

TOPIC 2 - PERFORMANCE AND POWER MODELING, PREDICTION AND EVALUATION

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DESCRIPTION

In recent years, a range of novel methods and tools have been developed for the evaluation, design, and modeling of parallel and distributed systems and applications. At the same time, the term ‘performance’ has broadened to also include scalability and energy efficiency, and touching reliability and robustness in addition to the classic resource-oriented notions. The aim of this topic is to gather researchers working on different aspects of performance modeling, evaluation, and prediction, be it for systems or for applications running on the whole range of parallel and distributed systems (multi-core and heterogeneous architectures, HPC systems, grid and cloud contexts etc.). Authors are invited to submit novel research in all areas of performance modeling, prediction and evaluation, and to help bring together current theory and practice.

Focus

- Novel techniques and tools for performance measurement, evaluation, and prediction
- Advanced simulation techniques and tools
- Measurements, benchmarking, and tracing
- Workload modeling
- Performance-driven code optimization
- Verification and validation of performance models
- Performance visualization
- Power consumption modeling and prediction
- Performance modeling, analysis, and prediction for both applications and systems (e.g., grids and cloud computing environments, large-scale HPC platforms)
- Performance modeling and simulation of emerging exascale systems

