

Lecture Notes in Computer Science

1897

Jürg Gutknecht Wolfgang Weck (Eds.)

Modular Programming Languages

Joint Modular Languages Conference, JMLC 2000
Zurich, Switzerland, September 2000
Proceedings

Suranaree University of Technology



31051000640713



Springer

Table of Contents

The Development of Procedural Programming Languages: Personal Contributions and Perspectives	1
<i>Niklaus Wirth (Zürich)</i>	
Parallel and Distributed Computing	
Composable Message Semantics in Oberon	11
<i>Markus Hof (Johannes Kepler University Linz, Austria)</i>	
Derivation of Secure Parallel Applications by Means of Module Embedding	26
<i>Atanas Radenski (Winston-Salem State University, USA)</i>	
Mianjin: A Parallel Language with a Type System That Governs Global System Behaviour	38
<i>Paul Roe (Queensland University of Technology, Australia) and Clemens Szyperski (Microsoft Research, USA)</i>	
A Design Pattern and Programming Framework for Interactive Metacomputing	51
<i>Spyros Lalis (University of Crete, Greece)</i>	
Mobile Agents Based on Concurrent Constraint Programming	62
<i>Marek Paralič (University of Technology in Košice, Slovak Republic)</i>	
Components	
Rethinking Our Trade and Science: From Developing Components to Component-Based Development	76
<i>Clemens Szyperski (Microsoft Research, USA)</i>	
Explicit Namespaces	77
<i>Franz Achermann and Oscar Nierstrasz (University of Berne, Switzerland)</i>	
Stand-Alone Messages: A Step Towards Component-Oriented Programming Languages	90
<i>Peter H. Fröhlich and Michael Franz (UC Irvine, USA)</i>	
The Design of a COM-Oriented Module System	104
<i>Riccardo Pucella (Cornell University, USA)</i>	
Oberon as an Implementation Language for COM Components: A Case Study in Language Interoperability	119
<i>Jürg Gutknecht (ETH Zürich, Switzerland)</i>	

Modularisation of Software Configuration Management	134
<i>Henrik Bærbak Christensen (University of Aarhus, Denmark)</i>	

Extensions and Applications

Leonardo: A Framework for Modeling and Editing Graphical Components .	147
<i>Erich Oswald (ETH Zürich, Switzerland)</i>	

OMX-FS: An Extended File System Architecture Based on a Generic Object Model	161
<i>Gabrio Rivera and Moira Norrie (ETH Zürich, Switzerland)</i>	

On Adding a Query Language to a Persistent Object System	175
<i>Markus Knasmüller (BMD Steyr, Austria)</i>	

Project C2 - A Survey of an Industrial Embedded Application with Native Oberon for PC	186
<i>Josef Sedlacek (Radiar, Switzerland) and Jürg Gutknecht (ETH Zürich, Switzerland)</i>	

System Architecture and Design Using Co-operating Groups of Real and Abstract Components	197
<i>Brian Kirk (Robinson Associates, UK)</i>	

Compilers and Runtime Environments

Abstraction and Modularization in the BETA Programming Language	211
<i>Ole Lehrmann Madsen (Aarhus University, Denmark)</i>	

Design of Multilingual Retargetable Compilers: Experience of the XDS Framework Evolution	238
<i>Vitaly V. Mikheev (Excelsior, Russia)</i>	

Structuring a Compiler with Active Objects	250
<i>Patrik Reali (ETH Zürich, Switzerland)</i>	

A Multiprocessor Kernel for Active Object-Based Systems	263
<i>Pieter Muller (ETH Zürich, Switzerland)</i>	

Evaluating the Java Virtual Machine as a Target for Languages Other Than Java	278
<i>K. John Gough and Diane Corney (Queensland University of Technology, Australia)</i>	

Building Your Own Tools: An Oberon Industrial Case-Study	291
<i>Paul Reed (Padded Cell Software Ltd, UK)</i>	

Author Index	299
--------------------	-----