

WiOpt 2009

7th Intl. Symposium on Modeling and Optimization in Mobile,
Ad Hoc, and Wireless Networks

June 23 – 27, 2009, Seoul, Korea

Conference day: June 23-25 & Workshop day: June 26-27

Technical Program

June 23rd	
8:00 onwards	Registration Open
8:40-9:00	Welcome from General Chair & TPC Chairs
9:00-10:00	Keynote speech by Prof. Mung Chiang (Princeton)
10:00-10:30	Coffee Break
10:30-11:30	Session 1: Cellular Networks Session Chair: Daniele Miorandi (CREATE-NET, Italy)
Cell Breathing, Sectorization and Densification in Cellular Networks Jean-Marc Kelif (France Telecom R&D, FR); Marceau Coupechoux (TELECOM ParisTech, FR)	
Optimization of Femtocell Network Configuration under Interference Constraints Kwanghun Han (Seoul National University, KR); Youngkyu Choi (Samsung Electronics, KR); Dongmyoung Kim (Seoul National University, KR); Minsoo Na (Institute of Network Technology, SK Telecom, Sungnam, Korea); Sunghyun Choi (Seoul National University, KR); Kiyoung Han (Communication Lab, Samsung Electronics, Suwon, Korea)	
Adaptive Multi-pattern Reuse in Multi-cell Networks Kyuhoo Son (KAIST, KR); Yung Yi (KAIST, KR); Song Chong (KAIST, KR)	
11:30-12:30	Session 2: Information Theoretic Issues and Approaches Session Chair: Venkat Anantharam (UC Berkeley, USA)
On Models for Multi-User Gaussian Channels with Fading Rony El Haddad (University of Texas at Austin, US); Brian Smith (University of Texas at Austin, US); Sriram Vishwanath (University of Texas at Austin, US)	
Power Control for non-Gaussian Interference Yi Chen (The Chinese University of Hong Kong, HK); Wing Shing Wong (The Chinese University of Hong Kong, HK);	

Feasibility of the Receiver Capacity Model for Multi-Hop Wireless Networks Avinash Sridharan (University of Southern California, US); Bhaskar Krishnamachari (University of Southern California, US)	
12:30-14:00	Lunch Break
14:00-15:20	Session 3: Optimization in Wireless Networks Session Chair: Jang Won Lee (Yonsei University, Korea)
Average-Delay Optimal Policies for the Point-to-Point channel Vineeth Bala Sukumaran (Indian Institute of Science, Bangalore, IN); Utpal Mukherji (Indian Institute of Science, IN)	
Delay Reduction via Lagrange Multipliers in Stochastic Network Optimization Longbo Huang (University of Southern California, US); Michael Neely (University of Southern California, US)	
Distributed Throughput Maximization in Wireless Networks via Random Power Allocation Hyang-Won Lee (MIT, US); Eytan Modiano (MIT, US); Long Bao Le (MIT, US)	
Optimal Link Scheduling and Channel Assignment for Convergecast in Linear WirelessHART Networks Haibo Zhang (KTH - Royal Institute of Technology, SE); Pablo Soldati (Royal Institute of Technology, SE); Mikael Johansson (Royal Institute of Technology, SE)	
15:20-15:50	Coffee Break
15:50-17:10	Session 4: Scheduling, Medium Access & Resource Allocation Session Chair: Jeong Hoon Mo (Yonsei University, Korea)
A Feedback Scheme Based on Iterative Group Splitting for Opportunistic Scheduling with Adaptive Modulation Haewoon Nam (Motorola Inc., US); Gustavo de Veciana (The University of Texas at Austin, US); Mohamed-Slim Alouini (Texas A&M University at Qatar, QA)	
Joint Load Balancing, Scheduling, and Interference Mitigation in Multi-cell and Multi-carrier Wireless Data Systems Honghai Zhang (NEC Labs America, US); Sampath Rangarajan (NEC Labs America, US)	
Distributed Adaptive Algorithms for Optimal Opportunistic Medium Access Yahya Al-Harathi (King Fahd University of Petroleum and Minerals, SA); Sem Borst (Eindhoven University of Technology, NL)	
Mathematical Analysis of Throughput Bounds in Random Access with ZigZag Decoding Jeongyeup Paek (University of Southern California, US); Michael Neely (University of Southern California, US)	

June 24th	
8:30-9:30	Keynote speech by Prof. Venkat Anantharam (UC Berkeley)
9:30-10:00	Coffee Break
10:00-11:00	Session 5: WSNs: Issues & Solutions Session Chair: Mohuammad Ibrahim (INRIA, France)
Generic Coverage Verification without Location Information Using Dimension Reduction Gaurav Kasbekar (University of Pennsylvania, US); Yigal Bejerano (Bell-Labs, Alcatel-Lucent, US); Saswati Sarkar (University of Pennsylvania, US)	
Distributed Algorithm for Minimizing Delay in Multi-Hop Wireless Sensor Networks Muhammad Farukh Munir (Institut Eurecom, FR); Arzad A. Kherani, (Indian Institute of Technology Delhi, New Delhi India); Fethi Filali (EURECOM, FR)	
A Graph Theoretic Approach for Optimizing Key Pre-distribution in Wireless Sensor Networks Aldar Chun-Fai Chan (National University of Singapore, SG)	
11:00-12:20	Session 6: Wireless Games Session Chair: Andrey Garnaev (St. Petersburg state univ., Russia)
Physical Layer Security: Coalitional Games for Distributed Cooperation Walid Saad (University of Oslo, UniK, NO); Zhu Han (University of Houston, US); Tamer Basar (University of Illinois at Urbana-Champaign, US); Merouane Debbah (Supelec, FR); Are Hjørungnes (University of Oslo, NO)	
A Dynamic Random Access Game with Energy Constraints Eitan Altman (INRIA, FR); Tamer Basar (University of Illinois at Urbana-Champaign, US); Ishai Menache (Massachusetts Institute of Technology, US); Hamidou Tembine (University of Avignon, FR);	
Jamming in wireless networks under uncertainty Eitan Altman (INRIA, FR); Konstantin Avrachenkov (INRIA Sophia Antipolis, FR); Andrey Garnaev (St. Petersburg State University, RU)	
Gaming the Jammer: Is Frequency Hopping Effective? Konstantinos Pelechrinis (University of California Riverside, US); Christos Koufogiannakis (University of California, Riverside, US); Srikanth Krishnamurthy (University of California, Riverside, US)	
12:20-14:00	Lunch Break
14:00-15:20	Session 7: Relaying & Forwarding in DTNs & MANETS Session Chair: Do Young Eun (NCSU, USA)
Heterogeneity in Contact Dynamics: Helpful or Harmful to Forwarding Algorithms in DTNs? Chul-Ho Lee (North Carolina State University, US); Do Young Eun (North Carolina State University, US)	

A Generalized Framework for Throughput Analysis in Sparse Mobile Networks Ramanan Subramanian (Georgia Institute of Technology, US); Badri Narayanan Vellambi Ravisankar (University of South Australia, AU); Faramarz Fekri (Georgia Institute of Technology, US)	
Analysis of Relay Protocols for Throwbox--Equipped DTNs Mouhamad Ibrahim (INRIA Sophia Antipolis, FR); Philippe Nain (INRIA, Sophia Antipolis, France, FR); Jacopo Carreras (Create-Net, IT)	
Natural Selection of Message Forwarding Algorithms in Multihop Wireless Networks Vilmos Simon (Budapest University of Technology and Economics, HU); Márton Bérces (Budapest University of Technology and Economics, HU); Endre Varga (Budapest University of Technology and Economics, HU); Laszlo Bacsardi (Budapest University of Technology and Economics, HU)	
15:20-15:50	Coffee Break
15:50-16:50	Session 8: Algorithms for Large-scale Wireless Networks Session Chair: Ulrich Barth (Alcatel-Lucent, USA)
Efficient Algorithms to Solve a Class of Resource Allocation Problems in Large Wireless Networks Jun Luo (Nanyang Technological University, SG); Andre Girard (INRS-EMT and GERAD, CA); Catherine Rosenberg (University of Waterloo, CA)	
Identifying RFID Tag Categories in Linear Time Murali Kodialam (Bell Labs, US); Wing Cheong Lau (The Chinese University of Hong Kong, HK); Thyaga Nandagopal (Bell Labs, Alcatel-Lucent Inc., US)	
An Algorithmic Solution for Computing Circle Intersection Areas and its Applications to Wireless Communications Federico Librino (University of Padova, IT); Marco Levorato (University of Padova, IT); Michele Zorzi (Università degli Studi di Padova, IT)	
16:50-17:50	Session 9: Cooperative Strategies Session Chair: Kyo Min Chung (KAIST, Korea)
Protocol-level Cooperation in Wireless Networks: Stable Throughput and Delay Analysis Beiyu Rong (University of Maryland, College Park, US); Anthony Ephremides (University of Maryland at College Park, US)	
SI-CCMAC: Sender Initiating Concurrent Cooperative MAC for Wireless LANs Zhengqing Hu (National University of Singapore, SG); Chen-Khong Tham (National University of Singapore, SG)	
Transmission Schedule Optimization for Half-Duplex Multiple-Relay Networks Wei Wang (Microsoft Research Asia, CN); Lawrence Ong (The University of Newcastle, AU); Mehul Motani (National University of Singapore, SG)	

June 25th	
8:30-9:30	Keynote speech by Dr. Ulrich Barth (Bell Labs/Alcatel-Lucent)
9:30-10:00	Coffee Break
10:00-11:00	Session 10: Cognitive Radios Session Chair: Wing Cheong Lau (CUHK, Hong Kong)
Spectrum Sharing between Cellular and Mobile Ad Hoc Networks: Transmission-Capacity Tradeoff Kaibin Huang (Hong Kong University of Science and Technology, HK); Vincent K. N. Lau (The university of science and technology, HK); Yan Chen (Hong Kong University of Science and Technology, HK)	
Exploiting Buffers in Cognitive Multi-Relay Systems for Delay-Sensitive Applications Yan Chen (Zhejiang University, CN); Vincent K. N. Lau (the Hong Kong University of Science and Technology, HK); Shunqing Zhang (Hong Kong Univeristy of Science and Technology, HK); Peiliang Qiu (Zhejiang University, CN)	
Cognitive Networks Achieve Throughput Scaling of a Homogeneous Network Sang-Woon Jeon (KAIST, KR); Natasha Devroye (University of Illinois at Chicago, US); Mai Vu (McGill University, CA); Sae-Young Chung (KAIST, KR); Vahid Tarokh (Harvard University, US)	
11:00-12:20	Session 11: Energy issues in WSN Session Chair: Simon Vilmos (Budapest University of Technology and Economics, Hungary)
Battery Recovery Aware Sensor Networks Chi-Kin Chau (University of Cambridge & University College London, UK); Muhammad Husni Wahab (University College London, UK); Fei Qin (University College London, UK); Yunsheng Wang (University College London, UK); Yang Yang (University College London, UK)	
Multi-sensor Event Detection under Temporal Correlations with Renewable Energy Sources Neeraj Jaggi (Wichita State University, US); Koushik Kar (Rensselaer Polytechnic Institute, US)	
Energy-efficient Area Coverage by Sensors with Two Adjustable Ranges Vyacheslav Zalyubovsky (Sobolev Institute of Mathematics, SB RAS, RU); Adil Erzín (Sobolev Institute of Mathematics, SB RAS, RU); Sergey Astrakov (Russian State University of Trade and Economics, RU); Hyunseung Choo (Sungkyunkwan University, KR)	
Quantization, Channel Compensation, and Energy Allocation for Estimation in Wireless Sensor Networks Xusheng Sun (Georgia Institute of Technology, US); Edward J. Coyle (Georgia Institute of Technology, US)	

12:20-14:00	Lunch Break
14:00-15:20	Session 12: WLANs & WMANs Session Chair: Yung Yi (KAIST, Korea)
Downlink Multi-user Transmission for Higher User Speeds in IEEE 802.16m Christos Papathanasiou (University of Thessaly, GR); Nikos Dimitriou (University of Athens, GR); Leandros Tassioulas (University of Thessaly, GR)	
Characterization of power consumption in thin clients due to protocol data transmission over IEEE 802.11 Pieter Simoens (University of Ghent, BE); Bert Vankeirsbilck (Ghent University, BE); F. Azmat Ali (University of Ghent, BE); Lien Deboosere (Ghent University, BE); Filip De Turck (Ghent University, BE); Bart Dhoedt (Ghent University, BE); Piet Demeester (Ghent University, BE); Rodolfo Torrea (IMEC, BE); Claude Desset (IMEC, BE)	
The Impact of Association on the Capacity of WLANs Thomas Bonald (Orange Labs, FR); Ali Ibrahim (France Telecom R&D, FR); James Roberts (France Telecom, FR)	
Joint Resource Allocation and Admission Control in Wireless Mesh Networks Tae-Suk Kim (University of California, Riverside, US); Yong Yang (University of Illinois at Urbana-Champaign, US); Jennifer C. Hou (University of Illinois at Urbana-Champaign, US); Srikanth V. Krishnamurthy (University of California, Riverside, US)	
15:20-15:50	Coffee Break
15:50-16:50	Session 13: Simulation & Performance Evaluation Session Chair: Sae-Young Chung (KAIST, Korea)
Techniques for Simulation of Realistic Infrastructure Wireless Network Traffic Caleb Phillips (University of Colorado, US); Suresh Singh (Portland State University, US); Douglas Sicker (University of Colorado, US); Dirk Grunwald (University of Colorado, US)	
The Impact of Directional Antenna Models on Simulation Accuracy Eric Anderson (University of Colorado, US); Gary Yee (University of Colorado, Boulder, US); Caleb Phillips (University of Colorado, US); Douglas Sicker (University of Colorado, US); Dirk Grunwald (University of Colorado, US)	
An Analytical Model for WiMAX Networks with Multiple Traffic Profiles and Throttling Policy Sébastien Doirieux (Université Pierre et Marie Curie, LIP6, Paris, France); Bruno Baynat (Université Pierre et Marie Curie, LIP6, Paris, France); Masood Maqbool (TELECOM ParisTech & CNRS LTCI, Paris, France); Marceau Coupechoux (TELECOM ParisTech & CNRS LTCI, Paris, France)	
16:50-17:00	Closing and Announcement of 2010 Edition
18:30-...	Social Event @ Korean House
June 26th	WiNMee, SpaSWiN
June 27th	RAWNET/WNC^3, PHYCOMNET, ConCom