Call for Papers

The International Workshop on Data-Intensive Scalable Computing Systems (DISCS)


November 15, 2015, Hilton Austin, Austin TX, USA

Held in conjunction with SC15: The International Conference for High Performance Computing, Networking, Storage and Analysis

**Scope:** The Data Intensive Scalable Computing Systems (DISCS) workshop series facilitates dialogue about research aimed at the intersection of data intensive computing and traditional high performance computing (HPC). Traditional HPC systems were designed from a compute-centric perspective, with an emphasis on high floating-point performance. As scientific and analytics applications become more data intensive, there is a need to rethink HPC system architectures, programming models, runtime systems, and tools with a focus on data intensive computing. Industry approaches supporting data intensive applications have been highly successful, leading many in the HPC community to explore ways to apply them. Conversely, the HPC community's expertise in designing, deploying, and using high performance systems is attractive to those in industry. DISCS-2015 will feature a keynote address and presentation of peer-reviewed full and short research papers, with ample opportunity for researchers and developers to discuss recent results and the future challenges of running data intensive applications on traditional HPC systems and latest data-centric computing systems.

**Important Dates:**

- **Paper Submission:** August 21, 2015
- **Author Notification:** September 25, 2015
- **Camera-Ready Paper Submission:** October 10, 2015
- **Workshop Date:** November 15, 2015

**Topics of Interest:** Topics for DISCS-2015 include, but not limited to:

- HPC system architectures for data intensive applications
  - Data-centric system architectures
  - I/O systems and architectures
  - System area networks
  - Power efficient systems
- Programming models supporting data intensive applications
  - Data-centric programming models
  - MPI/GAS/PGAS extensions for data intensive applications
  - Non-traditional programming languages/methodologies
- Runtime systems supporting data intensive applications
  - Intra-node, Inter-node and Inter-System Communication
  - Data compression and de-compression
  - Caching and prefetching
  - Reliability and fault tolerance
  - Data integrity and consistency
- Productivity techniques and tools for data intensive applications
  - Data analytic tools
  - Tracing and trace analysis tools
  - Data mining and knowledge discovery tools
  - Data visualization techniques and tools
  - Computational, mathematical and statistical tools

**Submission Instructions:** Submissions should be unpublished work and in PDF format on US Letter sized paper (8.5”x11”) with not more than 8 pages (all inclusive) formatted according to the double-column format of the ACM SIG Proceedings “Option 1: LaTeX2e – Strict Adherence to SIGS style” template. Margins and fonts should not be modified from this style. All accepted papers will appear in the workshop proceedings in the ACM Digital Library and IEEE Xplore. See https://easychair.org/conferences/?conf=discs2015 for details.

**Keynote:** Irene M. Qultur will deliver the keynote address for DISCS-2015. Ms. Quultur is the Division Director of Advanced Cyber-infrastructure for the U.S. National Science Foundation (NSF), and has extensive experience guiding NSF’s national computing infrastructure. Before coming to the NSF, she had a 30-year career in industry, working on compilers, operating systems, and file systems.

**Journal Special Issue:** The authors of papers presented in the DISCS-2015 workshop will be invited to extend their manuscripts to be considered for a special issue of Parallel Computing: Systems & Applications, guest edited by the DISCS-2015 workshop chairs. Details regarding the journal special issue will be available after the workshop.

**Organizers:** The following people are organizing DISCS-2015:

- **General Chair:** Philip C. Roth, Oak Ridge National Laboratory
- **Program Chairs:** Weikuan Yu, Florida State University; Shane Canon, Lawrence Berkeley National Laboratory
- **Proceedings Chair:** Michael Kluge, TU Dresden
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- Zhiq Tao, Intel Corporation
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- Jian-He Sun, Illinois Institute of Technology
- Rajeev Thakur, Argonne National Laboratory