

Table of Contents

Industrial Issues

Industrial Requirements for the Efficient Development of Reliable Embedded Systems	1
<i>K. Grimm</i> (Invited Speaker)	

Concurrency

How to Combine Z with a Process Algebra	5
<i>C. Fischer</i>	
The Specification and Refinement of an Environmental Model	24
<i>W.J. (Bill) Stoddart</i>	
Formal Derivation of Finite State Machines for Class Testing	42
<i>L. Murray, D. Carrington, I. MacColl, J. McDonald and P. Strooper</i>	

Tools

Using B to Specify, Verify and Design Hardware Circuits	60
<i>I.H. Sørensen</i> (Invited Speaker)	
Z on the Web Using Java	66
<i>J.P. Bowen and D. Chippington</i>	
Visualizing Z Notation in HTML Documents	81
<i>P. Ciancarini, C. Mascolo and F. Vitali</i>	

Z and HOL

On the Semantic Relation of Z and HOL	96
<i>T. Santen</i>	
HOL-Z in the UniForM-Workbench – A Case Study in Tool Integration for Z	116
<i>C. Lüth, E.W. Karlsen, Kolyang, S. Westmeier and B. Wolff</i>	

Safety-Critical and Real-Time Systems

Designing a Requirements Specification Language for Reactive Systems ...	135
<i>N.G. Leveson</i> (Invited Speaker)	
Analyzing a Real-Time Program with Z	136
<i>J. Jacky</i>	

Semantic Theory

Recursive Definitions in Z 154
R.D. Arthan

A Logic for the Schema Calculus 172
M.C. Henson and S. Reeves

Theory and Standards

Combining Specification Techniques for Processes, Data and Time 192
E.-R. Olderog (Invited Speaker)

Innovations in the Notation of Standard Z 193
I. Toyn

Reasoning and Consistency Issues

Comparing Extended Z with a Heterogeneous Notation for Reasoning about Time and Space 214
R.F. Paige

Inconsistency and Undefinedness in Z – A Practical Guide 233
S.H. Valentine

Refinement

Compositional Specification of Controllers for Batch Process Operations .. 250
K. Lano, P. Kan and A. Sanchez

Testing Refinements by Refining Tests 265
J. Derrick and E. Boiten

More Powerful Z Data Refinement: Pushing the State of the Art in Industrial Refinement 284
S. Stepney, D. Cooper and J.C.P. Woodcock

Object Orientation

Network Topology and a Case Study in TCOZ 308
B. Mahony and J.S. Dong

Object-Oriented Specification of Hybrid Systems Using UML^h and ZimOO 328
V. Friesen, A. Nordwig and M. Weber

Translating the OMT Dynamic Model into Object-Z 347
S. Dupuy, Y. Ledru and M. Chabre-Peccoud

Appendices

Select Z Bibliography367
J.P. Bowen

Comp.specification.z and Z FORUM Frequently Asked Questions 407
J.P. Bowen

Author Index417