



SiPS 2012

IEEE Workshop on Signal Processing Systems

Québec City, Canada, Oct. 17-19 2012

<http://www.sips2012.org/>



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Sponsored by:

- IEEE Signal Processing Society
- IEEE Circuits and Systems Society

SiPS is a major international forum for discussion of new technology progress and innovations in the design and implementation of digital signal processing systems. It addresses all aspects of architecture and design methods of these systems. Emphasis is on current and future challenges in research and development in both academia and industry. Prospective authors are invited to submit manuscripts on topics including, but not limited to:

- **Optimization of Signal Processing Algorithms and Architectures**
 - ✓ Dataflow-based design and implementation
 - ✓ Optimization of signal processing algorithms
 - ✓ Compilers and tools for signal processing system design
 - ✓ Algorithm transformation and algorithm-to-architecture mapping
- **Software Based Design and Implementation of Signal Processing Systems**
 - ✓ Embedded signal processing in cyber-physical systems
 - ✓ Programmable digital signal processor architecture and systems
 - ✓ Application specific instruction-set processor (ASIP) architecture and systems
 - ✓ SIMD, VLIW, and multi-core CPU architecture and systems
 - ✓ Graphic processing unit (GPU) based massively parallel implementation
- **VLSI Based Design and Implementation of Signal Processing Systems**
 - ✓ Low-power signal processing circuits and applications
 - ✓ High performance VLSI systems
 - ✓ FPGA and reconfigurable architecture based systems
 - ✓ System-on-chip and network-on-chip
- **Signal Processing Application Systems**
 - ✓ Audio, speech and language processing
 - ✓ Biomedical signal processing and bioinformatics
 - ✓ Image, video and multimedia signal processing
 - ✓ Information forensics, security and cryptography
 - ✓ Machine learning for signal processing
 - ✓ Sensing and sensor signal processing
 - ✓ Wireless communications and networking

Paper submission deadline: **April 20 (Extended)**

Acceptance notification: **June 22**

Camera-ready paper due: **July 23**

Paper Submission: Authors are invited to submit full-length (6 pages maximum), original, unpublished papers. Previously published papers or papers currently under review for other conferences/journals should not be submitted and will not be considered. Paper format information is available at <http://www.sips2012.org> website.

In 2012, SiPS's special theme is on "Embedded Signal Processing in Cyber-Physical Systems." Cyber-physical systems (CPS) are physical and engineered systems whose operations are monitored, coordinated, controlled and integrated by a computing and communication core. Submissions that can fall into this broad inter-disciplinary area are particularly encouraged.

Student Paper Contest and Special Issue: There will be a contest for best student papers, and selected papers will be considered for publication in a special issue of the Journal of Signal Processing Systems.