



co-sponsored by



New Technologies, Mobility and Security

Proceedings of NTMS'2008 Conference and Workshops

NTMS'2008 PARTNERS



NTMS'2008 ORGANIZERS



TABLE OF CONTENTS

A Bayesian Filter to Detect Misbehaving Nodes in MANETs	1
<i>Youcef Beghriche, Vincent Toubiana and Houda Labiod</i>	
A Distributed Dynamic Mobility Management Scheme Designed for Flat IP Architectures	6
<i>Philippe Bertin, Servane Bonjour and Jean-Marie Bonnin</i>	
A Heuristic Approach to Minimum-Cost Network Hardening Using Attack Graph	11
<i>Tania Islam and Lingyu Wang</i>	
A New Approach for Wireless Sensor Network Management: LiveNCM	16
<i>Aurélien Jacquot, Jean-Pierre Chanet, K. M. Hou, X. X. Diao and Jian-Jin Li</i>	
A New Link Adaptation Scheme for IEEE 802.11 WLANs	22
<i>A. R. Rebai, M. Fliss, S. Jarbouï and S. Hanafi</i>	
A New SIP Based Services Connecting IMS and DLNA for Future Converged Networks	27
<i>S. Vijay Anand</i>	
A New Wireless Fiber Optic Sensor for Monitoring Breath Motion	32
<i>Xiaobin Xu, Chunxi Zhang, K. M. Hou, Hao Ding and X. X. Diao</i>	
A Simple and Efficient Detection of Wormhole Attacks	37
<i>Dang Quan Nguyen and Louise Lamont</i>	
AdaMS: An Adaptation Multimedia System for Heterogeneous Environments	42
<i>Fayçal M'hamed Bouyakoub and Abdelkader Belkhir</i>	
An Approach to Improve the Radio Channel Bandwidth in Hierarchical Mobile IP Networks (HMIPv6-BI)	47
<i>L. Becerra, J. Padilla and J. Paradells</i>	
An Autonomous Data Gathering Scheme Adaptive to Sensing Requirements for Industrial Environment Monitoring	52
<i>Yoshiaki Taniguchi, Naoki Wakamiya, Masayuki Murata and Takashi Fukushima</i>	
An Efficient Self-Healing Key Distribution Scheme	57
<i>Biming Tian, Song Han and Tharam S. Dillon</i>	
An Improved Single Home Base Station Localization Method	61
<i>Lingwen Zhang and Zhenhui Tan</i>	
An Optimization Approach for Designing Wireless Sensor Networks	65
<i>F. Bendali, C. Duhamel, K.-M. Hou, J. Mailfert and A. C. Santos</i>	
An Overlay Network for a SIP Servlet-Based Service Execution Environment in Stand Alone MANETs	70
<i>Slimane Bah, Roch Glitho and Rachida Dssouli</i>	
An RF Channel Emulator-Based Testbed for Cooperative Transmission Using Wireless Sensor Devices	75
<i>Jin Woo Jung and Mary Ann Ingram</i>	
Annulling Traps & Fixed Traps in Chaos Cryptography	81
<i>Stamatios V. Kartalopoulos</i>	
AOnesC: An Aspect-Oriented Extension to nesC	85
<i>Erandi Lakshika, Chamath Keppitiyagama and Dulan Wathugala</i>	

Architecture for Consuming Long-Lived Mobile Web Services over Multiple Transport Protocols.....	90
<i>Fahad Aijaz, Mohammad Adeli Seyed and Bernhard Walke</i>	
Aspect Oriented Modeling of Component Architectures Using AADL.....	95
<i>Lydia Michotte, Thomas Vergnaud, Peter H. Feiler and Robert B. France</i>	
Attack Scenarios Reconstruction and Paths of Packets Transfer Identification in Multihop Wireless Systems	101
<i>Slim Rekhis and Nouredine Boudriga</i>	
Automatic 3D Facial Feature Extraction Algorithm.....	106
<i>Vandana Dixit Kaushik, S. Singh, H. Tiwari, S. K. Goyal, V. K. Pathak and P. Gupta</i>	
Biometric Identification System Based on Electrocardiogram Data	111
<i>Y. Gahi, M. Lamrani, A. Zoglat, M. Guennoun, B. Kapralos and K. El-Khatib</i>	
Characterizing On-Body Wireless Sensor Networks	115
<i>Carla Oliveira, Luís Pedrosa and Rui M. Rocha</i>	
Computation of SAR for Two Antennas Used in Mobile Communication Systems: Monopole and Patch	120
<i>M. Bouhorma, F. Elouaai and A. Mamouni</i>	
Connectivity Aware Instrumental Approach for Measuring Vocal Transmission Quality Over a Wireless Ad-Hoc Network	124
<i>Sofiene Jelassi and Habib Youssef</i>	
Controlling Physical Objects with Privacy using Secure RFID System	129
<i>Fahad Samad and Sadeq Ali Makram</i>	
Cooperative Inter-Vehicle Communication Protocol Dedicated to Intelligent Transport Systems.....	134
<i>X. X. Diao, J. J. Li, K. M. Hou, H. Y. Zhou and Aurelien Jacquot</i>	
Coverage Area Computation on the Run for Efficient Sensor Data Collection	139
<i>Prem Prakash Jayaraman, Arkady Zaslavsky and Jerker Delsing</i>	
Decentralized Alerts Correlation Approach for DDoS Intrusion Detection	144
<i>Rida Khatoun, Guillaume Doyen, Dominique Gai�ti, Radwane Saad and Ahmed Serhrouchni</i>	
Delay Model for Saturated IEEE 802.16 Networks.....	149
<i>Hai L. Vu and Sammy Chan</i>	
Deployment of a Security Assurance Monitoring Framework for Telecommunication Service Infrastructures on a VoIP Service.....	154
<i>Moussa Ouedraogo, Djamel Khadraoui, Beno�t De R�mont, Eric Dubois and Haralambos Mouratidis</i>	
Distributed Intrusion Detection Systems of Computer Communication Networks	163
<i>Adam Grzech and Mariusz Kazmierski</i>	
Efficiency of PRI and WRR DiffServ Scheduling Mechanisms for Real-Time Services on UMTS Environment.....	168
<i>Nuno Vasco Lopes, Maria Jo�o Nicolau and Alexandre Santos</i>	
Efficient Seamless Non-Broadcast Routing Algorithm for Wireless Mesh Network	174
<i>Ghassan Kbar and Wathiq Mansoor</i>	
Employing Clustering Techniques in Mobile Network Planning.....	179
<i>Lamiaa Fattouh Ibrahim and Manal Hamed Al Harbi</i>	

End-to-End QoS Improvement of HSDPA End-User Multi-Flow Traffic Using RAN Buffer Management	184
<i>Suleiman Y. Yerima and Khalid Al-Begain</i>	
Energy Adaptive Approach In a Multi-Channel Dissemination-Based Network.....	189
<i>Ahmad S. Al-Mogren</i>	
Fault Analysis Attack on an FPGA AES Implementation.....	194
<i>Farouk Khelil, Mohamed Hamdi, Sylvain Guilley, Jean Luc Danger and Nidhal Selmane</i>	
Fire Detection using Wireless Sensor Networks: An Approach Based on Statistical Data Modeling	199
<i>G. Boggia, P. Camarda, L. A. Grieco and M. R. Palattella</i>	
Formal Modelling and Validation of a Novel Energy Efficient Cross-Layer MAC Protocol in Wireless Multi Hop Sensor Networks Using Time Petri Nets.....	204
<i>Bouabdellah Kechar and Larbi Sekhri</i>	
Framework for Embedding Tacit Knowledge in Pedagogical Model to Enhance E-Learning.....	210
<i>Rizwana Irfan and Maqbool Uddin Shaikh</i>	
From Agents and Plugins to Plugin-Agents, Concepts for Flexible Architectures.....	214
<i>Benjamin Schleinker, Lawrence Cabac, Daniel Moldt and Michael Duvigenau</i>	
Hybrid Integration Approach for Heterogenous Information Sources: Applied to Medical Resources and Patients Medical Documents.....	219
<i>L. Cherrat, M. Ezziyani, M. Essaaidi, M. Bennouna and M. Ezziyani</i>	
Impact of IPSec on the Performance of the IEEE 802.16 Wireless Networks	224
<i>E. Barka, K. Shuaib and H. Chamas</i>	
Interactions Between Agents As Shared Resources in Multi-Agents Systems.....	229
<i>Adil Sayouti, Fatima Qrichi Aniba and Hicham Madromi</i>	
Introduction of Security in the Service Level Negotiated with SLNP Protocol	234
<i>M. A. Chalouf, X. Delord and F. Krief</i>	
Intrusion Detection for Computational Grids	239
<i>Alexandre Schuler, Kleber Vieira, Carlos Westphall, Carla Westphall and Sekkaki Abderrahim</i>	
Joint Optimization of Node Cooperation and Energy Saving in Wireless Sensor Networks with Multiple Access Channel Setting.....	245
<i>Navid MirMotahhary, S. Ali. A. Fakoorian, Hamed Asadi, Reza Khaniki and Zahra Rahimkhani</i>	
Link-Based VoIP Aggregation in Mesh Networks	250
<i>J. Okech, A. Kurien and M. Odhiambo</i>	
Localization of Anchor Nodes for Wireless Sensor Networks.....	256
<i>Qiao-Ling Du, Zhi-Hong Qian, Hong Jiang and Shu-Xun Wang</i>	
Low Cost Differential GPS Receivers (LCD-GPS): The Differential Correction Function	261
<i>Messaoud Kara and Kun-Mean Hou</i>	
MASA: End-to-End Data Security in Sensor Networks Using a Mix of Asymmetric and Symmetric Approaches.....	267
<i>Hani Alzaid and Manal Alfaraj</i>	
MEHR: Multi-Hop Energy-Aware Hierarchical Routing for Wireless Sensor Networks	272
<i>Abolfazl Asudeh and Ali Movaghar</i>	
Mobile Payment Protocol for Micropayments: Withdrawal and Payment Anonymous	278
<i>Rafael Martínez-Peláez, Francisco Rico-Novella and Cristina Satizábal</i>	

Mobility Impact on DSR-Based Power-Aware Ad hoc Routing Protocol.....	283
<i>Fedoua Didi, Benamar Bouyedou, Mohamed Feham and Houda Labiod</i>	
Mobility Simulation for the Evaluation of UMTS Power Control Algorithms.....	288
<i>C. Joumaa, A. Caminada and S. Lamrous</i>	
Mobility Support and Improving GPSR Routing Approach in Vehicular Ad Hoc Networks	293
<i>N. Brahmı, M. Boussedjra and J. Mouzna</i>	
Multi Layer Cyber Attack Detection through HoneyNet.....	296
<i>J. S. Bhatia, Rakesh Sehgal, Bharat Bhushan and Harneet Kaur</i>	
Multihop Data Message Transmission with Inter-Vehicle Communication and Store-Carry-Forward in Sparse Vehicle Ad-Hoc Networks (VANET).....	302
<i>Hiroaki Oka and Hiroaki Higaki</i>	
Multipath Routing Scheme in Solar Powered Wireless Sensor Networks	308
<i>Thirumal Kandasamy and Jaya Kumar Krishnan</i>	
Municipal Wireless Networks Planning	313
<i>Paolo Giacomazzi and Alessandro Poli</i>	
Mutual Authentication for SIP: A Semantic Meaning for the SIP Opaque Values	320
<i>Thomas Guillet, Ahmed Serhrouchni and Mohamad Badra</i>	
NETPOPPS: A Network Provider Oriented Peer-to-Peer System	325
<i>Marguerite Fayçal and Ahmed Serhrouchni</i>	
Offline Approach to Modeling and Optimization of Flows in Peer-to-Peer Systems.....	330
<i>Krzysztof M. Walkowiak</i>	
On Efficient Security Modelling of Complex Interconnected Communication Systems Based on Markov Processes	335
<i>D. A. Karras and V. C. Zorkadis</i>	
On Improved Event Scheduling Mechanisms for Wireless Communications Simulation Modelling	340
<i>P. M. Papazoglou, D. A. Karras and R. C. Papademetriou</i>	
On the Authentication of RFID Systems with Bitwise Operations	345
<i>Basel Alomair and Radha Poovendran</i>	
Path Selection Method for Localized QoS Routing.....	351
<i>Ahmed S. Alzahrani and Michael E. Woodward</i>	
Performance Analysis of Single Relay Cooperative ARQ protocol under Time Correlated Rayleigh Fading Channel	357
<i>Hong Il Cho, Chan Yong Lee and Gang Uk Hwang</i>	
Performance Evaluation for Saturated 802.16 Networks with Binary Backoff Mechanism	363
<i>Hai L. Vu and Sammy Chan</i>	
Performance Evaluation of the Location-Based Protocol DREAM for Large Mobile Ad Hoc Networks	368
<i>M. Bakhouya and N. Cottin</i>	
Performance Tuning of Steganography Algorithm for Privacy Preserving Association Rule Mining in Heterogeneous Data Base.....	374
<i>Mahmoud Hussein, Ashraf El-Sisi and Nabil Ismail</i>	
Private Communication and Authentication Protocol for Wireless Sensor Networks	379
<i>Sk. Md. Mizanur Rahman, Nidal Nasser and Atsuo Inomata</i>	

Proposal of a Novel Bandwidth Management Framework for IEEE 802.16 Based on Aggregation.....	385
<i>Mohamad El Masri, Slim Abdellatif and Guy Juano</i>	
Query Optimization in a Mediator for Digital Libraries.....	390
<i>Faouzia Wadjinny and Dalila Chiadmi</i>	
Querying and Semantic Mapping Approaches for Semantic Resolution in E-Learning System	395
<i>Rashid Jayousi and Yasmin Bali</i>	
SCAR: Sequential Coordinate Routing Algorithm for Autonomous Wireless Sensor Network.....	400
<i>Amir M. Jafari, Adam Sklorz and Walter Lang</i>	
ScatterFactory2: An Architecture Centric Framework for New Generation ScatterWeb.....	405
<i>Mohammad Al Saad, Elfriede Fehr, Nicolai Kamenzky and Jochen Schiller</i>	
Securing Roaming and Vertical Handover between Mobile WiMAX and UMTS.....	411
<i>Neila Krichene and Nouredine Boudriga</i>	
Security Analysis and Security Optimizations for the Context Transfer Protocol	417
<i>Fabien Allard, Jean-Michel Combes, Rafa Marin and Antonio F. Gomez</i>	
Security Analysis of Tu and Piramuthu's Protocol	422
<i>Jorge Munilla and Alberto Peinado</i>	
Security Oriented Analysis of B92 by Model Checking.....	427
<i>Mohamed Elboukhari, Abdelmalek Azizi and Mostafa Azizi</i>	
Self Organizing Maps for Synchronization in Wireless Sensor Networks	432
<i>Luca Paladina, Antonino Biundo, Marco Scarpa and Antonio Puliafito</i>	
Specification of Rating Function of Online Charging System in 3GPP IP Multimedia System (IMS) Environment.....	437
<i>Hanane Oumina and Daniel Ranc</i>	
Stateful Firewalling for Wireless Mesh Networks.....	442
<i>P. Neira, R. M. Gasca, Leonardo Maccari and L. Lefèvre</i>	
Support Vector Machines for Multiple Targets Tracking with Sensor Networks	448
<i>A. El Gonnouni, S. Pino Povedano, F. J. González Serrano and A. Lyhyaoui</i>	
Survey of Security Requirements, Attacks and Network Integration in Wireless Mesh Networks	453
<i>Hassen Redwan and Ki-Hyung Kim</i>	
The Optimistic Schemes of Cluster Analysis and k-NN Classifier Method in Detecting and Counteracting Learned DDoS Attack	459
<i>Edwin R. Ramos, Sooyoung Chae, Mansig Kim and Myeonggil Choi</i>	
The Relationship between Cyber Crime and Mental Illness	464
<i>Shabana Kabeer and Maqbool Uddin Shaikh</i>	
Threat Modeling in Pervasive Computing Paradigm	469
<i>Nazir A. Malik, Muhammad Younus Javed and Umar Mahmud</i>	
Time and Location Based Services with Access Control	474
<i>Clara Bertolissi and Maribel Fernández</i>	
TLS Tandem.....	479
<i>Mohamad Badra and Pascal Urien</i>	
Towards Efficient Over-Encryption in Outsourced Databases Using Secret Sharing.....	485
<i>Shuai Liu, Wei Li and Lingyu Wang</i>	

Towards Optimized TCP/IP Covert Channels Detection, IDS and Firewall Integration.....	490
<i>Senda Hammouda, Lilia Maalej and Zouheir Trabelsi</i>	
Voronoi-Based Sensor Network Engineering for Target Tracking Using Wireless Sensor Networks	495
<i>Manel Abdelkader, Mohamed Hamdi and Noureddine Boudriga</i>	
WMTP - A Modular WSN Transport Protocol: The Fairness Module.....	501
<i>Luis D. Pedrosa and Rui M. Rocha</i>	
Author Index	