Main Conference

The map of the rooms is available [here](#).

Tuesday, April 16

8:30-10:30 OPENING and KEYNOTE SPEECH (Room: Auditorium)
Main Technical Program

10:30-11:00 Coffee break

11:00-12:30 ALL CONFERENCE PANEL (Room: Auditorium)

12:30-14:00 Lunch break

14:00-15:30

Cloud computing and networks 1

Room: Sala 500

Chair: Krishna Kant (George Mason University, USA)
Shadow-Routing Based Dynamic Algorithms for Virtual Machine Placement in a Network Cloud

Yang Guo (Bell Labs, Alcatel-Lucent, USA); Alexander Stolyar (Bell Labs, Alcatel-Lucent, USA); Anwar Walid (Bell-labs, Alcatel Lucent, USA)

Dependable Virtual Machine Allocation

Hiroki Yanagisawa (IBM, Japan); Takayuki Osogami (IBM Research - Tokyo, Japan); Rudy Raymond (IBM Research - Tokyo, Japan)

PACE: Policy-Aware Application Cloud Embedding

Li (Erran) Li (Bell Labs, Lucent Technologies, USA); Vahid Liaghat (CS Dept, Maryland, USA)
Hongze Zhao (Tsinghua University, P.R. China); Mohammad Taghi Hajiaghayi (MIT, USA); Dan Li (Tsinghua University, P.R. China); Gordon Wilfong (Bell Labs, Alcatel-Lucent, USA); Y. Richard Yang (Yale University, USA); Chuanxiong Guo (Microsoft Research Asia, P.R. China)

**Optimizing Data Access Latencies in Cloud Systems by Intelligent Virtual Machine Placement**

Mansoor Alicherry (Bell Labs India, Alcatel-Lucent, India); T. V. Lakshman (Bell Labs, Alcatel-Lucent, USA)

**Mobile security and privacy**

Room: Londra

Chair: Faramarz Fekri (Georgia Institute of Technology, USA)
D2Taint: Differentiated and Dynamic Information Flow Tracking on Smartphones for Numerous Data Sources

Boxuan Gu (The Ohio State University, USA); Xinfeng Li (The Ohio State University, USA); Gang Li (the Ohio State University, USA); Adam C. Champion (The Ohio State University, USA); Zhezhe Chen (The Ohio State University, USA); Feng Qin (Ohio State University, USA); Dong Xuan (The Ohio State University, USA)

Privacy-preserving Spatiotemporal Matching

Jingchao Sun (Arizona State University, USA); Rui Zhang (Arizona State University, USA); Yanchao Zhang (Arizona State University, USA)

NetworkProfiler: Towards Automatic Fingerprinting of Android Apps

Shuaifu Dai (Peking University, P.R. China); Alok Tongaonkar (Narus Inc, USA); Xiaoyin Wang (University of California, Berkeley, USA); Antonio Nucci (Narus inc., USA); Dawn Song (CMU, USA)
Network economics and pricing 1

Room: Madrid

Chair: Jianwei Huang (The Chinese University of Hong Kong, Hong Kong)

An Economic Analysis of Regulating Security Investments in the Internet

MHR (Arman) Khouzani (Ohio State University, USA); Soumya Sen (Princeton University, USA); Ness B. Shroff (The Ohio State University, USA)

SPRING: A Strategy-Proof and Privacy Preserving Spectrum Auction Mechanism
Qianyi Huang (Shanghai Jiao Tong University, P.R. China); Yixin Tao (Shanghai Jiao Tong University, P.R. China); Fan Wu (Shanghai Jiao Tong University, P.R. China)

*Profit Incentive In A Secondary Spectrum Market: A Contract Design Approach*

Shang-Pin Sheng (University of Michigan, USA); Mingyan Liu (University of Michigan, USA)

*On the nature of revenue-sharing contracts to incentivize spectrum sharing*

Randall Berry (Northwestern University, USA); Michael Honig (Northwestern University, USA); Thanh Nguyen (Northwestern University, USA); Vijay Subramanian (Northwestern University, USA); Hang Zhou (Northwestern University, USA); Rakesh Vohra (Northwestern University, USA)
Cognitive radio networks 1

Room: Istanbul

Chair: Kaushik Chowdhury (Northeastern University, USA)

**DISCERN: Cooperative Whitespace Scanning in Practical Environments**

Tarun Bansal (Ohio State University, USA); Bo Chen (Ohio State University, USA); Prasun Sinha (Ohio State University, USA)

**Understanding Blackholes in Large-Scale Cognitive Radio Networks under Generic Failure**

Lei Sun (NC State University, USA); Wenye Wang (NC State University, USA)
Scaling Network-based Spectrum Analyzer with Constant Communication Cost

Youngjune L Gwon (Harvard University, USA); Ht Kung (Harvard University, USA)

Alternate Hop-and-Wait Channel Rendezvous Method for Cognitive Radio Networks

I-Hsun Chuang (National Cheng Kung University, Taiwan); Hsiao-Yun Wu (NCKU, Taiwan); Kuan-Rong Lee (Kun Shan University of Technology, Taiwan); Yau Hwang Kuo (National Cheng Kung University, Taiwan)

Smart Grid

Room: Roma

Chair: Minghua Chen (The Chinese University of Hong Kong, Hong Kong)
Smoothing the Energy Consumption: Peak Demand Reduction in Smart Grid

Shao-Jie Tang (Illinois Institute of Technology, USA); Qiuyuan Huang (University of Florida, USA); Xiang-Yang Li (Illinois Institute of Technology, USA); Dapeng Oliver Wu (University of Florida, USA)

Adaptive Electricity Scheduling in Microgrids

Yingsong Huang (Auburn University, USA); Shiwen Mao (Auburn University, USA); Mark Nelms (Co-Chair, USA)

A Contract-Based Approach for Ancillary Services in V2G Networks: Optimality and Learning
Optimal Budget Deployment Strategy against Power Grid Interdiction

Xuan Liu (Illinois Institute of Technology, USA); Kui Ren (State University of New York at Buffalo, USA); Yanling Yuan (Illinois Institute of Technology, USA); Zuyi Li (Illinois Institute of Technology, USA); Qian Wang (Wuhan University, P.R. China)

Underwater and aerial sensor networks

Room: Copenhagen

Chair: Tommaso Melodia (State University of New York at Buffalo, USA)
Reducing Information Gathering Latency through Mobile Aerial Sensor Network

Zhaoquan Gu (Tsinghua University, P.R. China); Qiang-Sheng Hua (Tsinghua University, P.R. China); Amy Yuexuan Wang (Tsinghua University, P.R. China); Francis C.M. Lau (The University of Hong Kong, Hong Kong)

M-FAMA: A Multi-session MAC Protocol for Reliable Underwater Acoustic Streams

Seongwon Han (University of California, Los Angeles, USA); Youngtae Noh (Cisco Systems Inc., USA); Uichin Lee (KAIST, Korea); Mario Gerla (University of California at Los Angeles, USA)

Environment Aware Connectivity for Wireless Underground Sensor Networks
Main Technical Program

Xin Dong (University of Nebraska-Lincoln, USA); Mehmet Can Vuran (University of Nebraska-Lincoln, USA)

Toward Practical MAC Design for Underwater Acoustic Networks

Yibo Zhu (University of Connecticut, USA); Zaihan Jiang (U.S. Naval Research Lab, USA); Zheng Peng (University of Connecticut, USA); Michael Zuba (University of Connecticut, USA); Jun-Hong Cui (University of Connecticut, USA); Huifang Chen (Zhejiang University, P.R. China)

Optical networks

Room: Dublino

Chair: Eytan Modiano (MIT, USA)
Network Protection with Guaranteed Recovery Times using Recovery Domains

Gregory Kuperman (MIT, USA); Eytan Modiano (MIT, USA)

Shortest Path versus Multi-Hub Routing in Networks with Uncertain Demand

Alexandre Fréchette (University of British Columbia, Canada); Bruce Shepherd (McGill University, Canada); Marina Thottan (Bell Labs, USA); Peter Winzer (Lucent Technologies, USA)

Bounded-Reorder Packet Scheduling in Optical Cut-through Switch

Zhemin Zhang (Stony Brook University, USA); Zhiyang Guo (Stony Brook University, USA); Yuanyuan Yang (Stony Brook University, USA)
Cellular networks 1

Room: Lisbona

Chair: Ting He (IBM Research, USA)

iDEAL: Incentivized Dynamic Cellular Offloading via Auctions

Wei Dong (University of Texas at Austin, USA); Swati Rallapalli (University of Texas at Austin, USA); Rittwik Jana (AT&T Labs Research, USA); Lili Qiu (The University of Texas at Austin, USA); K. K. Ramakrishnan (AT&T Labs - Research, USA); Leo Razoumov (AT&T Research, USA); Yin Zhang (University of Texas at Austin, USA); Tae Won Cho (AT&T Labs, USA)

Exploiting Double Opportunities for Deadline Based Content Propagation in Wireless Networks
Han Cai (North Carolina State University, USA); Irem Kopru (Ohio State University, USA); Ness B. Shroff (The Ohio State University, USA)

Using Poisson processes to model lattice cellular networks

Bartłomiej Błaszcyszyn (Inria-Ens, France); Mohamed Kadhem Karray (France Telecom R&D, France); Holger Keeler (Inria-Ens, France)

Cooperative Cell Outage Detection in Self-Organizing Femtocell Networks

Wei Wang (Hong Kong University of Science and Technology, Hong Kong); Jin Zhang (Hong Kong University of Science and Technology, P.R. China); Qian Zhang (Hong Kong University of Science and Technology, Hong Kong)

15:30-16:00 coffee break
16:00-17:30

Cloud computing and networks 2

Room: Sala 500

Chair: Tian Lan (George Washington University, USA)

Joint Request Mapping and Response Routing for Geo-distributed Cloud Services

Hong Xu (University of Toronto, Canada); Baochun Li (University of Toronto, Canada)

On the Steady-State of Cache Networks
Elisha Rosensweig (CloudBand, Alcatel-Lucent, Israel); Daniel S Menasche (Federal University of Rio de Janeiro, Brazil); Jim Kurose (University of Massachusetts at Amherst, USA)

On Arbitrating the Power-Performance Tradeoff in SaaS Clouds

Zhi Zhou (Huazhong University of Science and Technology, P.R. China); Fangming Liu (Huazhong University of Science and Technology, P.R. China); Hai Jin (Huazhong University of Science and Technology, P.R. China); Bo Li (Hong Kong University of Science and Technology, Hong Kong); Baochun Li (University of Toronto, Canada); Hongbo Jiang (Huazhong University of Science and Technology, P.R. China)

Fast Mencius: Mencius with Low Commit Latency

Wei Wei (College of William and Mary, USA); Harry Tian Gao (College of William and Mary, USA); Fengyuan Xu (College of William and Mary, USA); Qun Li (College of William and Mary, USA)
Security and privacy 1

Room: Londra

Chair: Ming Li (Utah State University, USA)

*Drifting Keys: Impersonation Detection for Constrained Devices*

Kevin Bowers (RSA Laboratories, USA); Ari Juels (RSA, The Security Division of EMC, USA); Ronald Rivest (MIT, USA); Emily Shen (MIT, USA)

*SybilShield: An Agent-Aided Social Network-Based Sybil Defense among Multiple Communities*

Lu Shi (University of Arkansas at Little Rock, USA); Shucheng Yu (University of Arkansas at
Protocol-level Hidden Server Discovery

Zhen Ling (Southeast University, P.R. China); Luo Junzhou (Southeast University, P.R. China); Kui Wu (University of Victoria, Canada); Xinwen Fu (University of Massachusetts Lowell, USA)

Cross-Domain Password-Based Authenticated Key Exchange Revisited

Liqun Chen (HP Laboratories, Bristol, United Kingdom); Hoon Wei Lim (Nanyang Technological University, Singapore); Guomin Yang (University of Wollongong, Australia)

Network economics and pricing 2
Main Technical Program

Room: Madrid

Chair: Fan Wu (Shanghai Jiao Tong University, P.R. China)

Offering Supplementary Wireless Technologies: Adoption Behavior and Offloading Benefits

Carlee Joe-Wong (Princeton University, USA); Soumya Sen (Princeton University, USA); Sangtae Ha (Princeton University, USA)

Economic Analysis of 4G Network Upgrade

Lingjie Duan (Singapore University of Technology and Design (SUTD), Singapore); Jianwei Huang (The Chinese University of Hong Kong, Hong Kong); Jean Walrand (University of California, Berkeley, USA)
Content-peering Dynamics of Autonomous Caches in a Content-centric Network

Valentino Pacifici (Royal Institute of Technology (KTH), Sweden); Győrgy Dán (KTH, Royal Institute of Technology, Sweden)

Optimal Pricing for Local and Global WiFi Markets

Lingjie Duan (Singapore University of Technology and Design (SUTD), Singapore); Jianwei Huang (The Chinese University of Hong Kong, Hong Kong); Biying Shou (City University of Hong Kong, Hong Kong)

Cognitive radio networks 2

Room: Istanbul
Maximizing Social Welfare in Operator-based Cognitive Radio Networks under Spectrum Uncertainty and Sensing Inaccuracy

Shuang Li (The Ohio State University, USA); Zizhan Zheng (The Ohio State University, USA); Eylem Ekici (The Ohio State University, USA); Ness B. Shroff (The Ohio State University, USA)

Dynamic Chinese Restaurant Game in Cognitive Radio Networks

Chunxiao Jiang (Tsinghua University, P.R. China); Yan Chen (University of Maryland, College Park, USA); Yu-Han Yang (University of Maryland, College Park, USA); Chih-Yu Wang (National Taiwan University, Taiwan); K. J. Ray Liu (University of Maryland, USA)

Cooperative Multi-hop Relaying via Network Formation Games in Cognitive Radio
Networks

Wei Li (The George Washington University, USA); Xiuzhen Cheng (George Washington Univ, USA); Tao Jing (Beijing Jiaotong University, P.R. China); Xiaoshuang Xing (Beijing Jiao Tong University, P.R. China)

Energy-Efficient Cognitive Heterogeneous Networks Powered by the Smart Grid

Shengrong Bu (Carleton University, Canada); F. Richard Yu (Carleton University, Canada); Yi Qian (University of Nebraska–Lincoln, USA)

Energy efficiency in wireless networks

Room: Roma

Chair: Enzo Mingozi (University of Pisa, Italy)
**Stochastic Analysis of Energy Savings with Sleep Mode in OFDMA Wireless Networks**

Dimitrios Tsilimantos (INSA Lyon, France); Jean-Marie Gorce (INSA-Lyon, France); Eitan Altman (INRIA, France)

**Practical algorithm for power efficient DRX configuration in next generation mobiles**

R M Karthik (Samsung India Software Operations, India); Arvind Chakrapani (Samsung R&D, India)

**Competitive Ratio Analysis of Online Algorithms to Minimize Packet Transmission Time in Energy Harvesting Communication System**
Rahul Vaze (TIFR Mumbai, India)

**The Case for Re-configurable Backhaul in Cloud-RAN based Small Cell Networks**

Cheng Liu (Georgia Institute of Technology, USA); Karthikeyan Sundaresan (NEC Labs America, USA); Meilong Jiang (InterDigital Communications, LLC, USA); Sampath Rangarajan (NEC Labs America, USA); Gee-Kung Chang (Georgia Tech, USA)

**RFID**

Room: Copenhagen

Chair: Xue Liu (McGill University, Canada)
An Efficient Protocol for RFID Multigroup Threshold-based Classification

Wen Luo (University of Florida, USA); Yan Qiao (University of Florida, USA); Shigang Chen (University of Florida, USA)

An Efficient Tag Search Protocol in Large-Scale RFID Systems

Min Chen (University of Florida, USA); Wen Luo (University of Florida, USA); Zhen Mo (University of Florida, USA); Shigang Chen (University of Florida, USA); Yuguang Fang (University of Florida, USA)

ZOE: Fast Cardinality Estimation for Large-Scale RFID Systems

Yuanqing Zheng (Nanyang Technological University, Singapore); Mo Li (Nanyang Technological University, Singapore)
**P-MTI: Physical-layer Missing Tag Identification via Compressive Sensing**

Yuanqing Zheng (Nanyang Technological University, Singapore); Mo Li (Nanyang Technological University, Singapore)

**Network survivability**

Room: Dublin

Chair: Eytan Modiano (Massachusetts Institute of Technology, USA)

**Providing Protection in Multi-Hop Wireless Networks**
Gregory Kuperman (MIT, USA); Eytan Modiano (MIT, USA)

*Router Virtualization for Improving IP-level Resilience*

János Tapolcai (Budapest University of Technology and Economics, Hungary); Gábor Rétvári (Budapest University of Technology and Economics, Hungary)

*Tunable QoS-Aware Network Survivability*

Jose Yallouz (Technion - Israel Institute of Technology, Israel); Ariel Orda (Technion, Israel)

Cellular networks 2
Room: Lisbona

Chair: Giuseppe Bianchi (University of Rome "Tor Vergata", Italy)

Optimization Of HTTP Adaptive Streaming Over Mobile Cellular Networks

Danny De Vleeschauwer (Alcatel-Lucent, Belgium); Harish Viswanathan (Bell Labs, Alcatel-Lucent, USA); Andre Beck (Bell Laboratories Research, USA); Steven Benno (Alcatel-Lucent, USA); Gang Li (Alcatel-Lucent, USA); Ray Miller (Bell Labs, USA)

RAT Selection Games in HetNets

Ehsan Aryafar (Princeton University, USA); Alireza Keshavarz-Haddad (Rice University, USA); Michael Wang (Princeton University, USA); Mung Chiang (Princeton University, USA)
Location Patterns of Mobile Users: A Large Scale Study

Ashwin Sridharan (AT&T, USA); Jean Bolot (Technicolor, USA)

Network Control without CSI using Rateless Codes for Downlink Cellular Systems

Yin Sun (the Ohio State University, USA); Can Emre Koksal (The Ohio State University, USA); Sung-Ju Lee (HP Labs, USA); Ness B. Shroff (The Ohio State University, USA)

18:00-20:00 Reception

Wednesday, April 17
9:00-10:30

Cloud computing and networks 3

Room: Londra

Chair: Baochun Li (University of Toronto, Canada)

An Ensemble of Replication and Erasure Codes for Cloud File Systems

Yadi Ma (University of Wisconsin-Madison, USA); Thyaga Nandagopal (Alcatel-Lucent, USA); Krishna P. N. Puttaswamy (Bell Labs, Alcatel-Lucent, USA); Suman Banerjee (University of Wisconsin, USA)
To Offload or Not to Offload? The Bandwidth and Energy Costs of Mobile Cloud Computing

Marco Valerio Barbera (Sapienza University of Rome, Italy); Sokol Kosta (Sapienza University of Rome, Italy); Alessandro Mei (Sapienza University of Rome, Italy); Julinda Stefa (Sapienza University of Rome, Italy)

RapidRAID: Pipelined Erasure Codes for Fast Data Archival in Distributed Storage Systems

Lluis Pamies-Juarez (Nanyang Technological University, Singapore); Anwitaman Datta (Nanyang Technological University, Singapore); Frederique Oggier (Nanyang Technological University, Singapore)

NEST: Locality-aware Approximate Query Service for Cloud Computing

Yu Hua (Huazhong University of Science and Technology, P.R. China); Bin Xiao (The Hong Kong Polytechnic University, Hong Kong); Xue Liu (McGill University, Canada)
Ad hoc networks 1

Room: Madrid

Chair: Michele Garetto (Università di Torino, Italy)

On the Capacity of Wireless CSMA/CA Multihop Networks

Rafael Laufer (Bell Labs, Alcatel-Lucent, USA); Leonard Kleinrock (University of California, Los Angeles, USA)

On Interference Alignment for Multi-hop MIMO Networks
Huacheng Zeng (Virginia Tech, USA); Yi Shi (Intelligent Automation Inc., USA); Thomas Hou (Virginia Tech, USA); Wenjing Lou (Virginia Tech, USA); Sastry Kompella (Naval Research Laboratory, USA); Scott F Midkiff (Virginia Tech, USA)

On the Throughput-Delay Trade-off in Large-Scale MANETs with A Generalized i.i.d. Mobility Model

Wang Liu (Central South University, P.R. China); Kejie Lu (University of Puerto Rico at Mayaguez, Puerto Rico); Jianping Wang (City University of Hong Kong, Hong Kong); Yi Qian (University of Nebraska–Lincoln, USA); Liusheng Huang (University of Science and Technology of China, P.R. China); Jun Liu (NIC of Hunan Electric Power Corporation, P.R. China); Dapeng Oliver Wu (University of Florida, USA)

Distributed Approximation Algorithms for Link Scheduling and Local Broadcasting in the Physical Interference Model

Guanhong Pei (Virginia Tech, USA); Vullikanti S Anil Kumar (Virginia Tech, USA)
Cognitive radio networks 3

Room: Istanbul

Chair: Shiwen Mao (Auburn University, USA)

Non-parametric Passive Traffic Monitoring in Cognitive Radio Networks

Qiben Yan (Virginia Tech, USA); Ming Li (Utah State University, USA); Feng Chen (Virginia Tech, USA); Tingting Jiang (Virginia Tech, USA); Wenjing Lou (Virginia Tech, USA); Thomas Hou (Virginia Tech, USA); Chang-Tien Lu (Virginia Tech, USA)

To Stay Or To Switch: Multiuser Dynamic Channel Access
Yang Liu (University of Michigan, Ann Arbor, USA); Mingyan Liu (University of Michigan, USA)

**Exploiting Self-Interference Suppression for Improved Spectrum Awareness/Efficiency in Cognitive Radio Systems**

Wessam Afifi (University of Arizona, USA); Marwan Krunz (University of Arizona, USA)

**Leveraging Load Migration and Basestaion Consolidation for Green Communications in Virtualized Cognitive Radio Networks**

Xiang Sheng (Syracuse University, USA); Jian Tang (Syracuse University, USA); Chenfei Gao (Syracuse University, USA); Weiyi Zhang (AT&T Labs Research, USA); Chonggang Wang (InterDigital Communications, USA)
Main Technical Program

Wireless LAN 1

Room: Roma

Chair: Dimitrios Koutsonikolas (University of Buffalo, SUNY, USA)

**Cooperative Packet Recovery in Enterprise WLANs**

Mahanth Gowda (Duke University, USA); Souvik Sen (HP Labs, USA); Romit Roy Choudhury (Duke University, USA); Sung-Ju Lee (HP Labs, USA)

**Selfish Misbehavior Detection in 802.11 Based Wireless Networks: An Adaptive Approach Based on Markov Decision Process**

Jin Tang (Illinois Institute of Technology, USA); Yu Cheng (Illinois Institute of Technology, USA)
**HoWiES: A Holistic Approach to ZigBee Assisted WiFi Energy Savings in Mobile Devices**

Yifan Zhang (College of William and Mary, USA); Qun Li (College of William and Mary, USA)

**WiFi-BA: Choosing Arbitration over Backoff in High Speed Multicarrier Wireless Networks**

Pei Huang (Michigan State University, USA); Xi Yang (Michigan State University, USA); Li Xiao (Michigan State University, USA)

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**Sensor coverage and topology control**

Room: Copenhagen

Chair: Mo Li (Nanyang Technological University, Singapore)
When Target Motion Matters: Doppler Coverage In Radar Sensor Networks

Xiaowen Gong (Arizona State University, USA); Junshan Zhang (Arizona State University, USA); Douglas Cochran (Arizona State University, USA)

Adaptive Approximation Algorithms for Hole Healing in Hybrid Wireless Sensor Networks

Yilin Shen (University of Florida, USA); Dung T. Nguyen (University of Florida, USA); My T. Thai (University of Florida, USA)

Approximations for Minimum Connected Sensor Cover
Lidong Wu (UT Dallas, USA); Hongwei Du (Harbin Institute of Technology Shenzhen Graduate School, P.R. China); Weili Wu (UT Dallas, USA); Deying Li (Renmin University of China, P.R. China); Jing Lv (Harbin Institute of Technology Shenzhen Graduate School, P.R. China); Wonjun Lee (Korea University, Korea)

On Wireless Network Coverage in Bounded Areas

Zuoming Yu (College of Zhangjiagang, Jiangsu University of Science and Technogoly, P.R. China); Jin Teng (The Ohio State University, USA); Xinfeng Li (The Ohio State University, USA); Dong Xuan (The Ohio State University, USA)

Router and switch design

Room: Dublino

Chair: Bin Liu (Tsinghua University, P.R. China)
A Benes Packet Network

Longbo Huang (University of California, Berkeley, USA); Jean Walrand (University of California, Berkeley, USA)

FIFA: Fast Incremental FIB Aggregation

Yaoqing Liu (University of Memphis, USA); Beichuan Zhang (University of Arizona, USA); Lan Wang (University of Memphis, USA)

A Trie Merging Approach with Incremental Updates for Virtual Routers

Layong Luo (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Gaogang Xie (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China);
Kavé Salamatian (LISTIC PolyTech, Université de Savoie Chambery Annecy, France); Steve Uhlig (Queen Mary, University of London, United Kingdom); Laurent Mathy (University of Liège, Belgium); Yingke Xie (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

Compressing Forwarding Tables

Ori Rottenstreich (Technion, Israel); Marat Radan (Technion, Israel); Yuval Cassuto (Technion, Israel); Isaac Keslassy (Technion, Israel); Carmi Arad (Marvell Israel, Israel); Tal Mizrahi (Marvell, Israel); Yoram Revah (Industry- Marvell Israel, Israel); Avinatan Hassidim (Google, Israel)

10:30-11:00 coffee break

11:00-12:30
Cloud pricing and cost optimization

Room: Londra

Chair: György Dán (KTH, Royal Institute of Technology, Sweden)

The Constrained Ski-Rental Problem and its Application to Online Cloud Cost Optimization

Ali Khanafer (University of Illinois at Urbana-Champaign, USA); M. Kodialam (Bell Labs, USA); Krishna P. N. Puttaswamy (Bell Labs, Alcatel-Lucent, USA)

An Efficient Distributed Algorithm for Resource Allocation in Large-Scale Coupled Systems

Di Niu (University of Alberta, Canada); Baochun Li (University of Toronto, Canada)
A Framework for Truthful Online Auctions in Cloud Computing with Heterogeneous User Demands

Hong Zhang (Huazhong University of Science and Technology, P.R. China); Bo Li (Hong Kong University of Science and Technology, Hong Kong); Hongbo Jiang (Huazhong University of Science and Technology, P.R. China); Fangming Liu (Huazhong University of Science and Technology, P.R. China); Athanasios V. Vasilakos (National Technical University of Athens, Greece); Jiangchuan Liu (Simon Fraser University, Canada)

Resource Pricing Game in Geo-distributed Clouds

Heejun Roh (Korea University, Korea); Cheoulhoon Jung (Korea University, Korea); Wonjun Lee (Korea University, Korea); Ding-Zhu Du (University of Texas, Dallas, USA)
Main Technical Program

Room: Madrid

Chair: Emilio Leonardi (Politecnico di Torino, Italy)

Exploring the Inefficiency and Instability of Back-Pressure Algorithms

Bo Ji (The Ohio State University, USA); Changhee Joo (UNIST, Korea); Ness B. Shroff (The Ohio State University, USA)

MaxWeight vs. BackPressure: Routing and Scheduling in Multi-Channel Relay Networks

Sharayu Moharir (UT Austin, USA); Sanjay Shakkottai (The University of Texas at Austin, USA)
An Efficient DoF Scheduling Algorithm for Multi-hop MIMO Networks

Huacheng Zeng (Virginia Tech, USA); Yi Shi (Intelligent Automation Inc., USA); Thomas Hou (Virginia Tech, USA); Wenjing Lou (Virginia Tech, USA)

Diff-Max: Separation of Routing and Scheduling in Backpressure-Based Wireless Networks

Hulya Seferoglu (Massachusetts Institute of Technology, USA); Eytan Modiano (MIT, USA)

Cognitive radio networks 4

Room: Istanbul

Chair: Kaushik Chaudhury (Northeastern University, USA)
Virtual Backbone Construction for Cognitive Radio Networks without Common Control Channel

Ying Dai (Temple University, USA); Jie Wu (Temple University, USA); ChunSheng Xin (Norfolk State University, USA)

Channel Quality Prediction Based on Bayesian Inference in Cognitive Radio Networks

Xiaoshuang Xing (Beijing Jiao Tong University, P.R. China); Tao Jing (Beijing Jiaotong University, P.R. China); Yan Huo (Beijing Jiaotong University, P.R. China); Hongjuan Li (The George Washington University, USA); Xiuzhen Cheng (George Washington Univ, USA)

FMAC: A Fair MAC Protocol for Coexisting Cognitive Radio Networks
Yanxiao Zhao (South Dakota School of Mines and Technology, USA); Min Song (The University of Toledo, USA); ChunSheng Xin (Norfolk State University, USA)

Event-driven Spectrum-Aware Clustering in Cognitive Radio Sensor Networks

Mustafa Ozger (Koc University, Turkey); Ozgur B. Akan (Koc University, Turkey)

Wireless LAN 2

Room: Roma

Chair: Joerg C. Widmer (Institute IMDEA Networks, Spain)

CUTS: Improving Channel Utilization in Both Time and Spatial Domains in WLAN
Distributed Spectrum Assignment for Home WLANs

Julien Herzen (EPFL, Switzerland); Ruben Merz (Telekom Innovation Laboratories, Germany); Patrick Thiran (EPFL, Switzerland)

Virtual MISO Triggers in WiFi-like Networks

Oscar Bejarano (Rice University, USA); Edward W. Knightly (Rice University, USA)
 Delay Analysis and Study of IEEE 802.11p based DSRC Safety Communication in a Highway Environment

Yuan Yao (McGill University, Canada); Lei Rao (General Motors Research Lab, USA); Xue Liu (McGill University, Canada); Xingshe Zhou (Northwestern Polytechnical University, P.R. China)

Sensor networks 1

Room: Copenhagen

Chair: Carla-Fabiana Chiasserini (Politecnico di Torino, Italy)

Dynamic Switching-based Reliable Flooding in Low-Duty-Cycle Wireless Sensor Networks
Long Cheng (Singapore University of Technology and Design, Singapore); Yu Gu (Singapore University of Technology and Design, Singapore); Tian He (University of Minnesota, USA); Jianwei Niu (Beihang University, P.R. China)

**Fault Tolerant Complex Event Detection in WSNs: A Case Study in Structural Health Monitoring**

Xuefeng Liu (The Hong Kong Polytechnic University, Hong Kong); Jiannong Cao (Hong Kong Polytechnic Univ, Hong Kong); Shaojie Tang (Illinois Institute of Technology, USA)

**Optimal Incentive-driven Design of Participatory Sensing Systems**

Iordanis Koutsopoulos (University of Thessaly and CERTH, Greece)
Efficient 3G Budget Utilization in Mobile Participatory Sensing Applications

Hengchang Liu (UIUC, USA); Shaohan Hu (University of Illinois at Urbana-Champaign, USA); Wei Zheng (University of Wisconsin - Madison, USA); Zhiheng Xie (University of Virginia, USA); Shiguang Wang (University of Illinois at Urbana Champaign, USA); Pan Hui (Deutsche Telekom Laboratories, Germany); Tarek Abdelzaher (University of Illinois, Urbana Champaign, USA)

Network measurement and analysis

Room: Dublino

Chair: Marco Mellia (Politecnico di Torino, Italy)

Pegasus: Precision Hunting for Icebergs and Anomalies in Network Flows

Sriharsha Gangam (Purdue University, USA); Puneet Sharma (HP Labs Palo Alto, USA); Sonia
Main Technical Program

Fahmy (Purdue University, USA)

Network Utilization: The Flow View

Avinatan Hassidim (Google, Israel); Danny Raz (Technion, Israel); Michal Segalov (Google, Israel); Ariel Shaqed (Google, Israel)

2-state (semi-)Markov Processes beyond Gilbert-Elliot: Traffic and Channel Models based on 2. Order Statistics

Gerhard Hasslinger (Deutsche Telekom, Germany); Anne Schwahn (T-Systems, Germany); Franz Hartleb (T-Systems, Germany)

Near-optimal Approximate Membership Query over Time-decaying Windows
Yang Liu (Iowa State University, USA); Wenji Chen (Iowa State University, USA); Yong Guan (Iowa State University, USA)

12:30-14:00 Lunch break

14:00-15:30

Resource allocation in cloud computing 1

Room: Sala 500

Chair: Florin Ciucu (T-Labs / TU Berlin, Germany)
A New Analytical Technique for Designing Provably Efficient MapReduce Schedulers

Yousi Zheng (Ohio State University, USA); Ness B. Shroff (The Ohio State University, USA); Prasun Sinha (Ohio State University, USA)

Map Task Scheduling in MapReduce with Data Locality: Throughput and Heavy-Traffic Optimality

Weina Wang (Arizona State University, USA); Kai Zhu (Arizona State University, USA); Lei Ying (Arizona State University, USA); Jian Tan (IBM Research, USA); Li Zhang (IBM T. J. Watson Research Center, USA)

Coupling Task Progress for MapReduce Resource-Aware Scheduling

Jian Tan (IBM Research, USA); Xiaoqiao Meng (IBM T. J. Watson Research Center, USA); Li Zhang (IBM T. J. Watson Research Center, USA)
Improving ReduceTask Data Locality for Sequential MapReduce Jobs

Jian Tan (IBM Research, USA); Shicong Meng (IBM TJ Watson Research Center, USA); Xiaoqiao Meng (IBM T. J. Watson Research Center, USA); Li Zhang (IBM T. J. Watson Research Center, USA)

Security and privacy 2

Room: Londra

Chair: Xiaojiang Du (Temple University, USA)

An Optimized Design of Reconfigurable PSD Accelerator for Online Shrew DDoS Attacks Detection
Hao Chen (State University of New York - Binghamton, USA); Yu Chen (State University of New York - Binghamton, USA); Douglas Summerville (State University of New York at Binghamton, USA); Zhou Su (Waseda University, Japan)

Cardinality Change-based Early Detection of Large-scale Cyber-Attacks

Wenji Chen (Iowa State University, USA); Yang Liu (Iowa State University, USA); Yong Guan (Iowa State University, USA)

A Traceback Attack on Freenet

Guanyu Tian (Florida State University, USA); Zhenhai Duan (Florida State University, USA); Todd Baumeister (University of Hawaii, Manoa, USA); Yingfei Dong (University of Hawaii, USA)
PPBD: A Piracy Preventing System for BT DHT Networks

Hongli Zhang (Harbin Institute of Technology, P.R. China); Jiantao Shi (Harbin Institute of Technology, P.R. China); Lin Ye (Harbin Institute of Technology, P.R. China); Xiaojiang Du (Temple University, USA)

Ad hoc networks 3

Room: Madrid

Chair: Xin Wang (Stony Brook University, USA)

Content-centric wireless networks with limited buffers: when mobility hurts

Giuseppa Alfano (Politecnico di Torino, Italy); Michele Garetto (Università di Torino, Italy); Emilio Leonardi (Politecnico di Torino, Italy)
Double Regression: Efficient Spatially Correlated Path loss Model for Wireless Network Simulation

Seon Yeong Han (KAIST, Korea); Nael Abu-Ghazaleh (State University of New York at Binghamton, USA); Dongman Lee (KAIST, Korea)

A (min,x)-Network Calculus for Multi-Hop Fading Channels

Hussein Al-Zubaidy (University of Toronto, Canada); Jorg Liebeherr (University of Toronto, Canada); Almut Burchard (University of Toronto, Canada)

Economic-Robust Transmission Opportunity Auction in Multi-hop Wireless Networks

Ming Li (Mississippi State University, USA); Pan Li (Mississippi State University, USA); Miao
Cognitive radio networks 5

Room: Istanbul

Chair: Jian Tang (Syracuse University, USA)

*Mobile Access of Wide-Spectrum Networks: Design, Deployment and Experimental Evaluation*

Anastasios Giannoulis (Rice University, USA); Paul Patras (Hamilton Institute, National University of Ireland Maynooth, Ireland); Edward W. Knightly (Rice University, USA)
Socially-optimal Multi-hop Secondary Communication under Arbitrary Primary User Mechanisms

Hongxing Li (The University of Hong Kong, USA); Chuan Wu (The University of Hong Kong, Hong Kong); Zongpeng Li (University of Calgary, Canada); Francis C.M. Lau (The University of Hong Kong, Hong Kong)

On Optimal Communication Strategies for Cooperative Cognitive Radio Networking

Bin Cao (Harbin Institute of Technology Shenzhen Graduate School, P.R. China); Jon Mark (University of Waterloo, Canada); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, P.R. China); Rongxing Lu (University of Waterloo, Canada); Xiaodong Lin (University of Ontario Institute of Technology, Canada); Sherman Shen (University of Waterloo, Canada)

Capacity Scaling of Cognitive Networks: Beyond Interference-Limited Communication

Sang-Woon Jeon (EPFL, Switzerland); Michael Gastpar (University of California, Berkeley,
Wireless mesh networks

Room: Roma

Chair: Renato Lo Cigno (University of Trento, Italy)

*Capacity Gain through Power Enhancement in Multi-Radio Multi-Channel Wireless Networks*

Devu Manikantan Shila (IIT, USA); Yu Cheng (Illinois Institute of Technology, USA)
GaS: A Gateway Scheduling-based Handoff Scheme in Single-radio Infrastructure Wireless Mesh Networks

Haopeng Li (University of North Carolina at Charlotte, USA); Linda Jiang Xie (University of North Carolina at Charlotte, USA)

Comparison of Routing Metrics in 802.11n Wireless Mesh Networks

Ramanujan K Sheshadri (University at Buffalo, SUNY, USA); Dimitrios Koutsonikolas (University at Buffalo, SUNY, USA)

Trading Off Distortion for Delay for Video Transmissions in Wireless Networks

Zi Feng (University of California, Riverside, USA); George Papageorgiou (UC Riverside, USA); Srikanth V. Krishnamurthy (University of California, Riverside, USA); Ramesh Govindan (University of Southern California, USA); Tom La Porta (Penn State University, USA)
Sensor networks 2

Room: Copenhagen

Chair: Yu Gu (Singapore University of Technology and Design, Singapore)

**Bundling Mobile Base Station and Wireless Energy Transfer: Modeling and Optimization**

Liguang Xie (Virginia Tech, USA); Yi Shi (Intelligent Automation Inc., USA); Thomas Hou (Virginia Tech, USA); Wenjing Lou (Virginia Tech, USA); Hanif Sherali (Virginia Tech, USA); Scott F Midkiff (Virginia Tech, USA)

**Application-Aware Data Collection in Wireless Sensor Networks**
Data Loss and Reconstruction in Sensor Networks

Linghe Kong (Shanghai Jiao Tong University, P.R. China); Mingyuan Xia (McGill University, Canada); Xiao-Yang Liu (Shanghai Jiao Tong University, P.R. China); Min-You Wu (Shanghai JiaoTong University, P.R. China); Xue Liu (McGill University, Canada)

ε-Approximation to Data Streams in Sensor Networks

Guohua Li (Harbin Institute of Technology, P.R. China); Jianzhong Li (Harbin Institute of Technology, P.R. China); Hong Gao (University of Harbin Institute Technology, P.R. China)
Internet monitoring and measurement

Room: Dublino

Chair: Cedric Westphal (Huawei Innovation Center, USA)

*Inferring the Periodicity in Large-Scale Internet Measurements*

Oded Argon (Tel-Aviv University, Israel); Yuval Shavitt (Tel-Aviv University, Israel); Udi Weinsberg (Tel Aviv University, Israel)

*Evaluating Anycast in the Domain Name System*

Xun Fan (University of Southern California, Information Sciences Institute, USA); John Heidemann (University of Southern California, USA); Ramesh Govindan (University of Southern
Event Detection using Customer Care Calls

Yi-Chao Chen (University of Texas at Austin, USA); Gene Moo Lee (University of Texas at Austin, USA); Nick Duffield (AT&T Labs - Research, USA); Lili Qiu (The University of Texas at Austin, USA); Jia Wang (AT&T Labs - Research, USA)

Decentralizing Network Inference Problems with Multiple-Description Fusion Estimation (MDFE)

Mehdi Malboubi (University of California, Davis, USA); Cuong Vu (UC Davis, USA); Chen-Nee Chuah (University of California, Davis, USA); Puneet Sharma (HP Labs Palo Alto, USA)

Overlay and peer-to-peer networks
Room: Lisbona

Chair: Haojin Zhu (Shanghai Jiao Tong University, P.R. China)

Hybrid Client-Server and Peer-to-Peer Caching Systems with Selfish Peers

Youngmi Jin (KAIST, Korea); Yung Yi (KAIST, Korea); George Kesidis (Pennsylvania State University, USA); Fatih Kocak (The Pennsylvania State University, USA); Jinwoo Shin (Georgia Institute of Technology, USA)

Can P2P Networks be Super-Scalable?

Francois Baccelli (INRIA-ENS, France); Fabien Mathieu (INRIA, France); Ilkka Norros (VTT Technical Research Centre of Finland, Finland); Rémi Varloot (INRIA, France)
Unstructured P2P Link Lifetimes Redux

Zhongmei Yao (University of Dayton, USA); Daren Cline (Texas A&M University, USA); Dmitri Loguinov (Texas A&M University, USA)

Minimum-Delay Overlay Multicast

Kianoosh Mokhtarian (University of Toronto, Canada); Hans-Arno Jacobsen (University of Toronto, Canada)

15:30-16:00 coffee break

16:00-17:30
Resource allocation in cloud computing 2

Room: Sala 500

Chair: Fangming Liu (Huazhong University of Science and Technology, P.R. China)

Scheduling Jobs with Unknown Duration in Clouds

Siva Theja Maguluri (University of Illinois Urbana Champaign, USA); R. Srikant (University of Illinois at Urbana-Champaign, USA)

FCD: Fast-Concurrent-Distributed Load Balancing under Switching Costs and Imperfect Observations
Optimal Bounds for Online Page Migration with Generalized Migration Costs

Johannes Schneider (IBM Research, Switzerland); Stefan Schmid (T-Labs & TU Berlin, Germany)

Resource Placement and Assignment in Distributed Network Topologies

Yuval Rochman (Tel-Aviv University, Israel); Hanoch Levy (Tel Aviv University, Israel); Eli Brosh (Vidyo, USA)
Security and privacy 3

Room: Londra

Chair: Yingfei Dong (University of Hawaii, USA)

Combining Supervised and Unsupervised Learning for Zero-Day Malware Detection

Prakash Mandayam Comar (Michigan State University, USA); Lei Liu (Michigan State University, USA); Sabyasachi Saha (Narus Inc., USA); Pang-Ning Tan (Michigan State University, USA); Antonio Nucci (Narus inc., USA)

Turbo Covert Channel: An Iterative Framework for Covert Communication Over Data Networks

Seyed Ali Ahmadzadeh (University of Waterloo, Canada); Gordon Agnew (University of Waterloo, Canada)
A Difference Resolution Approach to Compressing Access Control Lists

James Daly (Michigan State University, USA); Alex X. Liu (Michigan State University, USA); Eric Torng (Michigan State University, USA)

On Finding an Optimal TCAM Encoding Scheme for Packet Classification

Ori Rottenstreich (Technion, Israel); Isaac Keslassy (Technion, Israel); Avinatan Hassidim (Google, Israel); Haim Kaplan (Tel-Aviv University, Israel); Ely Porat (Bar Ilan University, Israel)

Mobile Opportunistic Networks 1

Room: Madrid
Chair: Yanmin Zhu (Shanghai Jiao Tong University, P.R. China)

Wakeup Scheduling For Energy-Efficient Communication in Opportunistic Mobile Network

Wei Gao (University of Tennessee, USA); Qinghua Li (Pennsylvania State University, USA)

Providing Probabilistic Guarantees on the Time of Information Spread in Opportunistic Networks

Yoora Kim (The Ohio State University, USA); Kyunghan Lee (Ulsan National Institute of Science and Technology, Korea); Ness B. Shroff (The Ohio State University, USA); Injong Rhee (North Carolina State University, USA)
Characterizing Link Connectivity for Opportunistic Mobile Networking: Does Mobility Suffice?

Chul-Ho Lee (North Carolina State University, USA); Jaewook Kwak (North Carolina State University, USA); Do Young Eun (North Carolina State University, USA)

TOUR: Time-sensitive Opportunistic Utility-based Routing in Delay Tolerant Networks

Mingjun Xiao (University of Science and Technology of China, P.R. China); Jie Wu (Temple University, USA); Cong Liu (Sun Yat-sen University, P.R. China); Liusheng Huang (University of Science and Technology of China, P.R. China)

Spectrum pricing

Room: Istanbul

Chair: Eitan Altman (INRIA, France)
Core-Selecting Combinatorial Auction Design for Secondary Spectrum Markets

Yuefei Zhu (University of Toronto, Canada); Baochun Li (University of Toronto, Canada); Zongpeng Li (University of Calgary, Canada)

Hybrid Pricing for TV White Space Database

Xiaojun Feng (Hong Kong University of Science and Technology, Hong Kong); Qian Zhang (Hong Kong University of Science and Technology, Hong Kong); Jin Zhang (Hong Kong University of Science and Technology, P.R. China)

Balance of revenue and social welfare in FCC's spectrum allocation
Yanjiao Chen (Hong Kong University of Science and Technology, Hong Kong); Lingjie Duan (Singapore University of Technology and Design (SUTD), Singapore); Jianwei Huang (The Chinese University of Hong Kong, Hong Kong); Qian Zhang (Hong Kong University of Science and Technology, Hong Kong)

**Groupon in the Air: A Three-stage Auction Framework for Spectrum Group-buying**

Peng Lin (HKUST, Hong Kong); Xiaojun Feng (Hong Kong University of Science and Technology, Hong Kong); Qian Zhang (Hong Kong University of Science and Technology, Hong Kong); Mounir Hamdi (Hong Kong University of Science and Technology, P.R. China)

**Wireless cross-layer design**

Room: Roma

Chair: Changhee Joo (UNIST, Korea)
**Distributed CSMA with Pairwise Coding**

Nathaniel Jones (MIT, USA); Brooke Shrader (MIT Lincoln Laboratory, USA); Eytan Modiano (MIT, USA)

**Distributed Cross-Layer Optimization in Wireless Networks: A Second-Order Approach**

Jia Liu (Ohio State University, USA); Cathy Xia (Ohio-State University, USA); Ness B. Shroff (The Ohio State University, USA); Hanif Sherali (Virginia Tech, USA)

**Wireless Scheduling for Network Utility Maximization with Optimal Convergence Speed**

Bin Li (Ohio State University, USA); Atilla Eryilmaz (Ohio State University, USA); Ruogu Li (The Ohio State University, USA)
Scalable Algorithms for Wireless Link Schedulings in Multi-Channel Multi-Radio Wireless Networks

Peng-Jun Wan (Illinois Institute of Technology, USA); Xiaohua Jia (City University of Hong Kong, Hong Kong); Guo-Jun Dai (School of Computer Science, Hangzhou DianZi University, P.R. China); Hongwei Du (Harbin Institute of Technology Shenzhen Graduate School, P.R. China); Zhiguo Wan (Tsinghua University, P.R. China); Ophir Frieder (Georgetown University, USA)

Sensor networks 3

Room: Copenhagen

Chair: Francesca Cuomo (University of Rome "La Sapienza", Italy)

Optimizing the Collection of Local Decisions for Time-Constrained Distributed Detection
Main Technical Program

in WSNs

Seksan Laittrakun (Georgia Institute of Technology, USA); Edward Coyle (Georgia Institute of Technology, USA)

Mobile Data Gathering with Wireless Energy Replenishment in Rechargeable Sensor Networks

Songtao Guo (Chongqing University, P.R. China); Cong Wang (State University of New York at Stony Brook, USA); Yuanyuan Yang (Stony Brook University, USA)

Low-Latency SINR-based Data Gathering in Wireless Sensor Networks

Dawei Gong (Stony Brook University, USA); Yuanyuan Yang (Stony Brook University, USA)
A Digital Watermarking Approach to Secure and Precise Range Query Processing in Sensor Networks

Yeqing Yi (Hunan University, P.R. China); Rui Li (Hunan University, P.R. China); Fei Chen (MSU/VMware, USA); Alex X. Liu (Michigan State University, USA); Yaping Lin (Hunan University, P.R. China)

Network modelling

Room: Dublin

Chair: Lachlan L.H. Andrew (Swinburne University of Technology, Australia)

Towards Scalable Network Emulation: Channel Accuracy Versus Implementation Resources
Pengda Huang (Southern Methodist University, USA); Matthew Tonnemacher (Southern Methodist University, USA); Yongjiu Du (Southern Methodist University, USA); Dinesh Rajan (Southern Methodist University, USA); Joseph D. Camp (Southern Methodist University, USA)

2.5K-Graphs: from Sampling to Generation

Minas Gjoka (University of California, Irvine, USA); Maciej Kurant (ETH Zurich, Switzerland); Athina Markopoulou (University of California, Irvine, USA)

Maximizing Submodular Set Function with Connectivity Constraint: Theory and Application to Networks

Tung-Wei Kuo (Academia Sinica, Taiwan); Kate Ching-Ju Lin (Academia Sinica, Taiwan); Ming-Jer Tsai (National Tsing Hua University, Taiwan)
NSF Informational Session on Sustainability

Room: Lisbona

Krisha Kant (NSF)

Thursday, April 18

9:00-10:30
Main Technical Program

Data center networking

Room: Sala 500

Chair: Holger Karl (University of Paderborn, Germany)

On the Impact of Packet Spraying in Data Center Networks

Advait A Dixit (Purdue University, USA); Pawan Prakash (Purdue University, USA); Y. Charlie Hu (Purdue University, USA); Ramana Rao Kompella (Purdue University, USA)

A Cooperative Game Based Allocation for Sharing Data Center Networks
Jian Guo (Huazhong University of Science and Technology, P.R. China); Fangming Liu (Huazhong University of Science and Technology, P.R. China); Dan Zeng (Huazhong University of Science and Technology, P.R. China); John Chi Shing Lui (Chinese University of Hong Kong, Hong Kong); Hai Jin (Huazhong University of Science and Technology, P.R. China)

*Intra-Data-Center Traffic Engineering with Ensemble Routing*

Ziyu Shao (The Chinese University of Hong Kong, Hong Kong); Xin Jin (Princeton University, USA); Wenjie Jiang (Princeton University, USA); Minghua Chen (The Chinese University of Hong Kong, P.R. China); Mung Chiang (Princeton University, USA)

*Minimizing Flow Completion Times in Data Centers*

Ali Munir (Michigan State University, USA); Ihsan A Qazi (Lahore University of Management Sciences, Pakistan); Zartash Afzal Uzmi (Lahore University of Management Sciences, Pakistan); Aisha Mushtaq (Lahore University of Management Sciences, Pakistan); Saad Ismail (Lahore University of Management Sciences, Pakistan); Muhammad Safdar Iqbal (Lahore University of Management Sciences, Pakistan); Basma Khan (Lahore University of Management Sciences, Pakistan)
Wireless security and privacy 1

Room: Londra

Chair: Yong Guan (Iowa State University, USA)

Exchanging Pairwise Secrets Efficiently

Iris Safaka (EPFL, Switzerland); Christina Fragouli (EPFL, Switzerland); Katerina Argyraki (EPFL, Switzerland); Suhas Diggavi (University of California Los Angeles, USA)

OPFKA: Secure and Efficient Ordered-Physiological-Feature-based Key Agreement for
Wireless Body Area Networks

Chunqiang Hu (The George Washington University, USA); Xiuzhen Cheng (George Washington Univ, USA); Fan Zhang (The George Washington University, USA); Dengyuan Wu (The George Washington University, USA); Xiaofeng Liao (Chongqing University, P.R. China); Dechang Chen (Uniformed Services University of the Health Sciences, USA)

Extracting Secret Key from Wireless Link Dynamics in Vehicular Environments

Xiaojun Zhu (Nanjing University, P.R. China); Fengyuan Xu (College of William and Mary, USA); Edmund Novak (William and Mary, USA); Chiu C. Tan (Temple University, USA); Qun Li (College of William and Mary, USA); Guihai Chen (Shanghai Jiao Tong University, P.R. China)

Fast Secret Key Generation in Static Wireless Networks: A Virtual Channel Approach

Pengfei Huang (Shanghai Jiao Tong University, P.R. China); Xudong Wang (Shanghai Jiao Tong University, P.R. China)
Main Technical Program

Mobile Opportunistic Networks 2

Room: Madrid

Chair: Paolo Giaccone (Politecnico di Torino, Italy)

A Privacy-preserving Social-assisted Mobile Content Dissemination Scheme in DTNs

Linke Guo (University of Florida, USA); Chi Zhang (University of Science of Technology of China, USA); Hao Yue (University of Florida, USA); Yuguang Fang (University of Florida, USA)

Self-Interest-Drive Incentives for Ad Dissemination in Autonomous Mobile Social Networks
Ting Ning (University of Louisiana at Lafayette, USA); Zhipeng Yang (University of Louisiana at Lafayette, USA); Hongyi Wu (University of Louisiana at Lafayette, USA); Zhu Han (University of Houston, USA)

**Homing Spread: Community Home-based Multi-copy Routing in Mobile Social Networks**

Jie Wu (Temple University, USA); Mingjun Xiao (University of Science and Technology of China, P.R. China); Liusheng Huang (University of Science and Technology of China, P.R. China)

**Wi-Fi Sensing: Should Mobiles Sleep Longer As They Age?**

Jaeseong Jeong (KAIST, Korea); Yung Yi (KAIST, Korea); Jeong-woo Cho (Royal Institute of Technology (KTH), Sweden); Do Young Eun (North Carolina State University, USA); Song Chong (KAIST, Korea)
Spectrum sensing

Room: Istanbul

Chair: Minghua Chen (The Chinese University of Hong Kong, Hong Kong)

*Did You Also Hear That? Spectrum Sensing Using Hermitian-Inner-Product*

Jerry Chiang (Advanced Digital Sciences Center, Singapore); Yih-Chun Hu (University of Illinois at Urbana-Champaign, USA)

*Performance bounds of Energy Detection with Signal Uncertainty in Cognitive Radio Networks*

Shimin Gong (Nanyang Technological University, Singapore); Ping Wang (Nanyang
QuickSense: Fast and Energy-Efficient Channel Sensing for Dynamic Spectrum Access Networks

Sungro Yoon (North Carolina State University, USA); Li (Erran) Li (Bell Labs, Lucent Technologies, USA); Soung Chang Liew (The Chinese University of Hong Kong, Hong Kong); Romit Choudhury (Duke University, USA); Injong Rhee (North Carolina State University, USA); Kun Tan (Microsoft Research Asia, P.R. China)

Scheduling of Sequential Periodic Sensing for Cognitive Radios

Qiang Liu (Stony Brook University, USA); Xin Wang (Stony Brook University, USA); Yong Cui (Tsinghua University, P.R. China)
Main Technical Program

Network coding

Room: Roma

Chair: Athina Markopoulou (University of California, Irvine, USA)

Wireless network coding with partial overhearing information

Georgios S. Paschos (Massachusetts Institute of Technology, USA); Constantinos Fragiadakis (University of Thessaly, Greece); Leonidas Georgiadis (Aristotle University of Thessaloniki, Greece); Leandros Tassiulas (University of Thessaly, Greece)

Cooperative Pipelined Regeneration in Distributed Storage Systems

Jun Li (University of Toronto, Canada); Xin Wang (Fudan University, P.R. China); Baochun Li (University of Toronto, Canada)
Analysis and Construction of Functional Regenerating Codes with Uncoded Repair for Distributed Storage Systems

Yuchong Hu (Institute of Network Coding, Hong Kong); Patrick Pak-Ching Lee (The Chinese University of Hong Kong, Hong Kong); Kenneth W. Shum (Institute of Network Coding, Hong Kong)

A Graph Minor Perspective to Network Coding: Connecting Algebraic Coding with Network Topologies

Xunrui Yin (Fudan University, P.R. China); Yan Wang (Fudan University, P.R. China); Xin Wang (Fudan University, P.R. China); Xiangyang Xue (Fudan University, P.R. China); Zongpeng Li (University of Calgary, Canada)
Room: Copenhagen

Chair: Mario Gerla (University of California at Los Angeles, USA)

**Topology Dependent Space Filling Curves for Sensor Networks and Applications**

Xiaomeng Ban (Stony Brook University, USA); Mayank Goswami (Stony Brook University, USA); Wei Zeng (Florida International University, USA); David Gu (Stony Brook University, USA); Jie Gao (Stony Brook University, USA)

**SINUS: A Scalable and Distributed Routing Algorithm with Guaranteed Delivery for WSNs on High Genus 3D Surfaces**

Tianlong Yu (Huazhong University of Science and Technology, P.R. China); Hongbo Jiang (Huazhong University of Science and Technology, P.R. China); Guang Tan (SIAT, Chinese Academy of Sciences, P.R. China); Chonggang Wang (InterDigital Communications, USA); Chen Tian (Huazhong University of Science and Technology, P.R. China); Yu Wu (Huazhong University of Science and Technology, P.R. China)
A Localized Backbone Renovating Algorithm for Wireless Ad Hoc and Sensor Networks

Kai Xing (University of Science and Technology of China, P.R. China); Shuo Zhang (University Of Science And Technology Of China, P.R. China); Lei Shi (Hefei University of Technology, P.R. China); Haojin Zhu (Shanghai Jiao Tong University, P.R. China); Yuepeng Wang (University of Science and Technology of China, P.R. China)

Reactive Planar Spanner Construction in Wireless Ad Hoc and Sensor Networks

Markus Benter (University of Paderborn, Germany); Florentin Neumann (University of Koblenz-Landau, Germany); Hannes Frey (Universität Koblenz-Landau, Germany)

Traffic engineering
Room: Dublino

Chair: Andrea Bianco (Politecnico di Torino, Italy)

Endhost-Based Shortest Path Routing in Dynamic Networks: An Online Learning Approach

Ting He (IBM Research, USA); Dennis Goeckel (University of Massachusetts, USA); Ramya Raghavendra (IBM Research, USA); Don Towsley (University of Massachusetts at Amherst, USA)

Traffic Engineering in Software Defined Networks

Sugam Agarwal (CIti, United Kingdom); M. Kodialam (Bell Labs, USA); T. V. Lakshman (Bell Labs, Alcatel-Lucent, USA)
When the cure is worse than the disease: the impact of graceful IGP operations on BGP

Laurent Vanbever (Université Catholique de Louvain, Belgium); Stefano Vissicchio (Université Catholique de Louvain, Belgium); Luca Cittadini (Roma Tre University, Italy); Olivier Bonaventure (Université catholique de Louvain, Belgium)

10:30-11:00 coffee break

11:00-12:30

Social computing and networks

Room: Sala 500
Chair: Gian Paolo Rossi (Università degli Studi di Milano, Italy)

How to Optimally Allocate your Budget of Attention in Social Networks

Bo Jiang (University of Massachusetts Amherst, USA); Nidhi Hegde (Technicolor, France); Laurent Massoulie (Technicolor, France); Don Towsley (University of Massachusetts at Amherst, USA)

Enterprise Social Network Analysis and Modeling: A Tale of Two Graphs

Jin Cao (Bell Labs, Lucent Technologies, USA); Hongyu Gao (Northwestern University, USA); Li (Erran) Li (Bell Labs, Lucent Technologies, USA); Brian Friedman (Bell Labs, Alcatel-Lucent, USA)
A Genealogy of Information Spreading on Microblogs: a Galton-Watson-based Explicative Model

Dong Wang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Hosung Park (Department of Computer Science, KAIST, Korea); Gaogang Xie (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Sue Moon (KAIST, Korea); Mohamed Ali Kaafar (INRIA, France); Kavé Salamatian (LISTIC PolyTech, Université de Savoie Chambéry Annecy, France)

VoteTrust: Leveraging Friend Invitation Graph to Defend against Social Network Sybils

Jilong Xue (Peking University, P.R. China); Zhi Yang (Peking University, P.R. China); Xiaoyong Yang (Peking University, P.R. China); Xiao Wang (Renren Inc., P.R. China); Lijiang Chen (HP Labs, P.R. China); Yafei Dai (Peking University, P.R. China)

Wireless security and privacy 2
Room: Londra

Chair: Patrick Pak-Ching Lee (The Chinese University of Hong Kong, Hong Kong)

**ARTSense: Anonymous Reputation and Trust in Participatory Sensing**

Xinlei (Oscar) Wang (University of California, Davis, USA); Wei Cheng (University of Massachusetts Lowell, USA); Prasant Mohapatra (University of California, Davis, USA); Tarek Abdelzaher (University of Illinois, Urbana Champaign, USA)

**Secure Crowdsourcing-Based Cooperative Spectrum Sensing**

Rui Zhang (Arizona State University, USA); Jinxue Zhang (Arizona State University, USA); Yanchao Zhang (Arizona State University, USA); Chi Zhang (University of Science of Technology of China, USA)
**YouSense: Mitigating Entropy Selfishness in Distributed Collaborative Spectrum Sensing**

Shuai Li (Shanghai Jiao Tong University, P.R. China); Haojin Zhu (Shanghai Jiao Tong University, P.R. China); Zhaoyu Gao (Shanghai Jiaotong University, P.R. China); Xinping Guan (Shanghai Jiao Tong University, P.R. China); Kai Xing (University of Science and Technology of China, P.R. China)

**Rejecting the Attack: Source Authentication for Wi-Fi Management Frames using CSI Information**

Zhiping Jiang (Xi'an Jiaotong University, P.R. China); Jizhong Zhao (Xi'an Jiaotong University, P.R. China); Xiang-Yang Li (Illinois Institute of Technology, USA); Jinsong Han (Xi'an Jiaotong University, P.R. China); Wei Xi (Xi'an Jiaotong University, P.R. China)

**Vehicular Networks 1**

Room: Madrid
Horizon on the Move: Geocast in Intermittently Connected Vehicular Ad Hoc Networks

Yujin Li (North Carolina State University, USA); Wenye Wang (NC State University, USA)

Integrity-Oriented Content Transmission in Highway Vehicular Ad Hoc Networks

Tom Luan (University of Waterloo, Canada); Sherman Shen (University of Waterloo, Canada); Fan Bai (General Motors, USA)

On-road Ads Delivery Scheduling and Bandwidth Allocation in Vehicular CPS
Xu Li (State University of New York at Buffalo, USA); Chunming Qiao (State University of New York at Buffalo, USA); Yunfei Hou (State University of New York at Buffalo, USA); Yunjie Zhao (State University of New York at Buffalo, USA); Aditya Wagh (State University of New York at Buffalo, USA); Adel Sadek (State University of New York at Buffalo, USA); Liusheng Huang (University of Science and Technology of China, P.R. China); Hongli Xu (University of Science and Technology of China, P.R. China)

**CCR: Capacity-Constrained Replication for Data Delivery in Vehicular Networks**

Yuchen Wu (Shanghai Jiao Tong University, P.R. China); Yanmin Zhu (Shanghai Jiao Tong University, P.R. China); Hongzi Zhu (Shanghai Jiao Tong University, P.R. China); Bo Li (Hong Kong University of Science and Technology, Hong Kong)

**Localization**

Room: Istanbul
Main Technical Program

Chair: Hongyi Wu (University of Lousiana at Lafayette, USA)

**FreeLoc: Calibration-Free Crowdsourced Indoor Localization**

Sungwon Yang (UCLA, USA); Pralav Dessai (UCLA, USA); Mansi Verma (UCLA, USA); Mario Gerla (University of California at Los Angeles, USA)

**Theory Underlying Measurement of AOA with a Rotating Directional Antenna**

Yinjie Chen (University of Massachusetts Lowell, USA); Zhongli Liu (University of Massachusetts Lowell, USA); Xinwen Fu (University of Massachusetts Lowell, USA); Benyuan Liu (University of Massachusetts Lowell, USA); Wei Zhao (University of Macau, P.R. China)

**Beyond Convex Relaxation: A Polynomial-Time Non-Convex Optimization Approach to Network Localization**
Senshan Ji (The Chinese University of Hong Kong, Hong Kong); Kam-Fung Sze (The Chinese University of Hong Kong, Hong Kong); Zirui Zhou (The Chinese University of Hong Kong, Hong Kong); Anthony Man-Cho So (The Chinese University of Hong Kong, Hong Kong); Yinyu Ye (Stanford University, USA)

**APT: Accurate Outdoor Pedestrian Tracking with Smartphones**

Xiaojun Zhu (Nanjing University, P.R. China); Qun Li (College of William and Mary, USA); Guihai Chen (Shanghai Jiao Tong University, P.R. China)

**Wireless networks 1**

Room: Roma

Chair: Michela Meo (Politecnico di Torino, Italy)
**Performance of Low-Complexity Greedy Scheduling Policies in Multi-Channel Wireless Networks: Optimal Throughput and Near-Optimal Delay**

Bo Ji (The Ohio State University, USA); Gagan R Gupta (AT&T Labs, USA); Xiaojun Lin (Purdue University, USA); Ness B. Shroff (The Ohio State University, USA)

**Improving the Delay Performance of CSMA Algorithms: A Virtual Multi-Channel Approach**

Po-Kai Huang (Purdue University, USA); Xiaojun Lin (Purdue University, USA)

**Channel Assignment in Dense MC-MR Wireless Networks: Scaling Laws and Algorithms**

Rahul Urgaonkar (BBN Technologies, USA); Ram Ramanathan (BBN Technologies, USA)
Jason Redi (Raytheon BBN Technologies, USA); Will Tetteh (BBN Technologies, USA)

*Throughput-Optimal Wireless Scheduling with Regulated Inter-Service Times*

Ruogu Li (The Ohio State University, USA); Atilla Eryilmaz (Ohio State University, USA); Bin Li (Ohio State University, USA)

**Sensor networks 5**

Room: Copenhagen

Chair: Simone Silvestri (Pennsylvania State University, USA)

*Compact Conformal Map for Greedy Routing in Wireless Mobile Sensor Networks*
SiMing Li (Stony Brook University, USA); Wei Zeng (Florida International University, USA); Dengpan Zhou (Stony Brook University, USA); David Gu (Stony Brook University, USA); Jie Gao (Stony Brook University, USA)

On the security vulnerabilities of the virtual force approach to mobile sensor deployment

Novella Bartolini (Sapienza University of Rome, Italy); Giancarlo Bongiovanni (University of Rome La Sapienza, Italy); Tom La Porta (Penn State University, USA); Simone Silvestri (Pennsylvania State University, USA)

Efficient Distributed Multiple-Message Broadcasting in Unstructured Wireless Networks

Dongxiao Yu (The University of Hong Kong, Hong Kong); Qiang-Sheng Hua (Tsinghua University, P.R. China); Amy Yuexuan Wang (Tsinghua University, P.R. China); Jiguo Yu (Qufu Normal University, P.R. China); Francis C.M. Lau (The University of Hong Kong, Hong Kong)
**ERCD: An Energy-efficient Clone Detection Protocol in WSNs Zhongming**

Zhongming Zheng (University of Waterloo, Canada); Anfeng Liu (Center South University, P.R. China); Lin X. Cai (Huawei, USA); Zhigang Chen (Central South University, P.R. China); Sherman Shen (University of Waterloo, Canada)

**Scheduling and buffer management**

Room: Dublino

Chair: Georgios S. Paschos (Massachusetts Institute of Technology, USA)

**Capacity Provisioning for Schedulers with Tiny Buffers**
Yashar Ghiassi-Farrokhfal (University of Toronto, Canada) and Jorg Liebeherr (University of Toronto, Canada)

Delay Optimal Policies Offer Very Little Privacy

Sachin Kadloor (University of Illinois at Urbana Champaign, USA); Negar Kiyavash (University of Illinois at Urbana-Champaign, USA)

Online Packet Scheduling with Hard Deadlines in Multihop Communication Networks

Zhoujia Mao (The Ohio State University, USA); Can Emre Koksal (The Ohio State University, USA); Ness B. Shroff (The Ohio State University, USA)

To send or not to send: Reducing the cost of data transmission
12:30-14:00 Lunch break

14:00-15:30

Cloud security and privacy 1

Room: Sala 500

Chair: Athanasios V. Vasilakos (National Technical University of Athens, Greece)
Privacy Preserving Cloud Data Access With Multi-Authorities

Taeho Jung (Illinois Institute of Technology, USA); Xiang-Yang Li (Illinois Institute of Technology, USA); Zhiguo Wan (Tsinghua University, P.R. China)

Privacy-Preserving Data Aggregation without Secure Channel: Multivariate Polynomial Evaluation

Taeho Jung (Illinois Institute of Technology, USA); Xiang-Yang Li (Illinois Institute of Technology, USA); Shao-Jie Tang (Illinois Institute of Technology, USA)

Prometheus: Privacy-Aware Data Retrieval on Hybrid Cloud

Zhigang Zhou (Harbin Institute of Technology, P.R. China); Hongli Zhang (Harbin Institute of Technology, P.R. China); Xiaojiang Du (Temple University, USA); Panpan Li (Harbin Institute of Technology, P.R. China); Xiangzhan Yu (Harbin Institute of Technology, P.R. China)
Efficient Privacy-Preserving Biometric Identification in Cloud Computing

Jiawei Yuan (University of Arkansas at Little Rock, USA); Shucheng Yu (University of Arkansas at Little Rock, USA)

Wireless security and privacy 3

Room: Londra

Chair: Shigang Chen (University of Florida, USA)

Characterizing Privacy Leakage of Public WiFi Networks for Users on Travel
Ningning Cheng (University of California, Davis, USA); Xinlei (Oscar) Wang (University of California, Davis, USA); Wei Cheng (University of Massachusetts Lowell, USA); Prasant Mohapatra (University of California, Davis, USA); Aruna Seneviratne (University of New South Wales, Australia)

**Analysis on Perfect Location Spoofing Attacks Using Beamforming**

Ting Wang (Virginia Tech, USA); Yaling Yang (Virginia Tech, USA)

**Countering Selfish Misbehavior in Multi-channel MAC Protocols**

Yan Zhang (University of Arizona, USA); Loukas Lazos (University of Arizona, USA)

**Secrecy Capacity Maximization for Secure Cooperative Ad-hoc Networks**
Biao Han (University of Tsukuba, Japan); Jie Li (University of Tsukuba, Japan)

Vehicular Networks 2

Room: Madrid

Chair: Claudio E. Casetti (Politecnico di Torino, Italy)

A performance analysis of CSMA based broadcast protocol in VANETs

Tien Viet Nguyen (ENS, France); Francois Baccelli (INRIA-ENS, France); Kai Zhu (Arizona State University, USA); Sundar Subramanian (Qualcomm, USA); Xinzhou Wu (Qualcomm, USA)
Connectivity in Two-Dimensional Lattice Networks

Lei Zhang (University of Victoria, Canada); Lin Cai (University of Victoria, Canada); Jianping Pan (University of Victoria, Canada)

Compressive Sensing based Monitoring with Vehicular Networks

Hongjian Wang (Shanghai Jiao Tong University, P.R. China); Yanmin Zhu (Shanghai Jiao Tong University, P.R. China); Qian Zhang (Hong Kong University of Science and Technology, Hong Kong)

ZOOM: Scaling the Mobility for Fast Opportunistic Forwarding in Vehicular Networks

Hongzi Zhu (Shanghai Jiao Tong University, P.R. China); Mianxiong Dong (University of Waterloo, Canada); Shan Chang (Xi'an JiaoTong University, P.R. China); Yanmin Zhu (Shanghai Jiao Tong University, P.R. China); Minglu Li (Shanghai Jiao Tong University, P.R. China); Sherman Shen (University of Waterloo, Canada)
Localization and location privacy

Room: Istanbul

Chair: Wensheng Zhang (Iowa State University, USA)

WheelLoc: Enabling Continuous Location Service on Mobile Phone for Outdoor Scenarios

He Wang (Duke University, USA); Zhiyang Wang (University of California, Los Angeles, USA); Shen Guobin (Microsoft Research Asia, P.R. China); Fan Li (Microsoft Research Asia, P.R. China); Song Han (Tsinghua University, P.R. China); Feng Zhao (Microsoft Research, USA)
Extend Your Journey: Introducing Signal Strength into Location-based Applications

Chih-Chuan Cheng (Academia Sinica, Taiwan); Pi-Cheng Hsiu (Academia Sinica, Taiwan)

Location Privacy in Database-driven Cognitive Radio Networks: Attacks and Countermeasures

Zhaoyu Gao (Shanghai Jiaotong University, P.R. China); Haojin Zhu (Shanghai Jiao Tong University, P.R. China); Yao Liu (University of South Florida, USA); Muyuan Li (Shanghai Jiao Tong University, P.R. China); Zhenfu Cao (Shanghai Jiao Tong University, P.R. China)

Search Me If You Can: Privacy-preserving Location Query Service

Taeho Jung (Illinois Institute of Technology, USA); Xiang-Yang Li (Illinois Institute of Technology, USA)
Wireless networks 2

Room: Roma

Chair: Wenye Wang (NC State University, USA)

**Interference coordination in wireless networks: a flow-level perspective**

Richard Combes (Orange Labs, France); Zwi Altman (Orange Labs, France); Eitan Altman (INRIA, France)

*Streaming Codes for Channels with Burst and Isolated Erasures*
Ahmed Badr (University of Toronto, Canada); Ashish Khisti (University of Toronto, Canada); Wai-tian Tan (Hewlett-Packard, USA); John Apostolopoulos (Hewlett-Packard Labs, USA)

**CEDAR: An Optimal and Distributed Strategy for Packet Recovery In Wireless Networks**

Chenxi Qiu (Clemson University, USA); Haiying Shen (Clemson University, USA); Sohraab Soltani (University of Texas at Tyler, USA); Karan Sapra (Clemson University, USA); Hao Jiang (Clemson University, USA); Jason O. Hallstrom (Clemson University, USA)

**Stability Analyses of Static Greedy Link Schedulings in MC-MR Wireless Networks**

Peng-Jun Wan (Illinois Institute of Technology, USA); Zhiguo Wan (Tsinghua University, P.R. China); Zhu Wang (Illinois Institute of Technology, USA); Xiaohua Xu (The University of Toledo, USA); Shaojie Tang (Illinois Institute of Technology, USA); Xiaohua Jia (City University of Hong Kong, Hong Kong)
Sensor networks 6

Room: Copenhagen

Chair: Silvia Giordano (SUPSI, Switzerland)

PSR: Practical Synchronous Rendezvous in Low-duty-cycle Wireless Networks

Hao Huang (University of Nebraska-Lincoln, USA); Jihoon Yun (University of Nebraska-Lincoln, USA); Ziguo Zhong (University of Nebraska - Lincoln, USA); Song Min Kim (University of Minnesota, USA); Tian He (University of Minnesota, USA)

I^2C: A Holistic Approach to Prolong the Sensor Network Lifetime

Yang Peng (Iowa State University, USA); Zi Li (Iowa State University, USA); Daji Qiao (Iowa State University, USA)
Measurement and Analysis on the Packet Delivery Performance in A Large Scale Sensor Network

Wei Dong (Zhejiang University, P.R. China); Yunhao Liu (Tsinghua University, P.R. China); Yuan He (Tsinghua University, P.R. China); Tong Zhu (Hong Kong University of Science and Technology, Hong Kong)

Link Scanner: Faulty Link Detection for Wireless Sensor Networks

Qiang Ma (Hong Kong University of Science and Technology, Hong Kong); Kebin Liu (Hong Kong University of Science and Technology, Hong Kong); Xiangrong Xiao (National University of Defence Technology, P.R. China); Zhichao Cao (HKUST, Hong Kong); Yunhao Liu (Tsinghua University, P.R. China)
Multimedia networking

Room: Dublino

Chair: Rong Zheng (McMaster University, Canada)

Capacity of P2P On-Demand Streaming with Simple, Robust and Decentralized Control

Can Zhao (Purdue University, USA); Jian Zhao (The University of Hong Kong, Hong Kong); Xiaojun Lin (Purdue University, USA); Chuan Wu (The University of Hong Kong, Hong Kong)

Optimizing Stored Video Delivery For Mobile Networks: The Value of Knowing the Future

Zheng Lu (The University of Texas at Austin, USA); Gustavo de Veciana (The University of Texas at Austin, USA)
Impact of Flow-level Dynamics on QoE of Video Streaming in Wireless Networks

Yuedong Xu (INRIA, France); Salah Eddine Elayoubi (Orange Labs, France); Eitan Altman (INRIA, France); Rachid El-Azouzi (LIA/CERI University of Avignon, France)

How much can large-scale Video-On-Demand benefit from users’ cooperation?

Delia Ciullo (INRIA Sophia Antipolis, France); Valentina Martina (Politecnico di Torino, Italy); Michele Garetto (Università di Torino, Italy); Emilio Leonardi (Politecnico di Torino, Italy)

15:30-16:00 coffee break

16:00-17:30
Cloud security and privacy 2

Room: Sala 500

Chair: Anat Bremler-Barr (Interdisciplinary Center Herzliya, Israel)

Protecting Cloud Data Using Dynamic Inline Fingerprint Checks

Fang Hao (Bell Labs, Alcatel-Lucent, USA); M. Kodialam (Bell Labs, USA); T. V. Lakshman (Bell Labs, Alcatel-Lucent, USA); Krishna P. N. Puttaswamy (Bell Labs, Alcatel-Lucent, USA)

Outsourcing Privacy-Preserving Social Networks to a Cloud
Guojun Wang (Central South University, P.R. China); Qin Liu (Central South University, USA); Feng Li (Indiana University-Purdue University Indianapolis, USA); Shuhui Yang (Purdue University Calumet, USA); Jie Wu (Temple University, USA)

**DAC-MACS: Effective Data Access Control for Multi-Authority Cloud Storage Systems**

Kan Yang (City University of Hong Kong, Hong Kong); Xiaohua Jia (City University of Hong Kong, Hong Kong); Kui Ren (State University of New York at Buffalo, USA); Bo Zhang (City University of Hong Kong, Hong Kong)

**Public Auditing for Shared Data with Efficient User Revocation in the Cloud**

Boyang Wang (Xidian University, P.R. China); Baochun Li (University of Toronto, Canada); Hui Li (Xidian University, P.R. China)
Wireless security and privacy 4

Room: Londra

Chair: Xinwen Fu (University of Massachusetts Lowell, USA)

Is Random Walk Truly Memoryless - Traffic analysis and source location privacy under random walks

Rui Shi (Stony Brook University, USA); Mayank Goswami (Stony Brook University, USA); Jie Gao (Stony Brook University, USA); David Gu (Stony Brook University, USA)

PIPAC: Patient Infusion Pattern based Access Control Scheme for Wireless Insulin Pump Syste
Mutual Privacy-Preserving Regression Modeling in Participatory Sensing

Kai Xing (University of Science and Technology of China, P.R. China); Zhiguo Wan (Tsinghua University, P.R. China); Pengfei Hu (University of Science and Technology of China, P.R. China); Haojin Zhu (Shanghai Jiao Tong University, P.R. China); Yuepeng Wang (University of Science and Technology of China, P.R. China); Xi Chen (State Grid Corporation of China, P.R. China); Yang Wang (University of Science and Technology of China, P.R. China); Liusheng Huang (University of Science and Technology of China, P.R. China)

Fast and Practical Secret Key Extraction by Exploiting Channel Response

Hongbo Liu (Stevens Institute of Technology, USA); Yan Wang (Stevens Institute of Technology, USA); Jie Yang (Oakland University, USA); Yingying Chen (Stevens Institute of Technology, USA)
Cyber-physical systems

Room: Madrid

Chair: Chunming Qiao (State University of New York at Buffalo, USA)

Towards Omnidirectional Passive Human Detection

Zimu Zhou (Hong Kong University of Science and Technology, Hong Kong); Zheng Yang (Tsinghua University, P.R. China); Chenshu Wu (Tsinghua University, P.R. China); Long-fei Shangguan (Hong Kong University of Science and Technology, Hong Kong); Yunhao Liu (Tsinghua University, P.R. China)

OTrack: Order Tracking for Luggage in Mobile RFID Systems
Long-fei Shangguan (Hong Kong University of Science and Technology, Hong Kong); Zhenjiang Li (Nanyang Technological University, Singapore); Zheng Yang (Tsinghua University, P.R. China); Mo Li (Nanyang Technological University, Singapore); Yunhao Liu (Tsinghua University, P.R. China)

**RSS-Ratio for Enhancing Performance of RSS-based Applications**

Wei Cheng (University of Massachusetts Lowell, USA); Kefeng Tan (University of California, Davis, USA); Victor Omwando (UC-Davis, USA); Jindan Zhu (University of California, Davis, USA); Prasant Mohapatra (University of California, Davis, USA)

**O(1/ε)-Approximation to Physical World by Sensor Networks**

Siyao Cheng (Harbin Institute of Technology, P.R. China); Jianzhong Li (Harbin Institute of Technology, P.R. China); Zhipeng Cai (Georgia State University, USA)
Main Technical Program

Location privacy

Room: Istanbul

Chair: David K.Y. Yau (Purdue University, USA)

A Game-Theoretic Approach for Achieving k-Anonymity in Location Based Services

Xinxin Liu (University of Florida, USA); Kaikai Liu (University of Florida, USA); Linke Guo (University of Florida, USA); Xiaolin Li (University of Florida, USA); Yuguang Fang (University of Florida, USA)

Truthful Incentive Mechanisms for K-Anonymity Location Privacy

Dejun Yang (Arizona State University, USA); Xi Fang (Arizona State University, USA); Guoliang Xue (Arizona State University, USA)
Checking in without Worries: Location Privacy in Location Based Social Networks

Xinxin Zhao (Arizona State University, USA); Lingjun Li (Arizona State University, USA); Guoliang Xue (Arizona State University, USA)

n-CD: A Geometric Approach to Preserving Location Privacy in Location-Based Services

Ming Li (Mississippi State University, USA); Sergio Salinas (Mississippi State University, USA); Arun Thapa (Mississippi State University, USA); Pan Li (Mississippi State University, USA)

Wireless networks 3

Room: Roma
Chair: Chiara Petrioli (University of Rome "La Sapienza", Italy)

**Gap Sense: Lightweight Coordination of Heterogeneous Wireless Devices**

Xinyu Zhang (University of Wisconsin-Madison, USA); Kang G. Shin (University of Michigan, USA)

**Predicting Length of Stay at WiFi Hotspots**

Justin G Manweiler (IBM, USA); Naveen Kumar Santhapuri (Duke University, USA); Romit Roy Choudhury (Duke University, USA); Srihari Nelakuditi (University of South Carolina, USA)

**Approximate Online Learning for Passive Monitoring of Multi-channel Wireless Networks**
Rong Zheng (McMaster University, Canada); Thanh Le (University of Houston, USA); Zhu Han (University of Houston, USA)

**Optimal Dynamic Power Control for Full-Duplex Bidirectional-Channel Based Wireless Networks**

Wenchi Cheng (Xidian University, P.R. China); Xi Zhang (Texas A&M University, ECE Department, USA); Hailin Zhang (Xidian University, P.R. China)

**Sensor networks 7**

Room: Copenhagen

Chair: Zhipeng Cai (Georgia State University, USA)
RaSMaLai: A Randomized Switching Algorithm for Maximizing Lifetime in Tree-based Wireless Sensor Networks

Sk Kajal Arefin Imon (University of Texas at Arlington, USA); Adnan Khan (The University of Texas at Arlington, USA); Mario Di Francesco (Aalto University, Finland); Sajal K. Das (University of Texas at Arlington, USA)

Minimizing Charging Delay in Wirelessly Rechargeable Sensor Networks

Lingkun Fu (Zhejiang University, P.R. China); Peng Cheng (Zhejiang University, P.R. China); Yu Gu (Singapore University of Technology and Design, Singapore); Jiming Chen (Zhejiang University, P.R. China); Tian He (University of Minnesota, USA)

Energy Efficient Neighborhood Maintenance and Medium Access with Wake on Idle
Franck Rousseau (Grenoble INP / LIG, France); Maria Isabel Vergara Gallego (Grenoble INP, France)

**ZiFind: Exploiting Cross-Technology Interference Signatures for Energy-Efficient Indoor Localization**

Yuhang Gao (School of Computer Science and Engineering, Beihang University, P.R. China); Jianwei Niu (Beihang University, P.R. China); Ruogu Zhou (Michigan State University, USA); Guoliang Xing (Michigan State University, USA)

**Flow and congestion control**

Room: Dublino

Chair: Fabio Martignon (Université Paris-Sud, France)
**Receiver-Based Flow Control for Networks in Overload**

Chih-ping Li (MIT, USA); Eytan Modiano (MIT, USA)

**Does It Hurt When Others Prosper? Exploring the Impact of Heterogeneous Reordering Robustness of TCP**

Chengdi Lai (University of Hong Kong, Hong Kong); Ka-Cheong Leung (The University of Hong Kong, Hong Kong); Victor O. K. Li (University of Hong Kong, P.R. China)

**Low-latency and high bandwidth TCP/IP protocol processing through an integrated HW/SW approach**

Ken Inoue (IBM, USA); Davide Pasetto (IBM, USA); Karol Lynch (IBM, Ireland); Massimiliano Meneghin (IBM Technology Campus, Ireland); Kay Muller (IBM, Ireland); John Sheehan (IBM, Ireland)
When Heavy-Tailed and Light-Tailed Flows Compete: The Response Time Tail Under Generalized Max-Weight Scheduling

Jayakrishnan Unnikrishnan Nair (California Institute of Technology, USA); Krishna P Jagannathan (Indian Institute of Technology Madras, India); Adam C Wierman (California Institute of Technology, USA)