
- Social networks

- Software performance engineering
- Data management systems
- High performance computing environments

The workshop seeks original contributions on foundations or applications of feedback in computing systems. We encourage both research paper submissions expressing new research directions with the promise of producing a pipeline of papers, and application paper submissions elaborating the challenges and experiences from real systems. In addition, the workshop will leverage extended coffee breaks and lunch break to arrange special meetings and to discuss collaborative research agenda built among the participants.

SUBMISSION INSTRUCTIONS

Authors are invited to submit both research papers and application papers to emphasize the bi-fold focuses of this workshop.

[Research Papers] Paper submissions must represent original, unpublished contributions. All submissions should be formatted according to the standard ACM two-column proceeding guidelines and not exceed 6 pages in length. Manuscript templates are available for download at <http://www.acm.org/sigs/publications/proceedings-templates>.

[Application Papers] Paper submissions must be based on real experience and working systems. All submissions should be formatted as annotated slides - a visual in the upper half of a page and the explanatory text in the lower half – and not exceed 15 slides in length.

All papers are to be submitted through the workshop website (<http://www.feedbackcomputing.org>) in PDF files. There will be NO copyright-transferred formal proceedings for the workshop. Accepted papers will be available on the workshop website under authors' permission.

One Best Paper Award and one Best Application Paper Award will be announced at the end of workshop to recognize the current best work in Feedback Computing.

IMPORTANT DATES

Paper submission:	Jun 15, 2012
Author notification:	Jul 27, 2012
Final paper due:	Aug 24, 2012
Workshop:	Sep 17, 2012

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