

Table of Contents

Invited Talk

Distributed Process Discovery and Conformance Checking	1
<i>Wil M.P. van der Aalst</i>	

Software Architecture and Components

Model-Driven Techniques to Enhance Architectural Languages Interoperability	26
<i>Davide Di Ruscio, Ivano Malavolta, Henry Muccini, Patrizio Pelliccione, and Alfonso Pierantonio</i>	
Moving from Specifications to Contracts in Component-Based Design . . .	43
<i>Sebastian S. Bauer, Alexandre David, Rolf Hennicker, Kim Guldstrand Larsen, Axel Legay, Ulrik Nyman, and Andrzej Wąsowski</i>	
The SynchAADL2Maude Tool	59
<i>Kyungmin Bae, Peter Csaba Ölveczky, José Meseguer, and Abdullah Al-Nayem</i>	

Services

Consistency of Service Composition	63
<i>José Luiz Fiadeiro and Antónia Lopes</i>	
Stable Availability under Denial of Service Attacks through Formal Patterns	78
<i>Jonas Eckhardt, Tobias Mühlbauer, Musab AlTurki, José Meseguer, and Martin Wirsing</i>	
Loose Programming with PROPHETS	94
<i>Stefan Naujokat, Anna-Lena Lamprecht, and Bernhard Steffen</i>	

Verification and Monitoring

Schedule Insensitivity Reduction	99
<i>Vineet Kahlon</i>	
Adaptive Task Automata: A Framework for Verifying Adaptive Embedded Systems	115
<i>Leo Hatvani, Paul Pettersson, and Cristina Seceleanu</i>	

Verified Resource Guarantees for Heap Manipulating Programs	130
<i>Elvira Albert, Richard Bubel, Samir Genaim, Reiner Hähnle, and Guillermo Román-Díez</i>	

An Operational Decision Support Framework for Monitoring Business Constraints	146
<i>Fabrizio Maria Maggi, Marco Montali, and Wil M.P. van der Aalst</i>	

Intermodelling and Model Transformations

Intermodeling, Queries, and Kleisli Categories	163
<i>Zinovy Diskin, Tom Maibaum, and Krzysztof Czarnecki</i>	

Concurrent Model Synchronization with Conflict Resolution Based on Triple Graph Grammars	178
<i>Frank Hermann, Hartmut Ehrig, Claudia Ermel, and Fernando Orejas</i>	

Recursive Checkonly QVT-R Transformations with General <i>when</i> and <i>where</i> Clauses via the Modal Mu Calculus	194
<i>Julian Bradfield and Perdita Stevens</i>	

Graph Transforming Java Data	209
<i>Maarten de Mol, Arend Rensink, and James J. Hunt</i>	

Modelling and Adaptation

Language Independent Refinement Using Partial Modeling	224
<i>Rick Salay, Michalis Famelis, and Marsha Chechik</i>	

A Conceptual Framework for Adaptation	240
<i>Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, and Andrea Vandin</i>	

Product Lines and Feature-Oriented Programming

Applying Design by Contract to Feature-Oriented Programming	255
<i>Thomas Thüm, Ina Schaefer, Martin Kuhlemann, Sven Apel, and Gunter Saake</i>	

Integration Testing of Software Product Lines Using Compositional Symbolic Execution	270
<i>Jiangfan Shi, Myra B. Cohen, and Matthew B. Dwyer</i>	

Combining Related Products into Product Lines	285
<i>Julia Rubin and Marsha Chechik</i>	

Development Process

Tracing Your Maintenance Work – A Cross-Project Validation of an Automated Classification Dictionary for Commit Messages	301
<i>Andreas Mauczka, Markus Huber, Christian Schanes, Wolfgang Schramm, Mario Bernhart, and Thomas Grechenig</i>	
Cohesive and Isolated Development with Branches	316
<i>Earl T. Barr, Christian Bird, Peter C. Rigby, Abram Hindle, Daniel M. German, and Premkumar Devanbu</i>	
Making Software Integration Really Continuous	332
<i>Mário Luís Guimarães and António Rito Silva</i>	
Extracting Widget Descriptions from GUIs	347
<i>Giovanni Becce, Leonardo Mariani, Oliviero Riganelli, and Mauro Santoro</i>	

Verification and Synthesis

Language-Theoretic Abstraction Refinement	362
<i>Zhenyue Long, Georgel Calin, Rupak Majumdar, and Roland Meyer</i>	
Learning from Vacuously Satisfiable Scenario-Based Specifications	377
<i>Dalal Alrajeh, Jeff Kramer, Alessandra Russo, and Sebastian Uchitel</i>	
Explanations for Regular Expressions	394
<i>Martin Erwig and Rahul Gopinath</i>	

Testing and Maintenance

On the Danger of Coverage Directed Test Case Generation	409
<i>Matt Staats, Gregory Gay, Michael Whalen, and Mats Heimdahl</i>	
Reduction of Test Suites Using Mutation	425
<i>Macario Polo Usaola, Pedro Reales Mateo, and Beatriz Pérez Lamancha</i>	
Model-Based Filtering of Combinatorial Test Suites	439
<i>Taha Triki, Yves Ledru, Lydie du Bousquet, Frédéric Dadeau, and Julien Botella</i>	
A New Design Defects Classification: Marrying Detection and Correction	455
<i>Rim Mahouachi, Marouane Kessentini, and Khaled Ghedira</i>	

Slicing and Refactoring

Fine Slicing: Theory and Applications for Computation Extraction	471
<i>Aharon Abadi, Ran Ettinger, and Yishai A. Feldman</i>	
System Dependence Graphs in Sequential Erlang	486
<i>Josep Silva, Salvador Tamarit, and César Tomás</i>	
A Domain-Specific Language for Scripting Refactorings in Erlang	501
<i>Huiqing Li and Simon Thompson</i>	
Author Index	517