# Table of Contents

**Software Variability: Requirements**

Supporting Software Variability by Reusing Generic Incomplete Models at the Requirements Specification Stage ........................................... 1  
*Rebeca P. Díaz Redondo, Martín López Nores, José J. Pazos Arias, Ana Fernández Vilas, Jorge García Duque, Alberto Gil Solla, Belén Barragáns Martínez, Manuel Ramos Cabrer*

Business Users and Program Variability: Bridging the Gap .................. 11  
*Isabelle Rouvellou, Lou Degenaro, Judah Diament, Achille Fokoue, Sam Weber*

An Approach to Develop Requirement as a Core Asset in Product Line .......................................................... 23  
*Mikyeong Moon, Keunhyuk Yeom*

**Testing Reusable Software**

Towards Generating Acceptance Tests for Product Lines .................. 35  
*Birgit Geppert, Jenny Li, Frank Rößler, David M. Weiss*

TTCN-3 Language Characteristics in Producing Reusable Test Software ........................................... 49  
*Pekka Ruuska, Matti Kärki*

Software Reuse and the Test Development Process:  
A Combined Approach .......................................................... 59  
*Mikko Karinsalo, Pekka Abrahamsson*

**Feature Modelling**

Feature Dependency Analysis for Product Line Component Design ........ 69  
*Kwanwoo Lee, Kyo C. Kang*

Enhancements – Enabling Flexible Feature and Implementation Selection ........................................... 86  
*John M. Hunt, Murali Sitaraman*

XML-Based Feature Modelling ............................................... 101  
*V. Cechticky, A. Pasetti, O. Rohlik, W. Schaufelberger*
# Table of Contents

## Aspect-Oriented Software Development

Aspects for Synthesizing Applications by Refinement ................................. 115  
*David Lesaint, George Papamargaritis*

Framed Aspects: Supporting Variability and Configurability for AOP .......................................................... 127  
*Neil Loughran, Awais Rashid*

An Evaluation of Aspect-Oriented Programming as a Product Line Implementation Technology .............................. 141  
*Michalis Anastasopoulos, Dirk Muthig*

## Component and Service Composition

Variability and Component Composition ....................................................... 157  
*Tijs van der Storm*

Concern-Based Composition and Reuse of Distributed Systems ........................ 167  
*Andrey Nechypurenko, Tao Lu, Gan Deng, Emre Turkay,  
  Douglas C. Schmidt, Aniruddha Gokhale*

Reusable Web Services  ........................................................................ 185  
*Peter Henderson, Jingtao Yang*

## Code Level Reuse

Quantifying COTS Component Functional Adaptation ................................. 195  
*Alejandra Cechich, Mario Piattini*

Reuse Variables: Reusing Code and State in Timor ...................................... 205  
*J. Leslie Keedy, Christian Heinlein, Gisela Menger*

Decoupling Source Trees into Build-Level Components ............................. 215  
*Merijn de Jonge*

## Libraries, Classification, and Retrieval

Attribute Ranking: An Entropy-Based Approach to Accelerating Browsing-Based Component Retrieval ....................... 232  
*Ge Li, Ying Pan, Lu Zhang, Bing Xie, Weizhong Shao*

Software Reuse as Ontology Negotiation .................................................. 242  
*Sidney C. Bailin*

Component-Extraction-Based Search System for Object-Oriented Programs ......................................................... 254  
*Hironori Washizaki, Yoshiaki Fukazawa*
Model-Based Approaches

A Metamodel-Based Approach for the Dynamic Reconfiguration of Component-Based Software ........................................ 264
  Abdelmadjid Ketfi, Noureddine Belkhatir

A Multiple-View Meta-modeling Approach for Variability Management in Software Product Lines ............ 274
  Hassan Gomaa, Michael E. Shin

Validating Quality of Service for Reusable Software Via Model-Integrated Distributed Continuous Quality Assurance ............ 286
  Arvind S. Krishna, Douglas C. Schmidt, Atif Memon, Adam Porter, Diego Sevilla

Transformation and Generation

Implementing Tag-Driven Transformers with Tango ..................... 296
  Vassian Cepa

Developing Active Help for Framework Instantiation Through Case-Based Reasoning ................................... 308
  Carlos J. Fernández-Conde, Pedro A. González-Calero

Requirements

Requirements-Reuse Using GOPCSD: Component-Based Development of Process Control Systems ............ 318
  Islam A.M. El-Maddah, Tom S.E. Maibaum

Reuse, Standardization, and Transformation of Requirements .......... 329
  Miguel A. Laguna, Oscar López, Yania Crespo

Author Index ........................................................................... 339