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## Call for Papers

### **MCHPC'18: Workshop on Memory Centric High Performance Computing**

held in conjunction with SC18: The International Conference on High Performance Computing, Networking, Storage and Analysis

Location: Kay Bailey Hutchison Convention Center, Dallas, TX USA

Time/Date: 9:00AM - 5:30PM, Sunday, November 11, 2018

<https://passlab.github.io/mchpc/mchpc2018/>

Submission Deadline: September 9 2018 AOE

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The MCHPC workshop aims to bring together computer and computational science researchers, from industry, government labs and academia, concerned with the challenges of efficiently using existing and emerging memory systems for high performance computing. The term performance for memory system is general, which include latency, bandwidth, power consumption and reliability from the aspect of hardware memory technologies to what it is manifested in the application performance. The topics of interest for the MCHPC workshop include, but are not limited to:

- The challenges and software and hardware solutions of using 3-D stack memory, NVDIMM, memristor and other processor/compute-in-memory technology.
- Programming interfaces or language extensions that improve the programmability of using emerging memory technologies and systems.
- Compiler and runtime techniques for optimizing data layout, movement and consistency enforcement for latency hiding and for improving bandwidth utilization and energy consumption of memory systems.
- Enhancement or new development for operating systems, storage and file systems, and I/O system that address existing and emerging memory systems.
- Modeling, evaluation, and case study of memory system behavior and application performance that reveal the limitation and characteristics of existing memory systems.
- Application development and optimization for memory architecture and technologies.

### **Important Dates**

- Submission Deadline -- Sep 9 2018 AoE
- Notifications -- September 21 2018
- Camera Ready Papers or Submission of Extended Journal Version -- TBD
- November 11th 2018 - MCHPC2018 Workshop

### **Submission**

Authors are invited to submit manuscripts in English structured as technical papers up to 8 pages or as short papers up to 5 pages, both of letter size (8.5in x 11in) and including figures, tables, and references. Submissions not conforming to these guidelines may be returned without review. Your paper should be formatted using sigconf of the ACM Master Article Template from <https://www.acm.org/publications/proceedings-template>.

All manuscripts will be reviewed and judged on correctness, originality, technical strength, and significance, quality of presentation, and interest and relevance to the workshop attendees. Submitted papers must represent original unpublished research that is not currently under review for any other conference or journal. Papers not following these guidelines will be rejected without review and further action may be taken, including (but not limited to) notifications sent to the heads of the institutions of the authors and sponsors of the conference. Submissions received after the due date, exceeding length limit, or not appropriately structured may also not be considered. At least one author of an accepted paper must register for and attend the workshop. Authors may contact the workshop organizers for more information.

Papers should be submitted electronically at: <https://submissions.supercomputing.org/> using the "SC18 Workshop: MCHPC18" form.

We are working on proceeding details and the tentative plan is to invite papers presented at the workshop for an expanded version for consideration in a journal special issue.

## Organizers

- Yonghong Yan (University of South Carolina, [yanyh@cse.sc.edu](mailto:yanyh@cse.sc.edu))
- Ron Brightwell (Sandia National Laboratory, [rbrigh@sandia.gov](mailto:rbrigh@sandia.gov))
- Xian-He Sun (Illinois Institute of Technology, [sun@iit.edu](mailto:sun@iit.edu))
- Maya B Gokhale (Lawrence Livermore National Laboratory, [gokhale2@llnl.gov](mailto:gokhale2@llnl.gov))

## Program Committee

- Ron Brightwell (Co-Chair, Sandia National Laboratory, [rbrigh@sandia.gov](mailto:rbrigh@sandia.gov))
- Yonghong Yan (Co-Chair, University of South Carolina, [yanyh@cse.sc.edu](mailto:yanyh@cse.sc.edu))
- Xian-He Sun (Illinois Institute of Technology)
- Maya B Gokhale (Lawrence Livermore National Laboratory)
- Mingyu Chen (Chinese Academy of Sciences)
- Bronis R. de Supinski (Lawrence Livermore National Laboratory)
- Tom Deakin (University of Bristol)
- Wendy Elasser (Arm Ltd)
- Hal Finkel (Argonne National Laboratory and LLVM Foundation)
- Kyle Hale (Illinois Institute of Technology)
- Jeff R. Hammond (Intel Corporation)
- Dong Li (University of California, Merced)
- Scott Lloyd (Lawrence Livermore National Laboratory)
- Ivy B. Peng (Oak Ridge National Laboratory)
- Christian Terboven (RWTH Aachen University)
- Alice Koniges (Univ. of Hawaii, Maui High Performance Computing Center)