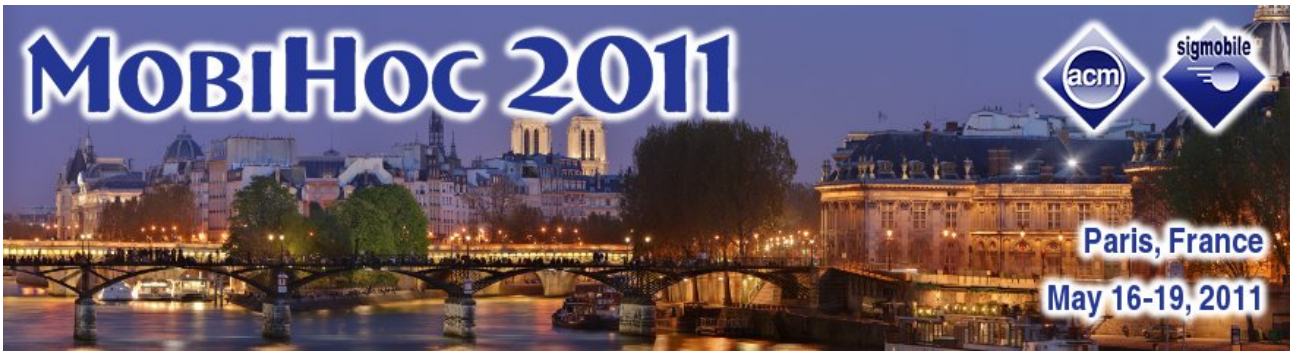

MOBIHOC 2011 CONFERENCE PROGRAM

With the generous support of

Program of MobiHoc Conference 2011
Paris May 17-19 2011

Program in a glance

begins	ends	
		Tuesday May 17
08h30	09h00	Welcome and opening adresses
09h00	10h00	Plenary talk: H. Balakrishnan
10h00	10h30	*Coffee break*
10h30	12h00	Session Routing
12h00	13h30	*Lunch*
13h30	15h30	Session Applications
15h30	16h00	*Coffee break*
16h00	17h30	Session Cognitive Radios and Spectrum Access
		Wednesday May 18
08h30	09h00	Welcome, TPC chairs addresses
09h00	10h00	Plenary talk: J. Walrand
10h00	10h30	*Coffee break*
10h30	12h30	Session Network Coverage
12h30	14h00	*Lunch*
14h00	15h00	Session Reliability and Security
15h00	15h30	*Coffee break*
15h30	16h30	Poster session
16h30	17h30	Session Mobility and DTNs
20h00	23h00	*Social Event*
		Thursday May 19
08h30	09h00	*Welcome*
09h00	10h00	Session Scheduling and Optimization
10h00	10h30	*Coffee break*
10h30	12h00	Session Energy Efficiency I
12h00	13h30	*Lunch*
13h30	14h30	Session Energy Efficiency II
14h30	15h00	*Coffee break*
	16h00	Closing

Tuesday May 17

08h30-09h00 Welcome and addresses

- Opening Addresses: Isabelle Ryl (Director INRIA Paris-Rocquencourt),

- Philippe Jacquet, General Chair.

09h00-10h00 Plenary talk

Session chair: Devavrat Shah (MIT).

Sense and Sensibility for Mobile Networks by Prof. Hari Balakrishnan, MIT

Abstract: "Truly mobile" devices such as smartphones and pads/tablets are rapidly becoming the dominant mode of Internet access. People use these devices in a wide range of locations and movement conditions, often in quick succession. The richness and diversity of operating conditions poses a significant challenge for wireless network protocols, which must adapt to the conditions at hand. In this talk, I will discuss how wireless network protocols can become smarter and operate more sensibly by incorporating external sensory information. The talk will make the case for a sensor-augmented protocol architecture for mobile networks, giving specific examples and outlining several open problems.

This talk is largely based on joint work with Lenin Ravindranath, Sam Madden, and Calvin Newport.

10h00-10h30 Coffee break

10h30-12h00 Session: Routing

Session Chair: Dr. Thrasyvoulos Spyropoulos (Eurecom, France)

10h30-11h00 **Deterministic Greedy Routing with Guaranteed Delivery in 3D Wireless Sensor Networks** Su Xia (University of Louisiana at Lafayette), Xiaotian Yin (Stony Brook University), Hongyi Wu (University of Louisiana at Lafayette), Miao Jin (University of Louisiana at Lafayette), David Gu (Stony Brook University)

11h00-11h30 **Optimized Overlay-based Opportunistic Routing** Mi Kyung Han (University of Texas at Austin), Apurv Bhartia (University of Texas at Austin), Lili Qiu (University of Texas at Austin), Eric Rozner (University of Texas at Austin)

11h30-12h00 **Neighbor Discovery in Wireless Networks with Multipacket Reception** Wei Zeng (University of Connecticut), Xian Chen (University of Connecticut), Alexander Russell (University of Connecticut), Sudarshan Vasudevan (Bell Labs), Bing Wang (University of Connecticut), Wei Wei (University of Massachusetts)

12h00-13h30 Lunch

13h30-15h30 Session Applications

Session Chair: Hari Balakrishnan (MIT)

13h30-14h00 **Broadcasting Delay-Constrained Traffic over Unreliable Wireless Links with Network Coding** I-Hong Hou (CSL and Dept. of CS, University of Illinois), P.R. Kumar (CSL and Dept. of ECE, University of Illinois)

14h00-14h30 **OmniVoice: A Mobile Voice Solution for Small-scale Enterprises** Nabeel Ahmed (MIT), Srinivasan Keshav (University of Waterloo), Konstantina Papagiannaki (Intel Research Pittsburgh)

14h30-15h00 **Enabling Coexistence of Heterogeneous Wireless Systems: Case for ZigBee and WiFi** Xinyu Zhang (University of Michigan), Kang G. Shin (University of Michigan)

15h00-15h30 **The Hare and the Tortoise: Taming Wireless Losses by Exploiting Wired Reliability** Anirudh Badam (Princeton University), Dongsu Han (Carnegie Mellon University), David G. Andersen (Carnegie Mellon University), Michael Kaminsky (Intel Labs Pittsburgh), Konstantina Papagiannaki (Intel Labs Pittsburgh), Srinivasan Seshan (Carnegie Mellon University)

15h30-16h00 Coffee break

16h00-17h30 Session Cognitive Radios and Spectrum Access

Session chair: Dina Papagianakis (Intel Labs, USA)

16h00-16h30 **A Market-Clearing Model for Spectrum Trade in Cognitive Radio Networks** Sang-Seon Byun (Norwegian University of Science and Technology), Ilangko Balasingham (Rikshospitalet University Hospital), Athanasios Vasilakos (University of Western Macedonia)

16h30-17h00 **Truthful Auction for Cooperative Communications** Dejun Yang (Arizona State University), Xi Fang (Arizona State University), Guoliang Xue (Arizona State University)

17h00-17h30 **Non-cooperative Spectrum Access - The Dedicated vs. Free Spectrum Choice** Krishna Jagannathan (MIT), Ishai Menache (MIT), Eytan Modiano (MIT), Gil Zussman (Columbia University)

Wednesday May 18

08h30-09h00 Welcome, Technical Program Chair addresses

- Dina Papagiannaki, Intel Labs Pittsburgh, USA
- Devavrat Shah, MIT, USA

09h00-10h00 Plenary talk

Session chair: Philippe Jacquet (INRIA, France).

Distributed Wireless Protocols: A Review by Prof. Jean Walrand, University of California, Berkeley

Abstract: This talk reviews recent results on distributed wireless protocols and explains the main ideas behind their throughput and delay properties. Using a simple example, the intuition behind the throughput-optimality of CSMA for one-hop flows is explained. The method for analyzing the average delays is explained on that example. The interaction with congestion control is then discussed. The next step is the integration of routing with the MAC and Transport protocol. Recent results on delays are then discussed. The talk concludes with a discussion of open problems and research directions.

This talk is based on the work of many colleagues and in part on the recent monograph: Libin Jiang and Jean Walrand, "Scheduling and Congestion Control for Communication and Processing Networks" (Morgan-Claypool, 2010).

10h00-10h30 Coffee break

10h30-12h30 Session Network Coverage

Session Chair: Jean Walrand (University of California Berkeley, USA)

10h30-11h00 **Wireless Coverage with Disparate Ranges** Pengjun Wan (IIT), XiaoHua Xu (IIT), Zhu Wang (IIT)

11h00-11h30 **Barrier coverage in camera sensor networks** Yi Wang (Pennsylvania State University), Guohong Cao (Pennsylvania State University)

11h30-12h00 **Local Connectivity Tests to Identify Wormholes in Wireless Networks** Xiaomeng Ban (Stony Brook University), Rik Sarkar (Freie Universitt Berlin), Jie Gao (Stony Brook University)

12h00-12h30 **UNFOLD: UNiform Fast On-Line boundary Detection for Dynamic 3D Wireless Sensor Networks** Feng LI (Nanyang Technological University), Jun LUO (Nanyang Technological University), Chi ZHANG (Zhejiang University), Shiqing XIN (Nanyang Technological University), Ying HE (Nanyang Technological University)

12h30-14h00 Lunch

14h00-15h00 Session Reliability and Security

Session Chair: Xiaomeng Ban (Stony Brook University)

14h00-14h30 **Self-Stabilizing Leader Election for Single-Hop Wireless Networks Despite Jamming** Andrea Richa (ASU), Christian Scheideler (Uni Paderborn), Stefan Schmid (T-Labs / TU Berlin), Jin Zhang (ASU)

14h30-15h00 **Towards Cheat-Proof Cooperative Relay for Cognitive Radio Networks** Haifan Yao (SUNY at Buffalo), Sheng Zhong (SUNY at Buffalo)

15h00-15h30 Coffee break

15h30-16h30 Poster session

Session Chair: Cédric Adjih (INRIA, France)

- **W3-Privacy: the Three Dimensions of User Privacy in LBS**, Pablo A. Prez-Martnez, Agusti Solanas (Universitat Rovira i Virgili Tarragona, Catalonia, Spain)
- **On the impact of routers mobility on substitution networks**, Karen Miranda, Enrico Natalizio and Tahiry Razafindralambo (INRIA Lille - Nord Europe)
- **A Statistical Region-based Compressive Sensing Indoor**, Dimitris Milioris (INRIA Rocquencourt - Paris)
- **Local Capacity in Wireless Networks: What Can We Expect Beyond Slotted ALOHA**, Philippe Jacquet and Salman Malik (INRIA Rocquencourt - Paris)
- **Impact of 802.11n Link Layer Parameters on Application Performance**, Lito Kriara, Mujahid Al-Adhami and Mahesh K. Marina (The University of Edinburgh, UK)
- **Emulation of large scale wireless sensor networks: from real neighbors to imaginary destination**, Jovan Radak (INRIA Lille - Nord Europe), Bogdan Pavkovic, Franck Rousseau (University of Grenoble, France), Ivan Stojmenovic (University of Novi Sad, Serbia)
- **TABA: A Channel Selection Algorithm for Heterogeneous Wireless Sensor Networks**, Yasir Faheem and Saadi Boudjit (Universit Paris 13, France)

16h30-17h30 Session Mobility and DTNs

Session chair: Christian Scheideler (Uni Paderborn, Germany)

16h30-17h00 **Dispatch-and-Search: Dynamic Multi-Ferry Control in Partitioned Mobile Networks** Ting He (IBM Research), Ananthram Swami (US Army Research Lab), Kang-Won Lee (IBM Research)

17h00-17h30 **Putting Contacts into Context: Mobility Modeling beyond Inter-Contact Times** Theus Hossmann (ETH Zurich), Thrasyvoulos Spyropoulos (Eurecom), Franck Legendre (ETH Zurich)

20h00-23h00 Social Event: Dinner cruise Bleu Seine

Thursday May 19

08h30-09h00 Welcome

09h00-10h00 Session Scheduling and Optimization

Session chair: Pascale Minet (INRIA, France)

09h00-09h30 **Towards Optimal Rate Allocation of Data Aggregation in Wireless Sensor Networks** Lu Su (UIUC), Yan Gao (UIUC), Yong Yang (UIUC), Guohong Cao (PSU)

09h30-10h00 **Scheduling Algorithms for Video Multicasting with Channel Diversity in Wireless OFDMA Networks** Karthikeyan Sundaresan (NEC Labs America), Sampath Rangarajan (NEC Labs America)

10h00-10h30 Coffee break

10h30-12h00 Session Energy Efficiency I

Session chair: Karthikeyan Sundaresan(NEC Labs, USA)

10h30-11h00 **Utility Optimal Scheduling in Energy Harvesting Networks** Longbo Huang (University of Southern California), Michael J. Neely (University of Southern California)

11h00-11h30 **Turning off Radios to Save Power in Multi-Radio Wireless Mesh Networks** Stefano Avallone (University of Naples)

11h30-12h00 **EM-MAC: A Dynamic Multichannel Energy-Efficient MAC Protocol for Wireless Sensor Networks** Lei Tang (Rice University), Yanjun Sun (Texas Instruments), Omer Gurewitz (Ben Gurion University), David B. Johnson (Rice University)

12h00-13h30 Lunch

13h30-14h30 Session Energy Efficiency II

Session chair: Lei Tang (Rice University)

13h30-14h00 **On Optimal Energy Efficient Convergecasting in Unreliable Sensor Networks with Applications to Target Tracking** Srikanth Hariharan (The Ohio State University), Ness B. Shroff (The Ohio State University)

14h00-14h30 **Energy-efficient Polling Protocols in RFID Systems** Yan Qiao, Shigang Chen, Tao Li, Shiping Chen

14h30-15h00 Coffee break

16h00 Conference closing

Sponsor section

Sagem, a high-tech company in the Safran group, holds world or European leadership positions in optronics, avionics, navigation, electronics and safety-critical software for both civil and military markets. Sagem is the No. 1 company in Europe and No. 3 worldwide for inertial navigation systems (INS) used in air, land and naval applications. It is also the world leader in helicopter flight controls and the European leader in optronics and tactical UAV systems. Operating across the globe through the Safran group, Sagem and its subsidiaries employ 7,000 people in Europe, Southeast Asia and North America.

Sagem is involved in several programs of digitization and transformations of the armed forces, developping and producing C2 systems such as Battle management systems, artillery C2 systems, optronics systems for forward observers and recce units, for France and international customers. Sagem is main contractor of the FELIN program, the integrated dismounted soldier system, including tactical radio, C2 systems and optronic sensors, for the French army. A total of 22 600 systems is being currently in production. The first bataillon has been delivered in september 2010. Sagem is the main contractor of Phoenix demonstration and experimentation program for the French Army based on software, C4I tactical systems, sensors and integration of electronics and optronics in combat vehicles. Sagem systems are proven on several overseas operations.

Sagem is the commercial name of the company Sagem Dfense Scurit. For more information: www.sagem-ds.com