

CALL FOR PAPERS
2nd Joint Workshop On
High Confidence Medical Devices, Software, and Systems (HCMDSS) and
Medical Device Plug-and-Play (MD PnP) Interoperability
(HCMDSS/MDPnP '09)



April 16, 2009
San Francisco, CA

<http://www.cis.upenn.edu/hcmdss09/>



The second joint workshop on HCMDSS (High Confidence Medical Devices, Software, and Systems) and Medical Device Plug-and-Play (MD PnP) provides a forum for the presentation of research and development covering all aspects of high integrity and interoperability for medical devices, software, and systems, which are essential to improve safety and efficiency in health care. The goal of the workshop is to bring together medical device specialists, including researchers, developers, and caregivers, from clinical environments, industry, research laboratories, academia, and government, with the goal of advancing science, technology, and practice to overcome crucial medical devices, software, and systems issues and challenges facing the design, manufacture, certification, and use of medical devices.

HCMDSS/MD PnP '09 welcomes the submission of papers in all aspects of HCMDSS and MD PnP, including but not limited to:

- Foundations for Integration of Medical Device Systems/Models: Component-based technologies for accelerated design and verifiable system integration, Systems of systems, MD PnP (Plug-and-Play) to support interoperability of heterogeneous systems
- Enabling Technologies for Future Medical Devices: Implantable regulatory devices, networked biosensors, telesurgery, robotic surgery, physiologic signal QoS (Quality of Service)
- Distributed Control & Sensing of Networked Medical Device Systems: Robust, verifiable, fault-tolerant control of uncertain, multi-modal systems
- Medical Device Plug-and-Play Ecosystem: Requirements for supporting interoperability in the clinical environment, including "black box" data recording, device authorization, and data security
- Patient Modeling & Simulation: Large scale, high fidelity organ and patient models for design and testing
- Embedded, Real-Time, Networked System Infrastructures for HCMDSS: Architecture, platform, middleware, resource management, quality of service in HCMDSS; dynamic interoperation in HCMDSS, including MD PnP operation
- High Confidence Medical Device Software Development & Assurance: Care-giver requirements solicitation and capture, design and implementation, verification and validation, heterogeneity in environment, architecture, platforms in medical devices
- Medical Practice-driven Models and Requirements: User-centric design, risk understanding, and use/misuse modeling in medical practice, management of failures in a clinical environment, modeling of operational scenarios, including medical devices, care-givers, patients
- Certification of HCMDSS and MD PnP: Quantifiable incremental certification of HCMDSS and MD PnP interoperability, role of design tools and COTS, approval of non-deterministic and self-adaptive medical device systems
- Life Cycle Management of Networked Devices and HCMDSS: Maintainability issues and methods, monitoring of networked devices, bringing new devices onto the network, implications for legacy systems

Important dates

February 28, 2009:	Submission Deadline
March 16, 2009:	Notification of Acceptance/Rejection
April 2, 2009:	Final Version Due
April 16, 2009:	Workshop

Submission Instructions

Submissions should not exceed 20 double-space pages (5,000 words) for long papers and 5 double-space pages for short papers (1,250 words). Submissions are accepted in the electronic form using the submission page on the workshop web site. Preferred submission format is PDF, although Microsoft Word, Postscript, and RTF are acceptable as well.

Venue

The workshop is colocated with Cyber Physical Systems Week at the Parc 55 Hotel in San Francisco CA.

Workshop organizers

Juilian M. Goldman	Massachusetts General Hospital/Harvard Medical School
Paul Jones	U.S. Food and Drug Administration
Insup Lee	University of Pennsylvania
Oleg Sokolsky	University of Pennsylvania
Susan Whitehead	Center for the Integration of Medicine and Innovative Technology