Technical Program

TUESDAY, June 23rd

08:15 Registration

09:15 – 09:30 Opening Announcements

09:30: - 10:30 Keynote: (Session Chair: Victor Bahl)

Bruce Tuch, “Wi-Fi to 4G: The Business/Technology Success and Failures Leading to Product Acceptance”

10:30 - 11:00 Coffee Break

11:00 - 12:30 Session 1: Security and Privacy (Session Chair: Doug Terry)

SPATE: Small-group PKI-less Authenticated Trust Establishment
Yue-Hsun Lin, National Tsing Hua University, Ahren Studer, Hsu-Chun Hsiao, Jonathan McCune, Carnegie Mellon University, King-Hang Wang, National Tsing Hua University, Maxwell Krohn, Carnegie Mellon University, Phen-Lan Lin, Providence University, Adrian Perrig, Carnegie Mellon University, Hung-Min Sun, National Tsing Hua University, and Bo-Yin Yang, Academia Sinica

xShare: Supporting Impromptu Sharing of Mobile Phones
Yunxin Liu, Microsoft Research Asia and Shanghai Jiao Tong University, Ahmad Rahmati, Rice University, Yuanhe Hang, Microsoft Research Asia and Tsinghua University, Hyukjae Jang, Microsoft Research Asia and KAIST, Lin Zhong, Rice University, Yongguang Zhang, Microsoft Research Asia, Shensheng Zhang, Shanghai Jiao Tong University.

Attacks on Public WLAN-based Positioning Systems
Nil Ole Tippenhauer, Kasper Rasmussen, Christina Pöpper, and Srdjan Capkun, ETH Zurich

12:30 - 2:00 Lunch

2:00 - 3:30 Session 2: Experimental Platforms (Session Chair: Mahadev Satyanarayanan)

BlueMonarch: A System for Evaluating Bluetooth Applications in the Wild
Timothy J. Smith, University of Toronto, Stefan Saroiu, and Alec Wolman, Microsoft Research

PEIR, the Personal Environmental Impact Report, as a Platform for Participatory Sensing Systems Research:Min Mun, Sasank Reddy, Katie Shilton, Nathan Yau, Jeff Burke, Deborah Estrin, Mark Hansen, Eric Howard, Ruth West, UCLA, and Peter Boda, Nokia Research Center.

Longitudinal Study of a Building-Scale RFID Ecosystem
Evan Welbourne, Karl Koscher, Emad Sorouch, Magdalena Balazinska, and Gaetano Borriello, University of Washington

3:30 - 4:00 Coffee Break

4:00 - 5:30 Session 3: Resource Management (Session Chair: Ed Nightingale)

Fidelity-Aware Replication for Mobile Devices
Kaushik Veeraraghavan, Venugopalan Ramasubramanian, Thomas L. Rodeheffer, Douglas B. Terry, and Ted Wobber, Microsoft Research Silicon Valley

MajB: Improving Resource Management for Web-Based Applications on Mobile Devices
Du Li and Manish Anand, Nokia Research Center

Leveraging Smart Phones to Reduce Mobility Footprints
Stephen Smaldone, Rutgers University, Benjamin Gilbert, Carnegie Mellon University, Nilton Bila, University of Toronto, Liviu Iftode, Rutgers University, Eyal de Lara, University of Toronto, and Mahadev Satyanarayanan, Carnegie Mellon University

5:30 – 6:00 Break

6:00 – 11:00 Wieliczka Salt Mine Tour and Dinner
WEDNESDAY, June 24th

08:30 Registration

09:00 - 10:30 Session 4: Discovery and Planning (Session chair: Roy Want)

Wifi-Reports: Improving Wireless Network Selection with Collaboration

Point&Connect: Intention-based Device Pairing for Mobile Phone Users
Chunyi Peng, Guobin Shen, Yongguang Zhang, Microsoft Research Asia, and Songwu Lu, Univ. of California, Los Angeles

Using Bluetooth Device Names to Support Interaction in Smart Environments
Nigel Davies, Adrian Friday, Peter Newman, Sarah Rutlidge, and Oliver Storz, Lancaster University

10:30 - 11:00 Coffee Break

11:00 - 12:30 Session 5: Mobile Sensing and Inference (Session Chair: Marco Gruteser)

SoundSense: Scalable Sound Sensing for People-Centric Applications on Mobile Phones
Hong Lu, Wei Pan, Nicholas D. Lane, Tanzeem Choudhury, and Andrew T. Campbell, Dartmouth College

A Framework of Energy Efficient Mobile Sensing for Automatic Human State Recognition
Yi Wang, University of Southern California, Jialiu Lin, Carnegie Mellon University, Murali Annavaram, University of Southern California, Quinn A. Jacobson, Nokia Research Center, Jason Hong, Carnegie Mellon University, Bhaskar Krishnamachari, University of Southern California, and Norman Sadeh-Koniecpol, Carnegie Mellon University

A Methodology for Extracting Temporal Properties from Sensor Network Data Streams
Dimitrios Lymberopoulos, Microsoft Research, Athanasios Bamis, and Andreas Savvides, Yale University

12:30 - 2:00 Lunch

2:00 – 3:00 Session 6: Location (Session Chair: Eyal de Lara)

StarTrack: A Framework for Track-Based Applications
Ganesh Ananthanarayanan, University of California, Berkeley and Microsoft Research, Maya Haridasan, Iqbal Mohamed, Douglas B. Terry, and Chandramohan A. Thekkath, Microsoft Research

EnTracked: Energy-Efficient Robust Position Tracking for Mobile Devices
Mikkel B. Kjaergaard, Jakob Langdal, Torben Godsk, and Thomas Toftkjaer, Aarhus University

3:00 - 3:30 Coffee Break

3:30 - 5:30 Demonstration and Poster Session

5:30 – 7:00 Break

7:00 – 9:00 Dinner near Wawel Castle (walking distance from hotel)
THURSDAY, June 25th

08:30 Registration

09:00 - 10:30 **Session 7: Wireless networking** (Session Chair: Alec Wolman)

R2D2: Regulating Beam Shape and Rate as Directionality meets Diversity
Kishore Ramachandran, Rutgers University, Ravi Kokku, Karthik Sundaresan, NEC Laboratories America, Marco Gruteser, Rutgers University, and Sampath Rangarajan, NEC Laboratories America

Blue-Fi: Enhancing Wi-Fi Performance using Bluetooth Signals
Ganesh Ananthanarayanan and Ion Stoica, University of California, Berkeley

Predictive Methods for Improved Vehicular WiFi Access
Prathap Deshpande, State University of New York, Stony Brook, Anand Kashyap, Symantec Corp., Chul Sung, and Samir Das, State University of New York, Stony Brook

10:30 - 11:00 Coffee Break

11:00 - 12:30 **Session 8: Applications and Services** (Session Chair: Jason Flinn)

iScope: Personalized Multi-Modality Image Search for Mobile Devices
Changyun Zhu, Queen’s University, Kun Li, Qin Lv, Li Shang, University of Colorado at Boulder, and Robert P. Dick, University of Michigan

mFerio: The Design and Evaluation of a Peer-to-Peer Mobile Payment System
Rajesh Balan, Narayan Ramasubbu, Singapore Management University, Komsit Prakobphol, Nicolas Christin, and Jason Hong, Carnegie Mellon University

Air-dropped Sensor Network for Real-time High-fidelity Volcano Monitoring
Wen-Zhan Song, Renjie Huang, Andy Ma, Mingsen Xu, Behrooz Shirazi, Washington State University, and Richard LaHusen, U.S. Geological Survey

12:30 – 2:00 Lunch

2:00 - 3:30 **Session 9: Power Management and Optimization** (Session Chair: Rajesh Balan)

Leakage-Aware Energy Synchronization for Wireless Sensor Networks
Ting Zhu, Ziguo Zhong, Yu Gu, Tian He, and Zhi-Li Zhang, University of Minnesota

SolarStore: Enhancing Data Reliability in Solar-powered Storage-centric Sensor Networks
Yong Yang, Lili Wang, Dong Kun Noh, Hieu Khac Le, and Tarek Abdelzaher, University of Illinois at Urbana-Champaign

Sensor Selection for Energy-Efficient Ambulatory Medical Monitoring
Eugene Shih, Ali Shoeb, and John Guttag, MIT

3.30 – 3:45 Closing