Introduction - An Editorial Note

Acknowledgments

The Open Microprocessor Systems Initiative: A Strategy Towards Integrated System Design p. 2

The Extended Partitioning Problem: Hardware/Software Mapping and Implementation-Bin Selection p. 12

Arbitrary Hardware Software Trade-Offs p. 19

Analysis of Real-Time Embedded Systems for Co-Design p. 26

Adaptation of Force-Directed Scheduling Algorithm for Hardware/Software Partitioning p. 33

Hardware-Software Codesign with GRAPE p. 40

Rapid Prototyping in Microsystems Development p. 48

A Prototyping System for Verification and Evaluation in Hardware-Software Cosynthesis p. 54

Modeling and Rapid Prototyping of Avionics Using STATEMATE p. 62

The Application of Rapid Prototyping to Underwater Acoustic Modem Research and Development p. 68

Development and Prototyping System for an 8-Bit Multitask Micropower Processor p. 75

Virtual Prototyping of a Synthetic Aperture Radar Processor and RASSP Benchmark 1 p. 79

Invited Talk: Rapid Prototyping of DSP Systems: Requirements and Solutions p. 88

A Methodology for Rapid Prototyping of Real-Time Image Processing VLSI Systems p. 97

Testing and Optimizing a Scale Reduction Algorithm for a Multi-Screen Video Wall Application on the META-100 ASIC Emulator p. 104

Development of a Real-Time Motion Image Encoder Using Codesign Methodology p. 110

A Rapid Protocol Prototyping Development System p. 118

A Case Study on Rapid Systems Prototyping and its Impact on System Evolution p. 125


CASE Tools Evaluation: An Automatic Process Based on Fuzzy Sets Theory p. 140

Survey into the Acceptance of Prototyping in Software Development p. 147

Rapid System Prototyping, System Modeling, and Analysis in a Hardware-Software Codesign Environment p. 154

VHDL Virtual Prototyping p. 161

A Case Study of System Synthesis with Non-Synthesizable Components Using Extended VHDL p. 168

Modeling a Versatile FPGA for Prototyping Adaptive Systems p. 174

The AMS Operating System: A Prototyping Environment for Real-Time Signal Processing Algorithm Development p. 182


Converting Graphical DSP Programs into Memory Constrained Software Prototypes p. 194

Circuit Partitioning with Partial Order for Mixed Simulation Emulation Environment p. 201

System Validation by Source Level Emulation of Behavioral VHDL Specifications p. 210

Imposing a Unified Design Methodology on Independent Rapid Prototyping Tools p. 217