

WONS 2009

Sixth International Conference on
Wireless On-demand Network Systems and Services

Snowbird, Utah, USA February 2-4, 2009



TABLE OF CONTENTS

Session 1: Routing in MANETs

- *A Simulation-based Performance Comparison Study of Stability-based Routing, Power-aware Routing and Load-balancing On-Demand Routing Protocols for Mobile Ad hoc Networks*.....1
Natarajan Meghanathan (Jackson State University), Leslie Milton (US Army Engineer Research & Development Center)
- *TO-GO: TOpology-assist Geo-Opportunistic Routing in Urban Vehicular Grids*.....9
Kevin Lee, Uichin Lee, Mario Gerla (UCLA)
- *Cluster-based Inter-domain Routing (CIDR) Protocol for MANETs*.....17
Biao Zhou, Zhen Cao, Mario Gerla (UCLA)
- *Optimal Routing and Scheduling for Deterministic Delay Tolerant Networks*..... 25
David Hay, Paolo Giaccone (Politecnico di Torino)

Poster Session 1

- *Node Presence Detection with Reduced Overhead*.....33
Thi Minh Chau Tran, Björn Scheuermann, Martin Mauve (Heinrich Heine University)
- *On-demand service composition based on natural language requests*.....41
Florin-Claudiu Pop, Marcel Cremene, Mircea Vaida (Technical University of Cluj-Napoca), Michel Riveill (University of Nice)
- *Pricing for Heterogeneous Services in OFDMA 802.16 Systems*.....45
Hakyung Jung (Seoul National University), Bruno Tuffin (INRIA Rennes-Bretagne Atlantique)
- *Study of Randomly Replicated Random Walks For Information Dissemination Over Various Network Topologies*49
Dimitris Kogias, Ioannis Stavrakakis (National And Kapodistrian University of Athens), Konstantinos Oikonomou (Ionian University)
- *Using Graphical Process Modeling for Realizing SOA Programming Paradigms in Sensor Networks*.....57
Nils Glombitza, Martin Lipphardt, Christian Werner, Stefan Fischer (University of Luebeck)

Session 2: Physical Layer

- *Decentralized Link Adaptation for Multi-link MIMO Interference System*.....65
Mirza Tayyab Mehmood, Abdelwaheb Marzouki, Djamal Zeglache (TELECOM & Management Sud Paris)
- *Performance of Multicarrier CDMA Systems with Improved Pilot-Aided Channel Estimation*.....72
Deolinda Cardoso (Brazilian Navy), Fabian Backx, Raimundo Sampaio-Neto (PUC – Rio)

Session 3: Efficient Communication

- *Non-interactive Localization of Cognitive Radios Based on Dynamic Signal Strength Mapping*.....77
Song Liu (Rutgers University), Yingying Chen (Stevens Institute of Technology), Wade Trappe (Rutgers University), Larry Greenstein (Rutgers University)
- *An Energy-Savvy, Application-Aware MAC*.....85
Renato Lo Cigno, Matteo Nardelli (University of Trento), Michael Welzl (University of Innsbruck)
- *Improving Preamble Sampling Performance in Wireless Sensor Networks with State Information*.....93
Erwing Sanchez, Claude Chaudet (TELECOM ParisTech), Maurizio Rebaudengo (Politecnico di Torino)

Session 4: Wireless Sensor Networks

- *Advantages of Virtual Addressing for Efficient and Failure Tolerant Routing in Sensor Networks*.....101
Abdalkarim Awad, Lei Shi, Reinhard German, Falko Dressler (University of Erlangen)
- *TinyTorrents -Integrating Peer-to-Peer and Wireless Sensor Networks*.....109
Ciaran Mc Goldrick, Michael Clear, Ricardo Simon Carbajo, Karsten Fritsche, Meriel Huggard (Trinity College)
- *A Distributed Solution to Estimation Problems in Wireless Sensor Networks Leveraging Broadcast Communication*.....117
Simone Del Favero, Federico Librino, Francesco Zorzi, Michele Zorzi (Università di Padova), Albert Harris III (University of Kansas)
- *Impact of Correlation in Node Locations on the Performance of Distributed Compression*.....125
Frank Oldewurtel, Janne Riihijärvi, Petri Mähönen (RWTH Aachen University)

Special Session: Social Networks

- *Privacy Preserving Social Networking Through Decentralization*.....133
Thorsten Strufe, Refik Molva, Leucio Antonio Cutillo (Eurécom)
- *Findings from an Empirical Study of Fine-grained Human Social Contacts*.....141
Yi Wang, Bhaskar Krishnamachari, Thomas Valente (University of Southern California)
- *A Case for P2P Infrastructure for Social Networks -Opportunities & Challenges*.....149
Sonja Buchegger (Deutsche Telekom Laboratories), Anwitaman Datta (NTU Singapore)
- *Using Co-presence Communities to Enhance Social Recommendation*.....157
Laurissa Tokarchuk, Karen Shoop (Queen Mary University of London), Athen Ma (Macao Polytechnic Institute)
- *Joint Interest-and Locality-Aware Content Dissemination in Social Networks*.....161
Eva Jaho, Ioannis Stavrakakis (National & Kapodistrian University of Athens)

Poster Session 2

- *A Performance Analysis Emulation Framework for Wireless On-Demand Applications and Services*.....169
Raymond Nunez, Cedric Angelo Festin, Roel Ocampo (University of the Philippines Diliman)
- *gMAP: Efficient Construction of Global Maps for Mobility-Assisted Wireless Sensor Networks*.....175
Abdelmajid Khelil, Faisal Karim Shaikh, Azad Ali Wasan, Neeraj Suri (TU Darmstadt)
- *Generative Dynamic Deployment of Multiple Components in Wireless Sensor Networks*.....183
Shunichiro Suenaga (Nihon Unisys Ltd.), Nobukazu Yoshioka, Shinichi Honiden (University of Tokio)
- *Evaluation of Path Dependent Scheduling in Ad Hoc Networks: a Suitable Fairness Mechanism?*191
Tor Moseng, Oivind Kure (NTNU Trondheim)
- *An Application Layer Architecture for Seamless Roaming*.....198
Adrian Popescu, Dragos Ilie, David Erman, Markus Fiedler, Karel De Vogeeler (Blekinge Institute of Technology), Alexandru Popescu (University of Bradford)

Session 5: Routing in Mesh Networks

- *Correlating wireless link cost metrics to capacity*.....207
Marianna Carrera, Henrik Lundgren, Theodoros Salonidis, Christophe Diot (Thomson)
- *Loop Avoidance for Fish-Eye OLSR in Sparse Wireless Mesh Networks*.....215
Yasir Faheem, Jean-Louis Rougier (TELECOM ParisTech)

Session 6: MAC Protocols

- *Could Cooperative MAC Protocols Improve Performance in Multi-Hop Wireless Ad Hoc Networks?*.....219
Lakshmi Narasimhan Kannan, Kumaran Vijayasankar, Divya Channe Gowda, Niraj Agarwal, Marco Tacca, Andrea Fumagalli (University of Texas at Dallas)
- *Packet Suppression Protocol for a Regional Protection System using a Wireless Ad-Hoc Network*.....225
Yasushi Fuwa, Hiroyuki Oda, Tomohiro Takeda, Kaori Fuwa, Masashi Miyagi, Masaaki Niimura, Hisayoshi Kunimune (Shinshu University), Eiki Motoyama (Nagano Japan Radio Co.)
- *LDOS Attack in Ad-hoc Network*.....233
Yanxiang He, Yi Han, Qiang Cao, Tao Liu, Libing Wu (Wuhan University)

Author Index