

Volume I

**2006 IEEE International Conference on
Wireless Communications, Networking
and Mobile Computing**

*2nd International Conference on Wireless Communications, Networking
and Mobile Computing (WiCOM 2006)*

Wuhan, China

22-24 September 2006

Table of Contents

MIMO and OFDM

A Novel Wideband MIMO Channel Model and the Wideband MIMO Software Defined Radio	1
N. Costa and S. Haykin	
Correlation Effects and Channel Capacities for MIMO Polarization Diversity	5
N. Prayongpun and K. Raouf	
On the MIMO Channel Capacity Saturation for Spatially Constrained Multielement Antenna Systems ..	9
Y. Wu and Z. Nie	
Capacity Enhancement Scheme for Downlink Multiuser MIMO Systems with Limited Feedback	13
H. Zheng, Y. Li, S. Zhou and J. Wang	
Impacts of Gaussian Error and Doppler Spread on the Performance of MIMO Systems with Antenna Selection	17
W. Xie, S. Liu, D. Yoon and J.-W. Chong	
A Hybrid Zero-Forcing and Sphere-Decoding Method for MIMO Systems	21
H.-J. Lee and D. Kim	
Turbo Receiver for MIMO CDMA in Flat Fading Channel	25
M. Tan and J. Shen	
A New Detection Scheme for MIMO-BLAST Systems	29
Z. Wang	
Blind Channel Estimation for MIMO Uplink MC-CDMA Systems with Layered Space Frequency Equalisation	33
S. Punnoose, X. Zhu and A.K. Nandi	
Opportunistic Spatial Multiuser Diversity when Transmitter has More Antennas in Downlink	37
G. Liu and J. Zhang	
Optimal Linear Precoder Design for Space-Time Block Coded Systems	41
Z. Zhao and G. Xu	
The Performance Analysis of Non-Primitive Turbo Codes in MIMO System Over Flat Fading Channel	45
M. Tan	
Channel Design: A Novel Approach for Blocking Interference and Achieving Interference-Free Capacity	49
R. Ying, R. Liu and G. Xu	
Fast Antenna Subset Selection Algorithm for MIMO Wireless Systems	53
P. Lan, J. Liu, B. Gu and H. Xu	
A Novel Detection Algorithm Using the Sorted QR Decomposition Based on Log-Likelihood Ratio in V-BLAST Systems	57
H. Lee, H. Jeon, J. Choi, W. Kim, J. Cha and H. Lee	
A New Reduced-Complexity ML Joint Detection Algorithm Based Sphere Decoder for LS-CDMA System	61
W. Rao and L. Dai	
Performance Analysis of a New MIMO Transmit Scheme	65
Z. Lin, G. Zhu, X. Xiao and L. Jian	
A Pairwise Ordered Successive Interference Cancellation Algorithm for VBLAST	69
L. Sun, W. Ye and S S. Feng	

The Relation of Channel Estimation Error Parameters and System Capacity in MIMO CDMA System	73
D. Liu, G. Li and D. Li	
Ordered Group Interference Cancellation for Quasi-Orthogonal Space Time Block Codes	77
F. Wang, W. Zhao and Y. Xiong	
On Capacity of Multiple Antenna LS-CDMA System in Ricean Fading Channel	81
W. Rao	
rms Angular Spread Estimation Using CDM Based MIMO Channel Sounder with Loosely Synchronous Codes and Kasami Codes	85
J.H. Choi, H. Lee, H. Jeon, J. Cha and H. Lee	
Low Complexity Adaptive Group Detection in Layered Space-Time MIMO Wireless Communications	90
T. Chen	
Precoding and Power Allocation for Cooperative MIMO Systems	94
C. Pan, Y. Cai and Y. Xu	
The Multi-Level Mapping Sequential Gaussian Approximation for MIMO Detection	98
F. Wang, W. Zhao and Y. Xiong	
Improved RLS Predictor in Fast Time-Varying Channels for SC-FDE System	102
L. Wang, Y. Du, L. Liu, X. Sun and Y. Liu	
A Robust Superimposed Pilot Scheme in MIMO Systems	106
X. Han and J. B. Wei	
The Diversity Algorithms of Timing Synchronization for MIMOOFDM Systems in Mobile Environments	110
D. Peng, L. Peng, C. Yin and G. Yue	
Cyclic Space-Time Block Codes and Decoding Algorithm in MIMO CDMA System	114
F. Hong-Liang and G.-Z. Feng	
An Improved Channel Estimation Algorithm for MIMO-OFDM Systems	118
F. Mung'au and K.-K. Wong	
Effects of Imperfect Channel State Information on the Performance of Adaptive MIMO-OFDM Systems	122
X. Liang, G. Zhu and X. Cao	
A Novel Spatial Diversity Algorithms of Carrier Frequency Offset Synchronization for MIMO-OFDM Systems	126
D. Peng, L. Peng, C. Yin and G. Yue	
On the Performance of MIMO-OFDM Beamforming Systems with Feedback Delay	130
D. Li and X. Dai	
BER Performance Analysis of RCPC Encoded MIMO-OFDM in Nakagami-m Channels	134
R. Guo, P. Zhou and J.-L. Liu	
Channel Estimation Based on Extended Kalman Filtering for MIMO-OFDM Systems	138
Y. Liang, H. Luo, Y. Xu and J. Huang	
High Spectral Efficiency Transmission Scheme in Multiple Antenna CDMA Systems	142
H. Zhang, G. Wang and W. Wu	
Adaptive Subcarrier and Antenna Allocation for Multiuser MIMO-OFDM Systems	146
Y. Ma, Y. Cai and Y. Xu	

Channel Estimation Using Adaptive Filters in MIMO-OFDM Systems	150
Y. Liang, H. Luo, C. Yan and J. Huang	
Design of Video NLOS Communication System Using MIMOOFDM Based on I EEE802.16a Standard	154
P. Zhou and R. Guo	
A Hybrid MQAM-LFSK OFDM Transceiver with Low PAPR	158
A. Latif and N.D. Gohar	
Throughput Optimization for Wireless OFDM System in Downlink Transmission Using Adaptive Techniques	162
Y. Fakhri, B. Nsiri, D. Aboutajdine and J. Vidal	
A Robust Blind Symbol-Timing Synchronization for UWBOFDM Systems	166
C. Li, D.P. Liu and G. Yue	
Fast Frequency Offset Estimation Method for OFDM	170
M. Ding, H.-W. Luo, Y. Wu and C.-G. Yan	
Blind Channel Estimation for SIMO OFDM Systems without Cyclic Prefix	174
J.-L. Yu, C.-H. Chen and M.-C. Lee	
Fast-Convergence SMI Adaptive Beamforming Based on Frequency-to-Time Pilot Transform for OFDM System	178
M. Lei and H. Harada	
Analysis of a New Scheme Mitigating the Impact of Inter-Carrier Interference on OFDM Communication Systems	183
Z. Li and Z. Ping	
High-Throughput High-Performance VLST-CI/OFDM with Low PAPR	187
S. Feng, P. Liang and W. Wu	
Joint ICI and Noise Reduction in OFDM Using a New Windowing Scheme	191
B. Maham and N.-E. Said	
A Novel Three-Stage Frequency Offset Estimator for OFDM	195
Y. Wu, H. Luo and M. Ding	
A Novel Pre-FFT Beamforming for an OFDM System with an Antenna Array in WLAN	199
L. Ping'an and F. Zhao	
Subband Based Adaptive Bit and Power Allocation for OFDM Systems	203
X. Cao, G. Zhu, X. Liang and L. Tan	
A Novel Blind Channel Estimation for Space-Time Coded OFDM on Time Varying Mobile Radio Channels	207
Z. Chen, T. Zhang and Z. Gong	
Adaptive Modulation with One Bit CSI in OFDM	211
L. Liu, Y. Du, X. Sun, L. Wang and Y. Liu	
Comparative Investigation on MU-MIMO Schemes for TDD MIMO OFDMA Uplink	215
G. Liu and J. Zhang	
Second Order Polynomial Class of Nyquist Windows for Reduction of ICI in OFDM Systems	219
K. Dai and R. Song	
Kalman Filter Channel Estimation Based on Comb-Type Pilot in Time-Varying Channel	223
W. Ling and L. Ting	

An Interpolation-Based Beamforming Scheme for OFDM Systems	226
L. Ping'an and S. Qin	
Blind Channel Estimation Based on Linear Precoding for OFDM Systems	230
Y. Liang, H. Luo, Y. Xu and J. Huang	
A QoS-Guaranteed Adaptive Resource Allocation Algorithm with Low Complexity in OFDMA System	234
Y. Gao, H. Xu, T. Hui and Z. Ping	
Compensation of Phase Jitter in Frequency Hopped OFDM Systems	238
D. Zhao, J. Fang and Q. Yu	
Channel Estimation of PP-OFDM over Doubly Selective Channels	243
W. Yang and Y. Cai	
Multiuser Bit-Interleaved Space-Time-Frequency Coding System for Frequency Selective Block Fading Channels	247
T. Huang, C. Yuan and C. Sun	
Deterministic OFDM Channel Estimator Based on Nonmaximally Decimated Filterbanks	251
M. Wu, Y. Fang and M. Wang	
Packet Scheduling for Multimedia Traffics in Downlink Multi-User OFDM Systems	255
W. Shuang, Y. Gao, X. Gu, T. Hui and Z. Ping	
Comparison Study of Low-Complexity Detection Schemes Exploiting Subcarrier Correlation for V-BLAST OFDM	259
M. Lei and H. Harada	
Iterative Detection of OFDM Signals in Dispersive Fading Channels	264
X. Bu, H. Jiao and J. An	
Cell Identification Scheme for OFDM Cellular Systems Based on a New Preamble Structure	268
M. Ding, H.-W. Luo, Y. Wu and R.-M. Liu	
Sub-Carrier Assignment for Multimedia Traffic Over OFDM Wireless Channel	272
W. Meng, G. Zhu and Z. Liu	
A Pilot Aided Multi-Cell Interference Cancellation with LMS Channel Estimation for STC OFDM Systems	276
F. She, H. Luo, B. Yang and J. Huang	
A Hybrid Technique Based on RS Coding and Least Square Method for Clipping Distortion Mitigation in OFDM System	280
J. Tang, X. Jin, X. Zhang and W. Cai	
Analysis of IEEE 802.15.3 CAP Based on DC-OFDM-UWB	284
Y. Zhang, P. Xu, X. Chen and S. Huang	
An OFDM-UWB Scheme with Adaptive Carrier Selection and Power Allocation	288
Z. Chen, D. Wang and G. Ding	
DSP Implementation Aspects of an OFDM Based Wireless MAN Modem	292
B. Maham and A.-H. Reza	
Reduction of Out-of-Band Radiation in OFDM Based DRM Simulcast Systems	296
P. Wang, J. An and Y. Wu	
Joint Design for LDPC Coded OFDM with Transmit Adaptive Antenna	300
X. Yang, X. Xia and Y. Xiong	

Performance Comparison of High Rate Ultra-Wideband OFDM System between Two Different Modulation Techniques	304
B. Li, Y. Wu and T. Lu	
A Model of Turbo Code Based on OFDM-CDMA	308
L. Na, W. Shi and W. Jiang	
Channel Estimation Error on Performance of Zero Force Beamforming Based Multiuser SDMA in Downlink	312
J. Zhang and G. Liu	
A Novel Timing Estimation Method Based on Symmetrical & Conjugate Prefix in OFDM System	316
H. Yu	
Cyclic Correlation Based Symbol Duration Estimation for OFDM Signals	320
X. Fang, L. Huo and T. Duan	
A New Resource Allocation Scheme for Downlink OFDM Systems	324
D. Liu, W. Kou, G. Yu and L. Hu	
3G Technologies	
Multiuser Transmission in Conjunction with Smart Antennas for the Downlink of TDD-CDMA System	327
J. Zheng and D.-C. Yang	
Two-Hop Two-Slot CDMA Uplink - Multi-Cell Considerations	331
C. Gao and R. Jäntti	
Uplink Performance Analysis for TD-SCDMA System	335
Z. Wang, J. Li, P. Wu and D. Yang	
An Adaptive Space-Time Multiuser Detection Algorithm for CDMA Systems	339
K.-L. Du and M.N.S. Swamy	
A Subspace Semi-Blind Adaptive Multiuser Detection Algorithm Based on Kalman Filter for MC-CDMA Uplink	344
Y. Meng, J. Wang, Y. Han and J. Zhu	
Multistage Parallel Interference Cancellation Based on Chase Algorithm	348
L. Feng and M.R. Soleymani	
A Finite State Markov Chain-Based Umbrella Cell Channel Model for Fast Mobile Users	352
E. Inaty	
A Reduced-Complexity Parallel Interference Cancellation/Decoding for Convolutionally Coded CDMA Systems	357
G. Xu and L. Gan	
A Novel Power Control Strategy for CDMA Mobile System	361
X. Tan and H. Yang	
Convolutional Coding Quasi-Synchronous CDMA System Using Real-Valued Self-Orthogonal Finite-Length Sequences	365
J. Le and Y. Tanada	
Implementation Scheme and Performance Analysis of RLC in TD-SCDMA	369
J. Xi, H. Shu and Q. Chen	
Novel Rate Control Scheme Based on System Load and Channel Quality	373
Y.-H. Gao, X. Zhang and D.-C. Yang	

Capacity Estimation for an MF-CDMA Cellular Model Based on LEO Satellite Constellation.....	377
Y. Zhang and X. Zhu	
Time-Frequency Double Differential Encoding and Detection in Cyclic Prefix Assisted CDMA System	381
Z. Fang, H. Shan and Z. Wang	
Development of the Forward Link Physical Layer in a Multiuser SDMA/CDMA Low-Power Transceiver	385
J.-F. Bousquet, R. Salmond and S. Magierowski	
A Threshold Optimizing Method Based on Markov in AMC Combined with HARQ	389
H. Feng, F. Chen and T. Lv	
The MC-CDMA System Using LS Codes and Nonorthogonal Subcarriers.....	394
H. Liao	
An Effective Method for PAPR Reduction in MC-DS-CDMA Systems	398
X. Dai, J. Liang, H. Wu and D. Li	
A High-Resolution Iterative DOA Algorithm for CDMA System.....	402
W. Liu, J. Liang, J. Hu and B. Cheng	
Bit Error Rate Analysis of CDMA Receiver with Linear and Circular Antenna Array	405
R. Agarwal, B.V.R. Reddy and K.K. Aggarwal	
Adaptive Cooperation Algorithm for Cognitive Radio Networks.....	409
H. Sun, J. Jiang and M. Lin	
A MVDR Multi-Code Receiver Based on Channel Estimation for HSDPA Mode.....	413
C. Li, Q. Wu and J. Wang	
Research on Fast DCA Algorithms in TD-SCDMA Systems	417
C. Rui, Y.-Y. Chang and D.-C. Yang	
UWB	
Consideration of Pre-Filter Bandwidth Optimization for Non- Coherent UWB Receiver	421
J. Wu, M. Dong, Q. Liang and H. Xiang	
Boost the Performance of MBOK DS-UWB with Decision Feedback ISI Cancellation.....	425
G. Ding, D. Wang and Z. Chen	
Numerical Study on the Average Noise Factor of LNA for UWB Impulse Radio Systems	429
H. Zhu, Y. Tanabe, T. Uwano and T. Baba	
Analysis of DS-UWB with MMSE Equalization in Dispersive Channels	433
S.-L. Chiou and M.-X. Chang	
Performance Evaluation of a Novel Low-Density Parity- Check Coded Ultra Wide Band Impulse Radio (UWB-IR) System	437
F. Chen, S. Li and L. Shen	
Time-Domain Investigating Path Loss Characteristics of UWB Signals in Indoor Line-of-Sight Environment.....	441
W. Yang, N. Zhang, Q. Zhang and H. Zhang	
Multi-Path Combining Scheme for ISI Suppression in DSUWB Systems.....	445
J. Wang, D. Wang and Y. Zhao	
A Novel Approach to Interference Mitigation with Coexisting Spectrum Users for UWB Pulse Radio.....	449
L. Jiang, J. Guo and Y. Wang	

A Novel Algorithm for Designing Adaptive DS-UWB Pulses Using Hermite-Gaussian Orthonormal Expansion	453
R. Yang, C. Yu and Z. Zhou	
Antenna Effects Consideration for Space-Time Coding UWB Impulse Radio System in IEEE 802.15 Multipath Channel	457
Y.-F. Ruan and X.-Q. Shi	
Ultra-Wideband Data Acquisition Circuit Based on Nonperiodic Equivalent Sampling	461
B. Fang and X. Li	
UWB High Data-Rate Wireless Communication System Base on Multi-Pulse Position Modulation	465
Q. Wang, Y.-H. Lu, Y. Xu, P.-F. He and N. Zhang	
TDOA Algorithm for UWB Localization in Mobile Environments	469
X. Yong, L. Hua, H. Fei and W. Qiu	
A Low Complex Frequency Domain Nondata-Aided Channel Estimation for Indoor Time-Hopping UWB Communication System	474
L. Zhao, C. Zhao, Z. Zhou and P. Lu	
Performance Analysis of Constellation Mapping and Channel Estimation in MB-OFDM UWB Systems	478
C. Li, G. Zheng and M. Wang	
A Fuzzy Logic-Based Ranging Technique for UWB Radio Link	482
W.- W. Ji and Z. Liu	
A Novel Orthogonal Comb Spectrum Correlation Demodulation Method for the UWB Carrier Envelope Modulation	485
W. Liu, L. Zhang, Y. Zeng, Z. Zhou and F. Zhao	
Analysis of Error Performance of the Hybrid Pulse Amplitude and Position Modulated Ultra-Wideband System Over Lognormal Fading Channels	489
S. Wang, Y. Chi and N. Zhang	
Performance of Ranging and Positioning Models with Impulse UWB	493
X. Zhang, X. Sha and R. Sheng	
Performance Analysis of UWB Timing Acquisition Schemes Based on RSS Measurements	497
H. Wang, S. Jiang, G. Wei, F. Ji and X. Zhang	
Coding, Detection and Modulation	
An Efficient Adaptive Decoding for Block Turbo Codes	501
X. Liu, W. Zhang, Z. Wang and P. Cull	
Construction of Large Girth (3,k) LDPC Codes Based on Cuboid	506
X. Tao, W. Liu and X. Zou	
Full Diversity Concatenation Space-Time Coding Over Time- Selective Block Rayleigh Fading Channels via Duality	510
J. Zhu, S. Wen, Y. Shao, H. Wen and Z. Wang	
A New Performance Estimate Method of Space-Time Block Codes for Nakagami Fading Channel	515
W. Zhang and Z. -S. Lu	
The Novel Super-FEC Coding Scheme Based on the Block Turbo Code for Long-Haul Optical Transmission Systems	519
J.G. Yuan, Z. Jiang, Y.J. Mao, W. Ye and W. Wang	

Generation of Chaotic Frequency Hopping Codes and Its Application in Communications	523
H. Chen and J. Feng	
An Improved Degree Distribution Based HARQ for LDPC	527
X. Li, Y. Cao and D. Yang	
RAKE Receiver from Physical Channel Modeling Perspective	531
M.T. Simsim, N.M. Khan and R. Ramer	
Structure and Performance of Space-Time Block Code.....	535
Z. Tian and H. Zhou	
Performance of Space-Time Code in OFDM	539
Z. Tian and H. Zhou	
Simplified Iterative Symbol Timing and Carrier Phase Recovery Scheme for LDPC-Coded Systems.....	543
L. An and L. Wu	
Joint Channel Estimation and Data Detection for Space-Time Block Coded System via EM Algorithm.....	547
X. Jing, Z. Xu and Z. Zhou	
Combinatorial Construction of Low-Density Parity-Check Codes for Short Block Length and High Rate Applications.....	551
S. Ding, Z. Yang, J. Song, C. Pan and J. Wang	
VOLUME II	
A New Method for Detection of LDPC Coded GMSK Modulated Signals	555
M. Taki and M.B. Nezafti	
Cooperative Communication Using Distributed Differential Space-Time Codes	560
B. Maham and F. Lahouti	
A New Coding Scheme in SC-FDE.....	565
Y. Liu and Y. Du	
A Joint Timing Recovery and SNR Estimation Algorithm for LDPC-Coded Systems.....	569
X.-F. Pan and X.-D. Hao	
Cycle Properties Analysis of Matrix-Filled LDPC Codes.....	573
J. Liu, Y. Xu and Y. Cai	
Outage Probability and Adaptive Power Allocation in Wireless Cooperative Communications	577
W. Yang, Y. Cai and C. Pan	
The Block Coding Used in OFDM System to Reduce the PAPR.....	581
T. Tang	
Turbo Multiuser Receiver for Rayleigh Flat Fading Channels	585
M. Tan and J. Shen	
A Novel Method of Absolute Digital Demodulation	589
Z. Yin, Z. Wu, G. Ren and Z. Zhang	
An Efficient Architecture for Wideband Digital Down Conversion Based on the Goertzel Filter	593
B. Li, L. Ge and J. Zheng	
Closed Loop Transmit Diversity Schemes Based on Power Control Command Bit.....	597
J. Jin, W. Yao, G. Sun and H. Yang	

A Novel Kalman-MLSD Receiver Over Fast Fading Channel	601
H. Zhou and D. Li	
Viterbi Algorithm Based Frequency Offset Estimation for GMSK.....	605
D.-P. Hu, H.-W. Li, Y. Guo and C.-Z. Fan	
Blind Multiuser Detection Algorithm for Asynchronous MFSK/FFH-MA System	609
C.-Q. Liu, X.-L. Hu and Y.-Y. Zhang	
FBG Based Voltage Measurement using PZT Modulation	613
Y. Yao and B. Yi	
A Novel Demodulation Method for Chaotic Parameter Modulation	617
M. Xu, Y. Song and L. Liu	
A Novel Modulation Classification Method Based on High Order Cumulants	621
L. Liu and J. Xu	
Analyze and Comment on Spectral Efficiency of VMSK Modulation	626
Z. Shi, J. Huang, Z. Zhang and Y. Sang	
Blind Multiuser Detection for UWB Systems Based on Generalized Sidelobe Canceller.....	630
Z. Li, H. Ma and Y. Mei	
An All-Digital Signal Demodulation Scheme for High Frequency (HF) QAM Signals.....	634
Z. Yan, T. Duan and W. Suqin	
Underwater Acoustic Frequency Demodulation System Based on High-Q Filter	638
E. Cheng, K. Zheng, X. Ou and B. Sun	
Circuit and Antenna	
An Efficient Preconditioner for RFICs Simulation Using Harmonic Balance Method	642
Y. Cao and G. Wang	
Implementation of Blind Equalization Algorithm for HF QAM Based on DSP	646
L. Ang, T. Duan, X. Fang and R. Wei	
A Linear Voltage Regulator for PLL in SOC Application	650
C. Jia, B. Qin and Z. Chen	
A Fast Inductance Extraction Engine	654
S. Sun, J. Xue, L. Liu and G. Wang	
A New Channel Model Based on Multiconductor Transmission Line Theory for Broadband Over Distribution Grids	658
M. Zhai	
The Scheme Design and Implementation of the Baseband Part of a Wireless OFDM System	662
Y. Wang, J. An and X. Bu	
An Improved Digital Timing Recovery Circuit for Burst-Mode Communications	666
C. Liu, X. Guo, J. Song, C. Pan and Z. Yang	
The Multi-Stage Chaotic Secure Communication System Applied in Radio Frequency Channel	671
H. Bao and Y.-S. Zhu	
Parallel Genetic Algorithm for VLSI Building Block Layout.....	675
N. Xu, F. Huang and Z. Jiang	
A Partial MRT Algorithm for Closed-Loop Spatial Multiplexing Systems with Transmit Antenna Selection	679
Y. Zhu, Y. Fang and J. Wang	

Error Performance of Maximal-Ratio Combining with Transmit Antenna Selection in Nakagami-m Fading Channels	683
Z. Chen, Z. Chi and B. Vucetic	
Wideband Stacked Double Disc-Ring Dielectric Resonator Antenna	686
Y.-F. Ruan and X.-Q. Shi	
On Improving the Performance of Polarization Diversity in Wireless Communication Systems	690
Y. Wu and Z. Nie	
A New Rate 3/4 Transmit Diversity for Five and Six Transmit Antennas with Phase Feedback	694
Z. Gong, T. Zhang and R. Zhang	
A Simple Broadband Transition from Waveguide to Microstrip Line in X Band.....	698
G. Niyomjan, B. Cheeseman and Y. Huang	
Signal Processing and Channel Modeling	
Decision Directed Technique for Channel Estimation in OFDM Mobile Systems	701
H. Chen and X. Chen	
BER Analysis of RAKE Receiver in Rayleigh Fading Channels	705
C. Wei, L. Wu and M. Nan	
A Novel Simple DOA Estimation Algorithm Based on Direct Data Domain Approach Using Phase-Only Conjugate Gradient Method.....	709
S. Wei and Z.-P. Qian	
Real-Value Space ESPRIT Algorithm and Its Implement.....	713
C. Liu and G. Liao	
Channel and Modulation Selection Based on Support Vector Machines for Cognitive Radio	718
G. Xu and Y. Lu	
Blind Channel Equalization with Order Estimation Based on Evolutionary Algorithm	722
F. Tong, X.-M. Xu and D.-S. Chen	
Multipath Performance for GNSS Signals Considering Correlation	725
X. Liu and J. Liu	
More Realistic Analysis of Co-Channel Interference in Sectorization Cellular Communications Systems with Rayleigh Fading Environment.....	729
Z. Zhang, F. Lei and H. Du	
Peak-to-Average Power Ratio in WFMT Systems	734
R.M. Vitenberg	
Generalized Affine Spectral Correlation Analysis with Application to Multifractal Signal Processing.....	738
X. Gang, H. Zhao and X. Yang	
Performance of Differential Frequency Hopping Systems in a Fading Channel with Partial-Band Noise Jamming.....	742
Y. Zhu, L. Gan, J. Lin and J. Xiong	
A Reference Model for Computing Path Correlations in Cooperative Mobile Communication Systems.....	746
M.-S. Yang and D. Kim	
Machinery Fault Diagnosis Using Improved LSSVM Method	750
K. Yang and L. Zhao	

A New Channel Tracking Algorithm Based on Kalman Filter	754
L. Li, B. Liu, H. Yu and H. Hu	
Impact of Feedback Delay on System Performance with AMC/SR-ARQ over Rayleigh Fading Channels	758
D. Hao, J. Xiao, S. Zou and S. Cheng	
Characterization of Wireless Shallow-Water Communication Channel Based on Gaussian Beam Tracing	763
X. Xu, T. Feng, L. Qing and T. Yi	
A Novel Iterative Control Variates Algorithm for Efficient Simulation in AWGN Channels	767
L. Dong and J.-R. Lin	
Fourth-Order MUSIC Algorithm Based on Minimum Redundant Virtual Extended Array	771
B. Jiang, L. Zheng and Q. Cheng	
A Novel TD-LMS Algorithm Based on the Fractional Fourier Transform	775
G. Su and G. Zhu	
A Statistical Model for Indoor UWB LOS Channels	779
W. Yang, Q. Zhang, N. Zhang and Y. Wang	
A Novel Channel Estimation Method for TD-SCDMA System	783
X. Yang, D. He, L. Li, X. Tao and Z. Ping	
Design and Performance Analysis of an FM-QCSK Chaotic Communication System	787
Y. Zhang, X. Shen and Y. Ding	
On Subband LS-CMA Adaptive Arrays in Multipath Jamming Environment	791
Y. Liu and H. Wang	
Ad Hoc and Mesh Networks	
Identity-Based and Threshold Key Management in Mobile Ad Hoc Networks	795
J. Li, D. Wei and H. Kou	
Bandwidth-Guaranteed Multi-Path QoS Routing for Saving Energy in TDMA-Based Wireless Ad Hoc Networks	799
Y. Li, X. Chen and D. Yu	
Secure Anonymous Threshold Subliminal Channel for Ad Hoc Environments	803
L. Su, M. Yang, J. Li and G. Cui	
Position-Based Greedy Stateless Routing for Multihop WPANs Based on a Realistic OFDM UWB Physical Layer	807
H. Gao and D.G. Daut	
Adaptive Cross-Layer Routing for HWN with Dedicated Relay Station	811
C. Shen, S. Rea and D. Pesch	
The Transmission Capacity of MANET Based on Conflict Graph	816
G.-J. Yu and B.-Y. Zheng	
Capacity Evaluation of a Multi-Hop Wireless Ad hoc Network Using Minimum Impact Routing	820
Y. Ming Lu, D. Grace and P.D. Mitchell	
Mobility Prediction Model Based Link Stability Metric for Wireless Ad Hoc Networks	824
H. Zhang and Y.-N. Dong	
A Source-Specific Multicast Routing Protocol for Mobile Ad Hoc Networks	828
J. Dongxing	

Securing the Ad Hoc Dynamic Source Routing Protocol	832
R. Shankaran, V. Varadharajan and M. Hitchens	
Processing Delay as a New Metric for On-Demand Mobile Ad Hoc Network Routing Path Selection	836
B.S. Lee, M.N. San, T.M. Lim, C.K. Yeo and B.C. Seet	
Routing for Diverting Calls in ICAR System	840
H. Peng and J. Zhu	
On the Performance of Multi-Node Generalized Selection Cooperative System with Minimum Selection	844
B.-C. Zhu and W.-J. Cheng	
Cross-Layer Design for Packet Fast Forward in Mobile Ad Hoc Network	848
W. Tan, D.-y. Qin, X.-J. Sha and Y. Xu	
A Distributed Approach of WCA in Ad-Hoc Network	852
J. Zhang, B. Wang and F. Zhang	
Collision-Constrained Minimum Energy Node-Disjoint Multipath Routing in Ad Hoc Networks	857
M. Liu, Z. Xu, J. Yang and J. Ye	
Adaptive Mechanisms to Enhance Internet Connectivity for Mobile Ad Hoc Networks	862
S. Bin, H. Ke and Z. Hu	
An On-Demand Clustering Mechanism for Hierarchical Routing Protocol in Ad Hoc Networks	866
C. Huang, Y. Zhang, X. Jia, W. Shi, Y. Cheng and H. Zhou	
A Self-Repair Algorithm for Ad Hoc On-Demand Distance Vector Routing	872
J. Feng and H. Zhou	
A Cross-Layer Design for Broadcast Algorithm in MANETs	876
S. Qiang, L. Li, N. Chen and S. Aziz	
A Novel Framework for QoS Enhancement in Ad Hoc Network	880
X. Chen, S. Qiang, G.A. Zhang and Z.H. Bao	
A Novel Location-Based Routing Algorithm for Mobile Ad Hoc Networks	884
C. Zhuo, L. Kai and Z. Jun	
Service Registration Model of Service Discovery Protocols in MANETs	888
X. Gu, J. Lu and S. Shuo	
Improved Opportunistic Auto Rate Media Access Protocol for Multi-Rate Ad Hoc Networks	892
L. Qian, J. Zhou, Y. Qian and K. Chen	
Slot Synchronization in Ad Hoc Networks Based on Frequency Hopping Synchronization	896
M. Zhao, M. Xu, J. Zhong and S. Li	
Performance Improvement for Best-Effort Traffic of IEEE 802.11e QoS MAC in Mobile Ad Hoc Networks	900
Y.-H. Kim and J.-B. Suk	
Multi-Path QoS Routing Protocol Under Three Different Path Selection Strategies in Wireless Ad-Hoc Networks	904
L. Ming, C. Huang, Y. Jianghu, G. Peng and C. Gao	
Fast Authentication Public Key Infrastructure for Mobile Ad Hoc Networks Based on Trusted Computing	910
L. Hao, X. Li, S. Yang and S. Lu	

A Dynamic Counter-Based Forwarding Scheme for ODMRP	914
N. Mei and W. Neng	
A New Method to Resist Flooding Attacks in Ad Hoc Networks	918
S. Li, Q. Liu, H. Chen and M. Tan	
Improved Threshold Ring Signature for Ad-Hoc Group	922
J. Xiao, G. Zeng, J. Liao and P. Huang	
Congestion Aware Scheduling Algorithm for MANET	926
Z.-G. Chen, Z.-H. Ge and M. Zhao	
SCSR: A Novel MAC Protocol for Mobile Ad Hoc Network	931
F. Jun, Z. Li, W. Li and C. Yuan	
Application Research Based Ant Colony Optimization for MANET	935
X. Yang, L. Li and C. Cheng	
IMBP: An Interference Control Topology Algorithm Based on Interference Measure in Ad Hoc Networks	939
M. Liu, L. Li, Z. Xu and P. Chen	
An Efficient Random Number Generator for Ad Hoc Sensor Network	943
Y.-H. Wang, H.-G. Zhang, F.-B. Zhu and B.-J. Wang	
Energy Efficiency Comparison of SACK, Tahoe, Reno and NewReno Over Ad Hoc Network Based on Analytic Hierarchy Process	947
L. Heng and A.-H. Guo	
A Group Aware Topology Control Algorithm in Mobile Ad Hoc Networks	951
G. Luo and W. Wu	
Research on Identity-Based Cluster Access Control Model with Dynamic Trust Agent for Mobile Ad Hoc Networks	956
F. Lu and T. Zhou	
Throughput Analysis of IEEE 802.11 in Multi-Hop Ad Hoc Networks	961
Y. Wang, N. Yan and T. Li	
An Adaptive Assistant-Aided Clustering Scheme for Mobile Ad Hoc Networks	965
G. Wang, J. Yan, H. Cong and C. Pan	
A Simple Scalable Wireless Mesh Architecture	969
M.V. Padmini and R.P. Rustagi	
Coordination Mechanisms for Selfish Routing in Multi- Channel Wireless Mesh Networks	974
J. Xiao and Y. He	
A MAC Aware Cross-Layer Routing Approach for Wireless Mesh Network	978
L. Jiang and G. Feng	
Synchronization Inspired from Nature for Wireless Meshed Networks	983
A. Tyrrell, G. Auer and C. Bettstetter	
SMETT: A New Routing Metric for Multi-Radio and Multi- Channel Wireless Mesh Network	987
Y. Hu, S. Yang, D. Wang and L. Zhang	
9Square: A New Architecture for MIMO WMN	991
D. Wang, S. Yang, Y. Hu and D. Teng	
A Centralized Scheduling Algorithm Based on Multi-Path Routing in WiMAX Mesh Network	995
Y. Cao, Z. Liu and Y. Yang	

Sensor Networks

Enhancing Base Station Security Against DoS Attacks in Wireless Sensor Networks	999
Z. Cao, X. Zhou, M. Xu, Z. Chen, J. Hu and L. Tang	
An Energy-Aware Hierarchical Architecture Design Scheme	1003
L. Yuan, X. Du, W. Cheng, Q. Zhang and Z. Shu	
Low-Energy Static Clustering Scheme for Wireless Sensor Network	1007
B. Huang, F. Hao, H. Zhu, Y. Tanabe and T. Baba	
Voronoi Tessellation Based Haar Wavelet Data Compression for Sensor Networks	1011
M. Tan, Z.J. Xie and L. Wang	
RDA: Reliable Data Aggregation Protocol for WSNs	1015
H. Luo, Q. Li and W. Guo	
Initialization Algorithm Based on SNIR Model for Wireless Sensor Networks	1019
L. Jin, L. Fang and Z. Huang	
A Lightweight FEC Algorithm for Fault Tolerant Routing in Wireless Sensor Networks	1023
Z. Xiong, Z. Yang, W. Liu and Z. Feng	
A Reliable Localization Method in WSNs	1027
H. Peng, Y. Ming, H. Wu and G. Chuanshan	
Advanced MAC Protocol with Adjustable Sleep Mode for Wireless Sensor Networks	1031
Q. Yu and H. Zhou	
An Improvement of DV-Hop Algorithm in Wireless Sensor Networks	1035
W.- W. Ji and Z. Liu	
An Ant Odor Analysis Approach to the Ant Colony Optimization Algorithm for Data-Aggregation in Wireless Sensor Networks	1039
V. Vijaykumar, R. Chandrasekar and T. Srinivasan	
A Multiple-Objective Fuzzy Decision Making Based Information-Aware Routing Protocol for Wireless Sensor Networks	1043
L. Wang, S. Chen and X. Li	
A Light-Weight Multicast Schema for Wireless Sensor Network with Multi-Sinks	1047
Y. Min, H. Peng, Y. Bo, X. Mao, M. Dilin and G. Chuanshan	
Probabilistic Coverage Configuration for Wireless Sensor Networks	1051
D. Zhang, X. Ming, Y. Chen and S. Wang	
Transmission Range Adjustment in WSNs Based on Dynamic Programming Algorithm	1055
E. Zhao, B. Yi, H. Li and J. Yao	
An Energy-Efficient Cooperative MIMO Transmission Scheme for Wireless Sensor Networks	1059
W. Cheng, K. Xu, W. Liu, Z. Yang and Z. Feng	
Collective Real-Time QoS in Wireless Sensor Networks	1063
X.-Z. Lin, J.-J. Zhou and C.-D. Mu	
A Distributed Heuristics of Localization in Wireless Sensor Network	1067
W. Wang and B.-H. Soong	
RDRT: A Novel Roaming Agent-Based Directed Routing Tree Algorithm	1071
K. Li, X. Chen and Y. Cui	

Market-Based Adaptive Task Scheduling for Sensor Networks	1075
W. Zhe, Y. Yujie, J. Peng and W. Shu	
Energy Consumption Distribution-Aware Node Placement in Wireless Sensor Networks (WSNs) ...	1080
F. Yong, X. Zhang, S. Duan and W. Dong	
EEMC: An Energy-Efficient Multi-Tier Clustering Algorithm for Large-Scale Wireless Sensor Networks	1084
Y. Jin, L. Wang, Y. Kim and X. Yang	
Cluster Merging Algorithm with Link Optimization for Wireless Sensor Networks	1088
W. Zhou, H.-M. Chen and W.-H. Xie	
Research on Reliability Model of Large-Scale Wireless Sensor Networks	1092
W. Cai, X. Jin, Y. Zhang, K. Chen and J. Tang	
On the Tradeoff Between Robustness and Energy-Efficiency of the Routing Algorithm for Wireless Sensor Networks	1096
Z. Sun, R. Yu and S. Mei	
Study on Blind Paths in Wireless Sensor Networks	1101
H. Peng, C. Xun, H. Chen and C. Gao	
A Study on Wireless Sensor Networks Location	1105
B. Liu	
VOLUME III	
A Distributed Weight-Based Clustering Algorithm for WSNs	1109
Z. Fan and H. Zhou	
Dynamic Alliance Based on Genetic Algorithms in Wireless Sensor Networks	1114
S. Zhang, Z. Zhang, Q.-n. Lu and J. Chen	
Wireless Sensor Network Autonomic Agent Based on In- Cluster Directional Evidence Reasoning	1118
S. Tao, G. Rui, D. Li and X. Yang	
Loss Cumulant Generating Function Inference in Sensor Network	1122
Y. Li, W. Cai, G. Tian and W. Wang	
A Coverage-Preserving Density Control Algorithm Based-on Cooperation in Wireless Sensor Networks	1126
B. Yang, H. Yu, H. Li and H. Hou	
S_Firewall: A Firewall in Wireless Sensor Networks	1130
J. Ma, P. Yi, Y. Zhong and S. Zhang	
HETCP: A Hierarchical Energy Efficient Topology Control Protocol for Wireless Sensor Networks ..	1134
K. Du, X. Zhou, X. Zhu and Z. Li	
Searching Algorithm of the Optimal Sensor Set in Wireless Sensor Network	1138
S. Zhang, J. Chen, J. Jia and X.-R. Bao	
Wireless Sensor Network Positioning Scheme with Ring Overlapping Based on Hybrid Access of Received Signal Strength Indication	1142
D. Li, M. Lei, J. Chen and T. Sun	
The Architecture of Planning and Deployment Platform for Wireless Sensor Networks	1146
J. Li, Y. Bai, J. Ma, H. Ji and D. Qian	
Discuss in Round Rotation Policy of Hierarchical Route in Wireless Sensor Networks	1150
L. Li, H. Wu and C. Peng	

An Extended DISCUS Scheme for Distributed Source Coding in Wireless Sensor Networks	1155
Q. Ye, Y. Liu and L. Zhang	
GROUP: A Grid-Clustering Routing Protocol for Wireless Sensor Networks.....	1159
L. Yu, N. Wang, W. Zhang and C. Zheng	
Indoor Localization Scheme in Wireless Sensor Networks Using Spatial Information	1164
W. Shi, C. Huang, M. Shao, Y. Cheng and Z. Chen	
The Combination of the Optimal Number of Cluster-Heads and Energy Adaptive Cluster-Head Selection Algorithm in Wireless Sensor Networks.....	1169
Y. Tao and Y. Zheng	
Cooperative Transmission in the Wireless Sensors Network: Realization and Analysis.....	1173
J. Wei, H. Zhao and S. Wang	
The Research on Certainty-Based Secure Routing Protocol in Wireless Sensor Networks	1177
Y. Lan, Z. Zhao, F. Gao and Y. Ge	
Centroid Optimization Coverage and Polling the Sets of the "Coverage" Nodes: An Improved Coverage Scheme.....	1182
Z. Zhou and S. Wang	
Security	
An Improved Wireless Grid Security Infrastructure Based on Trusted Computing Technology.....	1186
F. Yan, H. Zhang, Z. Shen, L. Zhang and W. Qiang	
On the Security of Two Signature Schemes	1190
J. Zhang and J. Zou	
Information Hiding Based on GSM Full Rate Speech Coding	1194
H. Licai and S. Wang	
A Fast Vaccine Distribution Mechanism in Worm Defense System for Mobile Network	1198
Y. Guo and M. Zhu	
A Secure Admission Control Scheme for P2P Networks	1202
X.-M. Wang	
A WPKI-Based Security Mechanism for IEEE 802.16e.....	1206
F. Liu and L. Lu	
Security Analysis and Improvement for Mesh Mode in IEEE802.16	1210
F. Yang	
Formal Verification of EAP-AKA with Improved Authentication Tests	1214
X. Li, L. Hao, S. Yang and J. Li	
A (t, n) Threshold Signature Scheme Against Conspiracy Attack	1218
M. Zheng, J. Zhu and G. Cui	
Policy-Based Access Control Model for Mobile Agent System.....	1222
C. Xiao-Su and L. Zhi	
A Study on the Security Features of the Parlay API Based Application Behavior	1226
P. Jin and F.-C. Yang	
Homomorphic Encryption Scheme of the Rational	1230
P. Zhu, Y. He and G. Xiang	
The Mobile Agent Security Enhanced by Trusted Computing Technology	1234
X. Wu, Z. Shen and H. Zhang	

Analysis and Improvement of Return Routability Procedure for Network Mobility	1238
R. Kong and H. Zhou	
Multimedia Technologies	
An Efficient Block-Matching Motion Estimation Algorithm for H.264 Video Coding Standard	1242
W. Zhou, H.S. Shi, Z.M. Duan and X. Zhou	
Study and Analysis of an Error Resilient Technique in H.264 Video Using Flexible Macroblock Grouping.....	1246
A. Sood, N.K. Chilamkurti and B. Soh	
An Optimized Rate Control Algorithm for H.264 Under Low Delay Constraint.....	1250
L.-F. Wang, J.-W. Niu, C. Xiao and E.-H. Lu	
Error and Rate Joint Control for Wireless Video Streaming.....	1254
Z. Wang, R. Hu, Y. Fu and G. Tian	
Satellite Hyperspectral Imagery Compression Algorithm Based on Adaptive Band Regrouping.....	1259
Z. Zhou, Y. Tan and J. Liu	
A Scalable Wideband Speech Coder for Mobile Ad Hoc Networks.....	1263
Y. Yang, R. Hu, H. Ai and Y. Luo	
Optimization of an AVS Audio Decoder on DSP	1267
C. Shuixian, A. Haojun, H. Ruimin and Y. Yang	
PRATM - Derived PRASAN Error Concealment Model for Efficient Transmission of MPEG Video Streams Over ATM Networks	1271
P. Kannan	
A Fast Watermarking Technology for Compressed Video.....	1275
Y. Wang	
Adaptive Quantization for Interlaced Video Coding	1278
X. Han, W. Liu, X. Jin and Z. Ma	
Adaptive Motion Vector Prediction Based on Spatiotemporal Correlation.....	1282
J. Liu, B. Feng, Z. Ma and W.-Y. Liu	
Adaptive Fast Inter Mode Decision for Wireless Video Applications Using H.264/AVC	1286
L. Qiong, R. Hu, S. Ye and Z. Li	
Speech Enhancement Under Aviation Noise.....	1290
Y. Yao, B. Yi and Y. Yao	
MPEG-2 to AVS-M Transcoder with Mode Decision Optimization for Mobile Video Communication.....	1294
Z. Han, R. Hu, L. Zhu and Q. Liu	
A New Intra Coding Method for Spatial Scalability in Scalable Video Coding.....	1298
Z. Wang and J. Liu	
DCT-Based Speech Enhancement Using a New Speech Variance Estimation.....	1302
O. Shifeng and Z. Xiaohui	
A Fair Anonymous Multicast Fingerprinting Scheme.....	1306
R. Yanzhen, R. Hu and A. Haojun	
Predictive Picture Refresh Based on Scene-Context Reference Picture for Video Transmission	1310
Y.-H. Ai, W. Ye, S.-L. Feng, B. Hu and M. Xie	

Fast Algorithm for Sub-Pixel Motion Estimation Using Parabola Model for H.264/MPEG4 AVC	1314
Z. Wang, Q. Xue, W. Zeng, Z. Fang, A. Liu, Y. Xia and S. Wu	
A Novel Method of Dynamic Rate Adaptation for Streaming Media Server	1318
Y. Tong, Y. Li and X. Gong	
Robust Audio Coding Over Wireless Channels	1322
Y. Zhang and Y. Yang	
Fast Motion Estimation with Multilevel Successive Elimination Algorithm and Early Termination for H.264/AVC Video Coding.....	1326
T. Chen and Q. Xue	
Detection and Localization of Transmission Error in MPEG-4 Video	1330
D. Xuewen, Z. Yan, J. Wu, C. Yang and Y. Yuan	
Network Protocols, Traffic Analysis and Congestion Control	
Adaptive MAC Scheduling Using Channel State Diversity for Wireless Networks	1334
J. Zhang, Y.P. Chen and I. Marsic	
A Power-Consumption Analysis for 802.11DCF.....	1338
L. Ning	
A Method for Improving MAC Level Fairness on IEEE802.11DCF.....	1342
M. Kawasaki, T. Shigeyasu and H. Matsuno	
Simulation-Based Performance Analysis of Dynamic Channel Scheduling Algorithm.....	1346
K. Amaief and J. Wu	
Two-Tier Scheduling Algorithm for Uplink Transmissions in IEEE 802.16 Broadband Wireless Access Systems.....	1352
L.-F. Chan, H.-L. Chao and Z.-T. Chou	
A Comparative Study of Voice Over Wireless Networks Using NS-2 Simulation with an Integrated Error Model.....	1356
B. Munir, N.K. Chilamkurti and B. Soh	
Admission Control Based on Channel Time Classification for EDCA in IEEE 802.11e Networks.....	1361
J. Zhuang, F. Ren and C. Lin	
Comparison of Super-Resolution Algorithms for TOA Estimation in Indoor IEEE 802.11 Wireless LANs	1365
F. Zhao, W. Yao, C.C. Logothetis and Y. Song	
An Anti-Collision Algorithm for Active RFID	1369
N. Li, X. Duan, Y. Wu, S. Hua and B. Jiao	
Throughput Model of IEEE 802.11 Networks with Capture Effect.....	1373
X. Ge, D. Dongyan and Y. Zhu	
A Novel Solution to the Reader Collision Problem in RFID System.....	1377
D. Wang, J. Wang and Y. Zhao	
Effectiveness of the Limited Retransmission on the WLANs Using Error-Prone Channel	1381
H.M. AlSabbagh, J. Chen and Y. Xu	
ALOHA-Based Anti-Collision Algorithms Used in RFID System.....	1386
L. Liu and S. Lai	

Virtual Contention Window Based Scheme for Service Differentiation Over IEEE 802.11 Wireless LAN	1390
Y. Xu and S. Wang	
Routing in LEO/MEO Double-Layered Satellite Networks	1395
Z. Yuan, J. Zhang and Z. Liu	
Energy-Efficient Scheduling of TCP Packet Transmission Over Satellite Channels	1399
Z.-T. Li, B. Zeng and J. Wei	
Design and Evaluation of Strategies for Full Mobility Provision in Bluetooth Wireless Personal Area Networks	1403
A. Hernández-Solana, I. Alastruey, J. Chóliz, J.L. Valenzuela and A. Valdovinos	
Adaptive Bandwidth Allocation for Multi-Media LEO Satellite Systems	1407
D. Yan, H. Lin, X. Wang and H. Zailu	
Handover Decision Algorithm for Fixed to Mobile Handover in Heterogeneous Networks	1411
J.M. Lee, O. Sik Yang, J.K. Choi, J.I. Lim and V. Heo	
Research on Hierarchical Mobile IP Optimal Size of Regional Networks	1415
L. Jun, S. Mei and J. Song	
A Lightweight Multi-Source IP Multicast Protocol	1419
C. Yue, P. Huang and C. Pu	
An Enhanced Scheme for the IEEE 802.15.4 Multi-Hop Network	1424
Y.-M. Zou, M.-H. Sun and R. Peng	
An Effective Integration of Hierarchical Cellular and Hierarchical Mobile MPLS	1428
X. Yuan, Q.-P. Wang, Q.-C. Yu, L.-s. Kang and Y. Chen	
QoS Routing Algorithm Subject to Delay Constraint for Satellite MPLS Networks	1431
Z. Tao and Z. Jun	
Handoff in Virtual Cell System Based on Distributed Antenna	1435
Y. Mo, J. Xie and B.X. Huang	
CODMRP: Cluster-Based On Demand Multicast Routing Protocol	1439
X.-M. Sun, W.-J. Liu, Z.-Q. Zhang and Y. Zhao	
The Research and Practice of Mobile IP Position Management Based on Virtual Private Network ...	1444
J.-S. Xue and G.-X. Wang	
Impact of Cell Motion Patterns on Handovers in Low Earth Orbit Satellite Networks	1447
Q. Yong, Z. Jun and Z. Tao	
A Survey of Multicast Control in Mobile Internet	1451
W. Li, L. Dong, B. Yi and C. Cheng	
Seamless Handover Mechanism for Fixed-Mobile Convergence Service in BcN	1455
O.S. Yang, G.C. Seong, J.K. Choi, D.H. Kim and D.H. Kim	
A New Handoff Ordering and Reduction Scheme Based on Road Topology Information	1459
A.N. Khan and S.X. Jun	
Opportunistic Scheduling for Multiclass Users with Different QoS Constraints in Wireless Data Networks	1463
D. Liao and L. Li	
A Novel IPv6 Communication Framework: Mobile SHIM6 (MSHIM6)	1467
T. Chen and W. Liu	

A Mobile IPv6 Firewall Traversal Scheme Integrating with AAA	1470
J.L. Pan and C.S. Zhi	
A Pre-Anticipated Handover Seamless QoS Scheme for IEEE 802.16e Based on Mobile Station Character Pattern.....	1476
Y. Zhang, X. Jiang and Z. Lin	
Research on Route Optimization in Mobile Networks	1480
W. Su, H. Zhang and Y. Ren	
A QoS Pre-Configure Mechanism on DiffServ Mobile IPv6 Networks	1484
W. Sun, S. Yang, D. Wang and L. Zhang	
QoS Routing in IPv6 with Link-Utilization-Ratio Single Metric	1488
J. Zhang, H. Hu, M. Chen and Y. Mo	
An Analysis of Multicast Support for Mobile Hosts Using Mobile IPv6	1493
L. Zhou and Y.-M. Sun	
An Improved Implicit Token Passing Algorithm for DAP-NAD in MIL-STD-188-220C	1497
J. Yang and Y. Liu	
Effects of Mobility on Mean Packet Delay Over Integrated Services Wireless Networks	1501
J. Padilla, J. Paradells and A. Rodríguez	
An Improved Long Transmission Protocol for VDL Mode 4	1505
X. Li, K. Liu and J. Zhang	
Scalable Fair Random Early Detection	1509
X.-H. Lin, K.-Y. Zhou, H. Wang and G.-C. Su	
An Improved Algorithm for Minimizing Preemption Cost in MPLS Networks.....	1513
X. He, Q. Chu and M. Zhu	
TCP-Friendly Rate Control for Streaming Service Over 3G Network.....	1517
Y. Fu, R. Hu, G. Tian and Z. Wang	
RR-CETEN Algorithm: Making TCP More Robust Against Spurious Retransmissions	1521
D. Wang, X.H. Li and D.F. Zhang	
A New Mechanism to Improving Wireless TCP Performance Based on P-ACK from Link Layer	1525
L. Zhang and D. Qi	
Multi-Scale Network Traffic Prediction Using a Two-Stage Neural Network Combined Model.....	1529
H.-L. Feng, C. Di, Q.-J. Lin and C.-X. Chen	
Hierarchical Self-Healing Rings for Mobile Ethernet Networks	1534
Y. Zhan, M. Ji and S. Yu	
The Waiting Time Distribution of a Pareto Service Self- Similar Queuing Model for Wireless Network Nodes	1538
S. Xu, B. Xu and D. Peng	
A Discrete-Time Queue with Discrete Autoregressive Process of Order 1 Fluid in High-Speed Networks.....	1541
W.-H. Zhou, Y.-J. Li and S.Y. Yang	
The On-Line Prediction of Self-Similar Traffic Based on Chaos Theory	1545
D. Li, B. Ji and H. Xiang	
Scheduling for Wireless Networks Using Fuzzy Logic.....	1549
Y. Qin, W. Ye and S. Feng	

A Call Admission Control Scheme Using Statistical Priority Queue	1553
Y. Qin, W. Ye and S. Feng	
Data Management, Operating Systems and Mobile Computing Systems	
A Dynamic Load Balancing Algorithm for Distributed SLEE in Mobile Service Provisioning	1557
Y. Zhao and F. Yang	
A Study Towards Enhanced Reliability Performance of Remote Control and Monitoring Application Over Commercial Wireless Communication Networks	1561
Y. Liu and R. Jäntti	
Accurate Localization and Tracking of Mobile Terminal	1565
M. Anisetti, V. Bellandi, E. Damiani and S. Reale	
Distributed Internet Telephony System Using a Novel P2P Architecture	1569
D. Bin, W. Furong and L. Jian	
A Novel Software Radio Platform Based on General PC and Network	1573
Q. Wu, L. Gan and Q. Fan	
Offline Text Message Storage and Recovery Based on Inverted Files in Peer-to-Peer Internet Telephony	1577
W. ZhongXin and D.P. Qian	
An Improved Approach of Fast Path Restoration for SDHBased ASON - The Next Generation Infrastructure of Mobile Network	1581
J. Zhang and Q. Mao	
Implementing Context-Aware Computing in 802.11 LAN	1585
C.-D. Wang, X.-F. Wang and M. Gao	
HOPA: A Near Optimization Algorithm for Pathfinding	1589
J. Wang, Q. Wang, B. Chen and H. Chen	
Design of Media Gateway Controller in 3G Softswitch	1593
X. Li, Y. Shi, Y. Zheng, Y. Feng and J. Luo	
Wireless Digitization Telecommunication Application in the Forest-Fire Preventing	1597
Z. Dengyi, X. Zhang and D. Geng	
A Genetic Algorithm for Evolutionary Voting System	1601
W. Jun, X. Dan and Z. Zhen	
An Approach for Describing SOA	1605
X. Dan, Y. Shi, Z. Tao, X.-Y. Jia, Z.-Q. Liang and J.-F. Yao	
Web Services Matchmaking with Incremental Semantic Precision	1609
B. Dong-Wei, C.-C. Liu, P. Yong and J.-L. Chen	
Study and Implementation of a Heavy Server Architecture	1613
R. Liyong and W. Tao	
A Data Synchronization Mechanism for Cache on Mobile Client	1617
S.-Y. Wang, L. Zhong and Y.-L. Cao	
A Hybrid Strategy of Location Database Clustering and Dynamic Hierarchical Caching in PCS Networks	1622
L. Hong, Y. Lu, Q. Wei, J. Liu and Q. Lou	
Performance Tests and Application Strategies of Spatial Indexes in the Embedded-GIS Data Management	1626
C.-J. Ma, X.-C. Wu and X. Zhong	

Uncertain Data Management for Wireless Sensor Networks Using Rough Set Theory	1630
Z.-F. Dai, Y.-X. Li, G.-L. He, Y.-L. Tong and X.-J. Shen	
Bandwidth Aware Cache Invalidation in Error Prone Wireless Mobile Environments	1635
S. Kattepogu and K. Garg	
Rank Aggregation Algorithms Based on Voting Model for Metasearch	1639
Y. Yu, X. Chen and S. Zhu	
A Predicted Region Based Cache Replacement Policy for Location Dependent Data in Mobile Environment	1643
A. Kumar, M. Misra and A.K. Sarje	
A Modified O(1) Scheduling Algorithm for Real-Time Tasks	1647
W. Chi, H. Zhou, M. Chao and C. Nian	
On-Demand Software Streaming System for Embedded System	1651
S. Kim, Y. Oh, H. Kim, M. Kim and J. Choi	
A New Type of NAND Flash-Based File System: Design and Implementation	1655
T. Chen, X. Wang, W. Hu and W. Duan	
An Efficient Power Management Mechanism for WiFi-Based Handheld Systems	1659
J.-H. Min, H. Cha and V.P. Srin	
LIMOS: A Tiny Real-Time Micro-Kernel for Wireless Objects	1663
H.-Y. Zhou, K.-M. Hou, J.-P. Chanet, C. de Vault and G. De Sousa	
Author Index Volume I	follows page 408
Author Index Volume II	follows page 810
Author Index Volume III	follows page 1258
Author Index Volume IV	follows page 1666