

Call for Contributions

The application of model-based engineering (MBE) methods for software and systems development in industry is increasing. Moreover, the integration of component-based approaches with MBE has further accelerated its adoption along with providing it with a sound theoretical foundation.

The focus of this workshop is on the use of MBE for embedded systems development for example in the industrial transport sector for applications such as railway systems, automotive, aerospace, and related domains. In this context, special focus is given on MARTE, the UML profile for Modeling and Analysis of Real-Time and Embedded systems, which has been successfully adopted in several projects.

In particular, the intent is to concentrate on the following topics:

- *The infrastructure that supports MBE*, that is, the required languages, tools, and standards as well as the combination of design and V&V activities, and the diverse engineering disciplines involved in embedded system design.
- *Process-related issues*, such as guidelines for deciding when and where to use domain-specific languages, appropriate integration of process descriptions and tool mentors, and advanced methods to assist on criteria design and on performance and impact assessing.
- *MARTE returns on experiences*

The aim of the workshop is to bring together researchers and tool developers from industry and academia to discuss on applications of model-based engineering to application domains as well as on MARTE usage and on safety and MARTE. A significant portion of time will be reserved for discussion. In complement to the papers selected from this call for papers, several presentations will be invited from the MARTE standardization task force, from European projects involved in the domain of the workshop and from MBE tool vendors.

Important dates:

Submission of abstracts: 18 November 2009
Acceptation: 26 November 2009
Final version: 14 February 2010
Workshop: 12 March 2010

Organizing Committee:

- Pierre Boulet, Lille University, France
- Daniela Cancila, CEA-LIST, France
- Huascar Espinoza, ESI-Tecnalia, Spain
- Adam Morawiec, ECSI, France

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- Laurent Rioux, Thales RT, France
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- Bran Selic, Malina Software Corp., Canada

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Wolfgang Mueller (C-Lab, Germany)		

The topics to be covered by the workshop include but are not limited to:

- Modelling and methodological frameworks supporting the use of modelling languages in specific application domains (e.g., automotive, avionics industries).
- Automation support for Model-Based Engineering (MBE): tools and development environments (e.g., tools for detecting, storing, and applying patterns, tools for deploying and supporting specific processes, integration support tools, reuse tools, deployment tools, team collaborative environments, etc.).
- Best practices for modeling language design for embedded systems, and how they can and should be applied in different contexts (application domains, engineering disciplines, etc.).
- Industrial experiences in applying MBE to embedded systems.
- MARTE returns on experience.
- Combining different types of non-functional property analyses within a single decision making environment.
- The possibility of cross-fertilization of MBE methods and techniques between disciplines (e.g., hardware, software, systems design).
- Techniques for deriving architecture models from requirements, and deriving high-level design models from architecture models.

Submission format:

- Abstract: 2 pages
- Short papers: 4 pages
- PDF format, IEEE double column.

Final paper format:

- Abstract : 2-4 pages
- Short papers: 4-6 pages
- PDF format, IEEE double column

Publication:

Each accepted abstract and short paper will be electronically published in the Workshop Proceedings www.marte-ug.org and given in hardcopy form to each participant. Each accepted abstract and short paper must be presented at the workshop by one of the authors. The presenter will have 20 min to present his paper and 10 min will be allowed for discussion. Select papers will be considered for the Journal of System Architecture (ELSEVIER)

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