Call for Papers

Organizing Committee

Organizers

Nelly Bencomo (main contact)
Gordon Blair
Computing Department
Lancaster University, UK
Robert France
Computer Science Department
Colorado State University
Freddy Munoz
INRIA, France (Submissions)
Cedric Jeanneret
Universitat Zurich,, Switzerland (Publicity)

Program Committee

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Steffen Zschaler
T.U. Dresden, Germany

Important Dates

Deadline Submission:
Wednesday August 13th
Notification of acceptance:
September 7th (or before early
registration at MODELS08)
Workshop at MoDELS:
Tuesday 30th September

Motivation

We are witnessing the emergence of new classes of application that are highly complex, inevitably distributed, and operate in heterogeneous and rapidly changing environments. Examples of such applications include those from pervasive and Grid computing domains. These systems are required to be adaptable, flexible, reconfigurable and, increasingly, self-managing. Such characteristics make systems more prone to failure when executing and thus the development and study of appropriate mechanisms for runtime validation and monitoring is needed.

In the model-driven software development area, research effort has focused primarily on using models at design, implementation, and deployment stages of development. This work has been highly productive with several techniques now entering the commercialisation phase. The use of model-driven techniques for validating and monitoring run-time behaviour can also yield significant benefits. A key benefit is that models can be used to provide a richer semantic base for run-time decision-making related to system adaptation and other run-time concerns. For example, one can use models to help determine when a system should move from a consistent architecture to another consistent architecture. Model-based monitoring and management of executing systems can play a significant role as we move towards implementing the key self-* properties associated with autonomic computing.

Goal

The goal of this workshop is to look at issues related to developing appropriate model-driven approaches to monitoring and managing the execution of systems. This is the first workshop (in its third edition) to address this theme and its treatment requires the bringing together of a variety of communities including researchers working on model-driven software development, software architectures, reflection (including for example architectural reflection), and autonomic and self healing systems. Discussions in the workshop will address questions such as: What should a runtime model look like? How can the models be maintained at runtime? What are the best approaches to follow when developing runtime models?

Workshop format

The workshop participants will be selected based on their experience and ideas related to this new and emerging field. You are invited to apply for attendance by sending a full-paper (8-10 pages) or a short paper (2-4 pages) in PDF or PS The paper **must conform to the Springer LNCS formatting guidelines: http://www.springer.com/computer/lncs (it is the same format of the Conference, see conference website for more information).** Submissions will be reviewed by at least 3 PC members. The authors will be notified about acceptance before the MoDELS 2008 early registration deadline. Candidates for best papers (if finally chosen) can be just taken from the category of full-papers.

A primary deliverable of the workshop is a report that clearly outlines (1) the research issues and challenges in terms of specific research problems in the area, and (2) a synopsis of existing model-based solutions that target some well-defined aspect of monitoring and managing the execution of systems. Potential attendees are strongly encouraged to submit position papers that clearly identify research issues and challenges, present techniques that address well-defined problems in the area, and are supported by small demos.

The workshop aims to:
- Integrate and combine research ideas from the areas cited above.
- Provide a "state-of-the-research" assessment expressed in terms of research issues, challenges, and accomplishments. This assessment can be used to guide research in the area.
- Continue to build a network of researchers in this area, building on the previous editions.
- Plan and promote further events on these topics.

We strongly encourage authors to address the following topics. Labelled research topics with (*) are crucially important:
- What a runtime model looks like and how does it evolve? **(*)**
- How can runtime models be maintained? **(*)**
- How can runtime models be validated?
- What abstractions over runtime phenomena are useful?
- How are the abstractions tied to the types of adaptations supported? **(*)**
- How do these abstractions evolve over time? **(*)**
- Are new abstractions created during runtime? **(*)**
- How are the causal relationships with executing code realized? **(*)**
- What is the role of reflection in maintaining the causal connection between models and runtime system?
- The relevance and suitability of different model-driven approaches to monitoring and managing systems during runtime
- Examples of how models can be used to validate and verify the behaviour of the system at runtime **(*)**
- Compatibility (or tension) between different model-driven approaches
- How do models at other phases of the SE lifecycle relate to the corresponding runtime models?
- Small demos and tools that support the use of models@run.time **(*)**

Further Information
Web site: http://www.comp.lancs.ac.uk/computing/users/bencomo/MRT/
Contact: Nelly Bencomo nelly@comp.lancs.ac.uk