

2008 IEEE/ACS International Conference on Computer Systems and Applications

**Doha, Qatar
31 March- 4 April 2008**

Pages 1-372



IEEE Catalog Number:	CFP08283-PRT
ISBN 10:	1-4244-1967-0
ISBN 13:	978-1-4244-1967-8

Table of Contents

I. AICCSA-08 Algorithms and Bioinformatics Track

ALG-1: Algorithms

A Multipattern Matching Algorithm using Sampling and Bit Index	1
J. Chen, Z. Ye, and M. Tang	
An Evolutionary Gait Generator with Online Parameter Adjustment for Humanoid Robots	9
A. Zamiri, A. Farzad, E. Saboori, M. Rouhani, M. Naghibzadeh, and A.M. Fard	
Solving MEC Model of Haplotype Reconstruction using Information Fusion, Single Greedy and Parallel Clustering Approaches	15
E. Asgarian, M-H. Moeinzadeh, S. Sharifian-R, A. Najafi-A, A. Ramezani, J. Habibi, and J. Mohammadzadeh	
Methodology for Evaluating String Matching Algorithms on Multiprocessor	20
B. Soewito and N. Weng	

ALG-2: Bioinformatics

RBT-I: A Novel Approach for Solving the Multiple Sequence Alignment Problem	28
J. Taheri, A.Y. Zomaya, and B.B. Zhou	
A Framework for Predicting Proteins 3D Structures	37
R. Duwairi and A. Kassawneh	
Comparison of Population based Metaheuristics for Feature Selection: Application to Microarray Data Classification	45
E-G. Talbi, L. Jourdan, J. García-Nieto, and E. Alba	

II. AICCSA-08 Computer Systems and Architecture Track

CSA-1: Physical Layer Design of Computer Systems

Transistor-Level Based Defect Tolerance for Reliable Nanoelectronics	53
A.H. El-Maleh, B.M. Al-Hashimi, and A. Melouki	
Proposing an Efficient Method to Estimate and Reduce Crosstalk after Placement in VLSI Circuits	61
A. Mehdizadeh and M.S. Zamani	
A Low Power Crosstalk-Free Bus Encoding using Genetic Algorithm	69
T.Q. Vinh and Y-C. Kim	
A Variable Step-Size FxLMS Algorithm for Feedforward Active Noise Control Systems based on a New Online Secondary Path Modelling Technique	74
P. Davari and H. Hassanpour	

CSA-2: Design and Analysis of Computer Systems

High Performance Elliptic Curve Point Operations with Pipelined GF(2 ^m) Field Multiplier	82
T.F. Al-Somani and A. Amin	

Hardware based Algorithm for Conflict Diagnosis in SAT Solver	89
M. Safar, M. Shalan, M.W. El-Kharashi, and A. Salem	
Performance Modeling of Partially Reconfigurable Computing Systems	94
F. Lotfifar and H.S. Shahhoseini	
A Flash Translation Layer for Huge-Capacity Flash Memory Storage Systems	100
C-H. Wu	

III. AICCSA-08 Databases and Data Mining Track

DBM-1: Data Mining: Predictions and Patterns

Intelligent Heart Disease Prediction System using Data Mining Techniques	108
S. Palaniappan and R. Awang	
DMPML – Data Mining Preparation Markup Language	116
P.M. Gonçalves Jr., A.L. Arnaud, and R.S.M. Barros	
Enumeration of Maximal Clique for Mining Spatial Co-Location Patterns	126
G. Al-Naymat	
A Methodology for Discovering Spatial Co-Location Patterns	134
F.K. Deeb and L. Niepel	

DBM-2: Document Analysis

A Cellular Automata Approach to Detecting Concept Drift and Dealing with Noise	142
M. Pourkashani and M.R. Kangavari	
Rapid and Robust Ranking of Text Documents in a Dynamically Changing Corpus	149
B-H. Park, N.F. Samatova, R. Munavalli, R. Krishnamurthy, H. Kettani, and A. Geist	
Concept-Based Clustering of Textual Documents using SOM	156
A. Amine, Z. Elberrichi, L. Bellatreche, M. Simonet, and M. Malki	
When Serializability comes without Cost	164
M. Alomari, M. Cahill, A. Fekete, and U. Röhm	

DBM-3: Data Mining: Applications

Mining Fault Tolerant Frequent Patterns using Pattern Growth Approach	172
S. Bashir, Z. Halim, and A.R. Baig	
Practical Inter-Stock Dependency Indicators using Time Series and Derivatives	180
A. Dattasharma and P.K. Tripathi	
Effects of Dimensionality Reduction Techniques on Time Series Similarity Measurements	188
G. Al-Naymat and J. Taheri	
Using Sensitivity of a Bayesian Network to Discover Interesting Patterns	196
R. Malhas and Z. Al Aghbari	
Detecting High-Value Individuals in Covert Networks: 7/7 London Bombing Case Study	206
N. Memon, N. Harkiolakis, and D.L. Hicks	

IV. AICCSA-08 Networking and Multimedia Track

NET-1: Wireless Networks I

Providing QoS Guarantees to Multiple Classes of Traffic in Wireless Sensor Networks	216
M.Y. Aalsalem, J. Taheri, M. Iftikhar, and A.Y. Zomaya	

An Energy Efficient Data Reporting Scheme for Wireless Sensor Networks	223
F. Tashtarian, M. Tolou Honary, M. Mazinani, A.T. Haghghat, and J. Chitizadeh	
Enhancing AODV Routing Protocol using Mobility Parameters in VANET	229
O. Abedi, M. Fathy, and J. Taghiloo	
Measured Delay Distribution in a Wireless Mesh Network Test-Bed	236
N. Abu Ali, E. Ekram, A. Eljasmy, and K. Shuaib	
NET-2: Networks and Systems	
An Evolutionary Node Architecture and Performance Optimization	241
L. Tao, Q. Depei, H. Yongxiang, H. Ying, and W. Rui	
TCPBridge: A Software Approach to Establish Direct Communications for NAT Hosts	247
S. Liu, H. Jin, X. Liao, H. Yao, and D. Zeng	
Towards Scalable and Reliable Grid Networks	253
O.A. Rahmeh and P. Johnson	
Aspect-Oriented Formal Specification for Multimedia Systems	260
L. Zhang and L. Wang	
Workflow Scheduling in Computational Grids: Opportunistic vs. Planned	268
A. Aziz and H. El-Rewini	
NET-3: Wireless Networks II	
Energy Aware Routing in High Capacity Overlays in Wireless Sensor Networks	276
S.H. Shaikot and V. Sarangan	
A New Level based Clustering Scheme for Wireless Sensor Networks	284
F. Tashtarian, M. Tolou Honary, M. Mazinani, A.T. Haghghat, and J. Chitizadeh	
EEMR: An Energy-Efficient Multi-hop Routing Protocol for Wireless Sensor Networks	291
J. Yu, W. Liu, J. Song, and B. Cao	
Energy Assignment in Wireless Sensor Networks with Hierarchical Cluster-Based Routing	299
S.A.A. Fakoorian, M. Tolou, and H. Taheri	
NET-4: MIMO and Power Control	
Using Input/Output Queues to Increase LDPC Decoder Performance	304
E. Alghonaim, A. El-Maleh, and M.A. Landolsi	
Capacity Analysis of MIMO System over Nakagami-m Fading Channels using Finite Mixture with Expectation Maximization Algorithm	309
I.Y. Abualhaol and M.M. Matalgah	
Impact of Fading Wireless Channel on the Performance of Game Theoretic Power Control Algorithms for CDMA Wireless Data	317
M. Hayajneh, C. Abdallah, and W. Ibrahim	
Slow Antenna Selection and Fast Link Adaptation MIMO Systems	325
K-S. Hwang, Y-C. Ko, M-S. Alouini, and W. Lee	
NET-5: Wireless Networks III	
SLA-Based Dynamic Resource Management in Wireless Environments	333
B. Tebbani, I. Aib, and G. Pujolle	
Enhanced Mobile Node's Reachability through Anycasting for MIPv6 Regional Registrations	341
A. Abdel-Hamid, L. Eslim, and Y. Hanafy	
Self-localization based on Improved Subspace Approach in Wireless Sensor Network	349
L. Hongbo and Z. Wei	

Avoiding Virtual Link Attacks in Wireless Ad Hoc Networks	355
S. Djahel and F. Naït-Abdesselam	

NET-6: Call Handoff and Admission Control

Network Provisioning over IP Networks with Call Admission Control Schemes	361
S. Sharafeddine, Z. Dawy, and A. Beainy	
Performance Evaluation of TCP Handoffs over Mobile IP Connections	366
J. Ben-Othman, F. Nait-Abdesselam, L. Mokdad, and O. Ramirez	
Handover and Class-Based Call Admission Control Policy for 4G-Heterogeneous Mobile Networks	373
T. Bejaoui and N. Nasser	
Processing-Delay Reduction During the Vertical Handoff Decision in Heterogeneous Wireless Systems	381
R. Tawil, J. Demerjian, G. Pujolle, and O. Salazar	

NET-7: Potpourri

Wireless Fair Queuing Algorithm for Window-Based Link Level Retransmission	386
A-R. Elshafei and U. Baroudi	
On the Performance of a Simple Packet Rate Estimator	392
K. Salah and F. Haidari	
A Critical Assessment for RINEX Data from OS NET for GPS Accuracy Improvement	396
M. AL Nabhan, S. AL Masri, W. Balachandran, and Z. Hunaiti	
Voronoi Path Planning Technique for Recovering Communication in UAVs	403
O.M. Hammouri and M.M. Matalgah	
A Scalable P2P Model for Optimizing Application Layer Multicast	407
M. Amad and A. Meddahi	

V. AICCSA-08 Parallel and Distributed Systems Track

PDS-1: Grid and Middleware Computing

A Dynamic Weighted Data Replication Strategy in Data Grids	414
R-S. Chang, H-P. Chang, and Y-T. Wang	
Commodity Resource Pricing in Dynamic Computational Grids	422
K. Abdelkader, J. Broeckhove, and K. Vanmechelen	
OTSX: An Extended Transaction Service in Support of FT-CORBA Standard	430
H. Salimi and M. Sharifi	
Performance Enhancement through Hybrid Replication and Genetic Algorithm Co-Scheduling in Data Grids	436
A. Elghirani, R. Subrata, A.Y. Zomaya, and A. Al Mazari	
A New, Efficient Coordinated Checkpointing Protocol Combined with Selective Sender-based Message Logging	444
Ch.D.V. Subba Rao and M.M. Naidu	

PDS-2: Scheduling and Routing

Comparative Performance Evaluation of Software-Based Fault-Tolerant Routing Algorithms in Adaptively-Routed Tori	448
F. Safaei, A. Khonsari, and A.H. Shantia	
Dynamic Scheduling of Periodic Skippable Tasks in an Overloaded Real-Time System	456
A. Marchand and M. Chetto	

Slack-Based Global Multiprocessor Scheduling of Aperiodic Tasks in Parallel Embedded Real-Time Systems	465
L. Lundberg and H. Lennerstad	
Electing a Leader in the Local Computation Model using Mobile Agents	473
M.A. Haddar, A. Hadj Kacem, Y. Métivier, M. Mosbah, and M. Jmaiel	
Mapping Task Graphs onto Network Processors using Genetic Algorithm	481
N. Weng, N. Kumar, S. Dechu, and B. Soewito	

VI. AICCSA-08 Pattern Recognition and Image Processing Track

PAT-1: Audio Processing and Recognition

Real-Time Implementation of an Efficient RLS Algorithm based on IIR Filter for Acoustic Echo Cancellation	489
J.R. Mohammed	
Far-Field Continuous Speech Recognition System based on Speaker Localization and Sub-Band Beamforming	495
A. Asaei, M.J. Taghizadeh, and H. Sameti	
A Model Order based Sinusoid Representation for Audio Signals	501
P.M.B. Mahale, M. Rashidi, and A. Sayadiyan	
A New Robust Adaptive Beamformer for Enhancing Speech Corrupted with Colored Noise	508
J.R. Mohammed	

PAT-2: Biometrics

A New Approach for Iris Localization in Iris Recognition Systems	516
N. Barzegar and M.S. Moin	
Cooperative Criminal Face Recognition in Distributed Web Environment	524
H.T. Yazdi., A.M. Fard, and M-R. Akbarzadeh -T.	
Fingerprint Verification based on Core Point Neighbourhoods Minutiae	530
F. Benhammedi, K. Bey Baghdad, and H. Hentous	
Personal Authentication based on Iris Texture Analysis	537
F. Benhammedi and N. Kihal	

PAT-3: Supervised and unsupervised learning

A Fuzzy Similarity Approach for Automated Spam Filtering	544
E-S.M. El-Alfy and F.S. Al-Qunaieer	
An Agent-Based Clustering Algorithm using Potential Fields	551
M.S. Baghshah, S.B. Shouraki, and C. Lucas	
A Fuzzy Clustering Algorithm for Finding Arbitrary Shaped Clusters	559
M.S. Baghshah and S.B. Shouraki	
Supervised Texture Classification using Several Features Extraction Techniques based on ANN and SVM	567
M.W. Ashour, M.F. Hussin, and K.M. Mahar	
Semantic-Based Image Retrieval: A Fuzzy Modeling Approach	575
A. Lakdashti, M.S. Moin, and K. Badie	

PAT-4: Recognition using Wavelets and Probability Distributions

Writer Identification using Edge-Based Directional Probability Distribution Features for Arabic Words	582
S. Al-Ma'adeed, E. Mohammed, D. Al Kassis, and F. Al-Muslih	

Redundant Watermarking using Wavelet Packets	591
M.R. Soheili	
A Video-Based Image Processing System for the Automatic Implementation of the Eye Involuntary Reflexes Measurements Involved in the Drug Recognition Expert (DRE)	599
F. Meunier and D. Laperrière	
Numeral Recognition using Curvelet Transform	606
F.M. Kazemi, J. Izadian, R. Moravejian, and E.M. Kazemi	

PAT-5: Enhancement and Segmentation

ALSD: An Algorithm for Noise Erasure and Structural Information Recovery for Surfaces with Structural Discontinuities	613
A. Saha and S. Garg	
A Similarity-Window based Background Estimation Approach	623
E. Shahrian, H. Karshenas, and M. Fathy	
Active Contours Initialization for Ultrasound Carotid Artery Images	629
S.G. Moursi and M.R. El-Sakka	
Core Point Detection using Improved Segmentation and Orientation	637
M.U. Akram, A. Tariq, S. Nasir, and A. Khanam	

VII. AICCSA-08 Security and Information Assurance Track

SIA-1: Computer Security

Privacy Preserving ID3 using Gini Index over Horizontally Partitioned Data	645
S. Samet and A. Miri	
Formal Digital License Language with OTS/CafeOBJ Method	652
J. Xiang, D. Bjørner, and K. Futatsugi	
A Novel Flow-Sensitive Type and Effect Analysis for Securing C Code	661
S. Tlili and M. Debbabi	
Privacy and the Market for Private Data: A Negotiation Model to Capitalize on Private Data	669
A. Yassine and S. Shirmohammadi	
Extracting Kerberos Passwords through RC4-HMAC Encryption Type Analysis	679
A. Alazzawe, A. Alazzawe, A. Nawaz, and D. Wijesekera	

SIA-2: Network Security

Optimizing Fuzzy K-Means for Network Anomaly Detection using PSO	686
R. Ensafi, S. Dehghanzadeh, and M-R. Akbarzadeh -T	
A New RSA Vulnerability using Continued Fractions	694
D.I. Nassr, H.M. Bahig, A. Bhery, and S.S. Daoud	
Managing Access and Flow Control Requirements in Distributed Workflows	702
S. Ayed, N. Cuppens-Boulahia, and F. Cuppens	
Performance Analysis of Identity Management in the Session Initiation Protocol (SIP)	711
Y. Rebahi, J.J. Pallares, N.T. Minh, S. Ehlert, G. Kovacs, and D. Sisalem	
PerformTrust: Trust Model Integrated Past and Current Performance in P2P File Sharing Systems	718
J. Fu, H. Xiong, Z. Li, and H. Zhang	

VIII. AICCSA-08 Software Systems and Applications Track

SSA-1: Software Design and Testing Methodologies

Efficient Computation of State Space over Approximation of Preemptive Real Time Systems	726
A. Abdelli and D. Yahiatene	
Test of Preemptive Real-Time Systems	734
N. Adjir, P. de Saqui-Sannes, and K.M. Rahmouni	
Towards a Mobile Architecture Description Language	743
C. Bouanaka and F. Belala	
Integrating Software Development Security Activities with Agile Methodologies	749
H. Keramati and S-H. Mirian-Hosseinabadi	

SSA-2: Web Services

Comprehensive Support for Management of Enterprise Applications	755
J. Bruhn, C. Niklaus, T. Vogel, and G. Wirtz	
Assessing Quality of Web based Systems	763
K.M. Khan	
Exceptions in a Web Services Environment	770
Z. Maamar and D. Benslimane	
Design Metrics for Web Application Maintainability Measurement	778
E. Ghosheh, S. Black, and J. Qaddour	

SSA-3: Software Systems Modeling

A Recursive Colored Petri Nets Semantics for AUML as Base of Test Case Generation	785
Y. Kissoum and Z. Sahnoun	
A Modular State Exploration and Compatibility Checking of UML Dynamic Diagrams	793
Y. Hammal	
Modeling Variability in the Component and Connector View of Architecture using UML	801
M. Razavian and R. Khosravi	
A Context Model based on UML and XML Schema Representations	810
S.K. Mostéfaoui	

Short Papers

SP-1: Short Papers I

Efficient Hierarchical Diff-EDF Schedulability for QoS Packet Networks	815
M. Saleh, Z. Othman, and M. Saleh	
Modelling Information Generation in Event-Driven Sensor Networks	820
G. Balasubramanian and S. Chakrabarti	
Error Rate Performance for Coherent Modulation Techniques with Switched and Examine Diversity Combining over Weibull Fading Channels	824
A.M. Magableh and M.M. Matalgah	
A Recursive Load Balancing Technique for VoIP-Dedicated WLANs	830
G. Sawma, I. Aib, K. Barbar, and G. Pujolle	
Text Classification: A Preferred Tool for Audio File Classification	834
L. Rompré, I. Biskri, and F. Meunier	

A Phishing Sites Blacklist Generator	840
M. Sharifi and S.H. Siadati	
Steganography in SMS by Sudoku Puzzle	844
M.H. Shirali-Shahreza and M. Shirali-Shahreza	
Detecting Flooding Attacks Against IP Multimedia Subsystem (IMS) Networks	848
Y. Rebahi, M. Sher, T. Magedanz	
A Connectionist System Approach for Learning Logic Programs	852
M.H. Mashinchi and S.M.Hj. Shamsuddin	
SPVA: A Novel Digital Signal Processor Architecture for Software Defined Radio	856
X. Fang, D. Wang, and S. Chen	
An Efficient High Performance Scalar Multiplication Method with Resistance against Timing Attacks	860
T.F. Al-Somani and A. Amin	

SP-2: Short Papers II

Committee Machines and Quadratic B-Spline Wavelet for the P300 Speller Paradigm	866
Z. Seyyedsalehi, A.M. Nasrabadi, and V. Abootalebi	
Enhanced Document Clustering using Fusion of Multi-Scale Wavelet Decomposition	870
M.F. Hussin, I. El Rube, and M.S. Kamel	
Wavelets: An Efficient Tool for Lung Sounds Analysis	875
F. Ayari, A.T. Alouani, and M. Ksouri	
Compression of the Images of Ancient Arab Manuscript Documents based on Segmentation	879
W. Elloumi, M. Chakroun, M. Charfi, and M.A. Alimi	
On Hybrid-Fuzzy Classifier Design: An Empirical Modeling Scenario for Corrosion Detection in Gas Pipelines	884
U. Qidwai and M. Maqbool	
Time-Frequency Analysis of the Arabian Flute (Nay) Tone Applied to Automatic Music Transcription	891
M.A. Al-Tae, M.S. Al-Rawi, and F.M. Al-Ghawanmeh	
DEVS-WSN: A Discrete Event Approach for Wireless Sensor Network Simulation	895
T. Antoine-Santoni, J.F. Santucci, E. De Gentili, and B. Costa	
Delegation Model for Object-Oriented Systems	899
H. Mcheick, H. Mili, E. Dallaire, and R. Mcheik	
An Evaluation Method for Aspectual Modeling of Distributed Software Architectures	903
H. Bagheri, V. Montaghami, G. Safi, and S-H. Mirian-Hosseiniabadi	
Intelligent Virtual Archiving for Accessing News Article Repositories	909
W.K. Lebda, N. Fetais, S. Al Hussaini, S. Ismail, and Q. Malluhi	

Poster Papers

Posters 1: Learning and Identification

Intelligent Diabetes Assistant: Using Machine Learning to Help Manage Diabetes	913
D.L. Duke, C. Thorpe, M. Mahmoud, and M. Zirie	
New Technique in the use of Tangent Vectors for a Robust Handwritten Digit Recognition	915
H. Nemmour and Y. Chibani	
Networks of Evolutionary Processors with a Self-Organizing Learning	917
N.G. Blas, L.F. Mingo, and J. Castellanos	
SIGMA – A Malaysian Signatures' Database	919
S.M.S. Ahmad, A. Shakil, A.R. Ahmad, M. Agil, M. Balbed, and R.Md. Anwar	

Improved Image Segmentation Method based on Optimized Threshold using Genetic Algorithm	921
X. Zhao, M-E. Lee, and S-H. Kim	
Writer Identification of Arabic Handwriting Documents using Grapheme Features	923
S. Al-Ma'adeed, A-A. Al-Kurbi, A. Al-Muslih, R. Al-Qahtani, and H. Al-Kubisi	
MASCE: A Multi-Agent System for Collaborative E-Learning	925
H. Mahdi and S.S. Attia	
Arabic Spotted Words Recognition System based on HMM Approach to Control a Didactic Manipulator	927
M. Fezari, A. Hamza, and M. Bedda	
Forensic Handwritten Document Management System	929
S. Al-Ma'adeed, F. Amire, S.K. Hamza, and W. Al-lebda	

Posters 2: Networks and Modeling

Estimation of Clock Parameters and Performance Benchmarks for Synchronization in Wireless Sensor Networks	931
Q.M. Chaudhari and E. Serpedin	
Suitability of Context Models for Service-Oriented Environments	933
S.K. Mostéfaoui	
A System for Automatic Gathering and Intelligent Analyses of Doha Traffic Data	935
N. Alnaimi, N. Barhoum, A. Nasser, A. Swidan and Q. Malluhi	
Segmentation of Medical Image based on Mean Shift and Deterministic Annealing EM Algorithm	937
M-E. Lee, S-H. Kim, W-H. Cho, and X. Zhao	
Hierarchical Replication Techniques to Ensure Checkpoint Storage Reliability in Grid Environment	939
F. Bouabache, T. Herault, G. Fedak, and F. Cappello	
A Fair Scheduling Algorithm for Video Transmission over Wireless Packet Networks	941
M. Hassan, T. Landolsi, and M. Tarhuni	
How can Path Diversity Help Transmission Protocols in the Achievement of a Better Connection QoS?	943
F. Melakessou, U. Sorger, and Z. Suchanecki	
Tutorials-Based System to Assist Qatari Children with Special Needs	945
J.M. Alja'am, H. Alsuwaidi, N. Alkuwari, and H. Aldosari	

Workshop Papers

WiSe-1: Network Architecture and Quality of Service

An MPLS-DiffServ Experimental Core Network Infrastructure for E2E QoS Content Delivery	947
N. Zotos, G. Xilouris, E. Pallis, and A. Kourtis	
Differentiated Services Provision in a Converged DVB/IP Networking Environment	952
E. Markakis, A. Sideris , E. Pallis , and V. Zacharopoulos	
SLNP Usage for QoS Negotiation in Heterogeneous Environments	958
N. Mbarek, F. Krief, and D. Négru	
QoS Monitoring Framework for End-to-End Service Management in Wired and Wireless Networks	964
M. Sidibé and A. Mehaoua	

WiSe-2: Multimedia and Wireless Services

Measuring Quality of Experience for MPEG-21-Based Cross-Layer Multimedia Content Adaptation	969
C. Timmerer, V.H. Ortega , J.M. González , and A. León	
P2P-Based Mobile IPTV: Challenges and Opportunities	975
M. Mushtaq and T. Ahmed	

Multimedia Terminal Architecture: An Inter-Operable Approach	981
B. Shao, M. Mattavelli, M.T. Andrade, S. Keller, G. Ciobanu, and P. Carvalho	
Optimizing Resources Utilization in Heterogeneous Wireless Networks	987
A. Djouama, M. Abdennebi, and S. Tohme	
WiSe-3: Algorithms, Protocols and Tools	
Adaptive Cross-Layer Fragmentation for QoS-Based Wireless IPTV Services	993
I. Djama, T. Ahmed, and D. Négru	
Frame-Level Dynamic Bandwidth Provisioning for QoS-Enabled Broadband Wireless Networks	999
B. Al-Manthari, N. Abu Ali, N. Nasser, and H. Hassanein	
Ant Colony-Based Many-to-One Sensory Data Routing in Wireless Sensor Networks	1005
R.G. Aghaei, ASM M. Rahman, A. Rahman, W. Gueaieb, and A. El Saddik	
Multimedia Caching Integration for Efficient Content Delivery over Heterogeneous Networks	1011
M. Mushtaq and T. Ahmed	
The ENTHRONE 2 Metadata Management Tool (MATool) (WISE 2008 MATool Demonstration)	1013
A. Lugmayr	
WiSe-4: Panel Discussion	
End-to-End QoS through Integrated Management of Content, Networks and Terminals: The ENTHRONE Project	1019
O. Négru	
SCAS-1: Workshop on: Safety Computer Architecture and Systems	
Improve Industrial Process Plant Safety and Availability via Reliability Engineering	1021
M. Houtermans, M. Al-Ghumgham, and T. Vande Capelle	
Functional Safety IEC 61508 / IEC 61511 – The Impact to Certification and the User	1027
H. Gall	
Development Guidelines for Dependable Real-Time Embedded Systems	1032
M. Short	
Redundant Optical Data Transmission using Semiconductor Lasers	1040
H.D. Wacker, J. Börcsök, and H. Hillmer	
SCAS-2: Workshop on: Safety Computer Architecture and Systems	
Implementation of a 1oo2-RISC-Architecture on FPGA for Safety Systems	1046
J. Börcsök, A. Hayek, and M. Umar	
Different Approaches for Probability of Common Cause Failure on Demand Calculations for Safety Integrity Systems	1052
J. Börcsök and P. Holub	
Matlab® / Simulink® Generated Source Code for Safety Related Systems	1058
M.H. Schwarz, H. Sheng, A. Sheleh, and J. Börcsök	
RRMesh-1: Planning and Infrastructure	
A Heterogeneous Network Architecture based Gnutella for Mobile Emergency Preparedness Applications	1064
A. Boukerche, A. Zarrad, and R. Araujo	
WiMAX Mesh Networks for Underserved Areas	1070
E. Sedoyeka, Z. Hunaiti, M. Al Nabhan, and W. Balachandran	
Analysis of the Latency-Lifetime Tradeoff in Wireless Sensor Networks	1076
F. Bouabdallah, N. Bouabdallah, and R. Boutaba	

RRMesh–2: RRM Functionalities

Enhancement of IEEE 802.11 DCF Backoff Algorithm under Heavy Traffic	1082
I. Elarbaoui and H.H. Refai	
Cumulative Intelligence Gathering for Smart Vehicles	1088
S. Cheng, L. Stanković, V. Stanković, and H. Refai	
Preventing Admission Failures of Bandwidth Reservation in Wireless Mesh Networks	1094
A. Herms and G. Lukas	
Performance Study of Wireless Mesh Networks Routing Metrics	1100
S. Waharte, B. Ishibashi, R. Boutaba, and D. Meddour	

Paper added to SSA I

A UML Rule-Based Approach for Describing and Checking Dynamic Software Architectures	1107
M.N. Miladi, M. Hadj Kacem, A. Boukhris, M. Jmaiel, and K. Drira	