The Generation of Optimized Codes Using Nonzero Structure Analysis  p. 1
On the Importance of an End-To-End View of Memory Consistency in Future Computer Systems  p. 30
High Performance Distributed Object Systems  p. 42
Instruction Cache Prefetching Using Multilevel Branch Prediction  p. 51
High Performance Wireless Computing  p. 71
High-Performance Computing and Applications in Image Processing and Computer Vision  p. 72

Present and Future of HPC Technologies  p. 73
Evaluation of Multithreaded Processors and Thread-Switch Policies  p. 75
A Multithreaded Implementation Concept of Prolog on Datarol-II Machine  p. 91
Thread Synchronization Unit (TSU): A Building Block for High Performance Computers  p. 107

Data Dependence Path Reduction with Tunneling Load Instructions  p. 119
Performance Estimation of Embedded Software with Pipeline and Cache Hazard Modeling  p. 131

An Implementation and Evaluation of a Distributed Shared-Memory System on Workstation Clusters Using Fast Serial Links  p. 143
Designing and Optimizing 3-connectivity Communication Networks Using a Distributed Genetic Algorithm  p. 159
Adaptive Routing on the Recursive Diagonal Torus  p. 171
Achieving Multi-level Parallelization  p. 183
A Technique to Eliminate Redundant Inter-Processor Communication on Parallelizing Compiler TINPAR  p. 195
An Automatic Vectorizing/Parallelizing Pascal Compiler V-Pascal V.3  p. 205
An Algorithm for Automatic Detection of Loop Indices for Communication Overlapping  p. 217

NaraView: An Interactive 3D Visualization System for Parallelization of Programs  p. 231
Hybrid Approach for Non-strict Dataflow Program on Commodity Machine  p. 243
Resource Management Methods for General Purpose Massively Parallel OS SSS-Core  p. 255
Scenario-Based Hypersequential Programming: Formulation of Parallelization  p. 267
Parallelization of Space Plasma Particle Simulation  p. 281
Implementing Iterative Solvers for Irregular Sparse Matrix Problems in High Performance Fortran  p. 293
Parallel Navigation in an A-NETL Based Parallel OODBMS  p. 305
High Performance Parallel FFT on Distributed Memory Parallel Computers  p. 317
Parallel Computation Model LogPQ  p. 327
Cost Estimation of Coherence Protocols of Software Managed Cache on Distributed Shared Memory System  p. 335
A Portable Distributed Shared Memory System on the Cluster Environment: Design and Implementation Fully in Software  p. 343
An Object-Oriented Framework for Loop Parallelization  p. 351
A Method for Runtime Recognition of Collective Communication on Distributed-Memory Multiprocessors  p. 361
Improving the Performance of Automated Forward Deduction System EnCal  p. 371