

Table of Contents

Theories, Implementations, and Transformations	1
Eric Hehner (<i>Invited Speaker</i>) and Ioannis T. Kassios	
Incremental Proof of the Producer/Consumer Property for the PCI Protocol	22
Dominique Cansell, Ganesh Gopalakrishnan, Mike Jones, Dominique Méry, and Airy Weinzoepflen (B)	
Controlling Control Systems: An Application of Evolving Retrenchment	42
Michael Poppleton and Richard Banach (B)	
Checking Z Data Refinements Using an Animation Tool	62
Neil J. Robinson (Z)	
Encoding Object-Z in Isabelle/HOL	82
Graeme Smith, Florian Kammlüller, and Thomas Santen (Z)	
Characters + Mark-up = Z Lexis	100
Ian Toyne and Susan Stepney (Z)	
Extraction of Abstraction Invariants for Data Refinement	120
Marielle Doche and Andrew Gravell (B)	
An Approach to Combining B and Alloy	140
Leonid Mikhailov and Michael Butler (B)	
Software Construction by Stepwise Feature Introduction	162
Ralph-Johan Back (<i>Invited Speaker</i>)	
The Semantics of <i>Circus</i>	184
Jim Woodcock and Ana Cavalcanti (Z)	
Handling Inconsistencies in Z Using Quasi-Classical Logic	204
Ralph Miarka, John Derrick, and Eerke Boiten (Z)	
Loose Specification and Refinement in Z	226
Eerke Boiten (Z)	
On Using Conditional Definitions in Formal Theories	242
Jean-Raymond Abrial and Louis Mussat (B)	
A Theory of Generalised Substitutions	270
Steve Dunne (B)	
Reinforced Condition/Decision Coverage (RC/DC): A New Criterion for Software Testing	291
Sergiy A. Vilkomir and Jonathan P. Bowen (Z)	

A Comparison of the BTT and TTF Test-Generation Methods	309
<i>Bruno Legeard, Fabien Peureux, and Mark Utting (Z, B)</i>	
A Formal Analysis of the CORBA Security Service	330
<i>David Basin, Frank Ritterer, and Luca Viganò (Z)</i>	
Type Synthesis in B and the Translation of B to PVS	350
<i>Jean-Paul Bodeveix and Mamoun Filali (B)</i>	
“Higher-Order” Mathematics in B	370
<i>Jean-Raymond Abrial, Dominique Cansell, and Guy Laffitte (B)</i>	
ABS Project: Merging the Best Practices in Software Design from Railway and Aircraft Industries	394
<i>Pierre Chartier (Invited Speaker)</i>	
Generalised Substitution Language and Differentials	396
<i>James Blow and Andy Galloway (B)</i>	
Communicating B Machines	416
<i>Steve Schneider and Helen Treharne (B)</i>	
Synchronized Parallel Composition of Event Systems in B	436
<i>Françoise Bellegarde, Jacques Julliand, and Olga Kouchnarenko (B)</i>	
Global and Communicating State Machine Models in Event Driven B: A Simple Railway Case Study	458
<i>Antonis Papatsaras and Bill Stoddart (B)</i>	
Verification of Dynamic Constraints for B Event Systems under Fairness Assumptions	477
<i>Françoise Bellegarde, Samir Chouali, and Jacques Julliand (B)</i>	
A Formal Model of the UML Metamodel: The UML State Machine and Its Integrity Constraints	497
<i>Soon-Kyeong Kim and David Carrington (Z)</i>	
Coming and Going from UML to B: A Proposal to Support Traceability in Rigorous IS Development	517
<i>Régine Laleau and Fiona Polack (B)</i>	
Author Index	535