

# Table of Contents

## Regular Papers

### *Applications*

Object-Oriented Approach for an Iterative Calculation Method and Its Parallelization with Domain Decomposition Method .....	1
<i>Masahiro Tatsumi, Akio Yamamoto</i>	
An Object-Oriented Time Warp Simulation Kernel .....	13
<i>Radharamanan Radhakrishnan, Dale E. Martin, Malolan Chetlur, Dhananjai Madhava Rao, Philip A. Wilsey</i>	
Particle Beam Dynamics Simulations Using the POOMA Framework .....	25
<i>William Humphrey, Robert Ryne, Timothy Cleland, Julian Cummings, Salman Habib, Graham Mark, Ji Qiang</i>	

### *Runtime and Libraries*

An Evaluation of Java for Numerical Computing .....	35
<i>Brian Blount, Siddhartha Chatterjee</i>	
High-Level Parallel Programming of an Adaptive Mesh Application Using the Illinois Concert System .....	47
<i>Bishwaroop Ganguly, Andrew Chien</i>	
The Matrix Template Library: A Generic Programming Approach to High Performance Numerical Linear Algebra .....	59
<i>Jeremy G. Siek, Andrew Lumsdaine</i>	
The Mobile Object Layer: A Run-Time Substrate for Mobile Adaptive Computations .....	71
<i>Nikos Chrisochoides, Kevin Barker, D�mian Nave, Chris Hawblitzel</i>	

### *Numerics and Algorithms I*

Software Tools for Partitioning Block-Structured Applications .....	83
<i>Jarmo Rantakokko</i>	
An Object-Oriented Collection of Minimum Degree Algorithms .....	95
<i>Gary Kumfert, Alex Pothen</i>	
Optimizing Transformations of Stencil Operations for Parallel Object-Oriented Scientific Frameworks on Cache-Based Architectures .....	107
<i>Federico Bassetti, Kei Davis, Dan Quinlan</i>	

## Short Papers

### *Metacomputing*

Merging Web-Based with Cluster-Based Computing .....	119
<i>Luís Moura Silva, Paulo Martins, João Gabriel Silva</i>	
Dynamic Reconfiguration and Virtual Machine Management in the Harness Metacomputing System .....	127
<i>Mauro Migliardi, Jack Dongarra, Al Geist, Vaidy Sunderam</i>	
<i>JEM-DOOS</i> : The Java/RMI Based Distributed Objects Operating System of the JEM Project .....	135
<i>Serge Chaumette</i>	
Static Networks: A Powerful and Elegant Extension to Concurrent Object- Oriented Languages .....	143
<i>Josh Yelon, Laxmikant V. Kalé</i>	

### *Frameworks and Runtime*

A FIFO Queue Class Library as a State Variable of Time Warp Logical Processes .....	151
<i>Soichiro Hidaka, Terumasa Aoki, Hitoshi Aida, Tadao Saito</i>	
$\mu$ Profiler: Profiling User-Level Threads in a Shared-Memory Programming Environment .....	159
<i>Peter A. Buhr, Robert Denda</i>	
Evaluating a Multithreaded Runtime System for Concurrent Object-Oriented Languages .....	167
<i>Antonio J. Nebro, Ernesto Pimentel, José M. Troya</i>	
Object-Oriented Run-Time Support for Data-Parallel Applications .....	175
<i>Hua Bi, Matthias Kessler, Matthias Wilhelm</i>	
Component Architecture of the Tecolote Framework .....	183
<i>Mark Zander, John Hall, Jim Painter, Sean O'Rourke</i>	

### *Numerics and Algorithms II*

Parallel Object Oriented Monte Carlo Simulations .....	191
<i>Matthias Troyer, Beat Ammon, Elmar Heeb</i>	
A Parallel, Object-Oriented Implementation of the Dynamic Recursion Method .....	199
<i>Wolfram T. Arnold, Roger Haydock</i>	
Object-Oriented Design for Sparse Direct Solvers .....	207
<i>Florin Dobrian, Gary Kumfert, Alex Pothen</i>	

Janus: A C++ Template Library for Parallel Dynamic Mesh Applications .	215
<i>Jens Gerlach, Mitsuhsa Sato, Yutaka Ishikawa</i>	

## ***Arrays***

Arrays in Blitz++ .....	223
<i>Todd L. Veldhuizen</i>	
Array Design and Expression Evaluation in POOMA II .....	231
<i>Steve Karmesin, James Crotinger, Julian Cummings, Scott Haney,</i> <i>William Humphrey, John Reynders, Stephen Smith, Timothy Williams</i>	
Author Contacts .....	239
Author Index .....	243

Computing in Object-Oriented Parallel Environments  
Second International Symposium, ISCOPE 98, Santa Fe,  
NM, USA, December 8-11, 1998, Proceedings  
Caromel, D.; Oldehoeft, R.R.; Tholburn, M. (Eds.)  
1998, XI, 242 p. 97 illus., 26 illus. in color., Softcover  
ISBN: 978-3-540-65387-5