



MoDELS 2009

ACM/IEEE 12th International Conference on Model Driven Engineering Languages and Systems

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Third International Workshop on Multi-Paradigm Modeling

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Modeling has become the norm in industry to remain competitive and be successful. As such, Model-Based Design of embedded software has enterprise-wide implications and modeling is not limited to isolated uses by a single engineer or team. Instead, it has reached a proliferation much akin to large-scale software design, with requirements for infrastructure support such as version control, configuration management, and automated processing.

The comprehensive use of models in design has created a set of challenges beyond that of supporting one isolated design task. In particular, the need to combine, couple, and integrate models at different levels of abstraction and in different formalisms is posing a set of specific problems that the field of Computer Automated Multiparadigm Modeling (CAMPaM) is aiming to address.

The essential element of multiparadigm modeling is the use of explicit heterogeneous models throughout. This leads to a framework with models to represent the syntax of formalisms used for modeling, models of the transformations that represent the operational semantics, as well as model-to-model transformations for mapping between formalisms. These models are then used to facilitate generative tasks in language engineering, such as evolving a domain specific modeling formalism as system's requirements change, but also in a tool engineering space, such as automatic generation of integrated development environments. Moreover, an explicit model of a model transformation allows analyses such as termination characteristics, consistency, and determinism.

Topics of interest include but not limited to:

Language engineering

- * concepts for multiple paradigm composition
- * existing multiparadigm approaches
 - analysis
 - overview
- * composability and compositionality
 - generic reasoning techniques
 - scalability of compositions
 - model integration

Tool engineering

- * concepts for tool support of multiparadigm modeling
- * tool support for compositional language constructs
- * multiparadigm modeling tools

Applications

- * modeling concrete and abstract syntax and their relation
- * integration of visual and textual modeling techniques
- * executability and support for code generation
- * model transformation modeling
 - modularity
 - textual or visual specification
 - declarative vs. imperative approaches
 - execution control
 - verification of properties
- * traceability
- * model composition in different formalisms at the syntax and semantics level

Contributions should clearly address the foundations of multiparadigm modeling by demonstrating the use of models to achieve the stated objectives and discuss the benefits of explicit modeling.

Submission Procedure:

Papers must be submitted electronically as PDF via <http://avalon.aut.bme.hu/mpm09/>. Papers should not exceed ten (10) pages and follow the style available at the workshop web site.

Papers will be peer reviewed. Accepted papers will be published in the workshop proceedings in Electronic Communications of the EASST. The authors of the best two papers will be invited for the LNCS volume (conference post-proceedings with the best papers of the workshops) to provide their extended versions including the workshop feedbacks and further research results.

Important dates:

- Paper submission deadline: July 31, 2009
- Notification of acceptance: September 5, 2009
- Camera-ready papers due: September 12, 2009



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