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Call for Papers

MCHPC'19: Workshop on Memory Centric High Performance Computing
held in conjunction with SC19: The International Conference on High Performance Computing, Networking, Storage and Analysis and in cooperation with IEEE TCHPC

Location: Room 501, Colorado Convention Center, Denver Colorado USA
Time/Date: 9:00AM - 5:30PM, Monday, November 18, 2019

https://passlab.github.io/mchpc/mchpc2019

Submission Deadline: August 30th, 2019 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.
- Programing 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 (extended) -- Aug 30th 2019 AoE
- Notifications -- September 20 2019
- Camera Ready Papers -- September 30 2019
- November 18th 2019 - Workshop

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 IEEE conference format which can be found from https://www.ieee.org/conferences/publishing/templates.html . The workshop also encourages submitters to include reproducibility information, using reproducibility initiatives for SC'19 Technical

Papers as a guide available from https://sc19.supercomputing.org/submit/paper-submissions/#section4.

All manuscripts will be peer-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.

The final papers are to be published through IEEE TCHPC. Published proceedings will be included in the IEEE Xplore digital library. We plan to invite selected papers for an extended version in a journal special issue.

Organizers

- Yonghong Yan (University of North Carolina at Charlotte, yyan7@uncc.edu)
- Ron Brightwell (Sandia National Laboratory, rbbrigh@sandia.gov)
- Xian-He Sun (Illinois Institute of Technology, sun@iit.edu)
- Maya B Gokhale (Lawrence Livermore National Laboratory, gokhale2@llnl.gov)

Program Committee

- Ron Brightwell (Co-Chair, Sandia National Laboratory, rbbrigh@sandia.gov)
- Yonghong Yan (Co-Chair, University of North Carolina at Charlotte, yyan7@uncc.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)
- 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)
- Arun Rodrigues (Sandia National Laboratory)