4th ACM/SPEC International Conference on Performance Engineering

ICPE 2013

Prague - Czech Republic - April 21-24

The International Conference on Performance Engineering (ICPE) provides a forum for the integration of theory and practice in the field of performance engineering. ICPE has grown out of the ACM Workshop on Software Performance (WOSP) and the SPEC International Performance Engineering Workshop (SIPEW). It brings together researchers and industry practitioners to share ideas and present their experiences, discuss challenges, and report state-of-the-art and in-progress research on performance engineering of software and systems. Topics of interest include:

Performance and software development processes
- Techniques to elicit and incorporate performance, availability, power and other extra-functional requirements throughout the software and system lifecycle
- Agile performance-test-driven development
- Performance-requirements engineering and design for software performance predictability
- Software performance modeling, patterns and anti-patterns

Performance modeling and prediction
- Languages, annotations, tools and methodologies to support model-based performance engineering
- Analytical, simulation, statistical, AI-based, and hybrid modeling/prediction methods
- Automated model discovery and model building
- Model validation and calibration techniques

Performance measurement and experimental analysis
- Performance measurement, monitoring, and workload characterization techniques
- Test planning, tools for performance, load testing, measurement, profiling and tuning
- Model extraction for functional or partly functional systems
- Methodologies for performance testing and for functional testing
- Reproduction and reproducibility of performance studies

System management/optimization
- Use of models for run-time configuration/management
- Online performance prediction and model parameter estimation
- Adaptive resource management

Benchmarking, configuration, sizing, and capacity planning
- Benchmark design and benchmarking methods, metrics, and suites
- Development of new, configurable, and/or scalable benchmarks
- Use of benchmarks in industry and academia
- System configuration, sizing and capacity planning techniques

Performance in Cloud, virtualized and multi-core systems
- Modeling, monitoring, and testing of cloud platforms and applications
- Performance/management of virtualized machines, storage and networks
- Performance engineering of multi-core and parallel systems

Performance and power
- Algorithms for combined power and performance management
- Instrumentation, profiling, modeling and measurement of power consumption
- Power/performance engineering in grid/cluster/cloud/mobile computing systems

Performance modeling and evaluation in other domains such as:
- Web-based systems, e-business, web services, SOAs
- Transaction-oriented and event-based systems
- Embedded and autonomous systems
- Real-time and multimedia systems
- Peer-to-peer, mobile and wireless systems

Multiple different kinds of papers are sought: basic and applied research, industrial/experience reports, and work-in-progress/vision papers. Different acceptance criteria apply for each category. The conference proceedings will be published by ACM and included in the ACM Digital Library. The best conference paper will receive a Best Paper Award.

Important Dates

Research paper submissions:	**24 Sep 2012**	Poster and demo papers submissions:	**13 Nov 2012**
Research paper notification:	**14 Dec 2012**	Tutorial proposals submissions:	**10 Nov 2012**
Industrial/experience paper submissions:	**30 Oct 2012**	Work-in-progress/vision paper submissions	**14 Jan 2013**

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