

CALL FOR PAPERS – 2018 IEEE INTERNATIONAL SYMPOSIUM ON WORKLOAD CHARACTERIZATION (<http://www.iiswc.org/iiswc2018/index.html>)

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Program Chair: Carole-Jean Wu (Arizona State University)

Conference Date: September 30 – October 2, 2018

Location: Raleigh, North Carolina

Important Dates

Abstracts Submission: ~~May 11, 2018~~ May 18, 2018

Paper Submission: ~~May 18, 2018~~ May 25, 2018

Acceptance Notification: July 27, 2018

Topics of Interest

We solicit papers in all areas related to characterization of computing system workloads. Topics of interest include (but are not limited to):

- Characterization of applications in domains including
 - Memory, storage and file systems
 - Cyber-physical systems, pervasive computation and Internet of Things (IoTs)
 - Search engines, e-commerce, web services, databases, file/application servers
 - Embedded, mobile, multimedia, real-time, 3D-graphics, gaming
 - Blockchain
 - Life sciences, bioinformatics, scientific computing, finance, forecasting
 - Machine learning, analytics, data mining
 - Security, reliability, biometrics
 - Cloud and edge computing
 - User behavior and system-user interaction
- Emerging workloads and architectures, such as
 - Transactional memory workloads; workloads for multi/many-core systems
 - Stream-based computing workloads; web/internet workloads; cyber-physical workloads
 - Near data processing architectures
 - Quantum computations and communication
 - Near-threshold computation
 - Non-volatile memory
- Implications of workloads in design issues, such as
 - Power management, reliability, security, performance
 - Processors, memory hierarchy, I/O, and networks
 - Design of accelerators, FPGAs, GPUs, CGRAs, etc.
 - Novel architectures (non-Von-Neumann)
- Benchmark creation and evaluation, including
 - Multithreaded benchmarks, benchmark cloning
 - Profiling, trace collection, synthetic traces
 - Validation of benchmarks

- Characterization of OS, Virtual Machine, middleware and library behavior including
 - Virtual machines, .NET, Java VM, databases
 - Graphics libraries, scientific libraries
 - Operating system and hypervisor effects and overheads
- Measurement tools and techniques, including
 - Instrumentation methodologies for workload verification and characterization
 - Techniques for accurate analysis/measurement of production systems
 - Analytical and abstract modeling of program behavior and systems