



2012 Workshop on Power Aware Computing and Systems (HotPower '12)

Sponsored by USENIX, the Advanced Computing Systems Association

www.usenix.org/conference/hotpower12

October 7, 2012

Hollywood, CA

HotPower '12 will be co-located with the 10th USENIX Symposium on Operating Systems Design and Implementation (OSDI '12), which will take place October 8–10, 2012.

Important Dates

Paper submissions due: *July 20, 2012, 8:59 p.m. PDT*

Notification to authors: *August 24, 2012*

Final papers due: *September 13, 2012*

Conference Organizers

Program Co-Chairs

Mani Srivastava, *University of California, Los Angeles*

Thomas F. Wenisch, *University of Michigan*

Steering Committee

Feng Zhao, *Microsoft Research*

Program Committee

TBA

Overview

Power has become a central societal concern, both in the design of modern computer systems and in the physical infrastructure supporting those systems. On the one hand, energy consumption is a critical concern for computing systems at all scales, including mobile devices, embedded networks, and data centers. On the other hand, computing itself can be used to improve the energy efficiency of cyber-physical systems, such as smart grids, smart buildings, and transportation. However, we do not yet fully understand the tradeoffs between energy, performance, cost, and other metrics in these environments. This limits our ability to improve energy efficiency without violating performance requirements and physical constraints (e.g., battery, cooling capacity).

HotPower provides a forum in which to present the latest research and to debate directions, challenges, and novel ideas about building energy-efficient information technology and cyber-physical systems. In addition, researchers coming to these issues from fields such as computer architecture, systems and networking, measurement and modeling, language and compiler design, mobile computing, and embedded and cyber-physical systems will have the opportunity to interact with one another, explore cross-cutting ideas, and develop new perspectives on the problem domain.

Topics

Topics of interest in energy-efficient computing include but are not limited to:

- Instrumentation, measurement, and measurement studies
- Metrics, benchmarks, interfaces
- Performance, energy, and other resource trade-offs; energy complexity
- Software optimization, application design
- System-level optimization, cross-layer coordination
- Scheduling, run-time adaptation, feedback control
- Processor, network, storage, hardware components and architecture

- Reliability and power management
- Energy-aware control of cyber-physical systems, such as buildings and transportation systems
- Application to multi-core, datacenter, and embedded systems
- Green energy sources and their implications
- Technologies for and management of energy storage
- Life-cycle analysis

The workshop seeks submissions of early-stage research and novel ideas that have a high likelihood of generating interesting discussion.

Submission Instructions

Submitted papers must be no longer than 5 single-spaced 8.5" x 11" pages, including figures, tables, and references, typeset in two-column format using 10 point type on 12 point (single-spaced) leading, in a text block no more than 6.5" wide by 9" deep. Author names and affiliations should appear on the title page. If you wish, you may use the sample files located at www.usenix.org/templates-conference-papers as templates.

Papers must be in PDF and must be submitted via the Web submission form on the HotPower '12 Call for Papers Web site, www.usenix.org/conference/hotpower12.

All papers will be available online to registered attendees before the workshop. If your accepted paper should not be published prior to the event, please notify production@usenix.org. The papers will be available online to everyone beginning on the day of the workshop.

Simultaneous submission of the same work to multiple venues, submission of previously published work, or plagiarism constitutes dishonesty or fraud. USENIX, like other scientific and technical conferences and journals, prohibits these practices and may take action against authors who have committed them. See the USENIX Conference Submissions Policy at www.usenix.org/conferences/submissions-policy for details. Questions? Contact your program co-chairs, hotpower12chairs@usenix.org, or the USENIX office, submissionspolicy@usenix.org.

Papers accompanied by nondisclosure agreement forms will not be considered. Accepted submissions will be treated as confidential prior to publication on the USENIX HotPower '12 Web site; rejected submissions will be permanently treated as confidential.

Registration Materials

Complete program and registration information will be available on the HotPower '12 Web site in late August 2012.

