Power Aware Computing

Real-Time Loop Scheduling with Energy Optimization Via DVS and ABB for Multi-core Embedded System p. 1


A Shortest Time First Scheduling Mechanism for Reducing the Total Power Consumption of an IEEE 802.11 Multiple Rate Ad Hoc Network p. 25

Energy Efficient Scheduling for Real-Time Systems with Mixed Workload p. 33

Reconfigurable Embedded Systems

Function-Level Multitasking Interface Design in an Embedded Operating System with Reconfigurable Hardware p. 45

Task Scheduling for Context Minimization in Dynamically Reconfigurable Platforms p. 55

Compiler Support for Dynamic Pipeline Scaling p. 64

Parallel Network Intrusion Detection on Reconfigurable Platforms p. 75

Wireless Networks

Evaluating Mobility Support in ZigBee Networks p. 87

On Using Probabilistic Forwarding to Improve HEC-Based Data Forwarding in Opportunistic Networks p. 101

Employment of Wireless Sensor Networks for Full-Scale Ship Application p. 113

Improving the Performance of the Wireless Data Broadcast by the Cyclic Indexing Schemes p. 123

Real-Time/Embedded Operating Systems

Revisiting Fixed Priority Techniques p. 134

A Server-Side Pre-linking Mechanism for Updating Embedded Clients Dynamically p. 146

Real-Time Scheduling Under Time-Interval Constraints p. 158

Towards a Software Framework for Building Highly Flexible Component-Based Embedded Operating Systems p. 170

Embedded System Architectures

A Study on Asymmetric Operating Systems on Symmetric Multiprocessors p. 182


Interconnection Synthesis of MPSoC Architecture for Gamma Cameras p. 209

Integrated Global and Local Quality-of-Service Adaptation in Distributed, Heterogeneous Systems p. 219

Scheduling and Resource Management

Toward to Utilize the Heterogeneous Multiple Processors of the Chip Multiprocessor Architecture p. 234

Consensus-Driven Distributable Thread Scheduling in Networked Embedded Systems p. 247

Novel Radio Resource Management Scheme with Low Complexity for Multiple Antenna Wireless Network System p. 261

Mobile Computing

Modelling Protocols for Multiagent Interaction by F-logic p. 271

Adding Adaptability to Mailbox-Based Mobile IP p. 283

Palpability Support Demonstrated p. 294
GPS-Based Location Extraction and Presence Management for Mobile Instant Messenger 
p. 309

System Security
Bilateration: An Attack-Resistant Localization Algorithm of Wireless Sensor 
Network p. 321
ID-Based Key Agreement with Anonymity for Ad Hoc Networks p. 333
Buffer Cache Level Encryption for Embedded Secure Operating System p. 346
SOM-Based Anomaly Intrusion Detection System p. 356

Networks Protocols
TCP-Taichung: A RTT-Based Predictive Bandwidth Based with Optimal Shrink Factor for Heterogeneous Wired and Wireless Networks p. 367

Dynamic Rate Adjustment (DRA) Algorithm for WiMAX Systems Supporting Multicast Video Services p. 379
Efficient and Load-Balance Overlay Multicast Scheme with Path Diversity for Video Streaming p. 389
A Cross Layer Time Slot Reservation Protocol for Wireless Networks p. 400

Fault Tolerance
An Efficient Handoff Strategy for Mobile Computing Checkpoint System p. 410
A Lightweight RFID Protocol Using Substring p. 422
Fast and Simple On-Line Sensor Fault Detection Scheme for Wireless Sensor Networks p. 444

Human-Computer Interface and Data Management
An Activity-Centered Wearable Computing Infrastructure for Intelligent Environment Applications p. 456
Finding and Extracting Data Records from Web Pages p. 466
Towards Transparent Personal Content Storage in Multi-service Access Networks p. 479
Extraction and Classification of User Behavior p. 493

HW/SW Co-design and Design Automations
A Floorplan-Based Power Network Analysis Methodology for System-on-Chip Designs p. 507
SystemC-Based Design Space Exploration of a 3D Graphics Acceleration SoC for Consumer Electronics p. 531
Optimal Allocation of I/O Device Parameters in Hardware and Software Codesign Methodology p. 541

Service-Aware Computing
A Semantic P2P Framework for Building Context-Aware Applications in Multiple Smart Spaces p. 553
Usage-Aware Search in Peer-to-Peer Systems p. 565
A Service Query Dissemination Algorithm for Accommodating Sophisticated QoS Requirements in a Service Discovery System p. 577
User Preference Based Service Discovery p. 587

Sensor Networks
An Optimal Distribution of Data Reduction in Sensor Networks with Hierarchical Caching  p. 598
MOFBAN: A Lightweight Modular Framework for Body Area Networks  p. 610
Performance Analysis for Distributed Classification Fusion Using Soft-Decision Decoding in Wireless Sensor Networks  
Ad Hoc and Sensor Networks  
Hard Constrained Vertex-Cover Communication Algorithm for WSN  p. 635
A Selective Push Algorithm for Cooperative Cache Consistency Maintenance over MANETs 650
Ubiquitous Computing  
PerSON: A Framework for Service Overlay Network in Pervasive Environments  p. 671
Universal Adaptor: A Novel Approach to Supporting Multi-protocol Service Discovery in Pervasive Computing  p. 683
U-Interactive: A Middleware for Ubiquitous Fashionable Computer to Interact with the Ubiquitous Environment by Gestures  p. 694
Towards Context-Awareness in Ubiquitous Computing  p. 706
Embedded Software Designs  
Real-Time Embedded Software Design for Mobile and Ubiquitous Systems  p. 718
Schedulable Online Testing Framework for Real-Time Embedded Applications in VM  p. 730
Scalable Lossless High Definition Image Coding on Multicore Platforms  p. 742
Self-stabilizing Structure Forming Algorithms for Distributed Multi-robot Systems  p. 754

Author Index  
Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.