# Table of Contents

## Generative Reuse and Formal Domain Languages

A New Control Structure for Transformation-Based Generators .......... 1  
*Ted J. Biggerstaff*

Palette: A Reuse-Oriented Specification Language for Real-Time Systems . 20  
*Binoy Ravindran and Stephen Edwards*

From Application Domains to Executable Domains:  
Achieving Reuse with a Domain Network ........................................ 41  
*Ulf Bergmann and Julio Cesar Sampaio do Prado Leite*

Reuse of Knowledge at an Appropriate Level of Abstraction -  
Case Studies Using Specware .......................................................... 58  
*Keith E. Williamso, Michael J. Healy and Richard A. Barker*

## Object Oriented Methods 1

Building Customizable Frameworks for the Telecommunications Domain:  
A Comparison of Approaches .......................................................... 74  
*Giovanni Cortese, Marco Braga and Sandro Borioni*

Object Oriented Analysis and Modeling for Families of Systems  
with UML ......................................................................................... 89  
*Hassan Gomaa*

Framework-Based Applications: From Incremental Development  
to Incremental Reasoning ................................................................. 100  
*Neelam Soundarajan and Stephen Fridella*

## Product Line Architectures

Achieving Extensibility Through Product-Lines and  
Domain-Specific Languages: A Case Study ........................................ 117  
*Don Batory, Clay Johnson, Bob MacDonald and Dale von Heeder*

Implementing Product-Line Features with Component Reuse ............ 137  
*Martin L. Griss*

Representing Requirements on Generic Software in  
an Application Family Model .......................................................... 153  
*Mike Mannion, Oliver Lewis, Hermann Kaindl, Gianluca Montroni  
and Joe Wheadon*
# Table of Contents

Implementation Issues in Product Line Scoping .................................. 170  
*Klaus Schmid and Cristina Gacek*

## Requirements Reuse and Business Modeling

Requirements Classification and Reuse: Crossing Domain Boundaries .... 190  
*Jacob L. Cybulski and Karl Reed*

Reuse Measurement in the ERP Requirements Engineering Process ...... 211  
*Maya Daneva*

Business Modeling and Component Mining Based on Rough Set Theory .. 231  
*Yoshiyuki Shinkawa and Masao J. Matsumoto*

## Components and Libraries

Visualization of Reusable Software Assets ................................. 251  
*Omar Alonso and William B. Frakes*

Reasoning about Software-Component Behavior .............................. 266  
*Murali Sitaraman, Steven Atkinson, Gregory Kulczycki, Bruce W. Weide, Timothy J. Long, Paolo Bucci, Wayne Heym and Scott Pike and Joseph E. Hollingsworth*

Use and Identification of Components in Component-Based  
Software Development Methods ............................................. 284  
*Marko Forsell, Veikko Halttunen and Jarmo Ahonen*

Promoting Reuse with Active Reuse Repository Systems ................. 302  
*Yunwen Ye and Gerhard Fischer*

## Design Patterns

A Method to Recover Design Patterns Using Software Product Metrics ... 318  
*Hyoseob Kim and Cornelia Boldyreff*

Object Oriented Design Expertise Reuse:  
An Approach Based on Heuristics, Design Patterns and Anti-Patterns .... 336  
*Alexandre L. Correa, Cláudia M. L. Werner and Gerson Zaverucha*

Patterns Leveraging Analysis Reuse of Business Processes ............... 353  
*Marco Paludo, Robert Burnett and Edgard Jamhour*

Constructional Design Patterns as Reusable Components ............... 369  
*Sherif Yacoub, Hany H. Ammar and Ali Mili*
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Two-Dimensional Composition Framework to Support Software Adaptability and Reuse</td>
<td>388</td>
</tr>
<tr>
<td>Constantinos A. Constantinides, Atef Bader and Tzila Elrad</td>
<td></td>
</tr>
<tr>
<td>Structuring Mechanisms for an Object-Oriented Formal Specification Language</td>
<td>402</td>
</tr>
<tr>
<td>Márcio Cornélio and Paulo Borba</td>
<td></td>
</tr>
<tr>
<td>Software Reuse in an Object Oriented Framework: Distinguishing Types from Implementations and Objects from Attributes</td>
<td>420</td>
</tr>
<tr>
<td>J. Leslie Keedy, K. Espenlaub, G. Menger, A. Schmolitsky and M. Evered</td>
<td></td>
</tr>
<tr>
<td>Compatibility Elements in System Composition</td>
<td>436</td>
</tr>
<tr>
<td>Giancarlo Succi, Paolo Predonzani and Tullio Vernazza</td>
<td></td>
</tr>
</tbody>
</table>

**Author Index** 449
Software Reuse: Advances in Software Reusability
6th International Conference, ICSR-6 Vienna, Austria,
June 27-29, 2000 Proceedings
Frakes, W.B. (Ed.)
2000, XI, 457 p., Softcover
ISBN: 978-3-540-67696-6