

CALL FOR PAPERS



2014 IEEE High Performance
Extreme Computing Conference
(HPEC '14)
Eighteenth Annual HPEC Conference

9 - 11 September 2014
Westin Hotel, Waltham, MA USA

www.ieee-hpec.org

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The IEEE High Performance Extreme Computing Conference (HPEC '14) will be held in the Greater Boston Area, Massachusetts, USA on 9 – 11 September 2014. The HPEC charter is to be the premier conference in the world on the confluence of HPC and Embedded Computing.

The technical committee seeks new presentations that clearly describe advances in high performance extreme computing technologies, emphasizing one or more of the following topics:

- Advanced Multicore Software Technologies
- Case Studies and Benchmarking of Applications
- Automated Design Tools
- Mapping and Scheduling of Parallel and Real-Time Applications
- Computing Technologies for Challenging Form Factors
- ASIC and FPGA Advances
- Open System Architectures
- Data Intensive Computing
- Big Data and Distributed Computing
- Interactive and Real-Time Supercomputing
- Graph Analytics and Network Science
- Fault-Tolerant Computing
- Embedded Cloud Computing
- Digital Front Ends
- General Purpose GPU Computing
- Advanced Processor Architectures
- Secure Computing & Anti-Tamper Technologies
- New Application Frontiers

All submissions will be peer-reviewed and judged on their technical merit, novelty, and relevance to the technical program. Preference will be given to papers with strong, quantitative results. The conference will have 30 minute oral presentations and poster displays. Presenters who wish to have hardware demonstrations are encouraged to mark their preference for a poster display.

Paper submissions can be up to 6 pages and should use the approved [IEEE templates](#). The highest scoring submissions will be published by IEEE in the official HPEC proceedings available on [IEEE eXplore](#). All other accepted submissions are published on ieee-hpec.org

Vendors are encouraged to sign up for [vendor booths](#). This will allow vendors to present their HPEC technologies in an interactive atmosphere suitable for product demonstration and promotion.

Important Dates:

16 May 2014: Paper submission deadline

11 June 2014: Author notification of acceptance

Instructions for submitting will be posted to the conference web site at: <http://ieee-hpec.org/cfp.htm>

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Invited Speakers:

- [Prof. Isaac Chuang](#), Dept. of Physics, MIT – *Massive Open Online Courses (MOOCs)*
- [Dr. Timothy Mattson](#), Intel Principal Investigator for [Big Data](#)
- [Dr. Richard Murphy](#), Senior Memory Architect, Micron – *Novel Memory Architectures*
- [Dr. Raphael Some](#), Chief Technologies Autonomous Systems, CalTech NASA JPL – *HPC in Space*
- [Prof. John Quackenbush](#), Dept. of Biostatistics, Harvard University

Special Events:

- [Accumulo](#) user's group meeting, organizers: [Mr. Adam Fuchs \(Sqrri\)](#) & Dr. Billie Rinaldi (Hortonworks)
- Bioinformatics, organizer: [Dr. Nirmal Kesheva \(AstraZeneca\)](#)
- Computing Challenges of Unmanned Platforms, organizer: [Dr. Ken Gregson \(MIT\)](#)
- [GraphBLAS](#) forum to define standard building blocks for graph algorithms, organizer: [Dr. Timothy Mattson \(Intel\)](#)
- High Performance Secure Extreme Computing (HP SEC), organizer: [Dr. Josh Kramer \(MIT\)](#)
- [Massachusetts Green High Performance Computing Center \(MGHPCC\)](#) user's group meeting, organizer: [Dr. Chris Hill \(MIT\)](#)
- [Vector, Signal, and Image Processing Library \(VSIPL\)](#) standard working group, organizer: Mr. Hahn Kim (MIT)

Tutorials:

- [Julia](#) programming language, organizer: Mr. Jeff Bezanson
- Programming TI DSPs, organizer: Dr. Murtaza Ali

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