



Call for Papers

Theme Issue: Performance Modeling

Editors

[David J. Lilja](#)

lilja@umn.edu

University of Minnesota, USA

[Raffaella Mirandola](#)

mirandola@elet.polimi.it

Politecnico di Milano, Italy

Editors-in-Chief

[Robert France](#)

Colorado State University

[Bernhard Rumpe](#)

RWTH Aachen University

The increasing complexity of modern computer systems demands new and efficient *performance modeling* techniques to aid developers in producing the most efficient system for a desired task.

Performance assessment seeks to understand and explain system performance. It should be an integral component of the development process from the beginning to reduce the costs required to fix problems late in the development cycle. Indeed, decisions made early in the process will directly impact the quality of the final product.

The *model-based development* paradigm, on the other hand, advocates developing systems starting from models - at multiple levels of abstraction - that express domain-specific concepts precisely and intuitively while supporting automated manipulation and transformation.

The goal of this special theme issue is to illuminate the deep relationship between computer systems performance evaluation and system modeling. For example, how can model-driven techniques that are used to understand a system's behavior be used to improve its performance? Can modeling languages and tools be adapted for improving performance? What are the connections between modeling tool environments and performance evaluation tools and environments? Papers that bridge the gap between theory and practice, and case studies that demonstrate the fundamental connections between performance evaluation and system modeling, are particularly encouraged.

The [Journal of Software and Systems Modeling](#) (SoSyM) invites original, high-quality submissions for its theme issue on "Performance Modeling", with main topics including:

- **Performance modeling methodologies:** Analytical, simulation and statistical modeling methodologies; model validation and calibration techniques; automatic model extraction; performance modeling and analysis tools.
- **Performance modeling of software:** languages and ontologies; methods and tools; model-driven performance requirements engineering; relationship/integration/tradeoffs with other QoS attributes.
- **Performance modeling and evaluation in different environments and application domains:** e.g., Service-oriented architectures, virtualization and cloud computing, web-based systems, e-business, web service, power consumption models and management techniques, tradeoffs between performance and energy efficiency.

Important Dates

Intent to submit 01 May 2011

Paper submission 01 Jul 2011

Notification 18 Dec 2011

Camera-ready version Feb 2012

General Author Information

- Papers must be written in a scientifically rigorous manner with adequate references to related work.
- Submitted papers must not be simultaneously submitted in an extended form or in a shortened form to other journals or conferences. It is however possible to submit extended versions of previously published work if less than 75% of the content already appeared in a non-journal publication, or less than 40% in a journal publication. Please see the [SoSyM Policy Statement on Plagiarism](#) for further conditions.
- Submitted papers do not need to adhere to a particular format or page limit, but should be prepared using font “Times New Roman” with a font size no smaller than 11 pt, and with 1.5 line spacing. Please consult the [SoSyM author information for submitting papers](#).
- Each paper will be reviewed by at least three reviewers.

Making a submission

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- Communicate your intent to submit a paper by emailing the theme issue editors the following information before the Intent to Submit deadline: Title, Authors, and an Abstract.
 - Prepare your submission with either Word or LaTeX using [Word and LaTeX templates](#). Possible submission formats are:
 - Word (.doc, without macros)
 - Rich Text Format (.rtf)
 - PostScript (.ps, special fonts must be embedded)
 - PDF (saved as readable in version 5.0 or later)
 - Submit your work using the online submission system [manuscript central](#):
 - In step 1, select “Special Section Paper” as the manuscript type and select “Dr. Bernhard Rumpe” as the “Editor-in-Chief” (EIC).
 - In step 4, add “David Lilja” (+ lilja@umn.edu) or “Raffaella Mirandola” (+ mirandola@elet.polimi.it) as an editor and choose “Designate as Preferred Editor”.
 - In step 5, make sure the field “Cover Letter” includes the line: “Submission for Theme Issue on Performance Modeling”.

Further information

If you have any questions or require additional information about this theme issue, please contact the editors.