

Contents

Introduction: Models, Modeling, and Model-Driven Architecture (MDA) <i>Alan W. Brown, Jim Conallen, Dave Tropeano</i>	1
---	---

Part I Conceptual Foundations of Model-Driven Development

A Systematic Look at Model Transformations <i>Andreas Metzger</i>	19
---	----

Tool Support for Model-Driven Development of Security-Critical Systems with UML <i>Jan Jürjens, Pasha Shabalin</i>	35
--	----

Caste-centric Modelling of Multi-agent Systems: The CAMLE Modelling Language and Automated Tools <i>Hong Zhu, Lijun Shan</i>	57
--	----

Using Graph Transformation for Practical Model-Driven Software Engineering <i>Lars Grunske, Leif Geiger, Albert Zündorf, Niels Van Eetvelde, Pieter Van Gorp, Dániel Varró</i>	91
--	----

A Generalized Notion of Platforms for Model-Driven Development <i>Colin Atkinson, Thomas Kühne</i>	119
--	-----

Part II Technical Infrastructure of Model-Driven Development

A Tool Infrastructure for Model-Driven Development Using Aspectual Patterns <i>Imed Hammouda</i>	139
--	-----

Automatically Discovering Transitive Relationships in Class Diagrams <i>Alexander Egyed</i>	179
Generic and Domain-Specific Model Refactoring Using a Model Transformation Engine <i>Jing Zhang, Yuehua Lin, Jeff Gray</i>	199
A Testing Framework for Model Transformations <i>Yuehua Lin, Jing Zhang, Jeff Gray</i>	219
Parallax – An Aspect-Enabled Framework for Plug-in-Based MDA Refinements Towards Middleware <i>Raul Silaghi, Alfred Strohmeier</i>	237
Evolution and Maintenance of MDA Applications <i>Tilman Seifert, Gerd Beneken</i>	269
<hr/>	
Part III Case Studies	
Intents and Upgrades in Component-Based High-Assurance Systems <i>Jonas Elmqvist, Simin Nadjm-Tehrani</i>	289
On Modeling Techniques for Supporting Model-Driven Development of Protocol Processing Applications <i>Marcus Alanen, Johan Lilius, Ivan Porres, Dragos Truscan</i>	305
An Integrated Model-Driven Development Environment for Composing and Validating Distributed Real-Time and Embedded Systems <i>Gabriele Trombetti, Aniruddha Gokhale, Douglas C. Schmidt, Jesse Greenwald, John Hatcliff, Georg Jung, Gurdip Singh</i>	329
A Model-Driven Technique for Development of Embedded Systems Based on the DEVS Formalism <i>Gabriel A. Wainer, Ezequiel Glinsky, Peter MacSween</i>	363
Model-Driven Service Engineering <i>Rolv Bræk, Geir Melby</i>	385
Practical Insights into Model-Driven Architecture: Lessons from the Design and Use of an MDA Toolkit <i>Alan W. Brown, Jim Conallen, Dave Tropeano</i>	403
References	433
Index	459