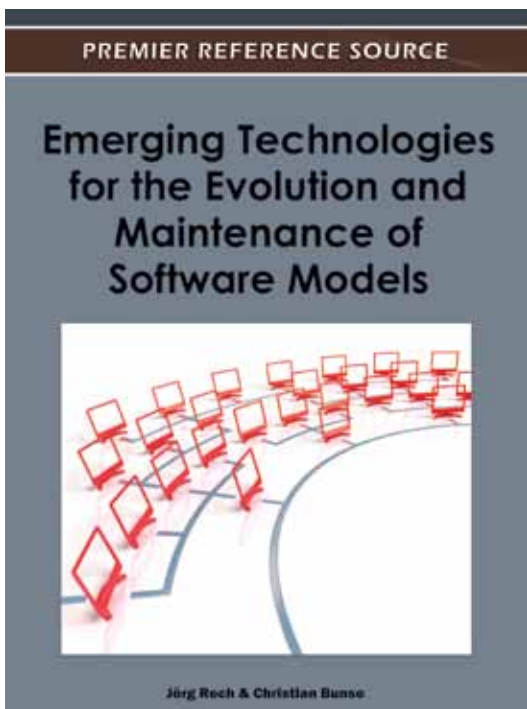


An Excellent Addition to Your Library!

Released: December 2011

Emerging Technologies for the Evolution and Maintenance of Software Models



Jörg Rech (SAP Research Center Karlsruhe, Germany)
and Christian Bunse (University of Applied Sciences Stralsund, Germany)

Model-driven software development drastically alters the software development process, which is characterized by a high degree of innovation and productivity.

Emerging Technologies for the Evolution and Maintenance of Software Models contains original academic work about current research and research projects related to all aspects affecting the maintenance, evolution, and reengineering (MER), as well as long-term management, of software models. The mission of this book is to present a comprehensive and central overview of new and emerging trends in software model research and to provide concrete results from ongoing developments in the field.

Topics Covered:

- Categorization of Software Models
- Managing Software Models
- Model-Driven Architectures
- Model-Driven Software Evolution
- Model-Driven Software Maintenance
- Model-Driven Software Quality Assurance
- Model-Driven Software Reengineering
- Project Management of Model-Driven Software Development
- Software Testing
- Verification and Validation of Software Models

ISBN: 9781613504383; © 2012; 512 pp.

Print: US \$195.00 | Perpetual: US \$295.00 | Print + Perpetual: US \$390.00

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Jörg Rech is a Senior Scientist and Project Manager at SAP Research Center Karlsruhe. He received his Ph.D from the University of Hildesheim, Germany and his BSc (Vordiplom) and his MSc (Diplom) in computer science from the University of Kaiserslautern, Germany. Previously, he worked for Fraunhofer IESE in Kaiserslautern and the University of Kaiserslautern. His research mainly concerns model-driven software development, quality defect diagnosis, refactoring, software analysis, intelligent assistance, semantic technologies, and knowledge management. He has published a number of papers, mainly on software engineering and knowledge management topics.

Section 1: Maintenance and Evolution of Software Models

Chapter 1

Quality-Driven Software Development for Maintenance

Dubielewicz Iwona (Wroclaw University of Technology, Poland)
Hnatkowska Bogumila (Wroclaw University of Technology, Poland)
Huzar Zbigniew (Wroclaw University of Technology, Poland)
Tuzinkiewicz Lech (Wroclaw University of Technology, Poland)

Chapter 2

Change Impact Analysis for UML Model Maintenance

Keller Anne (University of Antwerp, Belgium)
Demeyer Serge (University of Antwerp, Belgium)

Chapter 3

Interplay of Security Requirements Engineering and Reverse Engineering in the Maintenance of Undocumented Software

Herrmann Andrea (University Heidelberg, Germany)
Morali Ayse (Aszure N.V., Belgium)

Chapter 4

A WYSIWYG Approach to Support Layout Configuration in Model Evolution

Sun Yu (University of Alabama at Birmingham, USA)
Gray Jeff (University of Alabama, USA)
Langer Philip (Johannes Kepler University, Austria)
Kappel Gerti (Vienna University of Technology, Austria)
Wimmer Manuel (Vienna University of Technology, Austria)
White Jules (Virginia Tech, USA)

Chapter 5

Enriching the Model-Driven Architecture with Weakly Structured Information

Panfilenko Dima (DFKI (German Research Center for Artificial Intelligence), Germany)
Seel Christian (University of Applied Sciences Landshut, Germany)
Phalp Keith (Bournemouth University, UK)
Jeary Sheridan (Bournemouth University, UK)

Chapter 6

Model Evolution Leads by Users Interactions

Guillemot Charles-Georges (Upper Alsace University, France)
Fondement Frederic (Upper Alsace University, France)
Hassenforder Michel (Upper Alsace University, France)

Section 2: Reengineering of Software Models

Chapter 7

Software System Modernization:

Favre Liliana (Universidad Nacional del Centro de la Provincia de Buenos Aires, Argentina & Comisión de Investigaciones Científicas de la Provincia de Buenos Aires, Argentina)
Martinez Liliana (Universidad Nacional del Centro de la Provincia de Buenos Aires, Argentina)
Pereira Claudia (Universidad Nacional del Centro de la Provincia de Buenos Aires, Argentina)

Chapter 8

Model-Driven Reengineering

Pérez-Castillo Ricardo (University of Castilla-La Mancha, Spain)
Rodríguez de Guzmán Ignacio García (University of Castilla-La Mancha, Spain)
Piattini Mario (University of Castilla-La Mancha, Spain)

Section 3: Testing and Software Models

Chapter 9

Model-Driven Testing with Test Sheets

Felderer Michael (University of Innsbruck, Austria)
Atkinson Colin (University of Mannheim, Germany)
Barth Florian (University of Mannheim, Germany)
Breu Ruth (University of Innsbruck, Austria)

Chapter 10

State-Based Regression Testing:

Farooq Qurat-ul-ann (Ilmenau University of Technology, Germany)
Riebisch Matthias (Ilmenau University of Technology, Germany)

Chapter 11

State-Based Evolution Management of Risk-Based System Tests for Service-Centric Systems

Felderer Michael (University of Innsbruck, Austria)
Agreiter Berthold (University of Innsbruck, Austria)
Breu Ruth (University of Innsbruck, Austria)

Chapter 12

A Test-Driven Approach for Metamodel Development

Cicchetti A. (Malardalen University, Sweden)
Di Ruscio D. (University of L'Aquila, Italy)
Kolovos D.S. (The University of York, UK)

Chapter 13

What is the Benefit of a Model-Based Design of Embedded Software Systems in the Car Industry?

Broy Manfred (Technical University Munich, Germany)
Kirstan Sascha (Altran Technologies, Germany)
Krcmar Helmut (Technical University Munich, Germany)
Schätz Bernhard (Technical University Munich, Germany)

Section 4: Miscellaneous

Chapter 14

Reusable Modelling Tool Assets:

de Miguel Miguel A. (Technical University of Madrid, Spain)
Salazar Emilio (Technical University of Madrid, Spain)
Silva Juan P. (Technical University of Madrid, Spain)
Fernandez-Briones Javier (Technical University of Madrid, Spain)

Chapter 15

The Past, Present, and Future of Model Versioning

Brosch Petra (Vienna University of Technology, Austria)
Langer Philip (Johannes Kepler University Linz, Austria)
Seidl Martina (Johannes Kepler University Linz, Austria)
Wieland Konrad (Vienna University of Technology, Austria)
Wimmer Manuel (Vienna University of Technology, Austria)
Kappel Gerti (Vienna University of Technology, Austria)

Order Your Copy Today!

Name: _____

Organization: _____

Address: _____

City, State, Zip: _____

Country: _____

Tel: _____

Fax: _____

E-mail: _____

Enclosed is check payable to IGI Global in
US Dollars, drawn on a US-based bank

Credit Card Mastercard Visa Am. Express

3 or 4 Digit Security Code: _____

Name on Card: _____

Account #: _____

Expiration Date: _____