



TSINGHUA / SUPELEC

Workshop on Wireless Communications

27 – 28 June 2011, Beijing, China

Room1-315, FIT Building

<http://network.ee.tsinghua.edu.cn>

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SUMMARY: This workshop is a first event organized by Tsinghua University and SUPELEC towards a wider research cooperation between the two institutions in the future. The program covers a wide range of topics in the field of wireless communications including IMT Advanced and 4G networks, green communications, cognitive radio, MIMO systems, cooperative communications and relaying, fundamental technologies and mathematical tools, and video applications. The presentations included in the program are not only from Tsinghua University and SUPELEC, but also from several industrial partners active in these fields.

WORKSHOP PROGRAM

Monday, 27 June 2011

08:30 – 09:00: Registration

09:00 – 10:30: Opening and Welcome Addresses

Zhisheng Niu, Tsinghua University
Hikmet Sari, SUPELEC

Coffee Break (10:30 – 11:00)

11:00 – 12:30: Some Fundamentals

Random Matrix Theory for Wireless Communications
Mérouane Debbah, SUPELEC

Near-Capacity Bit-Interleaved Coded Modulation with Iterative Detection and Signal Space Diversity
Jian Song, Tsinghua University

Learning and Decision Making for Opportunistic Spectrum Access in Cognitive Radio
Yves Louët, Wassim Jouini, and Christophe Moy, SUPELEC

Lunch (12:30 – 14:00)

14:00 – 15:30: Cooperation and Relaying

Cooperation Tools in Wireless Networks: Network Coding and Relaying
Pierre Duhamel and Michel Kieffer, SUPELEC

Maintaining Throughput and Reliability: A Fundamental Challenge in MIMO Relay Networks
Sheng Yang, SUPELEC

CORE-4: Cognition Oriented Relaying Exploiting 4-D Spectrum Holes
Wei Chen, Tsinghua University

Coffee Break (15:30 – 16:00)

16:00 – 17:30: Towards IMT Advanced and Beyond

Prospect of 3GPP LTE & Beyond
Yongxing Zhou, Huawei

Some Thoughts on Coexistence Issues of LTE Systems
Dongyan Wang, France Telecom

LTE Advanced Challenges for Terminal Design: MIMO and Carrier Aggregation
Guillaume Vivier, SEQUANS Communications

Tuesday, 28 June 2011

09:00 – 10:30: MIMO Systems

Recent Advancement in Multi-User MIMO

Zhenning Shi, France Telecom

Some New Results in Space-Time Code Design

Hikmet Sari, SUPELEC

Mutual Coupling Cancellation for Compact Transmit Antenna Arrays

Jinhui Chen, Alcatel-Lucent

Coffee Break (10:30 – 11:00)

11:00 – 12:30: Green Communications

TANGO: Traffic-Aware Network Planning and Green Operation

Zhisheng Niu, Tsinghua University

New Challenges for Green Networks

Shunqing Zhang, Huawei

Flexible Green Small Cell Networks

Mérouane Debbah, SUPELEC

Lunch (12:30 – 14:00)

14:00 – 15:30: Application-oriented System Design (1)

Joint PAPR Reduction and Channel Estimation Scheme for OFDM Systems in DVB-NGH Context

Yves Louët, Jean-François Héland, and Youssef Nasser, SUPELEC

Joint Protocol and Channel Decoding

Pierre Duhamel and Michel Kieffer, SUPELEC

60GHz Wireless Transmission for HD Video

Ning Ge, Tsinghua University

Coffee Break (15:30 – 16:00)

16:00 – 17:00: Application-oriented System Design (2)

Last-Meter Optical Wireless Access Technologies

Daniel Xu, Tsinghua University

Data Service Oriented Networking Analysis of TD-LTE System

Sheng Zhou, China Mobile