

Preface

Software intensive systems are becoming more complex, driven by the need to integrate across multiple concerns and communicative. Consequently, the development of such systems requires the integration of many different concerns and skills. These concerns are usually covered by different languages, with specific concepts, technologies and abstraction levels. This multiplication of languages eases the development related to one specific concern but raises language and technology integration problems at the different stages of the software life cycle. In order to reason about the global system, it becomes necessary to explicitly describe the different kinds of relationships that exist between the different languages used in the development of a complex system. To support effective language integration, there is a pressing need to reify and classify these relationships, as well as the language interactions that the relationships enable. In this context, the proposed GEMOC 2015 workshop aims to attract submissions that outline language integration approaches and case studies that identify and discuss well-defined problems about the management of relationships between heterogeneous modeling languages. The goal is to facilitate deep discussions among the participants that lead to an initial classification of the kinds of language relationships and their management.

This volume contains the papers presented at GEMOC 2015: 3rd International Workshop on the Globalization of Modeling Languages held on September 27, 2015 in Ottawa. It follows the successful previous two editions at MODELS 2013 in Miami, FL, USA (<http://gemoc.org/gemoc2013>), and at MODELS 2014 in Valencia, Spain (<http://gemoc.org/gemoc2014>). This edition complete the state of the art and practice initiated in the previous editions. It also investigates the language interfaces required in the context of the globalization of modeling languages, and the possible relationships with the viewpoint engineering. Finally, it also strengthen the community that broadens the current DSML research focus beyond the development of independent DSMLs to a research focus that provides support for globalized DSMLs.

This year, there were 6 submissions. Each submission was reviewed by at least 3, and on the average 3.5, program committee members. The committee decided to accept 3 papers.

GEMOC 2015 has been supported by the GEMOC initiative (<http://gemoc.org>), which promotes research seeking to develop the necessary breakthroughs in software languages to support global software engineering, i.e., breakthroughs that lead to effective technologies supporting different forms of language integration, including language collaboration, interoperability and composability.

October 17, 2015

Benoit Combemale,
Julien Deantoni,
Jeff Gray

Table of Contents

Property-Based Methods for Collaborative Model Development	1
<i>Marsha Chechik, Fabiano Dalpiaz, Csaba Debreceeni, Jennifer Horkoff, Istvan Rath, Rick Salay and Daniel Varro</i>	
Programming against Multi-Version Metamodels: A Model Differencing and Virtualization Approach	8
<i>Robert Bill and Manuel Wimmer</i>	
Towards a formal semantics of the TESL specification language	14
<i>Hai Nguyen Van, Thibaut Balabonski, Frédéric Boulanger, Safouan Taha, Benoît Valiron, Burkhart Wolff and Lina Ye</i>	

Program Committee

Cedric Brun	Obeo
Marsha Chechik	University of Toronto
Tony Clark	Middlesex University
Benoit Combemale	IRISA, Université de Rennes 1
Julien Deantoni	UNS - I3S - INRIA Sophia Antipolis Mediterranee
Jeff Gray	University of Alabama
Jean-Marc Jézéquel	University of Rennes 1
Gabor Karsai	Vanderbilt University
Ralf Lämmel	Universität Koblenz-Landau
Marjan Mernik	University of Maribor
Gunter Mussbacher	McGill University
Richard Paige	University of York
Bernhard Rumpe	RWTH Aachen University
Matthias Schöttle	McGill University
Mark Van Den Brand	Eindhoven University of Technology
Eric Van Wyk	University of Minnesota
Jurgen Vinju	Centrum Wiskunde & Informatica
Markus Voelter	Independent