ICPE 2011

2nd ACM/SPEC
International Conference on
**Performance
Engineering**

2nd Joint
WOSP/SIPEW

Karlsruhe, Germany
March 14-16, 2011

A Joint Meeting of WOSP/SIPEW Sponsored by ACM SIGMETRICS and ACM SIGSOFT in Cooperation with SPEC

March, 14-16, 2011, Karlsruhe, Germany

http://www.icpe-conference.org

The goal of the International Conference on Performance Engineering (ICPE) is to bridge the gap between theory and practice in the field of performance engineering by providing a forum for sharing ideas and experiences between industry and academia. ICPE is established as a joint meeting of the ACM Workshop on Software and Performance (WOSP) and the SPEC International Performance Evaluation Workshop (SIPEW). The conference will bring together researchers and industry practitioners to share and present their experiences, discuss challenges, and report state-of-the-art and in-progress research on performance engineering of software and systems, including performance measurement, modeling, benchmark design, and run-time performance management.

Performance modeling of software
- Languages and ontologies
- Methods and tools
- Model-driven performance requirements engineering
- Relationship/integration/tradeoffs with other QoS attributes

Performance and development processes
- Software performance patterns and anti-patterns
- Software/performance tool interoperability (models and data interchange formats)
- Performance-oriented design, implementation and configuration management
- Software Performance Engineering and Model-Driven Development
- Gathering, interpreting and exploiting software performance annotations and data
- System sizing and capacity planning techniques

Performance modeling methodologies
- Analytical, simulation and statistical modeling methodologies
- Model validation and calibration techniques
- Automatic model extraction
- Performance modeling and analysis tools

Performance measurement, monitoring and analysis
- Performance measurement and monitoring techniques
- Analysis of measured application performance data
- Application tracing and profiling
- Workload characterization techniques
- Experimental design
- Tools for performance testing, measurement, profiling and tuning

Benchmarking
- Performance metrics and benchmark suites
- Benchmarking methodologies
- Development of parameterizable, flexible benchmarks
- Use of benchmarks in industry and academia

Run-time performance management
- Use of models at run-time
- Online performance prediction
- Autonomic resource management
- Utility-based optimization

Power and performance, energy efficiency
- Power consumption models and management techniques
- Tradeoffs between performance and energy efficiency

Performance modeling and evaluation in different environments and application domains, including, but not limited to
- Service-oriented architectures (SOA)
- Web-based systems, e-business, Web services
- Transaction-oriented systems
- Virtualization and cloud computing
- Communication networks
- Parallel and distributed systems
- Embedded and autonomous systems
- Cluster and grid computing environments
- High performance computing
- Event-based systems
- Real-time and multimedia systems
- Peer-to-peer, mobile and wireless systems

Various different kinds of papers are sought: Basic and applied research, industrial experience reports, work-in-progress/vision papers with different criteria for each category.

Important Dates

Research paper submissions:	**30 Sep 2010**	Industrial/experience papers:	**1 Nov 2010**	Poster and demo papers:	**7 Nov 2010**
Research paper notifications:	**19 Nov 2010**	Work-in-progress/vision papers:	**15 Jan 2011**	Tutorial proposals:	**7 Nov 2010**

Publication and Awards

All accepted papers will appear in the Conference Proceedings which will be published by ACM Press and included in the ACM Digital Library. Selected papers will be considered for publication in a *Special Issue* of a leading peer-reviewed journal. The best conference paper will receive a *Best Paper Award*.

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