



Monday, 15 June 2009

8:00-17:00 **Registration** (Lobby, ground floor)

9:00-18:30 **PARALLEL WORKSHOPS**

- **AOC 2009** (Ialysos, 1st floor) (<http://cnd.iit.cnr.it/aoc2009/>)
- **HotMESH 2009** (Asclipios, 1st floor) (<http://cnd.iit.cnr.it/mesh09/>)
- **IREHSS 2009** (Delphi, 1st floor) (<http://www.irehss.org/>)

Tuesday, 16 June 2009

8:00-17:00 **Registration** (Lobby, ground floor)

8:30-09:00 **WELCOME ADDRESS** (Colossos, ground floor)

9:00-10:30 **Session 1: Best paper candidates** (Colossos, ground floor)
(*Session chairs: Prasant Mohapatra and Jörg Ott*)

A Joint Routing and Scheduling Scheme for Wireless Networks with Multi-packet Reception and Directional Antennas

Jorge Crichigno (*University of New Mexico, US*)

Admission Control based on OFDMA Channel Transformations

James Gross (*RWTH Aachen University, DE*)

A CDMA-Based Approach for Highly Efficient Medium Access Control in Mesh Wireless Networks

Su Xia , Hongyi Wu (*University of Louisiana at Lafayette, US*)

10:30-11:00 **Coffee break** (Lobby, ground floor)

11:00-12:00 **Keynote Speech I** (Colossos, ground floor):
Cooperation at the Network Level

Anthony Ephremides, *University of Maryland, USA*

12:00-13:30 **Lunch** (1st floor)

13:30-15:15 **Session 2a: MAC Protocols** (Colossos, ground floor)
(*Session chair: Vania Conan, Thales*)

Multi-Channel Spectrum-Agile MAC Protocol with Adaptive Load Control

Fan Wang, Marwan Krunz (*University of Arizona, US*)

MAC FER-Based Codec Adaptation for Multimedia Streaming over Wireless Networks

Chun-Cheng Chiang, Zhung-Han Wu, Cheng-Yu Shih, Ping-Cheng Yeh, Hung-Yun Hsieh
(*National Taiwan University, TW*)

On the Difficulties of Passively Detecting 802.11n Rogue Wireless Access Points

Andrew Blaich, Aaron Striegel (*University of Notre Dame, US*)

Optimization of WiMax modulation scheme with a cross layer erasure code

Lei Zhang (*University of Toulouse - ISAE / LAAS-CNRS, FR*), Patrick Senac (*ensica, FR*),
Roksana Boreli (*National ICT Australia, AU*), Michel Diaz (*Laas CNRS, FR*)

13:30-15:15 Session 2b: Mobile Ad Hoc Networks (Asclipios, 1st floor)

(Session chair: Andrea Passarella, CNR IIT)

Routing with Transmission Buffer Zones in MANETs

Erlend Larsen, Lars Landmark (*Norwegian University of Science and Technology, NO*),
Vinh Pham (*Unik, NO*), Oivind Kure (*NTNU, NO*), Paal Engelstad (*University of Oslo /
Telenor R&I, NO*)

Reduced Packet Probing Multirate Adaptation For Multihop Ad Hoc Wireless Networks

Jun Cheol Park, Sneha Kasera (*University of Utah, US*)

RFID Reader and Tag Multi-hop Communication for Port Logistics

Younghwan Yoo (*Pusan National University, KR*)

Analytic Study of Delay/Fault-Tolerant Mobile Sensor Networks (DFT-MSN's)

Hongyi Wu (*University of Louisiana at Lafayette, US*)

15:15-15:45 Coffee break (Lobby, ground floor)

15:45-17:30 Session 3a: Routing and QoS (Colossos, ground floor)

(Session chair: Enzo Mingozzi, Univ. of Pisa)

Connecting Vehicular Networks to the Internet: A Life Time-based Routing Protocol

Saman Barghi (*Concordia University, CA*), Abderrahim Benslimane (*University of Avignon,
FR*), Chadi Assi (*Concordia University, CA*)

Delivering Improved QoS and Cell Throughput in UMTS Based HSDPA Networks

Ritesh Shreevastav, Ciaran Mc Goldrick, Meriel Huggard (*Trinity College Dublin, IE*)

Highly Efficient Multipoint Relay Selections in Link State QoS Routing Protocol for Multi-hop Wireless Networks

Takeaki Koga, Shigeaki Tagashira (*Kyushu University, JP*), Teruaki Kitasuka (*Kumamoto
University, JP*), Tsuneo Nakanishi, Akira Fukuda (*Kyushu University, JP*)

A Queuing Modeling Approach for Load-Aware Route Selection in Heterogenous Mesh Networks

Raffaele Bruno, Marco Conti, Antonio Pinizzotto (*CNR-IIT, IT*)

CDMR: Cooperative Diversity-based Multi-Copy Relaying in Mesh Networks

Van Nguyen, Dmitri Perkins (*University of Louisiana at Lafayette, US*)

15:45-17:30 Session 3b: Security (Asclipios, 1st floor)

(Session chair: Jörg Ott, TKK Comnet)

A Prevention Approach to Scrambling Attack in WiMAX Networks

Powen Chi (*Institute for Information Industry, TW*), Chin-Laung Lei (*National Taiwan
University, TW*)

A novel analytical framework to model malware diffusion in heterogeneous wireless networks

Nam Nguyen, Yoichi Shinoda (*Japan Advanced Institute of Science and Technology, JP*)

Distributed User Authentication in Wireless LANs

Dmitriy Kuptsov, Andrey Khurri, Andrei Gurtov (*Helsinki Institute for Information Technology FI*)

Detecting Misbehavior via a Trust-based Node Evaluation Scheme for Wireless Ad hoc Networks

Yonglin Ren, Azzedine Boukerche (*SITE, Univ. of Ottawa, CA*)

18:30-20:00 Demo Session and Conference Reception (Lobby, ground floor)

Optimised Content Accessibility in Dynamic Environments

Alexnewton Alexander, John Dunlop, John Bush (*University of Strathclyde, UK*)

Mobile Commerce in Rural South Africa – Proof of concept of mobile solution for the Next Billion Mobile Consumers

Jörg Dörflinger, Carsten Friedland, Makeda Mengistu, Christian Merz, Kathrin Pabst, Sebastian Stadtrecher (*SAP Research, DE*), Rudi de Louw (*SAP Research, ZA*)

A Lightweight Localization Architecture and Application for Opportunistic Networks

Michela Papandrea, Salvatore Vanini, Silvia Giordano (*University of Applied Sciences of Southern Switzerland, CH*)

Demonstration of Channel Assignment in a Wireless Metropolitan MESH Network

Nikolaos Petroulakis, Manolis Delakis, Manolis Genetzakis, Theodoros Dionysiou, Stefanos Papadakis, Vasilios A. Siris (*Institute of Computer Science, Foundation for Research and Technology-Hellas, GR*)

Induced Fading for Opportunistic Communication in Static Sensor Networks

Daniele Puccinelli, Silvia Giordano (*University of Applied Sciences of Southern Switzerland, CH*)

Demonstration of automatic address and radio parameters assignment in MANET using DHCP protocol extensions

Krzysztof Grochla, Walter Buga, Jarosław Dzierżęga, Piotr Pacyna, Aleksander Seman, Mariusz Witosz, Piotr Wyrobek (*Proximity, PL*)

Wednesday, 17 June 2009

8:15-17:00 **Registration** (Lobby, ground floor)

8:45-9:45 **Keynote Speech II** (Colossos, ground floor)

The Challenge of Sensor Stream Transport in Wireless Networks

Archan Misra, *Telcordia, USA*

9:45-10:00 (Colossos, ground floor)

James Lawton, EOARD (*European Office of Aerospace Research and Development*), *United States Air Force Research Laboratory*

10:00-10:30 **Coffee break** (Lobby, ground floor)

10:30-12:15 **Session 4a: Sensor Networks** (Colossos, ground floor)

(Session chair: Daniele Puccinelli, *SUPSI*)

Efficient Data Collection in Wireless Sensor Networks with Path-constrained Mobile Sinks

Shuai Gao, Hongke Zhang (*Beijing Jiaotong University, CN*), Sajal Das (*The University of Texas at Arlington, US*)

High performance, low overhead cooperative caching for wireless sensor networks

Nikos Dimokas (*Aristotle University of Thessaloniki, GR*), Dimitrios Katsaros, Leandros Tassioulas (*University of Thessaly, GR*), Yannis Manolopoulos (*Aristotle University of Thessaloniki, GR*)

A Plant-and-Play Wireless Sensor Network System for Gate Monitoring

Raghuram Sudhaakar, Ameya Sanzgiri (*University at Buffalo, US*), Murat Demirbas, Chunming Qiao (*SUNY Buffalo, US*)

On the Design of k-Covered Wireless Sensor Networks: Self- versus Triggered Sensor Scheduling

Habib M. Ammari (*Hofstra University, US*), Sajal Das (*The University of Texas at Arlington, US*)

10:30-12:15 **Session 4b: Positioning and Mobility** (Asclipios, 1st floor)

(Session chair: Ouri Wolfson, *Univ of Illinois at Chicago*)

VAPS: Positioning with Spatial Constraints

Yesid Jarma (*UPMC Paris Universit as, FR*), Golnaz Karbaschi (*INRIA-Saclay, FR*), Marcelo Dias de Amorim (*UPMC Paris Universit as, FR*), Farid Benbadis (*Thales Communications, FR*), Guillaume Chelius (*INRIA, FR*)

Discovering SpatioTemporal Mobility Profiles of Cellphone Users

Murat Ali Bayir (*University at Buffalo, US*), Murat Demirbas (*SUNY Buffalo, US*), Nathan Eagle (*MIT, US*)

Mobility Management for NGN WiMAX: Specification and Implementation

Pedro Neves (*Portugal Telecom Inova  o, PT*), Ricardo Matos (*Instituto de Telecomunica  es, Universidade de Aveiro, Portugal, PT*), Bruno Sousa (*University of Coimbra, PT*), Giada Landi (*Nextworks, IT*), Susana Sargento (*Instituto de Telecomunica  es, Universidade de Aveiro, Portugal, PT*), Kostas Pentikousis (*VTT Technical Research Centre of Finland, FI*), Marilia Curado (*University of Coimbra, PT*), Esa Piri (*VTT Technical Research Centre of Finland, FI*)

ECTC: Energy efficient Topology Control Algorithm for Wireless Sensor Networks
Nedal Ababneh (*TELECOM Paris, FR*)

12:15-13:30 **Lunch** (1st floor)

13:30-15:15 **Session 5a: Scheduling** (Colossos, ground floor)
(Session chair: Prasant Mohapatra, UC Davis)

Link Scheduling with End-to-end Delay Constraints in Wireless Mesh Networks

Paola Cappanera (*University of Florence, IT*), Luciano Lenzini, Alessandro Lori, Giovanni Stea, Gigliola Vaglini (*University of Pisa, IT*)

A Scheduling Algorithm For Downlink Multi-Antenna CDMA Systems

Elmahdi Driouch, Wessam Ajib (*Université du Québec à Montréal, CA*)

Enhanced Ripple (E-Ripple) Protocol for Multihop Wireless Chain-based Networks

Quang Vu Nguyen, Ray-Guang Cheng (*National Taiwan University of Science and Technology, TW*)

Joint Routing and Scheduling in WiMAX-based mesh networks: A Column Generation Approach

Jad El-Najjar, Chadi Assi, Brigitte Jaumard (*Concordia University, CA*)

13:30-15:15 **Session 5b: Industrial track** (Asclipios, 1st floor)
(Session chair: Igor Curcio, Nokia)

Business Opportunities and Considerations on Wireless Mesh Networks

G. Vasilakis, G. Perantinos (*, GR*), I.G. Askoxylakis (*Foundation for Research and Technology-Hellas, GR*), N. Mechin (*Ozone*), V. Spitadakis (*Forthnet, GR*), A. Traganitis (*Foundation for Research and Technology-Hellas, GR*)

Usage Scenarios and Application Requirements for Wireless Mesh Networks

I.G. Askoxylakis (*Foundation for Research and Technology-Hellas, GR*), N. Mechin (*Ozone*), G. Perantinos, G. Vassilakis (*Forthnet, GR*), A. Traganitis (*Foundation for Research and Technology-Hellas, GR*)

The CHIANTI Architecture for Robust Mobile Internet Access

J. Ott, P. Ylikoski (*Helsinki University of Technology*), N. Seifert (*LYSATIQ*), C. Carroll, N. Wallbridge (*NOMAD Digital*), O. Bergmann, D. Kutscher (*University of Bremen*)

Introducing Innovative Services with a Dense Broadcast Network

S. Guillouard, G. Bichot, Y. Legallais (*Thomson Corporate Research*)

15:15-15:45 **Coffee break** (Lobby, ground floor)

15:45-17:00 **Panel** (Colossos, ground floor)
Future of Wireless Video: Winning Strategies?

18:00 VISIT TO THE ARCHEOLOGICAL SITE ASCLIPION

19:45 Social Event: GREEK NIGHT

Thursday, 18 June 2009

8:30-16:45 **Registration** (Lobby, ground floor)

9:00-10:00 **Keynote Speech III** (Colossos, ground floor)

An IPTV System over multiple networks

John A. Vlontzos, Intracom, Greece

10:00-10:30 **Coffee break** (Lobby, ground floor)

10:30-12:15 **Session 6a: Performance and Efficiency** (Colossos, ground floor)
(*Session chair: Rosario Garroppo, Univ. of Pisa*)

Simple and Practical Rate Adaptation Algorithms for Wireless Networks

Parag Kulkarni, Sadia Quadri (Toshiba Research Europe Ltd., UK)

IEEE 802.21 Assisted Seamless and Energy Efficient Handovers in Mixed Networks

Huaiyu Liu, Christian Maciocco, Vijay Kesavan (*Intel Corporation, US*), Andy L. Y. Low (*BT Innovate, MY*)

Performance evaluation of a novel MAC layer handoff scheme for WiFi-based wireless networks

Azzedine Boukerche, Zhenxia Zhang (University of Ottawa, CA)

A Framework for Interference Mitigation in Multi-BSS 802.11 Wireless LANs

Murad Abusubaih (Technical University of Berlin, DE)

10:30-12:15 **Session 6b: Industrial Track** (Asclipios, 1st floor)
(*Session chair: Samuel Guillouard, Thomson*)

Optimized Mobile Push Distribution for Multimedia Files

J. Willig, S. Ålund (*Ericsson Research*)

Transition from Circuit-switched to Packet-switched 3G Mobile Multimedia Telephony

K. Jung (*Samsung Electronics*)

Mobile and Interactive Social Television – A Virtual TV Room

F. Cricri' (*Tampere University of Technology*), S. Mate, I.D.D. Curcio (*Nokia Research Center*), M. Gabbouj (*Tampere University of Technology*)

Consumer Experience Study of Mobile and Interactive Social Television

S.Mate, I.D.D. Curcio (*Nokia Research Center*)

12:15-13:30 **Lunch** (1st floor)

13:30-15:00 **Session 7a (short papers): Resource Management and Routing** (Colossos, ground floor)
(*Session chair: Raffaele Bruno, CNR IIT*)

Proactive Radio Resource Management Using Optimal Stopping Theory

Marios Poulakis, Stavroula Vassaki, Stathes Hadjiefthymiades (*University of Athens, GR*)

A Multiple-Metric Approach for Routing in Wireless Mesh Networks

Waldir Moreira (*Instituto de Engenharia de Sistemas e Computadores do Porto, PT*), Rafael Gomes (*Federal University of Pará, BR*), Antonio Jorge Abelém (*UFPA - Federal University of Pará, BR*)

Intelligent Network Synchronization for Energy Saving in Low Duty Cycle MAC Protocols

Jae-Young Pyun, Pranesh Sthapit (*Chosun University, KR*)

Collision and Corruption Awareness Based Link Adaptation Enhancement to 802.11 DCF

Yuan Cheng, Xiqi Gao (*Southeast University, CN*)

ARMAN: A new Anonymous Routing Protocol for Mobile Ad-Hoc Networks

Ehsan Baqerian, Siavash Khorsandi (*Amirkabir University of Technology, IR*)

13:30-15:00: Session 7b (short papers): Content Distribution and Wireless Networks

(Asclipios, 1st floor)

(Session chair: Prasant Mohapatra, UC Davis)

Opportunistic Scanning: Interruption-Free Network Topology Discovery for Wireless Meshed Networks

Marc Emmelmann, Sven Wiethoelter (*Technical University of Berlin, DE*)

An Efficient Reliable Multicast Protocol for 802.11-based Wireless LANs

Varun Srinivas, Lu Ruan (*Iowa State University, US*)

Structure and Evolution of a Large-Scale Wireless Community Network

Fotios Elianos Georgia Plakia, Pantelis Frangoudis, George Polyzos (*Athens University of Economics and Business, GR*)

Interest-aware content distribution protocol for mobile disruption-tolerant networks

Arezu Moghadam, Henning Schulzrinne (*Columbia University, US*)

Mediacast for Mobile Communities: When the Web and Telecommunications converge

Jose Simoes (*Fraunhofer FOKUS, DE*)

Habit: Leveraging Human Mobility and Social Network for Efficient Content Dissemination in MANETs

Afra Mashhadi, Sonia Ben Mokhtar, Licia Capra (*University College London, UK*)

15:00-15:30 Coffee break (Lobby, ground floor)

15:30-17:15 PhD & WiP Session (Colossos & lobby, ground floor)

(Session chair: Daniele Puccinelli, SUPSI)

Development of a Simulation Environment for Vehicular Communications,

Performance Analysis and Optimization of PHY based on IEEE 802.11p

Standard, Design and Implementation of FEC Coding Chain in Xilinx FPGA

George Kiokes, Nikolaos K. Uzunoglu (*National Technical University of Athens, GR*)

A framework for adaptive opportunistic forwarding in wireless networks

Niki Gazoni, Vangelis Angelakis (*Foundation for Research and Technology-Hellas, GR*), Raffaele Bruno, Marco Conti (*IIT-CNR, IT*), Vasilios A. Siris (*Foundation for Research and Technology-Hellas, GR*)

Multimodal Ubiquitous Localization: a GPS/WiFi/GSM-based lightweight solution

Michela Papandrea (*University of Applied Sciences of Southern Switzerland, CH*)

Dynamic Spectrum Reallocation via Autonomic Management

Ioannis P. Chochliouros, George Diakonikolaou, Maria Belesioti, Evangelos Sfakianakis, Anastasia S. Spiliopoulou (*Hellenic Telecommunications Organization, GR*), Nancy Alonistioti (*University of Athens, GR*)

Asynchronous Computing and Communication Architecture toward Energy Efficient Wireless Sensor Networks

Jing Wang (*The University of Texas at Arlington, US*)

Interference avoidance among IEEE 802.22 networks: A Game Theoretic Approach

Swastik Brahma, Mainak Chatterjee (*University of Central Florida, US*)

A Generic Enabler Framework for Contextualized Advertising within Interactive Multimedia Services

Jose Simoes (*Fraunhofer Institute FOKUS, DE*)

An Energy Efficient and Latency-aware Routing Protocol for Wireless Sensor Networks using Power Control Strategy

Ghufran Ahmed (*The University of Texas at Arlington, US*)

MintMOS: Inferring and Improving Perceptual Quality of Internet Video

Mukundan Venkataraman, Mainak Chatterjee (*University of Central Florida, USA*)

Friday, 19 June 2009

8:30 – 15:00 **Registration** (Lobby, ground floor)

9:00 – 17:00 **Parallel Workshops**

- **EXPONWIRELESS 2009** (Ialysos, 1st floor)
(<http://nrl.iis.sinica.edu.tw/EXPONWIRELESS09>)

- **SPAWN 2009** (Asclipios, 1st floor)
(http://www.ece.stevens-tech.edu/~ychen/workshop_spawn2009/spawn_home)