

# **Technical Sessions**

Monday 6 April 11:10 - 13:00 Erzsébet A

# PHY 1: Amplify and Forward Relaying 1

PHY1.1: Analyzing Amplify-and-Forward and Decode-and-Forward Cooperative Strategies in Wyner's Channel Model

Pengyu Zhang, Jian Yuan, Jianshu Chen, Jian Wang, Tsinghua University, China; Jin Yang, Motorola, China

PHY1.2: Beamforming with Antenna Correlation in Two Hop Amplify and Forward Relay Networks Raymond H.Y. Louie, Yonghui Li, University of Sydney, Australia; Himal A. Suraweera, Victoria University, Australia; Branka Vucetic, University of Sydney, Australia

PHY1.3: Comparison of Full-Duplex and Half-Duplex Modes with a Fixed Amplify-and-Forward Relay Taneli Riihonen, Stefan Werner, Risto Wichman, Helsinki University of Technology, Finland

PHY1.4: Cooperative Amplify-and-Forward with Trellis Coded Modulation Li Chen, Rolando Carrasco, Stephane LeGoff, Newcastle University, United Kingdom; and Ian Wassell, University of Cambridge, United Kingdom

PHY1.5: Transmit Antenna Selection Strategy in Amplify-and-Forward MIMO Relaying Lei Cao, Xin Zhang, Yafeng Wang, Dacheng Yang, Beijing University of Posts and Telecommunications, China

## Monday 6 April 11:10 - 13:00

Erzsébet B

#### PHY 2: MIMO 1

PHY 2.1: Efficient Transmit Antenna Selection for Correlated MIMO Channels
Hyungsoo Kim, Hyounkuk Kim, Namshik Kim, Hyuncheol Park, Information and Communications University, Korea,
Republic of: Seok Seo, Jinkyu Choi, Electronics and Telecommunications Research Institute, Korea, Republic of

PHY 2.2: MIMO TDCS with Extra Embedded Symbol for Higher Data Rates in Overlay Spectrum Sharing System Ibrahim Budiarjo, Homayoun Nikookar, IRCTR TU DELFT, Netherlands

PHY 2.3: Low Complexity Precoder Design for Delay Sensitive Multi-stream MIMO Systems Vincent Lau, Hong Kong University of Science Technology, Hong Kong; Yan Chen, Peiliang Qiu, Zhaoyang Zhang, Zhejiang University, China

PHY 2.4: Transmit Antenna Selection for Partially Precoded MIMO Systems Christos Masouros, Emad Alsusa, Ulises Pineda, University of Manchester, United Kingdom

PHY 2.5: Frequency-Domain Transmit Processing for MIMO SC-FDMA in Wideband Propagation Channels Mohamed Noune, Andrew Nix, University of Bristol, United Kingdom

11:10 - 13:00 Margit A

## **PHY 3: Fading Channels**

PHY 3.1: Cooperative Diversity over Fading Channels with Impulsive Noise Suhail Al-Dharrab, Murat Uysal, University of Waterloo, Canada

PHY 3.2: Outage Analysis of Wireless Systems over Composite Fading/Shadowing Channels with Co-Channel Interference

Imene Trigui, INRS-EMT, Canada; Amine Laourine, Cornell University, United States; Sofiene Affes, INRS-EMT, Canada; Alex Stephenne, Ericsson, Canada

PHY 3.3: Effect of a Cochannel Interferer on an Automatic Frequency Control Loop in Fading Channels Amin Emad, Norman C. Beaulieu, University of Alberta, Canada

PHY 3.4: New Method for Analyzing the Transport Stream Packet Error Rate of 'WBC over DVB-H' Zhanlin Ji, Ivan Ganchev, Mairtin O'Droma, University of Limerick, Ireland

PHY 3.5: On the Impact of Imperfect Cophasing in Uncoded and LDPC-Coded EGC Receivers over Generalized Fading Channels

Goran Djordjevic, Faculty of Electronic Engineering, Serbia; Ivan Djordjevic, University of Arizona, United States; George Karagiannidis, Aristotle University of Thessaloniki, Greece

#### Monday 6 April

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#### MAC 1: 802.11

MAC 1.1: A Selective Delayed Channel Access (SDCA) for the High-Throughput IEEE 802.11n Dionysios Skordoulis, Qiang Ni, Charilaos Zarakovitis, Brunel University, United Kingdom

MAC 1.2: Supporting MAC Layer Multicast in IEEE 802.11n: Issues and Solutions Xiaoli Wang, Lan Wang, Yingjie Wang, Yongsheng Zhang, DOCOMO Beijing Labs, China; Akira Yamada, DOCOMO, Japan

MAC 1.3: Performance Analysis of the TXOP Scheme in IEEE 802.11e WLANs with Bursty Error Channels Geyong Min, Jia Hu, University of Bradford, United Kingdom; Weijia Jia, City University of Hong Kong, Hong Kong; Mike E. Woodward, University of Bradford, United Kingdom

MAC 1.4: EDCA-TM: IEEE 802.11e MAC Enhancement for Wireless Multi-Hop Networks Min-Soo Kim, Deepesh Man Shrestha, Young-Bae Ko, Ajou University, South Korea

MAC 1.5: Improving the IEEE 802.11 MAC Layer Handoff Latency to Support Multimedia Traffic Yogesh Powar, Varsha Apte, IIT Bombay, India

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#### MAC 3: LTE

MAC 3.1: A Game Theoretical Formulation for Proportional Fairness in LTE Uplink Scheduling Elias Yaacoub, Zaher Dawy, American University of Beirut, Lebanon

MAC 3.2: Interference Avoidance with Dynamic Inter-Cell Coordination for Downlink LTE System Mahmudur Rahman, Halim Yanikomeroglu, Carleton University, Canada; William Wong, Communications Research Centre of Canada, Canada

MAC 3.3: Lab Performance Analysis of a 4G LTE Prototype Shirish Nagaraj, Sanjeev Garg, Frank Liang, Weidong Yang, John Haug, K. V. Pradap, Nitin Mangalvedhe, Motorola. United States

MAC 3.4: Uplink Buffer Status Reporting for Delay Constrained Flows in 3GPP Long Term Evolution K. V. Pradap, Vinod Kumar Ramachandran, Suresh Kalyanasundaram, Motorola, India

MAC 3.5: Principle and Performance of TTI Bundling For VoIP in LTE FDD Mode Haiming Wang, Jing Han, Nokia Device R&D/Wireless System Research, China

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## **MAC 7: Cognitive Radio Networks 2**

MAC 7.1: Joint Cross-Layer Scheduling and Spectrum Sensing for OFDMA Cognitive Radio Systems Rui Wang, Dr., Hong Kong; and Vincent K. N. Lau, Associate Professor, Hong Kong

MAC 7.2: Joint Power and Rate Control Considering Fairness for Cognitive Radio Network Yajun Zhu, Beijing University of Posts and Telecommunications, China; Zhenqiang Sun, China Telecom Beijing Research Institute, China; Wei Wang, Tao Peng, Wenbo Wang, Beijing University of Posts and Telecommunications, China

MAC 7.3: Joint Scheduling and Cooperative Sensing in Cognitive Radios: A Game Theoretic Approach Chunhua Sun, ECE Department, HKUST, Clear Water Bay, Kowloon, HongKong, Hong Kong; Wei Chen, Department of Electronic Engineering, Tsinghua University, Beijing, China; Khaled Ben Letaief, ECE Department, HKUST, Clear Water Bay, Kowloon, HongKong, Hong Kong

MAC 7.4: Opportunistic Underlay Transmission in Multi-carrier Cognitive Radio Systems Kyuho Son, KAIST, Korea, Republic of; Bang Chul Jung, KAIST Institute for Information Technology Convergence, Korea, Republic of; Song Chong, Dan Keun Sung, KAIST, Korea, Republic of

MAC 7.5: Cross-Layered Design of Spectrum Sensing and MAC for Opportunistic Spectrum Access Shoukang Zheng, Ying-Chang Liang, Institute for Infocomm Research, Singapore; Pooi Yuen Kam, National University of Singapore, Singapore; Anh Tuan Hoang, Institute for Infocomm Research, Singapore

#### Monday 6 April

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## **NET 1: Congestion and Admission Control**

NET 1.1: Admission Control based on Dynamic Rate Constraints in Multi-Hop Networks Simon Odou, Steven Martin, Khaldoun Al Agha, LRI - Université Paris-Sud - CNRS, France

NET 1.2: Exploiting Adaptive Window Techniques to Reduce TCP Congestion in Mobile Peer Networks Julian Buhagiar, Carl James Debono, University of Malta, Malta

NET 1.3: Fair Flow Control in Solar Powered WLAN Mesh Networks Ghada Badawy, Amir Sayegh, Terence Todd, McMaster University, Canada

NET 1.4: Routing and Admission Control for Wireless Mesh Networks with Directional Antennas Osama Bazan, Muhammad Jaseemuddin, Ryerson University, Canada

NET 1.5: Stability Analysis of XCP Congestion Control Systems Zongtao Lu, Shijie Zhang, Case Western Reserve University, United States

11:10 - 13:00 Lánchíd B

# **NET 2: Wireless Sensor Networks 1**

NET 2.1: Communication Scheme for Loosely Coupled Mobile User Groups in Wireless Sensor Fields Eusin Lee, Soochang Park, Fucai Yu, Min-Sook Jin, Sang-Ha Kim, Chungnam National University, Korea, Republic of

NET 2.2: PADRE: Modulated Backscattering-based PAssive Data REtrieval in Wireless Sensor Networks Ozgur Akan, Talha Isik, Middle East Technical University, Turkey

NET 2.3: Performance of Distributed Consensus Time Synchronization with Gaussian Delay in Wireless Sensor Networks

Gang Xiong, Shalinee Kishore, Lehigh University, United States

NET 2.4: Routing and Relay Node Placement in Wireless Sensor Networks Powered by Ambient Energy Harvesting

Zhi Ang Eu, National University of Singapore, Singapore; Hwee-Pink Tan, Winston Seah, Institute for Infocomm Research, A\*STAR, Singapore

NET 2.5: Towards Clustering Algorithms in Wireless Sensor Networks-A Survey Congfeng Jiang, Daomin Yuan, Hangzhou Dianzi University, China; Yinghui Zhao, Zhejiang Tongji Vocational College of Sci. and Tech., China

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#### **NET 3: Localization 1**

NET 3.1: A Distributed Algorithm for Localization Error Detection-Correction, Use in In-Network Faulty Reading Detection: Applicability in Long-Thin Wireless Sensor Networks Debraj De, Ohio State University, United States

NET 3.2: A Fine-Grained Localization Algorithm in Wireless Sensor Networks

Xueyong Xu, Liusheng Huang, Xiang Li, Jichun Wang, Hongli Xu, University of Science and Technology of China, China

NET 3.3: Derivation of Flip Ambiguity Probabilities to Facilitate Robust Sensor Network Localization Anushiya A Kannan, University of Sydney, Australia; Baris Fidan, Guoqiang Mao, National ICT Australia (NICTA), Australia

NET 3.4: Joint Localization and Time Synchronization in Wireless Sensor Networks with Anchor Uncertainties Jun Zheng, Yik-Chung Wu, The University of Hong Kong, Hong Kong

NET 3.5: Pollution Attack: A New Attack Against Localization in Wireless Sensor Networks Yingpei Zeng, Nanjing University, China; Jiannong Cao, The Hong Kong Polytechnic University, Hong Kong; Shigeng Zhang, Nanjing University, China; Shanqing Guo, Shandong University, China; Li Xie, Nanjing University, China

#### Monday 6 April

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## **NET 4: Relay Networks 1**

NET 4.1: On the Giant Component in Wireless Multi-Hop Networks Xiaoyuan Ta, Guoqiang Mao, The University of Sydney, Australia; Brian Anderson, The Australian National University, Australia NET 4.2: Amplify and Forward for Correlated Data Gathering over Hierarchical Sensor Networks R. Rajesh, Vinod Sharma, Indian Institute of Science, India

NET 4.3: Analysis of Optimal Relay Selection in IEEE 802.16 Multihop Relay Networks Yu Ge, Su Wen, Institute for Infocomm Research, Singapore; Yew-Hock Ang, Nanyang Technological University, Singapore

NET 4.4: Analysis of Transparent Mode IEEE 802.16j System Performance with varying Numbers of Relays and Associated Transmit Power

Vasken Genc, Sean Murphy, John Murphy, University College Dublin, Ireland

#### Monday 6 April

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#### **SVS 1: Location-Aware Networks**

SVS 1.1: An Energy-Aware Autonomic Architecture for Localization in Ubiquitous Networks Mathieu Bouet, Shahab Gashti, Guy Pujolle, University of Paris 6, France

SVS 1.2: An Enhanced Toa-Based Wireless Location Estimation Algorithm for Dense NLOS Environments Robin Wentao Ouyang, Albert Kai Sun Wong, The Hong Kong University of Science and Technology, Hong Kong

SVS 1.3: Enhancing the Efficiency of Active RFID-based Indoor Location Systems Rafael de Amorim Silva, Paulo André da Silva Gonçalves, CIn-UFPE, Brazil

SVS 1.4: Simple Localization with Sensors on Grid Chiara Taddia, Lepida S.p.A., Italy; Gianluca Mazzini, University of Ferrara, Italy

SVS 1.5: Improved MDS-Based Multi-Target Tracking Algorithm
Davide Macagnano, Giuseppe Thadeu Freitas de Abreu, Centre for Wireless Communications - University of Oulu,
Finland

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#### PHY 5: MIMO 2

PHY 5.1: Multi-Branch Successive Interference Cancellation for MIMO Spatial Multiplexing Systems Rui Fa, Rodrigo de Lamare, University of York, United Kingdom

PHY 5.2: On the Effect of I/Q Imbalance on MIMO Transmit-Receive Diversity Systems Jian Qi, Sonia Aissa, INRS-EMT, University of Quebec, Canada

PHY 5.3: Performance Prediction in Adaptive Mimo Systems

Tom McGiffen, Don Cox, Stanford University, United States; John Koshy, Telcordia Technologies, United States

PHY 5.4: Polynomial Matrix QR Decomposition and Iterative Decoding of Frequency Selective MIMO Channels Martin Davies, Sangarapillai Lambotharan, Joanne Foster, Jonathon Chambers, Loughborough University, United Kingdom; John McWhirter, Cardiff University, United Kingdom

PHY 5.5: Simplified Generalized Parallel Interference Cancellation Algorithm for Near-Optimal V-BLAST Detection Cong Xiong, Xin Zhang, He Wang, Kai Wu, Li Chen, Dacheng Yang, Beijing University of Posts and Telecommunications, China

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Erzsébet B

#### PHY 6: UWB

PHY 6.1: A New Criterion to Jointly Design the Antenna and Optimize the Communication Capacity in IR-UWB Dorin Panaitopol, SUPELEC & NUS, France; Jocelyn Fiorina, Antoine Diet, Nicolas Ribiere-Tharaud, SUPELEC, France

PHY 6.2: Genetic Algorithm Based Equalization for Direct Sequence Ultra-Wideband Communications Systems Nazmat Surajudeen-Bakinde, Xu Zhu, Jingbo Gao, Asoke. K. Nandi, University of Liverpool, United Kingdom

PHY 6.3: Performance of PPM-Based Non-Coherent Impulse Radio UWB Systems using Sparse Codes in the Presence of Multi-User Interference

Nuan Song, Mike Wolf, Martin Haardt, TU Ilmenau, Germany

PHY 6.4: Detection and Identification of NBI for Multichannel UWB Autocorrelation Receivers Yohannes Demessie, Hiroshi Harada, National Institute of Information Communication Technology (NICT), Japan; Klaus Witrisal, Graz University of Technology, Austria

PHY 6.5: Ultra-Wideband Radio Pulse Shaping Filter Design for IEEE 802.15.4a Transmitter Ayse Adalan, Michael Fischer, Vienna University of Technology, Austria; Thomas Gigl, CISC Semiconductor Design + Consulting GmbH, Austria; Klaus Witrisal, Graz University of Technology, Austria; Arpad L. Scholtz, Christoph F. Mecklenbräuker, Vienna University of Technology, Austria

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# PHY 7: Spread Spectrum

PHY 7.1: A Novel Pairing Diversity Technique with Dynamic Code Allocation for CDMA Systems Employing Polyphase Sequences

Ahmed El Kalagy, Emad Alsusa, University of Manchester, United Kingdom

PHY 7.2: Blind User Detection and Delay Acquisition in Doubly-Dispersive DS/CDMA Fading Channels Stefano Buzzi, Luca Venturino, Alessio Zappone, University of Cassino, Italy; Antonio De Maio, University of Naples Federico II, Italy

PHY 7.3: Performance of Large CDMA Random Access Systems with Retransmission Diversity over Fading Channels

Kai Yu, Southwest Jiaotong University, China; Yi Sun, City College of City University of New York, United States; Pingzhi Fan, Xianfu Lei, Southwest Jiaotong University, China

PHY 7.4: Permutation Spreading for Asynchronous MIMO-CDMA Systems Using Hadamard Codes and Gold Scrambling Sequences

Claude D'Amours, University of Ottawa, Canada; Adel Omar Dahmane, Universite du Quebec a Trois Rivieres, Canada

PHY 7.5: A Novel Complexity Metric of FH/SS Sequences Using Approximate Entropy Zan Li, Jueping Cai, Xiaojun Chen, Xiaofeng Lu, XiDian University, China

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Corso A

# MAC 4: Cellular Relay

MAC 4.1: MAC v. PHY: How to Relay in Cellular Networks

Zinan Lin, InterDigital, United States; Mohammed Sammour, InterDigital, Canada; Sana Sfar, Gregg Charlton, Prabhakar Chitrapu, Alex Reznik, InterDigital, United States

- MAC 4.2: Opportunistic Power Scheduling for OFDMA Cellular Networks with Scheduling at Relay Stations Byung-Gook Kim, Jang-Won Lee, Yonsei University, Korea, Republic of
- MAC 4.3: Downlink Performance and Optimization of Relay-Assisted Cellular Networks Shiang-Jiun Lin, Wern-Ho Sheen, Chia-Chi Huang, National Chiao Tung University, Taiwan
- MAC 4.4: Load Based Relay Selection Algorithm for Fairness in Relay Based OFDMA Cellular Systems Lin Xiao, Laurie Cuthbert, Queen Mary University of London, United Kingdom
- MAC 4.5: A Relay Assignment Algorithm With Interference Mitigation For Cooperative Communication Peng Zhang, Zhengguang Xu, Furong Wang, Xu Xie, Lai Tu, Huazhong University of Science and Technology, China

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Margit B

#### MAC 5: Cellular

MAC 5.1: An Efficient Mechanism for Power Control Optimization in MBMS Enabled UTRAN Christos Bouras, Antonios Alexiou, Vasileios Kokkinos, Research Academic Computer Technology Institute and Univ. of Patras, Greece

MAC 5.2: Complementary Resource Allocation for Variable-Size VoIP Packet in E-UTRA Jianchi Zhu, Xiaoming She, Lan Chen, DOCOMO Beijing Communications Laboratories Co.,Ltd, China

MAC 5.3: Decentralized Intercell Interference Coordination in Uplink Cellular Networks using Adaptive Sub-band Exclusion

Min Suk Kang, Bang Chul Jung, KAIST Institute, Korea, Republic of

MAC 5.4: On the Impact of Mobility on Outage Probabilityin Cellular Networks Jean-Marc Kelif, Orange Labs, France; Marceau Coupechoux, TELECOM ParisTech-CNRS LTCI, France

MAC 5.5: Dynamic Topology Control for Multi-hop Relaying in a Cellular TDD-OFDMA System Hey J. Kang, Hyun S. Ryu, Chung G. Kang, Korea University, Korea, Republic of

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#### MAC 6: Cognitive Radio Networks 1

MAC 6.1: A Channel Selection Mechanism based on Incumbent Appearance Expectation for Cognitive Networks Kaveh Ghaboosi, Centre for Wireless Communications, University of Oulu, Finland; Allen B. MacKenzie, Luiz A. DaSilva, Abdallah S. Abdallah, Virginia Tech, United States; Matti Latva-aho, Centre for Wireless Communications, University of Oulu, Finland

MAC 6.2: Distributed Spectrum Sensing in Cognitive Radio Networks Zhiqiang Li, F. Richard Yu, Minyi Huang, Carleton University, Canada

MAC 6.3: A POMDP-based Spectrum Handoff Protocol for Partially Observable Cognitive Radio Networks Rui-Ting Ma, Yu-Pin Hsu, Kai-Ten Feng, National Chiao Tung University, Taiwan

MAC 6.4: Adaptive Channel Searching Scheme for Cooperative Spectrum Sensing in Cognitive Radio Networks Chen Guo, Tao Peng, Postbox 93, Beijing University of Posts and Communications, China; Yuan Qi, Beijing University of Posts and Communications, China; Wenbo Wang, Postbox 93, Beijing University of Posts and Communications, China

MAC 6.5: Dynamic Spectrum Access in Cognitive Radio based Tactical Networks
Shamik Sengupta, Stevens Institute of Technology, United States; Mainak Chatterjee, University of Central Florida,
United States; Kevin Kwiat, Air Force Research Laboratory, United States

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#### **NET 5: Mobile and Wireless IP**

NET 5.1: On Serving Cell Change Reliability in HSDPA Network Timo Nihtilä, Kari Aho, Magister Solutions Ltd., Finl; Ilmari Repo, University of Jyväskylä, Finland

NET 5.2: Path Prediction for Resource Reservation between Mobile Nodes Eraldo Silveira e Silva, Jean-Marie Farines, Federal University of Santa Catarina, Brazil; Michel Diaz, CNRS; LAAS; Universite de Toulouse, France

NET 5.3: Preliminary Binding: An Extension to Proxy Mobile IPv6 for Inter-Technology Handover Long Le, Marco Liebsch, NEC Laboratories Europe, Germany

NET 5.4: Proxy Mobile IPv6 Based Multicast Listener Mobility Architecture Yong Li, Wentao Chen, Li Su, Depeng Jin, Lieguang Zeng, Tsinghua University, China

NET 5.5: Using the Media Independent Information Service to Support Mobile Authentication in Fast Mobile IPv6 Constantine Christakos, Johns Hopkins Applied Physics Laboratory, United States; Antonio Izquierdo, Richard Rouil, National Institute of Stards Technology, United States; Nada Golmie, National Institute of Standards and Technology, United States

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## **NET 6: Multimedia QoS and Traffic Management 1**

NET 6.1: A Unified QoS-Inspired Load Optimization Framework for Multiple Access Points Based Wireless LANs Eng Hwee Ong, Jamil Y. Khan, University of Newcastle, Australia

NET 6.2: A Versatile Probability Distribution for Light and Heavy Tails of Web File Sizes Edward Chlebus, Gautam Divgi, Illinois Institute of Technology, United States

NET 6.3: Adaptive Setting of TCP's Maximum Window in Ad Hoc Multihop Networks with a Single Flow Despina Triantafyllidou, LRI - University of Paris XI, France; Vasilios A. Siris, University of Crete, Greece; Khaldoun Al Agha, LRI - University of Paris XI, France

NET 6.4: An Enhanced Load-balancing Approach Using Detour in Ad-hoc Networks Young-Sil Kim, Young-Jong Cho, Kyungran Kang, Ajou University, Korea, Republic of

NET 6.5: Bounded Delay Transmission of Different Traffic Classes in Wireless Sensor Networks Narjes Torabi, Masoud Reza Hashemi, Isfahan University of Technology, Iran, Islamic Republic of

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# **NET 7: Wireless Broadcast, Multicast, and Streaming**

NET 7.1: A Prioritization-Based Application-Oriented Broadcast Protocol for Delay-Tolerant Networks Huazhi Gong, Jongwon Kim, Gwangju Institute of Sci&Tech, Korea, Republic of

NET 7.2: Achievable Multicast Throughput for Homogeneous Wireless Ad Hoc Networks Cheng Wang, Changjun Jiang, Tongji University, China; Shaojie Tang, Xiang-Yang Li, Illinois Institute of Technology, United States; Xianfei Tang, Tongji University, China

NET 7.3: An Incentive based Peer-to-peer Protocol for Anonymous Collaborative Mobile Streaming Sushil Subramanian, Indian Institute of Technology, Kharagpur, India; Praphul Chandra, Hewlett-Packard Labs, India

NET 7.4: Cross-Layer Optimization of Multipoint Message Broadcast in MANETs

Jimmy Jessen Nielsen, Jesper Grønbæk, Hans-Peter Schwefel, Thibault Renier, Aalborg University, Denmark; Thomas Toftegaard, Tieto IP solutions, Denmark

NET 7.5: Energy and Mobility Aware Clustering Technique for Multicast Routing Protocols in Wireless Ad Hoc Networks

Eric Astier, Abdelhakim Hafid, University of Montreal, Canada; Abderrahim Benslimane, Universite d'Avignon, France

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Béla B

# **NET 8: Mobility and Handoff Management 1**

NET 8.1: Markov Decision Process-based Adaptive Vertical Handoff with RSS Prediction in Heterogeneous Wireless Networks

Ben-Jye Chang, National Yunlin University of Science and Technology, Taiwan; Jun-Fu Chen, Cheng-Hsiung Hsieh, Chaoyang University of Technology, Taiwan; Ying-Hsin Liang, Nankai University of Technology, Taiwan

NET 8.2: Network Mobility Protocol for Vehicular Ad Hoc Networks

Yuh-Shyan Chen, Ching-Hsueh Cheng, National Taipei University, Taiwan; Chih-Shun Hsu, Shih Hsin University, Taiwan; Ge-Ming Chiu, National Taiwan University of Science and Technology, Taiwan

NET 8.3: Performance Evaluation of Reactive and Proactive Handover Schemes for IP Micromobility Networks Thienne Johnson, Rodrigo Prado, Eduardo Zagari, Tomas Badan, Eleri Cardozo, Unicamp, Brazil; Lars Westberg, Ericsson Research, Sweden

NET 8.4: Smooth Adaptive Soft Handover Algorithm for Multimedia Streaming over Wireless Networks Bogdan Ciubotaru, Gabriel-Miro Muntean, Dublin City University, Ireland

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István

#### **SVS 2: Vehicular Networks**

SVS 2.1: A Novel Social Cluster-based P2P Framework for Integrating VANETs with the Internet Sung-Han Lin, Junn-Yen Hu, Cheng-Fu Chou, National Taiwan University, Taiwan; Ing-Chau Chang, National Changhua University of Education, Taiwan; Chien-Chun Hung, National Taiwan University, Taiwan

SVS 2.2: A Novel Data Dissemination Method for Vehicular Networks with Rateless Codes

Pasquale Cataldi, Andrea Tomatis, Politecnico di Torino, Italy; Gianluca Grilli, University of Rome "Tor Vergata", Italy; Mario Gerla, University of California, Los Angeles, United States

## SVS 2.3: Distributed Misbehavior Detection in VANETs

Mainak Ghosh, Indian Institute of Technology Kharagpur, India; Anitha Varghese, Arzad Kherani, General Motors India Science Lab, India; Arobinda Gupta, Indian Institute of Technology Kharagpur, India

SVS 2.4: Performance Analysis of the Vehicular Delay Tolerant Network

Dusit Niyato, Ping Wang, Nanyang Technological University, Singapore; Joseph Chee Ming Teo, Institute for Infocomm Research, Singapore

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## **PHY 8: Channel Estimation**

PHY 8.1: 3D Pilot Aided Channel Estimation Gunther Auer, DOCOMO Euro-Labs, Germany

PHY 8.2: Efficient Space Code Block Code MIMO Channel Estimation for Future Mobile Video Broadcasting Oudomsack Pierre Pasquero, Matthieu Crussiere, Youssef Nasser, Jean-Francois Helard, IETR, France

PHY 8.3: Finite-State Markov Modelling of Frequency-Selective Fading Channels with Correlated Taps Stephen Taylor, Parastoo Sadeghi, Research School of Information Sciences and Engineering, Australian National University, Australia

PHY 8.4: Channel Estimation Using Time-Multiplexed Pilots in HSUPA Uplink Piyush Kaul, Anupama Saini, Aricent Technologies, India

PHY 8.5: Uplink Channel Estimation in WiMAX

Kenneth Ho, University of Maryland, United States; Andres Kwasinski, Rochester Institute of Technology, United States

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## **PHY 9: Wireless Sensor Networks**

PHY 9.1: Low Complexity Clock Synchronization Algorithm for Wireless Sensor Networks with Unknown Delay Mei Leng, Yik-Chung Wu, The University of Hong Kong, Hong Kong

PHY 9.2: Effect of Synchronization Errors on Alamouti Coding in Wireless Sensor Networks Haitao Wan, Jean-François Diouris, Guillaume Andrieux, IREENA, École polytechnique de l'université de Nantes, France

PHY 9.3: Relay Selection Schemes for Uniformly Distributed Wireless Sensor Networks Keyvan Zarifi, INRS-EMT, Canada; Mohammed Abuthinien, Ali Ghrayeb, Concordia University, Canada; Sofiene Affes, INRS-EMT, Canada

PHY 9.4: Modulation Selection from a Battery Power Efficiency Perspective: A Case Study of PPM and OOK Dongliang Duan, Fengzhong Qu, Liuqing Yang, University of Florida, United States; Ananthram Swami, U. S. Army Research Laboratory, United States; Jose C. Principe, University of Florida, United States

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#### PHY 10: Multiuser MIMO 1

PHY 10.1: A Hierarchical Feedback Technique for Multiuser MIMO Keying Wu, Hongwei Yang, Liyu Cai, Alcatel Shanghai Bell Co., Ltd, China

PHY 10.2: Base Station Selection Technique for MMSE Joint Transmission in Downlink Cooperative MIMO System Namieong Lee, Keonkook Lee, Eunhye Nam, Sunhyoung Kwon, Joonhyuk Kang, Information and Communications University, Korea, Republic of; Gye-Tae Gil, Korea Telecom, Korea, Republic of

PHY 10.3: Multiuser Scheduling in Downlink MIMO Systems Using Particle Swarm Optimization Yong-Qiang Hei, ISN, Xi'dian University, China; Xiao-Hui Li, Ke-Chu Yi, Xiong Li, Xi'dian University, China

PHY 10.4: Near-Optimum Vector Perturbation Precoding Using a Candidate List Henning Vetter, Toshiba Research Europe Ltd., United Kingdom; Vishakan Ponnampalam, Realtek Semiconductor, **United States** 

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Corso A

#### **PHY 11: Cooperative Relays**

PHY 11.1: An Outage-Optimal Distributed Coded Cooperation Scheme Based On Opportunistic Relaying Qiang Guo, Li Yu, Huazhong University of Science and Technology, China

PHY 11.2: Hybrid Decode-Amplify-Forward Cooperative Communications with Multiple Relays Trung Q. Duong, Hans-Jurgen Zepernick, Blekinge Institute of Technology, Sweden

PHY 11.3: On the Performance of Cooperative Systems with Blind Relays over Nakagami-m and Weibull Fading Marco Di Renzo, Telecommunications Technological Center of Catalonia (CTTC), Spain; Fabio Graziosi, Fortunato Santucci, University of L'Aquila, Italy

PHY 11.4: Realizing Wireless Cooperative Communications with the One-Bit Soft Forwarding Technique Gao Yang Dai, Wai Ho Mow, The Hong Kong University of Science & Technology, Hong Kong

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#### **MAC 2: 802.11 and VANETs**

MAC 2.1: Design and Implementation of Audio Conferencing Testbed based on Wi-Fi MANET Wei Wang, Boon-Hee Soong, Yiu Wing Edwin Chan, Nanyang Technological University, Singapore

MAC 2.2: Improving the Channel Utilization of IEEE 802.11p/1609 Networks S.Y. Wang, C.L. Chou, K.C. Liu, T.W. Ho, W.J. Hung, C.F. Huang, M.S. Hsu, H.Y. Chen, C.C. Lin, National Chiao Tung University, Taiwan

MAC 2.3: Design and Analysis for an 802.11-based Cognitive Radio Network
Anh Tuan Hoang, David Tung Chong Wong, Ying-Chang Liang, Institute for Infocomm Research, Singapore

MAC 2.4: Improvement of Multi-channel MAC Protocol for Dense VANET with Directional Antennas Xu Xie, Furong Wang, Kewei Li, Peng Zhang, Hao Wang, Huazhong University of Science and Technology, China

MAC 2.5: On the Use of Control Packets for Intelligent Flooding in VANETs Giovanni Ciccarese, Mario De Blasi, Pierluigi Marra, Cosimo Palazzo, Luigi Patrono, University of Salento, Italy

#### Monday 6 April

16:40 - 18:30 Lánchíd A

#### **MAC 8: Cognitive Radio Networks 3**

MAC 8.1: Solution of Information Exchange for Cooperative Sensing in Cognitive Radios Qun Pan, Yongyu Chang, Ruiming Zheng, Xin Zhang, Yafeng Wang, Dacheng Yang, Beijing University of Posts and Telecommunications, China

MAC 8.2: Power, Sensing Time, and Throughput Tradeoffs in Cognitive Radio Systems: A Cross-Layer Approach Karama Hamdi, Khaled Ben Letaief, HKUST, Hong Kong

MAC 8.3: Increase the End-to-End Throughput of a Cognitive Radio Chain by Considering the Primary Usage Pattern and Transmission Scheduling

Guang Lei, Chunjing Hu, Wei Wang, Tao Peng, Wenbo Wang, Wireless Signal Processing and Network Lab, Beijing University of Posts and Telecommunications, China

MAC 8.4: Prioritized Spectrum Sensing in Cognitive Radio Based on Spatiotemporal Statistical Fusion Xiao Yu Wang, Alexander Wong, Pin-Han Ho, University of Waterloo, Canada

MAC 8.5: A Resource Allocation Algorithm for Real-Time Streaming in Cognitive Networks Diego Piazza, Politecnico di Milano, Italy; Pamela Cosman, Laurence B. Milstein, UCSD, United States; Guido Tartara, Politecnico di Milano, Italy

#### Monday 6 April

16:40 - 18:30 Corso B

#### MAC 9: WLAN 1

MAC 9.1: Study of Power Saving Scheme Suitable for Wireless LAN in Multimedia Communication Takefumi Hiraguri, Masakatsu Ogawa, Makoto Umeuchi, Tetsu Sakata, NTT, Japan

MAC 9.2: The Combined Effect of Signal Strength and Traffic Type on WLAN Performance Nurul Sarkar, Auckland University of Technology, New Zealand; Kevin Sowerby, The University of Auckland, New Zealand

MAC 9.3: CSMAC: A New Centralized Scheduling-based MAC Protocol for Wireless LAN Shunyuan Ye, Thanasis Korakis, Shivendra Panwar, Polytechnic Institute of NYU, United States

MAC 9.4: M/M/1 Queuing Model for Adaptive Cross-Layer Error Protection in WLANs Hossein Bobarshad, Mohammad Shikh-Bahaei, King's College London, United Kingdom

MAC 9.5: Adaptive Reservation-Assisted Collision Resolution Protocol for Wireless Local Area Networks Jia-Shi Lin, Chien-Hua Chen, Kai-Ten Feng, National Chiao Tung University, Taiwan

## Monday 6 April

16:40 - 18:30 Lánchíd B

## **NET 9: Security**

NET 9.1: A Constrained Function Based Message Authentication Scheme for Sensor Networks Chia-Mu Yu, Chun-Shien Lu, Academia Sinica, Taiwan; Sy-Yen Kuo, National Taiwan University, Taiwan

NET 9.2: A Dual Re-Authentication Scheme for Fast Handoff in IEEE802.11 Wireless Mesh Networks Ye Yan, Jiannong Cao, Hong Kong Polytechnic University, Hong Kong; Seongwoo Kim, Seoul National University, Korea, Republic of; Chuda Liu, Hong Kong Polytechnic University, Hong Kong; Weigang Wu, Sun Yat-sen University, China

NET 9.3: An Efficient Authentication and Key Management Protocol for Hierarchical Ad Hoc Sensor Networks Aaron Gulliver, University of Victoria, Canada; Ali Fanian, Mehdi Berenjkoub, Isfahan University of Technology, Iran, Islamic Republic of

NET 9.4: An Innovative SIP Security Mechanism with Seamless Mobility Support Liang Zhang, Haruya Miyajima, Hideki Hayashi, Softbank Mobile Corp, Japan

NET 9.5: Bandwidth Efficient Key Distribution for Secure Multicast in Dynamic Wireless Mesh Networks Seungjae Shin, Junbeom Hur, Hanjin Lee, Hyunsoo Yoon, Korea Advanced Institute of Science and Technology, Korea, Republic of

# Monday 6 April

16:40 - 18:30 Béla B

#### NET 10: Localization 2

NET 10.1: A New Velocity Estimation Scheme based on Spatial Correlation of Wireless Communication Channel Woongsup Lee, Dong-Ho Cho, KAIST, South Korea

NET 10.2: A Semi Range-Based Iterative Localization Algorithm for Cognitive Radio Networks Zhiyao Ma, Tsinghua University, China; Khaled Ben Letaief, The Hong Kong University of Science Technology, China; Wei Chen, Zhigang Cao, Tsinghua University, China

NET 10.3: Combined AOA and TOA NLOS Localization Using Nonlinear Programming in Severe Multipath Environments

Victoria Ying Zhang, Albert Kai-Sun Wong, The Hong Kong University of Science and Technology, Hong Kong

NET 10.4: Cooperative Distance Classification Using an IEEE 802.15.4-Compliant Transceiver Andreas Willig, Matthias Kühm, Adam Wolisz, Technische Universität Berlin, Germany

NET 10.5: Cooperative Network Localization via Node Velocity Estimation Liang Dong, Western Michigan University, United States

## Monday 6 April

16:40 - 18:30 Árpád

#### **NET 11: Mobile and Wireless IP**

NET 11.1: A Network Architecture for Providing Micro-mobility in MPLS/GMPLS Networks Tomás Badan, Federal University of Goiás, Brazil; Eduardo Zagari, Rodrigo Prado, Eleri Cardozo, Maurício Magalhães, José Carrilho, Rossano Pinto, André Berenguel, Daniel Barbosa, Daniel Moraes, Thienne Johnson, State University of Campinas, Brazil; Lars Westberg, Ericsson Research, Sweden

NET 11.2: Achieving Spatial Disjointness in Multipath Routing without Location Information Juan Jose Galvez, Pedro M. Ruiz, Antonio F. Gomez-Skarmeta, University of Murcia, Spain

NET 11.3: Adaptive Cooperation Strategy for Multiple Relays in 4G Wireless Systems Yeejung Kim, Taehonn Kim, Sujung Kim, Youngnam Han, ICU, Korea, Republic of

NET 11.4: An Emulated IPv6 Based Self-Configuring Multi-Hop Mobile Network Testbed: Architecture and Performance Analysis

Dev Audsin, KCL, United Kingdom, Hamid Aghvami, Vasilis Friderikos, King's College London, United Kingdom

NET 11.5: Beaconing in Wireless Mobile Networks Abbas Nayebi, Gunnar Karlsson, Royal Institute of Technology (KTH), Sweden

## Monday 6 April

16:40 - 18:30 István

## **SVS 3: Ad-Hoc Networks**

SVS 3.1: A Multicast Approach for Peer-to-Peer Content Distribution in Mobile Ad Hoc Networks Sidney Santos Doria, Marco Aurelio Spohn, Federal University of Campina Grande, Brazil

SVS 3.2: Path Selection Based On Service Curve Measurement In MANETs Hui Yang, Stephen Patek, University of Virginia, United States

SVS 3.3: Hierarchical Adaptive Location Service Protocol for Mobile Ad Hoc Network Sabbir Ahmed, Gour Karmakar, Joarder Kamruzzaman, Monash University, Australia

SVS 3.4: A Novel Team-Centric Peer Selection Scheme for Distributed Wireless P2P Networks Xi Li, Hong Ji, Beijing University of Posts and Telecommunications, China; F. Richard Yu, Carleton University, Canada; Ruiming Zheng, Yi Li, Beijing University of Posts and Telecommunications, China

SVS 3.5: Topology Mismatch Avoidable Cross-layer Protocol for P2P File Discovery in MANETs Ting Li, Hong Ji, Jingqing Mei, Yi Li, Chao Hu, Key Lab of Universal Wireless Communications, Ministry of Education, Beijing University of Posts and, China

## Tuesday 7 April 11:10 - 13:00

Erzsébet B

# PHY 14: Amplify and Forward Relaying 2

PHY 14.1: Distributed Power Allocation Schemes for Amplify-and-Forward Networks Hui Hui, Shihua Zhu, Guobing Li, Xi'an Jiaotong University, China

PHY 14.2: Joint Source/Relay Precoder Design in Amplify-and-Forward Relay Systems Using an MMSE Criterion Fan-Shuo Tseng, Wen-Rong Wu, Jwo-Yuh Wu, National Chiao-Tung University, Taiwan

PHY 14.3: Nonlinear Amplifier Distortion in Cooperative Amplify-and-Forward OFDM Systems Victor del Razo, Taneli Riihonen, Helsinki University of Technology, Finland; Fernando Gregorio, Universidad Nacional del Sur, Argentina; Stefan Werner, Risto Wichman, Helsinki University of Technology, Finland

PHY 14.4: On the Outage Probability in Amplify-and-Forward Relay Channels Dorra Ben Cheikh, Ahmed Saadani, Orange-Labs, France

PHY 14.5: Relay Selection Issues for Amplify-and-Forward Cooperative Systems with Interference Ioannis Krikidis, John Thompson, Steve McLaughlin, University of Edinburgh, United Kingdom

Tuesday 7 April 11:10 - 13:00 Margit A

#### PHY 15: Multiuser MIMO 2

PHY 15.1: Non-Linear Transceiver Designs with Imperfect CSIT Using Convex Optimization P. Ubaidulla, A. Chockalingam, Indian Institute of Science, India

PHY 15.2: Performance Analysis of Multiuser MIMO Scheduling With Full and Limited Feedback Hamed Maleki, Said Nader-Esfahani, University of Tehran, Iran, Islamic Republic of

PHY 15.3: Robust THP Transceiver Designs for Multiuser MIMO Downlink P. Ubaidulla, A. Chockalingam, Indian Institute of Science, India

PHY 15.4: SINR Balancing with Coordinated Multi-cell Transmission Antti Tölli, Harri Pennanen, Petri Komulainen, University of Oulu, Finland

Tuesday 7 April 11:10 - 13:00 Corso A

# **PHY 16: Communication Theory**

PHY 16.1: A Novel Highly Accurate Log Skew Normal Approximation Method to Lognormal Sum Distributions Zhijin Wu, Brown University, United States; Xue Li, Wright State University, United States; Robert Husnay, Vasu Chakravarthy, Air Force Research Laboratory, United States; Bin Wang, Zhiqiang Wu, Wright State University, United States

PHY 16.2: On the Approximation of the Generalized-K PDF by a Gamma PDF Using the Moment Matching Method Saad Al-Ahmadi, Halim Yanikomeroglu, Carleton University, Canada

PHY 16.3: The alpha-lambda-mu-eta: A General Fading Distribution
Anastasios Papazafeiropoulos, Stavros Kotsopoulos, University of Patras, Greece; Dimitrios Zevgolis, Hellenic Open University, Greece

PHY 16.4: A General Numerical Method for Computing the Probability of Outage Damith Senaratne, Chintha Tellambura, University of Alberta, Canada

Tuesday 7 April 11:10 - 13:00 Erzsébet A

## PHY 33: Context-Aware Communications (NEWCOM++)

PHY 33.1: A Novel Link Performance Prediction Method for Coded MIMO-OFDM Systems Ivan Stupia, Filippo Giannetti, Vincenzo Lottici, University of Pisa, Italy; Luc Vandendorpe, Université Catholique de Louvain, Belgium

PHY 33.2: A Pragmatic Bit and Power Allocation Algorithm for NOFDM Signalling Adrian Kliks, Hanna Bogucka, Poznan University of Technology, Poland; Vincenzo Lottici, Ivan Stupia, University of Pisa, Italy

PHY 33.3: Asymptotic Analysis of Correlated Multi-Antenna Broadcast Channels Romain Couillet, Supelec, France; Sebastian Wagner, Eurecom, France; Mérouane Debbah, Supelec, France

PHY 33.4: Low Complexity SNR Estimation for Transmissions over Time-Varying Flat-Fading Channels Marco Moretti, Michele Morelli, Giuseppe Imbarlina, University of Pisa, Italy; Nikos Dimitriou, NKUA/IASA, Greece

PHY 33.5: Multi-User Diversity Gain for Oblivious and Informed Users in Downlink Channels Umer Salim, Dirk Slock, Eurecom, France

Tuesday 7 April 11:10 - 13:00 Margit B

#### **MAC 10: WLAN 2**

MAC 10.1: C-MAC: A MAC Protocol Supporting Cooperation in Wireless LANs Huan Jin, Xinbing Wang, China; Hui Yu, Youyun Xu, Yunfeng Guan, Shanghai Jiaotong University, China; Xinbo Gao, Xidian University, China

MAC 10.2: Distributed Interference-Aware Scheduling Schemes for High-Density WLAN Hongda Xiao, Yao Hua, Zhisheng Niu, Tsinghua University, China

MAC 10.3: Joint Distributed Transmit Power Control and Dynamic Channel Allocation for Scalable WLANs Jiayuan Chen, University College London, United Kingdom; Sverrir Olafsson, BT, United Kingdom; Yang Yang, University College London, United Kingdom; Xuanye Gu, BT, United Kingdom

MAC 10.4: Throughput Analysis of Cooperative Access Protocol for Multi-Rate WLANs Samir Sayed, Yang Yang, UCL, United Kingdom; Honglin Hu, Shanghai Research Center for Wireless Communications (WiCO), China

MAC 10.5: Queue and Channel State Awareness for Maximum Throughput Access Control in CSMA/CA-based Wireless LANs

Rodolfo Oliveira, Univ. Nova de Lisboa, Portugal; Iordanis Koutsopoulos, University of Thessaly, Greece

Tuesday 7 April 11:10 - 13:00 Lánchíd A

#### **MAC 11: Sensor Networks**

MAC 11.1: CA-MAC: Context Adaptive MAC Protocol for Wireless Sensor Networks Kyung Tae Kim, Won Jun Choi, Hee Yong Youn, SungKyunKwan University, Korea, Republic of

MAC 11.2: Packet Size Optimization for Goodput and Energy Efficiency Enhancement in Slotted IEEE 802.15.4 Networks

Yan Zhang, Feng Shu, IMEC-NL, Netherlands

MAC 11.3: Packet Transmission Scheduling Algorithm for Wireless Sensor Networks with Energy Limited Mobile Sink

Ali Sharifkhani, Norman C. Beaulieu, University of Alberta, Canada

MAC 11.4: Novel Metric for Identifying Energy-Vulnerable Nodes and Corresponding Proactive Schemes in Wireless Sensor Network

Joan Cortes, John Dunlop, Qi Wang, University of Strathclyde, United Kingdom

MAC 11.5: On Function Computation via Wireless Sensor Multiple-Access Channels Mario Goldenbaum, Slawomir Stanczak, Michal Kaliszan, Fraunhofer German-Sino Lab for Mobile Communications (MCI), Germany

Tuesday 7 April

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Corso B

#### MAC 13: OFDMA 1

MAC 13.1: A Novel Framework for Dynamic Spectrum Management in MultiCell OFDMA Networks Based on Reinforcement Learning

Francisco Bernardo, Ramón Agustí, Jordi Pérez-Romero, Oriol Sallent, Universitat Politècnica de Catalunya, Spain

MAC 13.2: An Efficient Subcarrier and Power Allocation Algorithm for Uplink OFDMA-based Cognitive Radio Systems

Zhihua Tang, Guo Wei, Wireless Information Network Lab, China

MAC 13.3: Centralized Proportional Fair (PF) Scheduling with Concurrent Transmission Enabled in Wireless Multihop OFDMA Networks

Wei Ni, Haifeng Wang, Zhenhong Li, Nokia, China

MAC 13.4: Cross-Layer Design for Single-Cell OFDMA Systems with Heterogeneous QoS and Partial CSIT Charilaos Zarakovitis, Qiang Ni, Dionysios Skordoulis, Brunel University, United Kingdom

MAC 13.5: Distributed Probabilistic Scheduling in OFDMA Uplink using Subcarrier Sensing Elias Yaacoub, Zaher Dawy, American University of Beirut, Lebanon

## Tuesday 7 April

11:10 - 13:00

Lánchíd B

#### **NET 12: Wireless Sensor Networks 2**

NET 12.1: Modeling of Extreme Data in Wireless Sensor Networks Glenn Patterson, Mustafa Mehmet Ali, Concordia University, Canada

NET 12.2: On Attack-Resilient Wireless Sensor Networks with Novel Recovery Strategies Ka-Shun Hung, Chun-Fai Law, King-Shan Lui, University of Hong Kong, Hong Kong, Ricky Kwok, Colorado State University, United States.

NET 12.3: Redeployment Based Sensing Hole Mitigation in Wireless Sensor Networks Rabun Kosar, Bogazici University, Turkey; Ertan Onur, Delft University of Technology, Netherlands; Cem Ersoy, Bogazici University, Turkey

NET 12.4: A Sensor Network Performance Inference Algorithm Based on Passive Measurement Yu Yang, Yongjun Xu, Xiaowei LI, Institute of Computing Technology, Chinese Academy of Sciences, China

NET 12.5: Event-to-Sink Directed Clustering in Wireless Sensor Networks Ozgur Akan, Alper Bereketli, Middle East Technical University, Turkey

# Tuesday 7 April

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Árpád

## **NET 13: Energy Efficiency in Wireless Networks 1**

NET 13.1: A Framework for Power Management of Handheld Devices with Multiple Radios Hicham Mahkoum, University of Montreal, Canada; Behcet Sarikaya, Huawei, United States; Abdelhakim Hafid, University of Montreal, Canada

NET 13.2: A MAC-Aware Energy Efficient Reliable Transport Protocol for Wireless Sensor Networks Sandip Dalvi, Anirudha Sahoo, Ashutosh Deo, IIT Bombay, India

NET 13.3: A Novel Reliability Based Routing Protocol for Power Aware Communications in Wireless Sensor Networks

Long Tran-Thanh, Janos Levendovszky, Budapest Unversity of Technology and Ecnomics, Hungary

NET 13.4: An Energy-Efficient Cooperative MISO-based Routing Protocol for Wireless Sensor Networks Pan Zhou, Georiga Institute of Technology, United States; Wei Liu, Wei Yuan, Wenqing Cheng, Shu Wang, Huazhong University of Science and Technology, China

NET 13.5: Energy Efficient and Delay Optimized TDMA Scheduling for Clustered Wireless Sensor Networks Liqi Shi, Abraham Fapojuwo, The University of Calgary, Canada

## Tuesday 7 April

11:10 - 13:00 Béla B

## **NET 14: Wireless Ad-Hoc Networks**

NET 14.1: On Minimum Data Replication for Delay-Bounded Query in Wireless Ad Hoc Networks Jun Huang, Yuebin Bai, Beihang University, China; Xu Shao, Institute for Infocomm Research, Singapore

NET 14.2: Virtual Access Points for Disaster Scenarios

Daniel Camara, EURECOM, France; Nikolaos Frangiadakis, University of Maryland, United States; Fethi Filali, EURECOM, France; Antonio A. F. Loureiro, UFMG, Brazil; Nick Roussopoulos, University of Maryland, United States

NET 14.3: A Multi-Interface Multi-Channel Routing (MMCR) Protocol for Wireless Ad Hoc Networks Reghu Anguswamy, Maciej Zawodniok, Sarangapani Jagannathan, Missouri S&T, United States

NET 14.4: Aproximating Size of Maximal Clique in a Node's Neighbourhood in the Ad Hoc Networks Nihad Borovina, Sead Kreso, Faculty of Electrical Engineering, University of Sarajevo, Bosnia and Herzegowina

#### Tuesday 7 April

11:10 - 13:00 István

## **SVS 4: Sensor Networks**

SVS 4.1: Analyzing the Optimal Use of Bloom Filters in Wireless Sensor Networks Storing Replicas Christine Jardak, Janne Riihijärvi, Petri Mähönen, RWTH Aachen University, Germany

SVS 4.2: Mesh Networking for Seismic Monitoring – The Sumatran cGPS Array Case Study Hoang-Ha Tran, Kai-Juan Wong, Nanyang Technological University, Singapore

SVS 4.3: Centralized Mobile SensorGroup for Exploring Border of Target Area Kuen-Liang Sue, and Jing-Wei Lin, Department of Information Management, National Central University, Taiwan

SVS 4.4: Cost-Aware Reactive Monitoring in Resource-Constrained Wireless Sensor Networks Mohammad S. Talebi, IPM, Iran, Islamic Republic of; Ahmad Khonsari, University of Tehran, Iran, Islamic Republic of; Reyhaneh Jabarvand, IPM, Iran, Islamic Republic of

SVS 4.5: VStore: Cooperative Storage in Vehicular Sensor Networks for Mobile Surveillance Xu Li, Hongyu Huang, Shanghai Jiao Tong University, China; Wei Shu, University of New Mexico, United States; Minglu Li, Min-You Wu, Shanghai Jiao Tong University, China

Tuesday 7 April 14:30 - 16:20

Erzsébet A

#### **PHY 19: OFDM 1**

PHY 19.1: Flexible OFDM schemes for bursty transmissions Romain Couillet, Mérouane Debbah, Supelec, France

PHY 19.2: A Novel Adaptive Interleaving Scheme for OFDM Systems

Hao Wang, Fujitsu Research & Development Center CO., Ltd, China; Hongwen Yang, Beijing University of Posts and Telecommunications, China

PHY 19.3: An Improved Receiver Architecture for Cyclic-Prefixed OFDM Giovanni Garbo, Stefano Mangione, Università di Palermo, Italy

PHY 19.4: Decoupled Phase Optimization for Partial Transmit Sequence OFDM Aaron Gulliver, Abolfazl Ghassemi, University of Victoria, Canada

PHY 19.5: PAPR Reduction in OFDM Systems with Per-subcarrier Antenna Selection Justin Coon, Toshiba Research Europe Ltd, United Kingdom

Tuesday 7 April 14:30 - 16:20 Margit B

## PHY 20: Spectrum Sensing 1

PHY 20.1: A Multitaper Spectrum Based Detector for Cognitive Radio Jun Wang, Q.T. Zhang, City University of Hong Kong, Hong Kong

PHY 20.2: An Optimal Soft Fusion Scheme for Cooperative Spectrum Sensing in Cognitive Radio Network Bin Shen, Taiping Cui, Chengshi Zhao, Kyungsup Kwak, Inha University, Korea, Republic of; Zheng Zhou, Beijing Univ. of Posts and Telecommunications, China

PHY 20.3: Collaborative Spectrum Sensing with Imperfect Gaussian Channel Estimation Yunfei Chen, University of Warwick, United Kingdom; Norman Beaulieu, University of Alberta, Canada

PHY 20.4: Identifying Spectrum Usage by Unknown Systems using Experiments in Machine Learning Nikhil Shetty, University of Cailfornia, Berkeley, United States; Sofie Pollin, Interuniversity Microelectronics Centre, Belgium; Przemyslaw Pawelczak, Delft University of Technology, Netherlands

Tuesday 7 April 14:30 - 16:20

Erzsébet B

## PHY 21: Cognitive Radio 1

Phy 21.1: Bayesian Inference for Multiple Antenna Cognitive Receivers Romain Couillet, Mérouane Debbah, Supelec, France

Phy 21.2: Beamforming and Power Control for Multi-Antenna Cognitive Two-Way Relaying Kommate Jitvanichphaibool, Ying-Chang Liang, Rui Zhang, Institute for Infocomm Research, Singapore

Phy 21.3: Design of Efficient ARQ Schemes with Anti-Jamming Coding for Cognitive Radios Guosen Yue, NEC Laboratories America, Inc., United States; Xiaodong Wang, Columbia University, United States

Phy 21.4: Listen-While-Talking: A Technique for Primary User Protection Nilesh Khambekar, University at Buffalo, United States; Chad Spooner, NorthWest Research Associates, United States; Vipin Chaudhary, University at Buffalo, United States

Phy 21.5: Multiple Antennas Selection for Linear Precoding MISO Cognitive Radio Jun Zhou, John Thompson, Ioannis Krikidis, University of Edinburgh, United Kingdom

Tuesday 7 April 14:30 - 16:20

Margit A

# PHY 25: Synchronization

PHY 25.1: A Closed Concept for Synchronization and Cell Search in 3GPP LTE Systems Konstantinos Manolakis, David Manuel Gutierrez Estevez, Volker Jungnickel, Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, Germany; Wen Xu, Siemens AG, Germany; Christian Drewes, Infineon Technologies AG, Germany

PHY 25.2: Low-Complexity Implementation of PN Correlator for Wireless Transmission Systems Wei Li, Kewu Peng, Jian Song, Tsinghua National Laboratory for Information Science and Technology, China

PHY 25.3: On Performance Bounds for Timing Estimation under Fading Channels Xiao Li, Yik-Chung Wu, The University of Hong Kong, Hong Kong; Erchin Serpedin, Texas A&M University, United States

PHY 25.4: PN Code Acquisition Using Boolean Satisfiability Techniques Fadi Aloul, Mohamed El-Tarhuni, American University of Sharjah, United Arab Emirates

PHY 25.5: Multiple CFOs Compensation and BER Analysis for Cooperative Communication Systems Zhang Yanyan, Zhang Jianhua, Wireless Technology Innovation Institute, Beijing University of Posts and Telecommunications, China

## Tuesday 7 April

14:30 - 16:20 Corso A

## **MAC 12: RFID and Sensor Networks**

MAC 12.1: Analysis of RFID Mutual Authentication Protocols Charng Rang Guo, Defence Science & Technology Agency, Singapore

MAC 12.2: DISEL: A Distance Based Slot Selection Protocol for Framed Slotted ALOHA RFID Systems Ilker Onat, Ali Miri, University of Ottawa, Canada

MAC 12.3: Multichannel Slotted-Aloha Anticollision Protocol for Active RFID Systems Won-Ju Yoon, Sang-Hwa Chung, Shin-Jun Park, Su-Young Kang, Pusan National University, Korea, Republic of

MAC 12.4: Asynchronous Location Tracking Algorithms for Distributed Power-saving Wireless Sensor Networks Chien-Hua Chen, Kai-Ten Feng, National Chiao Tung University, Taiwan

MAC 12.5: EEFF: A Cross-Layer Designed Energy Efficient Fast Forwarding Protocol for Wireless Sensor Networks

Tao Zhang, Lijun Chen, Daoxu Chen, Li Xie, Nanjing University, China

#### Tuesday 7 April

14:30 - 16:20

Corso B

#### MAC 14: OFDMA 2

MAC 14.1: Dynamic Subcarrier Controlled TDMA/OFDM Multi-hop Wireless Network for Improving End to End Throughput

Takeo Fujii, The University of Electro-Communications, Japan

MAC 14.2: Efficient Scheduling Algorithms for Multi-service Multi-slot OFDMA Networks Ahmed N. Zaki, Abraham O. Fapojuwo, The University of Calgary, Canada

MAC 14.3: Improved Schemes for Subcarrier, Bit, and Power Allocation in Multiuser OFDM Systems Wei-Cheng Pao, Yung-Fang Chen, Jia-Hong Lai, National Central University, Taiwan

MAC 14.4: Multi-User Dynamic (Re)transmission Scheduler for OFDMA Systems Emilio Calvanese Strinati, Dimitri Ktenas, CEA-LETI, MINATEC, France

MAC 14.5: On QoS-Guaranteed Downlink Cooperative OFDMA Systems with Amplify-and-Forward Relays: Optimal Schedule and Resource Allocation Danhua Zhang, Youzheng Wang, Jianhua Lu, Tsinghua University, China

Tuesday 7 April 14:30 - 16:20 Lánchíd A

# **MAC 17: Cooperative Networks**

MAC 17.1: Markov Decision Process Frameworks for Cooperative Retransmission in Wireless Networks Ghasem Naddafzadeh Shirazi, NUS, Singapore; Peng-Yong Kong, Chen-Khong Tham, I2R, Singapore

MAC 17.2: Multi-Service Transmission in Multiuser Cooperative Networks Chao Yang, Wenbo Wang, Xing Zhang, Beijing University of Posts & Telecom, China

MAC 17.3: Randomized Spatial Multiplexing for Distributed Cooperative Communications Pei Liu, Shivendra Panwar, Polytechnic Institute of NYU, United States

MAC 17.4: A Cooperative Retransmission Scheme in Wireless Networks with Imperfect Channel State Information Ghasem Naddafzadeh Shirazi, NUS, Singapore; Peng-Yong Kong, Chen-Khong Tham, I2R, Singapore

MAC 17.5: Optimal Resource Allocation for Energy Efficient Transmissions with QoS Constrains in Coded Cooperative Networks

Yan Zhang, Min Sheng, Jiandong Li, Ye Tian, Junliang Yao, Di Tang, Xidian University, China

## Tuesday 7 April

14:30 - 16:20 Lánchíd B

#### **NET 15: Mobile and Wireless IP 1**

NET 15.1: Domain Identifiers in a Next Generation Internet Architecture Rafael Pasquini, Luciano B. de Paula, Fábio L. Verdi, Maurício F. Magalhães, FEEC/Unicamp, Brazil

NET 15.2: DRO: Domain-Based Route Optimization Scheme for Nested Mobile Networks Ming-Chin Chuang, Jeng Farn Lee, National Chung Cheng University, Taiwan

NET 15.3: Integrating SIP-based Network Mobility into IP Multimedia Subsystem Wei-Kuo Chiang, An-Nie Ren, Ya-Chen Chung, National Chung Cheng University, Taiwan

NET 15.4: Location Tracking in Mobile Networks under Correlated Shadowing Effects Kai-Jie Yang, Yuh-Ren Tsai, Institute of Communications Engineering, National Tsing Hua University, Taiwan

NET 15.5: NERON: A Route Optimization Scheme for Nested Mobile Networks Faqir Zarrar Yousaf, Alain Tigyo, Christian Wietfeld, Dortmund University of Technology, Germany

### Tuesday 7 April

14:30 - 16:20 Árpád

## **NET 16: Mobility**

**NET 16.1** 

A Behavior Pattern Based Mobility Simulation Framework for Office Environments Shiging Shen, Ningning Cheng, Guihai Chen, Nanjing University, China

NET 16.2: Adaptive Location Update and Paging Scheme for Mobile Broadband Wireless Access Networks Jee-Hyeon Na, Hochoong Cho, Sangho Lee, ETRI, Korea, Republic of; Yunwon Chung, Soongsil University, Korea, Republic of; Sang-Ha Kim, Chungnam National University, Korea, Republic of

NET 16.3: An Analysis of Human Mobility using Real Traces
Tiago Azevedo, Rafael Bezerra, Carlos Alberto Campos, Luís de Moraes, COPPE/UFRJ, Brazil

NET 16.4: An Efficient Framework for Local Mobility

Feng Zhong, Yang Xia, Chai Kiat Yeo, Bu Sung Lee, NTU, Singapore; Teck Meng Lim, StartHub Ltd , Singapore

NET 16.5: Analyzing Path Dynamics in Mobile Ad Hoc Networks Using a Smooth Mobility Model Lifang Guo, Beijing University of Posts and Telecommunications, China; Khaled Harfoush, North Carolina State University, United States; Huimin Xu, Beijing University of Posts and Telecommunications, China

Tuesday 7 April

14:30 - 16:20

Béla B

## **NET 17: Wireless Network Security and Privacy**

NET 17.1: Employing a Novel Two Tiered Network Structure to Extend the Lifetime of WSNs Minh Thiep Ha, Trong Duc Le, Hyunseung Choo, Sungkyunkwan University, Korea, Republic of

NET 17.2: FKM: A Fingerprint-based Key Management Protocol for SoC-based Sensor Networks Xiaoguang Niu, Institute of Computing Technology, Chinese Academy Sciences, China; Yanmin Zhu, Imperial College of London, United Kingdom; Li Cui, Institute of Computing Technology, Chinese Academy Sciences, China; Lionel M. Ni, Hong Kong University of Science and Technology, Hong Kong

NET 17.3: Secure Hierarchical Data Aggregation in Wireless Sensor Networks Julia Albath, Sanjay Madria, Missouri University of Science and Technology, United States

NET 17.4: SWCA: A Secure Weighted Clustering Algorithm in Wireless Ad Hoc Networks Yingpei Zeng, Nanjing University, China; Jiannong Cao, The Hong Kong Polytechnic University, Hong Kong; Shanqing Guo, Shandong University, China; Kai Yang, Li Xie, Nanjing University, China

## Tuesday 7 April

14:30 - 16:20 István

#### SVS 5: Multimedia Networks 1

SVS 5.1: Cross-Layer QoS Provisioning for Multimedia Transmissions in Cognitive Radio Networks Saqib Ali, F. Richard Yu, Carleton University, Canada

SVS 5.2: Dynamic Rate Control for Media Streaming in High-Speed Mobile Networks Masayuki Hiromoto, Kyoto University, Japan; Hiroshi Tsutsui, Osaka University, Japan; Hiroyuki Ochi, Kyoto University, Japan; Tomoyuki Osano, Norihiro Ishikawa, NTT DoCoMo, Inc., Japan; Yukihiro Nakamura, Ritsumeikan University, Japan

SVS 5.3: Implementing a Cooperative MAC Protocol for Wireless Video Multicast Ozgu Alay, Zhe Xu, Thanasis Korakis, Yao Wang, Shivendra Panwar, Polytechnic Institute of NYU, United States

SVS 5.4: Progressive Display Method for Interactive Mobile 3D Graphics Mouguang Lin, School of Information Science and Technology, Sun Yat-Sen University, China; Xiaonan Luo, Key Laboratory of Digital Life (Sun Yat-Sen University), Ministry of Education, China

SVS 5.5: The Speech Quality Analysis of Push-to-Talk Services Kun-Yi Tsai, Yung-Feng Lu, Ai-Chun Pang, Tei-Wei Kuo, National Taiwan University, Taiwan

# Tuesday 7 April

16:40 - 18:30 Erzsébet A

# PHY 13: Transmitter and Receiver Design

PHY 13.1: A Joint MLSD Receiver for Meteor Burst Communication Zan Li, Jiangbo Si, XiDian University, China; Feng Lan, China Electronic System Engineering Company, China; Xiaojun Chen, XiDian University, China

PHY 13.2: Adaptive Sequence Detection for MPSK/MQAM with Unknown Carrier Phase Characteristics Yan Li, Pooi Yuen Kam, National University of Singapore, Singapore; Chee-Cheon Chui, DSO National Laboratories, Singapore

PHY 13.3: Design and Implementation of a Reconfigurable Decimation and Channel Selection Filter for GSM and UMTS Radio Standards

Nadia Khouja, Khaled Grati, CIRTA'COM Laboratory, Tunisia; Adel Ghazel, SUP'COM, Tunisia; Bertrand Le Gal, IMS-Bordeaux, France

PHY 13.4: Transmit Precoding Design for Multi-Antenna Multicast Broadcast Services with Limited Feedback Eddy Chiu, Vincent Lau, The Hong Kong University of Science and Technology, Hong Kong

PHY 13.5: Enhanced Greedy Algorithm Based Dynamic Subcarrier Allocation for Single Carrier FDMA Systems Obilor Nwamadi, Xu Zhu, Asoke Nandi, University of Liverpool, United Kingdom

## Tuesday 7 April

16:40 - 18:30 Margit A

#### PHY 17: Coded OFDM

PHY 17.1: Iterative EM-Based Channel Estimation for STBC-OFDM Ilhan Basturk, Berna Ozbek, Izmir Institute of Technology, Turkey

PHY 17.2: Full Rate Orthogonal Space-Time Block Coding in OFDM Transmission Using Time Reversal Yue Wang, Justin Coon, Toshiba Research Europe Ltd., United Kingdom

PHY 17.3: On the Performance of Pre-Transformed Space-Time Block Coded OFDM Systems Yan Wu, Eindhoven University of Technology, The Netherlands; Chin Keong Ho, Sumei Sun, Institute for Infocomm Research, Singapore

PHY 17.4: A Simple OFDM-Based Multiple Access System with Super-Orthogonal Convolutional Codes and Golay Sequence

Hideki Ochiai, Yu Takayama, Yokohama National University, Japan

## Tuesday 7 April

16:40 - 18:30 Erzsébet B

# PHY 23: WiMAX and LTE

PHY 23.1: Mobile WiMAX: MIMO Performance Analysis from a Quality of Service (QoS) Viewpoint Mai Tran, David Halls, Andrew Nix, Angela Doufexi, Mark Beach, Bristol University, United Kingdom

PHY 23.2: Self-Configuration of Antenna Tilt and Power for Plug & Play Deployed Cellular Networks András Temesváry, Budapest University of Technology and Economics, Hungary

PHY 23.3: Semi-Blind Multi-User Detection for LTE PUCCH

Yang Hu, Ericsson (China) Communications Company Ltd., China; David Astely, Robert Baldemair, Sorour Falahati, Ericsson AB, Sweden

PHY 23.4: Simple Cooperative Relaying Strategies for WiMAX Communication System Simone Morosi, Dania Marabissi, Romano Fantacci, Enrico Del Re, Sara Jayousi, University of Florence, Italy

PHY 23.5: Pipelined Cooperative Spectrum Sensing in Cognitive Radio Networks Feng Gao, Wei Yuan, Wei Liu, Wenqing Cheng, Shu Wang, Huazhong University of Science and Technology, China

#### Tuesday 7 April

16:40 - 18:30 Margit B

# PHY 24: Wireless Relay Networks

PHY 24.1: An Efficient Relay Selection Protocol for Cooperative Wireless Sensor Networks Chin-Liang Wang, Syue-Ju Syue, National Tsing Hua University, Taiwan

PHY 24.2: Combating Timing Asynchronism in Relay Transmission for 3GPP LTE Uplink Animesh Yadav, Markku Juntti, Juha Karjalainen, University of Oulu, Finland

PHY 24.3: Diversity-Multiplexing Tradeoff Bounds for Wireless Relay Networks John Boyer, David Falconer, Halim Yanikomeroglu, Carleton University, Canada

PHY 24.4: Energy Efficiency of Opportunistic Routing with Unreliable Links Ruifeng Zhang, Jean-Marie Gorce, Rongping Dong, Katia Jaffrès-Runser, INSA-Lyon, France

## Tuesday 7 April

16:40 - 18:30 Corso A

# PHY 28: Cognitive Radio 2

PHY 28.1: OFDM System Identification for Cognitive Radio Based on Pilot-Induced Cyclostationarity François-Xavier Socheleau, Philippe Ciblat, Sébastien Houcke, Institut TELECOM, France

PHY 28.2: Power Efficiency Maximization in Cognitive Radio Networks
Deah J. Kadhim, Shimin Gong, Wenfang Xia, Wei Liu, Wenqing Cheng, Huazhong University of Science and Technology, China

PHY 28.3: Power Loading for Multicarrier Cognitive Radio with MIMO Antennas Umesh Phuyal, Anjana Punchihewa, Vijay Bhargava, University of British Columbia, Canada; Charles Despins, Prompt-Quebec, Canada

PHY 28.4: Preamble Design for Non-contiguous Spectrum Usage in Cognitive Radio Networks Shulan Feng, Hisilicon Technologies, China; Heather Zheng, University of California, Santa Barbara, United States; Haiguang Wang, Jinnan Liu, Philipp Zhang, Hisilicon Technologies, China

PHY 28.5: Transmit Power Selection by Cooperative Sensing in Cognitive Radio Networks Kenta Umebayashi, Yukihiro Kamiya, Yasuo Suzuki, Tokyo University of Agriculture and Technology, Japan; Janne Lehtomäki, CWC, University of OULU, Finland

# Tuesday 7 April

16:40 - 18:30 Corso B

# **MAC 15: OFDMA 3**

MAC 15.1: On the Impact of Uplink Scheduling on Intercell Interference Variation in MIMO OFDM Systems Gabor Fodor, Per Skillermark, Anders Furuskär, Ericsson Research, Sweden; Jinghong Yang, Royal Institute of Technology (KTH), Sweden

MAC 15.2: Resource Allocation Optimization for OFDM-based Amplify-and-Forward Multi-relay System Yicheng Lin, Wenbo Wang, Bin Fan, Beijing University of Posts and Telecommunications, China; Lin Huang, Orange Labs, France Telecom R&D, Beijing, China; Kan Zheng, Beijing University of Posts and Telecommunications, China

MAC 15.3: User Resource Structure Design with Enhanced Diversity for OFDMA in Time-Varying Channels Hlaing Minn, University of Texas at Dallas, United States; Chia-Chin Chong, DOCOMO USA Labs, United States

MAC 15.4: Reduced Feedback and Signaling Schemes for Sum-Rate Maximization in OFDMA systems Naveen Arulselvan, Suresh Kalyanasundaram, Motorola, India

MAC 15.5: Queue-Aware Subchannel and Power Allocation for Downlink OFDM-Based Cognitive Radio Networks Long Bao Le, Massachusetts Institute of Technology, United States; Patrick Mitran, Catherine Rosenberg, University of Waterloo, Canada

# Tuesday 7 April

16:40 - 18:30 Lánchíd A

MAC 16: Resource Allocation in OFDMA

MAC 16.1: Resource Allocation for Guaranteed Service in OFDMA-based Systems

Nararat Ruangchaijatupon, The Graduate University for Advanced Studies, Japan; Yusheng Ji, National Institute of Informatics, Japan

MAC 16.2: Resource Allocation for OFDM-based Cognitive Radio Multicast Networks Duy Ngo, Chintha Tellambura, University of Alberta, Canada; Ha Nguyen, University of Saskatchewan, Canada

MAC 16.3: Resource Allocation for OFDMA Relay-Enhanced System with Cooperative Selection Diversity Liping Wang, Yusheng Ji, National Institute of Informatics, Japan; Fuqiang Liu, Tongji University, China

MAC 16.4: Resource Allocation in Multiuser OFDMA System: Feasibility and Optimization Study Naveed UI Hassan, Mohamad Assaad, SUPELEC, France

MAC 16.5: Resource Allocation with Fairness Consideration in OFDMA-based Relay Networks Zhihua Tang, Guo Wei, Wireless Information Network Lab, China

#### Tuesday 7 April

16:40 - 18:30 Lánchíd B

## MAC 18: 802.16e

MAC 18.1: A Waiting-time Dependent Algorithm for Initial Ranging in IEEE 802.16e Networks Jing Chi, BUPT, China; Philippe Martins, Marceau Coupechoux, ENST, France

MAC 18.2: An Efficient QoS-based Uplink Scheduling Schemefor IEEE 802.16e Mobile Stations Mina Sokar, SysdSoft, Egypt; Khaled Elsayed, Cairo University, Egypt; Hossam Abdallah, SysdSoft, Egypt

MAC 18.3: Instant Weighted Probability Model to Guarantee QoS in IEEE 802.16e scenario Floriano De Rango, Andrea Malfitano, Salvatore Marano, University of Calabria, Italy

MAC 18.4: IEEE802.16e Cell Capacity including mobility management and QoS Differentiation Thierry Peyre, Rachid Elazouzi, LIA - UAPV, France

MAC 18.5: Inter-Cell Coordinated Resource Allocation for Mobile WiMAX System Li Chen, Wenwen Chen, Xin Zhang, Beijing University of Posts and Telecommunications, China; Yong Zhang, China Mobile Communications Corporation (CMCC), China; Cong Xiong, Dacheng Yang, Beijing University of Posts and Telecommunications, China

## Tuesday 7 April 16:40 - 18:30

Árpád

# **NET 18: Wireless Multicasting, Routing 1**

NET 18.1: Local Scheduling Scheme for Opportunistic Routing

Yanhua Li, Yuan-An Liu, Beijing University of Posts and Telecommunications, China; Li Li, National University of Defense Technology, China; Pengkui Luo, University of Minnesota, United States

NET 18.2: LORP: A Load-balancing Based Optimal Routing Protocol for Sensor Networks with Bottlenecks Lijie Xu, Yangzhou University, China; Guihai Chen, Nanjing University, China; Xinchun Yin, Yangzhou University, China; Panlong Yang, Nanjing University, China; Baijian Yang, Ball State University, United States

NET 18.3: Optimal Scheduling and Routing in WirelessNetworks: A New Approach Naghmeh S. Moayedian, S. Jamaloddin Golestani, Isfahan University of Technology, Iran, Islamic Republic of

NET 18.4: Performance Comparison of Flat and Cluster-Based Hierarchical Ad Hoc Routing with Entity and Group Mobility

Mingyang Zhang, Peter H. J. Chong, Nanyang Technological Univ, Singapore

NET 18.5: Virtual Domain and Coordinate Routing in WirelessSensor Networks Chih-Cheng Hsu, Cheng-Fu Chou, Ching-Ju Lin, Chien-Chun Hung, National Taiwan University, Taiwan

#### Tuesday 7 April

16:40 - 18:30 Béla B

#### **NET 19**

NET 19.1: Performance Analysis of Two-Tier Wireless Mesh Networks for Achieving Delay Minimisation Geyong Min, Yulei Wu, University of Bradford, United Kingdom; Keqiu Li, Dalian University of Technology, China; Ahmed Y. Al-Dubai, Napier University, United Kingdom

NET 19.2: Area Throughput and Energy Consumption for Clustered Wireless Sensor Networks Flavio Fabbri, University of Bologna, Italy; Janne Riihijarvi, RWTH Aachen University, Germany; Chiara Buratti, Roberto Verdone, University of Bologna, Italy; Petri Mahonen, RWTH Aachen University, Germany

NET 19.3: Coverage Control and Irregular Radio Propagation in Wireless Sensor Networks Ramzi Bellazreg, Mohamed Hamdi, Noureddine Boudriga, Communication Networks and Security Research Lab., Tunisia

NET 19.4: Coverage-Aware Sleep Scheduling for Cluster-based Sensor Networks
Fangyang Shen, Northern New Mexico College, United States; Min-Te Sun, National Central University, Taiwan;
Chunlei Liu, Valdosta State University, United States; Andres Salazar, Northern New Mexico College, United States

NET 19.5: Field Test and Experimental Characterization of 5GHz RF Tranceivers for Coverage Extension II-Gu Lee, Jung-Bo Son, Sok-Kyu Lee, ETRI, Korea, Republic of

## Tuesday 7 April

16:40 - 18:30

Pest

# **NET 20: Energy Efficiency in Wireless Networks 2**

NET 20.1: Energy Efficient Adaptive Sensing for Dynamic Coverage in Wireless Sensor Networks Hui Ling, Taieb Znati, University of Pittsburgh, United States

NET 20.2: Energy Efficient Min-Max Spatial Monitoring with Wireless Sensor Networks Periklis Liaskovitis, Curt Schurgers, University of California, San Diego, United States

NET 20.3: Energy Savings Achievable in Connection Preserving Energy Saving Algorithms Seh Chun Ng, Guoqiang Mao, University of Sydney, Australia; Brian Anderson, Australian National University, Australia

NET 20.4: Maximizing the Lifetime of Wireless Sensor Networks through Intelligent Clustering and Data Reduction Techniques

Mario Cordina, Carl James Debono, University of Malta, Malta

NET 20.5: Optimal Communication-Computation Tradeoff for Wireless Multimedia Sensor Network Lifetime Maximization

Muhammad Tahir, Ronan Farrell, National Univ. of Ireland Maynooth, Ireland

## Tuesday 7 April

16:40 - 18:30

István

#### **SVS 6: Multimedia Networks 2**

SVS 6.1: Performance Evaluation of Distributing Real-time Video over Concurrent Multipath Changqiao Xu, Enda Fallon, Yuansong Qiao, Athlone Institute of Technology, Ireland; Gabriel-Miro Muntean, Dublin City University, Ireland; Xiaoguang Li, Austin Hanley, Athlone Institute of Technology, Ireland

SVS 6.2: Time-sliced Scalable Source Partition Streaming for Flexible Power Management in Digital Audio/Video Broadcasting

Ching-Yung Chen, National Kaohsiung First University of Science Technology, Taiwan; Fang-Chu Chen, Ce-Min Fang, Yi-Ting Wang, Industrial Technology Research Institute, Taiwan; Chih-Chun Feng, Novatek Microelectronics Corp., Taiwan

SVS 6.3: Service-Oriented Multimedia Delivery in Pervasive Space

Zhuzhong Qian, Nanjing University, China; Minyi Guo, The University of Aizu, Japan; Sheng Zhang, Sanglu Lu, Nanjing University, China

SVS 6.4: Regulatory Challenges to the Evolving NGN World

Malik Muhammad Imran Pattal, Zeng Jianqiu, Beijing University of Posts and Telecommunications, China

#### Wednesday 8 April

9:00 - 10:50 Erzsébet A

## PHY 22: Equalization

PHY 22.1: Low-Complexity Linear Equalization for Block Transmission in Multipath Channels Shakti Prasad Shenoy, EURECOM, France; Francesco Negro, Irfan Ghauri, Infineon Technologies, France; Dirk T. M. Slock, EURECOM, France

PHY 22.2: Efficient Compensation of RF Impairments for OFDM Systems

Deepaknath Tandur, Katholieke Universiteit Leuven, Belgium; Chong-you Lee, National Chiao Tung University, Taiwan; Marc Moonen, Katholieke Universiteit Leuven, Belgium

PHY 22.3: Performance Comparison of Feasible MMSE-PIC Algorithms with Channel Estimation for HSUPA Ilkka Moilanen, Paavo Hahtola, VTT Technical Research Centre of Finland, Finland

PHY 22.4: Turbo Equalization with Channel Prediction and Iterative Channel Estimation Liang Dong, Western Michigan University, United States

PHY 22.5: Theoretical Analysis of Joint THP/pre-FDE for Single-Carrier Signal Transmissions Kazuki Takeda, Hiromichi Tomeba, Fumiyuki Adachi, Tohoku University, Japan

#### Wednesday 8 April

9:00 - 10:50 Margit A

#### **PHY 26: Multiuser Receivers**

PHY 26.1: Multi-User SISO Precoding Based on Generalized Multi-Unitary Decomposition for Single-Carrier Transmission in Frequency Selective Channel

Wee-Seng Chua, Nanyang Technological University, Singapore; Chau Yuen, Institute for Infocomm Research, Singapore, Singapore; Yong Liang Guan, Nanyang Technological University, Singapore; Francois Chin, Institute for Infocomm Research, Singapore, Singapore

PHY 26.2: Downlink Assisted Uplink Zero-Forcing for TDD Multiuser MIMO Systems Petri Komulainen, Antti Tölli, Matti Latva-aho, Markku Juntti, University of Oulu, Finland

PHY 26.3: Iterative Detection for OFDMA Uplink with Frequency Offsets Sajid Ahmed, Li Zhang, University of Leeds, United Kingdom

PHY 26.4: A TH-UWB Receiver with Near-MUD Performance for Multiple Access Interference Environments Iraj Hosseini, Norman Beaulieu, University of Alberta, Canada

# Wednesday 8 April

9:00 - 10:50 Corso A

PHY 27: MIMO OFDM 1

PHY 27.1: A Novel Double-Polarized SFBC-OFDM Scheme for ICI Suppression Dong Li, Keying Wu, Liyu Cai, Hongwei Yang, Alcatel Shanghai Bell Co., Ltd, China

PHY 27.2: Blind I/Q Imbalance Compensation Using Independent Component Analysis in MIMO OFDM Systems Jingbo Gao, Xu Zhu, University of Liverpool, United Kingdom; Hai Lin, Osaka Prefecture University, Japan; Asoke Nandi, University of Liverpool, United Kingdom

PHY 27.3: Complexity Reduced MLD Based on QR Decomposition in OFDM MIMO Multiplexing with Frequency Domain Spreading and Code Multiplexing

Kenichi Higuchi, Kouji Nagatomi, Tokyo University of Science, Japan; Hiroyuki Kawai, NTT DOCOMO, INC., Japan

PHY 27.4: Efficient Channel Quantization and Feedback Strategies for Multiuser MIMO-OFDM Systems Xuejun Liang, Yang Liu, Jun Duan, Alcatel-Lucent Shanghai Bell Co., Ltd., China

# Wednesday 8 April

9:00 - 10:50 Margit B

## PHY 29: MC CDMA

PHY 29.1: Performance Analysis for MC-CDMA System in Impulsive Noise Environments Rui Fa, University of York, United Kingdom; Bayan Sharif, Charalampos Tsimenidis, Newcastle University, United Kingdom

PHY 29.2: On the Effect of Combined Equalization for MC-CDMA Systems in Correlated Fading Channels Barbara Masini, IEIIT/CNR, University of Bologna, Italy; Flavio Zabini, University of Bologna, Italy

PHY 29.3: On the Construction of Orthogonal Spreading Code Groups for MC-CDMA with FDE in A Frequency Selective Channel

Koichi Adachi, Masao Nakagawa, Keio University, Japan

PHY 29.4: Performance of Space-Time-Frequency Block-Coded MC-DS-CDMA in Correlated Conditions Daniel Basilio, Karel Mare, Bodhaswar Maharaj, University of Pretoria, South Africa

## Wednesday 8 April

9:00 - 10:50 Lánchíd A

# PHY 30: Cognitive Radio 3

PHY 30.1: Overhead-Throughput Tradeoff in Cooperative Cognitive Radio Networks Young-June Choi, Yan Xin, Sampath Rangarajan, NEC Laboratories America, United States

PHY 30.2: Cooperative Diversity of Spectrum Sensing in Cognitive Radio Networks Dongliang Duan, Liuqing Yang, Jose C. Principe, University of Florida, United States

PHY 30.3: Cognitive Node Selection and Assignment Algorithms for Weighted Cooperative Sensing in Radar Systems

Lingfeng (Stephen) Wang, Angela Doufexi, Centre for Communications Research, University of Bristol, United Kingdom; Chris Williams, Formerly of Centre for Communications Research, University of Bristol, United Kingdom; Joe McGeehan, Centre for Communications Research, University of Bristol, United Kingdom

PHY 30.4: Performance of Cyclostationary Features Based Spectrum Sensing Method in a Multiple Antenna Cognitive Radio System

Guanding Yu, Tengyi Zhang, Chi Sun, Zhejiang University, China

#### Wednesday 8 April

9:00 - 10:50 Erzsébet B

#### MAC 19: WIMAX 1

MAC 19.1: Distributed Adaptive Time Slot Allocation for WiMAX Based Maritime Wireless Mesh Networks Peng-Yong Kong, Haiguang Wang, Yu Ge, Chee-Wei Ang, Jaya Shankar Pathmasuntharam, Wen Su, Institute for Infocomm Research, Singapore; Ming-Tuo Zhou, Hiroshi Harada, Wireless Comms Lab., NICT Singapore Office, Singapore

MAC 19.2: Resource Allocation in 802.16j Multi-hop Relay Systems with the User Resource Fairness Constraint Hui Zeng, Chenxi Zhu, Fujitsu Laboratories of America, United States

MAC 19.3: Impact of WiMAX Network Asymmetry on TCP

Addisu Eshete, Norwegian University of Science Technology, Norway; Andrés Arcia, David Ros, TELECOM Bretagne, France; Jiang Yuming, Norwegian University of Science and Technology, Norway

MAC 19.4: Layered Video Resource Allocation in Mobile WiMAX Using Opportunistic Multicasting Chih-Wei Huang, Po-Han Wu, University of Washington, United States; Shiang-Jiun Lin, National Chiao Tung University, Taiwan; Jeng-Neng Hwang, University of Washington, United States

MAC 19.5: Network-Centric Joint Radio Resource Policy in heterogeneous WiMAX-UMTS Networks for Streaming and Elastic traffic

Marc Ibrahim, Kinda Khawam, Samir Tohme, Universite de Versailles, France

## Wednesday 8 April

9:00 - 10:50

Pest

#### MAC 21: AD-Hoc

MAC 21.1: A Proposal for High Air-Traffic Oceanic Flight Routes Employing Ad-Hoc Networks Ho Dac Tu, Shigeru Shimamoto, Waseda University, Japan

MAC 21.2: An Improved Multicode CDMA Transmission Method for Ad-Hoc Networks Jihai Zhou, Mustafa Gurcan, Imperial College London, United Kingdom

MAC 21.3: MRPC: A Multi-Rate Supported Power Control MAC Protocol for Wireless Ad-Hoc Networks Kuei-Ping Shih, Chau-Chieh Chang, Tamkang University, Taiwan; Yen-Da Chen, Lunghwa Univ. of Science and Technology, Taiwan

MAC 21.4: Improved Delayed ACK for TCP over Multi-Hop Wireless Networks Beizhong Chen, Ivan Marsic, Rutgers University, United States; Huai-Rong Shao, Samsung R&D Center, United States; Ray Miller, Bell Labs, United States

MAC 21.5: A Proposal of Wide-Band Air-to-Ground Communication at Airports Employing 5-GHz Band Ho Dac Tu, Shigeru Shimamoto, Waseda University, Japan

### Wednesday 8 April

9:00 - 10:50 Corso B

# MAC 24: Relay

MAC 24.1: Cooperative MAC Protocol with Distributed Relay Actuation M. Sarper Gokturk, Ozgur Gurbuz, Sabanci University, Turkey

MAC 24.2: Fairness and QoS-Based Resource Allocation in Multihop Relay Networks Tolga Girici, TOBB Economics and Technology University, Turkey

MAC 24.3: Novel Frame Structures to Improve System Capacity and Latency Performance of a Time-Division Duplex Multihop Relay Wireless Access System

Youhei Ohno, Tatsuya Shimizu, Takefumi Hiraguri, Masashi Nakatsugawa, NTT, Japan

MAC 24.4: Message-by-Message Route Modification in Wireless Multihop Transmission for Shorter Delay Hiroaki Higaki, Tokyo Denki University, Japan

MAC 24.5: Network Coded ALOHA for Wireless Multihop Networks Hyun-kwan Lee, Seong-Lyun Kim, Yonsei University, Korea, Republic of

# Wednesday 8 April

9:00 - 10:50 Lánchíd B

## **NET 21: Heterogeneous Networks**

NET 21.1: A Distributed Network Selection Scheme in Next Generation Heterogeneous Wireless Networks Pengbo Si, Beijing University of Posts Telecommunications, China; F. Richard Yu, Carleton University, Canada; Hong Ji, Beijing University of Posts Telecommunications, Canada; Victor Leung, The University of British Columbia, Canada

NET 21.2: An Optimization Framework for Heterogeneous Access Management Jörg Bühler, Gerhard Wunder, Fraunhofer German-Sino Lab for Mobile Communications (MCI), Germany

NET 21.3: Median Based Network Selection in Heterogeneous Wireless Networks Ying Wang, Lei Zheng, Jun Yuan, Wensheng Sun, Beijing University of Posts and Telecommunications, China

NET 21.4: Radio Access Network Selection in a Heterogeneous Communication Environment Weizhi Luo, Eliane Bodanese, Queen Mary, University of London, United Kingdom

NET 21.5: Implementation and analysis of load balancing switch over for hybrid wireless network Farukh Nadeem, Max Henkel, Bernhard Geiger, Erich Leitgeb, Muhammad Saleem Awan, TUG, Austria; Gorazd Kandus, JSI, Slovenia

## Wednesday 8 April

9:00 - 10:50 Árpád

# **NET 22: Mesh Networks**

NET 22.1: Gateway Selection in Backbone Wireless Mesh Networks Usman Ashraf, Université de Toulouse/LAAS-CNRS, France; Slim Abdellatif, Guy Juanole, LAAS-CNRS, France

NET 22.2: Optimization Models For Planning Wireless Mesh Networks: A Comparative Study Djohara Benyamina, Abdelhakim Hafid, Michel Gendreau, University of Montreal, Canada; N Hallam, University of Nottingham, United Kingdom

NET 22.3 Interface Placement in Constructing Widest Spanning Tree for Multi-Channel Multi-Interface Wireless Mesh Networks

Hon Sun Chiu, Kwan L. Yeung, King-Shan Lui, The University of Hong Kong, Hong Kong

NET 22.4: A Clean-Slate Architecture for Reliable Data Delivery in Wireless Mesh Networks Sherif El Rakabawy, Christoph Lindemann, University of Leipzig, Germany

NET 22.5: Low-Rate WPAN Mesh Network – An Enabling Technology for Ubiquitous Networks Chunhui Zhu, Samsung Electronics, United States; Jianliang Zheng, EMC Corp., United States; Chiu Ngo, Samsung Electronics, United States; Taerim Park, Samsung Electronics, South Korea; Rui Zhang, Myung Lee, City University of New York, United States

#### Wednesday 8 April

9:00 - 10:50 Béla B

# **NET 23: Wireless Multicasting, Routing 2**

NET 23.1: AMIRA: Interference-aware Routing Using Ant Colony Optimization in Wireless Mesh Networks Fawaz Bokhari, Gergely Zaruba, University of Texas at Arlington, United States

NET 23.2: Circle Path Based Sink Location Service for Geographic Routing Scheme Fucai Yu, Euisin Lee, Taehee Kim, Jeongcheol Lee, Sang-Ha Kim, Chungnam National University, Korea, Republic of

NET 23.3: Context-Aware Geographic Routing for Sensor Networks with Routing Holes
Jiaxi You, Dominik Lieckfeldt, Frank Reichenbach, Dirk Timmermann, University of Rostock, Germany

NET 23.4: Joint Channel Assignment and Routing in Real Time Wireless Mesh Network Xiaoguang Li, Athlone Institute of Technology, Ireland; Changgiao Xu, Chinese Academy of Sciences, China

NET 23.5: Link Estimation Methods for Routing over FWA Mesh Network Jun Nishioka, Satoru Yamano, Katsuhiko Yamada, NEC, Japan

# Wednesday 8 April

9:00 - 10:50 István

## **SVS 7: Resource Management 1**

SVS 7.1: The Economy of Redundancy in Wireless Multi-Hop Networks
Geir Egeland, University of Stavanger, Norway; Paal E. Engelstad, Telenor Research and Innovation, Norway

SVS 7.2: Personalization-based Optimization of Real-Time Service Delivery in a Multi-Device Environment Marcus Kuhnen, Daniel Kraft, Anett Schülke, Jochen Bauknecht, Johannes Häussler, Mario Lischka, NEC Europe Ltd., Germany

SVS 7.3: Architectural Optimization of Decomposition Algorithms for Wireless Communication Systems Ali Irturk, Bridget Benson, University of California, San Diego, United States; Nikolay Laptev, University of California, Los Angeles, United States; Ryan Kastner, University of California, San Diego, United States

SVS 7.4: Dynamic Virtual Backbone Management for Service Discovery in Wireless Mesh Networks Martin Krebs, RWTH Aachen University, Germany

SVS 7.5: Efficient Resource Allocation Strategies forMulticast/Broadcast Services in 3GPP Long TermEvolution Single Frequency Networks

Vihang Kamble, Suresh Kalyanasundaram, Vinod Ramachandran, Motorola India Pvt Ltd, India; Rajeev Agrawal, Motorola Inc, United States

# Wednesday 8 April

11:10 - 13:00 Margit A

#### **PHY 18: Wireless Networks**

PHY 18.1: Conversion of the Spatio-Temporal Correlation from Uplink to Downlink in FDD Systems Markus Jordan, Xitao Gong, Gerd Ascheid, RWTH Aachen University, Germany

PHY 18.2: Wireless NUM: Rate and Reliability Tradeoffs in Random Environment Daniel Craig O'Neill, Boon Sim Thian, Andrea Goldsmith, Stanford University, United States

PHY 18.3: Full Frequency Reuse in OFDMA-Based Wireless Networks with Sectored Cells Serdar Sezginer, Sequans Communications, France; Hikmet Sari, Supelec, France

PHY 18.4: Performance Analysis of Outage-Limited Multi-Access Cellular Systems with Macro-Diversity Derrick Wing Kwan Ng, University of British Columbia, Canada; Vincent K.N Lau, HKUST, Hong Kong

## Wednesday 8 April

11:10 - 13:00 Erzsébet A

#### PHY 31: OFDM Channel Estimation

PHY 31.1: A Convergence Study of Iterative Channel Estimation Algorithms for OFDM Systems in Dispersive Time-Varying Channels

Zheng Du, Huawei Technology Co., China; Xuegui Song, Julian Cheng, UBC Okanagan, School of Engineering, Canada; Norman Beaulieu, University of Alberta, Electrical and Computer Engineering, Canada

PHY 31.2: A Decision Directed Square-Root Free Inverse QR-Decomposition based Groupwise Recursive Channel Estimator for SFBC-OFDM Systems

Siva Muruganathan, Abu Sesay, University of Calgary, Canada

PHY 31.3: Pilot Designs for Channel Estimation of OFDM Systems with Frequency-Dependent I/Q Imbalances Hlaing Minn, Daniel Munoz, University of Texas at Dallas, United States

PHY 31.4: Robust DCT-based Channel Estimation for MIMO-OFDM system Diallo Moussa, Rabineau Rodrigue, Cariou Lautent, France Telecom, France

PHY 31.5: Recursive Channel Estimation Algorithms for Iterative Receiver in MIMO-OFDM Systems Chun-Lin Xiong, De-Gang Wang, Xiao-Ying Zhang, Ji-Bo Wei, Chao-Jing Tang, School of Electronic Science and Engineering, National University of Defense Technology, China

## Wednesday 8 April

11:10 - 13:00 Erzsébet B

## PHY 32: Multiple-Antenna Relay Systems

PHY 32.1: Achievable Rates of MIMO Bidirectional Broadcast Channels with Self-Interference Aided Channel Estimation

Jian Zhao, Marc Kuhn, Armin Wittneben, ETH Zurich, Switzerland; Gerhard Bauch, DoCoMo Euro-Labs, Germany

PHY 32.2: Blind Amplify-and-Forward Relaying in Multiple-Antenna Relay Networks Sami Muhaidat, Simon Fraser University, Canada; Murat Uysal, University of Waterloo, Canada; Raviraj Adve, University of Toronto, Canada

PHY 32.3: Performance Analysis of Maximum Likelihood Detection for Decode and Forward MIMO Relay Channels in Rayleigh Fading

G. V. V. Sharma, Vijay Ganwani, Uday B. Desai, S. N. Merchant, IIT Bombay, India

PHY 32.4: Performance of Amplify-and-Forward MIMO Relay Channels with Transmit Antenna Selection and Maximal-Ratio Combining

Shuping Chen, Wenbo Wang, Xing Zhang, Dong Zhao, Beijing University of Posts & Telecommunications, China

PHY 32.5: Resource Allocation Algorithms with Reduced Complexity in MIMO Multi-Hop Fading Channels Feng Li, Hamid Jafarkhani, University of California, Irvine, United States

## Wednesday 8 April

11:10 - 13:00 Corso A

## PHY 34: Diversity

PHY 34.1: Downlink Capacity of Distributed Antenna Systems in a Multi-Cell Environment Wei Feng, Yunzhou Li, Shidong Zhou, Jing Wang, Tsinghua University, China; Minghua Xia, ETRI Beijing R&D Center, China

PHY 34.2: 2-D Switching Diversity Aided Collaborative Spatial Multiplexing for Uplink Wireless Access Xiaolong Zhu, Yong Song, Hongwei Yang, Liyu Cai, Alcatel-Lucent Shanghai Bell Co. Ltd, China

PHY 34.3: Exact Error Probabilities for MRC in Frequency Selective Nakagami Fading with ISI, CCI and ACI Mohammad Azizur Rahman, Chin Sean Sum, National Institute of Information and Communications Technology (NICT), Japan; Shigenobu Sasaki, Niigata University, Japan; Tuncer Baykas, Junyi Wang, Ryuhei Funada, Hiroshi Harada, Shuzo Kato, National Institute of Information and Communications Technology (NICT), Japan

PHY 34.4: Low Complexity Antenna Diversity Front-End: Use of Code Multiplexing Matthieu Gautier, Guillaume Villemaud, Université de Lyon, INRIA, INSA-Lyon, CITI, France

PHY 34.5: Switching Rates of Dual Selection Diversity in kappa-mu and alpha-mu Fading Channels Xin Wang, Norman Beaulieu, University of Alberta, Canada

# Wednesday 8 April

11:10 - 13:00 Margit B

#### MAC 20: WIMAX 2

MAC 20.1: A Scalable Feedback Suppression Mechanism for Multicast Service in Wireless TDMA Network Jianfeng Chen, Ning Liao, Xiaojun Ma, Thomson, China

MAC 20.2: Receiving Power Level Prediction for WiMAX Systems on 3.5 GHz Snježana Rimac-Drlje, University of Osijek , Croatia; Josip Milanovic, Croatian Agency for Post and Electrical Communications , Croatia; Stanislav Strešnjak, Siemens d.d., Croatia

MAC 20.3: New Contention Resolution Schemes for WiMAX

Jesús Delicado, University of Castilla-La Mancha, Spain; Qiang Ni, Brunel University, United Kingdom; Francisco M. Delicado, Luis Orozco-Barbosa, University of Castilla-La Mancha, Spain

MAC 20.4: Efficient Polling Mechanism in WiMAX Network Fei Yin, Guy Pujolle, LIP6 - Université Pierre et Marie Curie, France

MAC 20.5: Distributed Load-Balancing in a Multi-Carrier System
Prashanth Hande, Shailesh Patil, Hyung Myung, Qualcomm Flarion Technologies, United States

## Wednesday 8 April

11:10 - 13:00 Lánchíd A

# MAC 22: Wireless Local Systems

MAC 22.1: A Virtual Time-Slot Allocation Throughput Enhancement Scheme with Multiple Modulations for a Multi-Gbps Millimeter-wave WPAN System

Chin-Sean Sum, Zhou Lan, Ryuhei Funada, Junyi Wang, Tuncer Baykas, Mohammad Azizur Rahman, Hiroshi Harada, Shuzo Kato, National Institute of Information and Communications Technology, Japan

MAC 22.2: Deflect Routing for Throughput Improvement in Muti-hop Millimeter-Wave WPAN System Zhou Lan, Chin-Sean Sum, Junyi Wang, Tuncer Baykas, Jing Gao, NICT, Japan; Hiroyuki Nakase, Tohoku University, Japan; Hiroshi Harada, Shuzo Kato, NICT, Japan

MAC 22.3: A Throughput Balancing Problem Between Uplink and Downlink in Multi-User MIMO-based WLAN Systems

Hu Jin, Bang Chul Jung, KAIST Korea, Republic of; Ho Young Hwang, University of Waterloo, Canada; Dan Keun Sung, KAIST, Korea, Republic of

MAC 22.4: A Region-Based Downlink Scheduling Algorithm in MIMO Precoding Systems
Di Pang, Jinlong Hu, Yubo Yang, Lin Tian, Institute of Computing Technology, Chinese Academy of Sciences,
China; Jihua Zhou, Chongqing Jinmei Communication Co., Ltd., China; Jinglin Shi, Institute of Computing
Technology, Chinese Academy of Sciences, China

MAC 22.5: Spatial Multi-user Pairing for Uplink Virtual-MIMO Systems with Linear Receiver Bin Fan, Wenbo Wang, Yicheng Lin, Beijing University of Posts and Telecommunications, China; Lin Huang, Orange Labs, France Telecom R&D, China; Kan Zheng, Beijing University of Posts and Telecommunications, China

## Wednesday 8 April

11:10 - 13:00 Corso B

# MAC 23: Scheduling

MAC 23.1: OLSR-Aware Distributed Channel Access Scheduling for Wireless Mesh Networks Miray Kas, Ibrahim Korpeoglu, Ezhan Karasan, Bilkent University, Turkey

MAC 23.2: Scheduling Performance of Heavy-Tailed Data Traffic in Wireless High-Speed Shared Channels Mikael Gidlund, Nera Networks, Norway; Nicolas Debernardi, France Telecom R&D, France

MAC 23.3: Joint Opportunistic Scheduling and Spectrum Sharing Mehrdad Shariat, Atta UI Quddus, Rahim Tafazolli, University of Surrey, United Kingdom

MAC 23.4: Adaptation of TDMA Parameters Based on Network Conditions Bora Karaoglu, Tolga Numanoglu, Wendi Heinzelman, University of Rochester, United States

MAC 23.5: Dynamic Channel Allocation in Wireless Networks Using Adaptive Learning Automata Behdis Eslamnour, Maciej Zawodniok, S. Jagannathan, Missouri University of Science and Technology, United States

#### Wednesday 8 April

11:10 - 13:00 Lánchíd B

# NET 24: Multimedia QoS and Traffic Management 2

NET 24.1: Performance Analysis of TCP-AFC for Satellite-based Networks

Nikhil Kothari, Bhavika Gambhava, Dharmsinh Desai University, India; K. S. Dasgupta, Space Application Centre, India

NET 24.2: Performance Evaluation of Wireless Communication Networks for Multi-Traffic with Multi-Channel Zhanyou Ma, Yanshan University, China; Wuyi Yue, Konan University, Japan; Naishuo Tian, Yanshan University, China

NET 24.3: The Effectiveness of QoS Constrained AODV Routing for Voice Support in Multi-hop IEEE802.11 Mobile Ad Hoc Networks

Liqi Shi, Abraham Fapojuwo, The University of Calgary, Canada; Neil Viberg, Wendy Hoople, Norbert Chan, General Dynamics Canada, Canada

NET 24.4: Traffic-based Dynamic Routing for Wireless Sensor Networks

Mukundan Venkataraman, Mainak Chatterjee, University of Central Florida, United States; Kevin Kwiat, Air Force Research Laboratory, United States

NET 24.5: Traffic Estimation from Wireless Environment Sensing Lionel Gueguen, Berna Sayrac, Orange Labs, France

# Wednesday 8 April

11:10 - 13:00 Árpád

# **NET 25: Large Scale and Mesh Networks**

NET 25.1: A Data Dissemination Model Base on Content-based Publish/Subscribe Paradigm in Large-Scale Wireless Sensor Networks

Min-Sook Jin, Hosung Park, Euisin Lee, Soochang Park, Sang-Ha Kim, Chungnam National University, South Korea

NET 25.2: Communication Scheme Independent of Publishers and Subscribers for Large-Scale Sensor Applications

Soochang Park, Euisin Lee, Fucai Yu, Min-Sook Jin, Sang-Ha Kim, Chungnam National University, South Korea

NET 25.3: Frequency Planning in IEEE 802.16j Networks: An Optimization Framework and Performance Analysis Fernando Gordejuela-Sanchez, David Lopez-Perez, Jie Zhang, University of Bedfordshire, United Kingdom

NET 25.4: Signaling Analysis for Multi-Radio Management

Christian M. Mueller, Universität Stuttgart, Germany; Lutz Ewe, Rolf Sigle, Alcatel-Lucent Bell Labs, Germany

NET 25.5: Interference Protection versus Spatial Reuse in Wireless Networks

Harald Burchardt, Technical University of Munich, Germany; Peter Omiyi, University College London, United Kingdom; Gunther Auer, DOCOMO Euro-Labs, Germany; Harald Haas, Sinan Sinanovic, University of Edinburgh, United Kingdom

#### Wednesday 8 April

11:10 - 13:00

Béla B

# **NET 26: Wireless Multicast and Streaming**

NET 26.1: Improving QoS in Multicasting Through Adaptive Redundancy Tolga Numanoglu, Wendi Heinzelman, University of Rochester, United States

NET 26.2: Multicast Capacity of Multi-Channel Multihop Wireless Networks Vishwanath Ramamurthi, Sree Krishna Chaitanya Vadrevu, Anurag Chaudhry, University of California, Davis, United States; Manav R. Bhatnagar, UniK – University Graduate Center, University of Oslo, Norway

NET 26.3: RBMulticast: Receiver Based Multicast for Wireless Sensor Networks Chen-Hsiang Feng, Wendi Heinzelman, University of Rochester, United States

NET 26.4: Secure Framework for Multipath Multimedia Streaming over Wireless Ad-Hoc Network Binod Vaidya, Hyuk Lim, Gwangju Institute of Science and Technology, Korea, Republic of

NET 26.5: Utilization of Multi-Radio Access Networks for Video Streaming Services Ali Yaver, Royal Institute of Technology (KTH), Sweden; Georgios Koudouridis, Huawei Technologies Sweden R&D Center, Sweden

### Wednesday 8 April

11:10 - 13:00

István

# **SVS 8: Resource Management 2**

SVS 8.1: Priority Based Selection to Improve Contents Consistency for Mobile Overlay Network Zhou Su, Jiro Katto, Yasuhiko Yasuda, Waseda University, Japan

SVS 8.2: A Novel Managed Wireless Mesh Architecture for Community Service Platform Masugi Inoue, Ved Kafle, Masaaki Ohnishi, NICT, Japan; Hiroaki Morino, Shibaura Institute of Technology, Japan; Tohru Sanefuji, Nassua Solutions Corp., Japan

SVS 8.3: Quality of Service Consideration for the Wireless Telemedicine and e-health Services Anna Zvikhachevskaya, PhD student, United Kingdom; Garik Markarian, Dr, United Kingdom; and Luydmila Mihailova, Dr, United Kingdom

## Wednesday 8 April

14:30 - 16:20 Margit A

# PHY 37: Cross-layer Design and Adaptive Communication Systems

PHY 37.1: Optimization of Adaptive Communication Systems with Feedback Channels Anatoliy A. Platonov, Warsaw University of Technology

PHY 37.2: Rate Adaptive Throughput Maximization in PAM-Modulated Overloaded System Mustafa Gurcan, Zhenfeng He, Imperial College London, United Kingdom

PHY 37.3: Cross-Layer Iterative Decoding of Irregular LDPC Codes using Cyclic Redundancy Check Codes Zhimin Yang, Shiju Li, Hao Feng, Thomas Honold, Guanding Yu, Zhejiang University, China

PHY 37.4: Cross Layer HARQ 2 Cooperation with Throughput Improvement Sannesh Beharie, Hongjun Xu, Fambirai Takawira, University of KwaZulu-Natal, South Africa

# Wednesday 8 April

14:30 - 16:20 Erzsébet B

#### **PHY 38: Parameters Estimation**

PHY 38.1: CFR and SNR Estimation Based on Complementary Golay Sequences for Single-Carrier Block Transmission in 60-GHz WPAN

Ming Lei, Ye Huang, Intel Corporation, United States

PHY 38.2: Recursive Parameter Estimation for Regression Channel Model in Pilot-Aided OFDM Systems Wei-Cheng Pao, Hsien-Cheng Chiu, Dah-Chung Chang, Yung-Fang Chen, NCU, Taiwan

PHY 38.3: Cramér-Rao Bound for NDA SNR Estimates of Square QAM Modulated Signals Faouzi Bellili, INRS-EMT, Canada; Alex Stéphenne, Ericsson Canada and INRS-EMT, Canada; and Sofiene Affes, INRS-EMT, Canada

PHY 38.4: Uplink CP-CDMA System: Joint CFO and CIR Estimation without Pilots Lokesh Bheema Thiagarajan, Institute for Infocomm Research, Singapore; Samir Attallah, SIM University (UniSIM), Singapore

PHY 38.5: A Preliminary Investigation on Angular Parameters Estimation in a Simplified IR-UWB Indoor Multipath Scenario

Vincenzo La Tosa, Benoît Denis, CEA Leti Minatec, France; Bernard Uguen, IETR-CNRS, Université Rennes-I, France

# Wednesday 8 April

14:30 - 16:20 Erzsébet A

## PHY 39: Resource Allocation in Relaying Systems

PHY 39.1: Optimum Power Allocation for Expected Achievable Rate Maximization with Outage Constraints in Cooperative Relay Networks

James C. F. Li, Subhrakanti Dey, The University of Melbourne, Australia

PHY 39.2: Rate-Optimized Power Allocation for OFDM Transmission with Multiple DF/Regenerative Relays and an Improved Protocol

Luc Vandendorpe, Jerome Louveaux, Onur Oguz, Abdellatif Zaidi, UCL, Belgium

PHY 39.3: Throughput Maximization for OFDMA Cooperative Relaying Networks with Fair Subchannel Allocation Hongxing Li, Hanwen Luo, Xinbing Wang, Chisheng Li, Shanghai Jiaotong University, China

PHY 39.4: Transmit Cooperation Versus Distributed Coordination in Interference Links Erhan Yilmaz, Saad G. Kiani, EURECOM, France

PHY 39.5: What Determines Resource Optimization in Cooperative Communications Rui Cao, Liuqing Yang, University of Florida, United States

#### Wednesday 8 April

14:30 - 16:20 Corso A

## **PHY 40: Wireless Systems Power Allocation**

PHY 40.1: Generalised Multi-Receiver Radio Network: Capacity and Asymptotic Stability of Power Control through Banach's Fixed-Point Theorem

Virgilio Rodriguez, Rudolf Mathar, Anke Schmeink, RWTH Aachen, Germany

PHY 40.2: Super-Imposed Pilot-Aided Channel Estimation and Power Allocation for Relay Systems Gongpu Wang, Chintha Tellambura, University of Alberta, Canada

PHY 40.3: Sub-Optimum Distributed Power Allocation for Parallel Relay Networks Feng Hu, Hua Zhang, Xiaohu You, Southeast University, China; Haifeng Wang, Gang Wu, Nokia, China

PHY 40.4: Lattice-Reduction for Power Optimisation Using the Fast Least-Squares Solution-Seeker Algorithm Ulises Pineda Rico, Emad Alsusa, Christos Masouros, The University of Manchester, United Kingdom

PHY 40.5: Multi-Rate Communications Using Layered Interleave-Division Multiple Access with Power Allocation Lance Linton, Phillip Conder, Michael Faulkner, Victoria University, Australia

# Wednesday 8 April

14:30 - 16:20 Margit B

#### MAC 25: Interference

MAC 25.1: A Novel Distributed Interference Mitigation Technique Using Power Planning Virginia Corvino, University of Bologna, Italy; David Gesbert, Institut Eurecom, France; Roberto Verdone, University of Bologna, Italy

MAC 25.2: Optimal Subcarrier and Power Allocation under Interference Temperature Constraints Qianxi Lu, China; Tao Peng, China; Wei Wang, China; Wenbo Wang, China

MAC 25.3: Adaptive Energy Saving Scheme for Downlink Elastic Traffic in Wireless Networks Jongwook Lee, Saewoong Bahk, Seoul National University, South Korea

MAC 25.4: Optimal Rate and Power Allocation in Uplink Packet CDMA Transmission Byoung-Hoon Kim, LG Institute of Technology, LG Electronics Inc., Korea, Republic of; Seong-Jun Oh, Korea University, Korea, Republic of

MAC 25.5: Extending the Percolation Threshold Using Power Control Georgios Paschos, CERTH - The Center for Research and Technology Hellas, Greece; Petteri Mannersalo, VTT - Technical Research Centre of Finland, Finland; Slawomir Stanczak, Heinrich-Hertz Group for Mobile Communications, EECS, Berlin University of Technology, Germany

# Wednesday 8 April

14:30 - 16:20 Lánchíd A

#### MAC 26: QoS and Multimedia

MAC 26.1: QoS-aware On-demand Channel Width Adaptation Protocols for Multi-Radio Ad-Hoc Networks Li Li, Chunyuan Zhang, National University of Defense Tech., China; Yanhua Li, Beijing Univ. of Posts & Telecommunications, China

MAC 26.2: Q-learning for Joint Access Decision in Heterogeneous Networks Louai Saker, Sana Ben Jemaa, Salah Eddine Elayoubi, Orange Labs, France

MAC 26.3: Scalable Video Streaming over Fading Wireless Channels

Honghai Zhang, NEC Laboratories America, United States; Yanyan Zheng, Stanford University, United States; Mohammad Khojastepour, Sampath Rangarajan, NEC Laboratories America, United States

MAC 26.4: Utility-based Multi-Service Bandwidth Allocation in the 4G Heterogeneous Wireless Access Networks Changqing Luo, Hong Ji, Yi Li, Key Lab of Universal Wireless Communications, Ministry of Education, Beijing University of Posts and Telecommunications, China

MAC 26.5: Unequal Error Protection Low-Density Parity-Check Codes Design Based on Gaussian Approximation in Image Transmission

Piming Ma, Kyung Sup Kwak, Inha University, Korea, Republic of

#### Wednesday 8 April

14:30 - 16:20 Corso B

# **MAC 27: Wireless Networks**

MAC 27.1: Traffic-Adaptive, Flow-Specific Medium Access Control for Wireless Networks Thaddeus Walker, Murali Tummala, John McEachen, Naval Postgraduate School, United States

MAC 27.2: Analysis of Carrier Sensing's Influence on the Performance of Routing Protocols in Multi-Hop, Multi-Rate Wireless Networks

Shunyuan Ye, Shivendra Panwar, Polytechnic Institute of NYU, United States

MAC 27.3: Flow Starvation Mitigation for Wireless Mesh Networks Keivan Ronasi, Sathish Gopalakrishnan, Vincent W.S. Wong, The University of British Columbia, Canada

MAC 27.4: Design and Analysis of a Splitting Algorithm for a Multi-packet Reception ALOHA System Jun-Bae Seo, Victor Leung, University of British Columbia, Canada

MAC 27.5: Throughput Optimization in Wireless Networks with Multi-packet Reception and Directional Antennas Jorge Crichigno, University of New Mexico, United States; Min-You Wu, Shanghai Jiao Tong University, China; Wei Shu, University of New Mexico, United States

#### Wednesday 8 April

14:30 - 16:20 Lánchíd B

#### **NET 27: Relay Networks 2**

NET 27.1: Bursty Wideband Relay Networks

Tony Q.S. Quek, Institute for Infocomm Research, Singapore; Hyundong Shin, Kyung-Hee University, Korea, Republic of

NET 27.2: Capacity Enhancement with Relay Station Placement in Wireless Cooperative Networks Bin Lin, University of Waterloo, Dalian Maritime University, Canada; Mehri Mehrjoo, Pin-Han Ho, Liang-Liang Xie, Xuemin (Sherman) Shen, University of Waterloo, Canada

NET 27.3: Energy-Aware Post Settings: A Study on Performance Gain by Adding Relaying Nodes in Wireless Ad-Hoc Networks

Eun-Sook Sung, Miodrag Potkonjak, UCLA, United States

NET 27.4: Wireless Multihop Transmission with Buffering in Neighbor Sensor Nodes for Shorter Delay Daiki Sakamoto, Hiroaki Higaki, Tokyo Denki University, Japan

NET 27.5: Indoor radio network optimization using multi level hierarchic method Lajos Nagy, BUTE, Hungary

## Wednesday 8 April

14:30 - 16:20 Árpád

# **NET 28: Mobility and Handoff Management 2**

NET 28.1: An Energy-Efficient Handover Scheme with Geographic Mobility Awareness in WiMAX-WiFi Integrated Networks

Wen-Hsin Yang, You-Chiun Wang, Yu-Chee Tseng, National Chiao-Tung University, Taiwan; Bao-Shuh P. Lin, Industrial Technology Research Institute, Taiwan

NET 28.2: Anonymous Handover Mechanism for Service Mobility in Heterogeneous Wireless Networks Toshiyuki Fujisawa, Japan Broadcasting Corporation, Japan; Masaki Inamura, Toshiaki Tanaka, KDDI R&D Laboratories Inc., Japan

NET 28.3: Design and Implementation of a Network-Centric Micro-Mobility Architecture Eduardo Zagari, Rodrigo Prado, State University of Campinas - Unicamp, Brazil; Tomás Badan, Federal University of Goiás, Brazil; Eleri Cardozo, Maurício Magalhães, José Carrilho, André Berenguel, Daniel Moraes, Tiago Dolphine, Thienne Johnson, State University of Campinas - Unicamp, Brazil; Lars Westberg, Ericsson Research, Sweden

NET 28.4: Evaluation of Session Handoffs in a Heterogeneous Mobile Network for Pareto-based Packet Arrivals Kumudu Munasinghe, Abbas Jamalipour, University of Sydney, Australia

NET 28.5: A Hybrid SS-ToA Wireless NLoS Geolocation Based on Path Attenuation: Mobile Position Estimation Bamrung Tau Sieskul, Feng Zheng, Thomas Kaiser, Institute of Communication Technology, Germany

## Wednesday 8 April

14:30 - 16:20 Béla B

## **NET 29: Wireless Ad-Hoc Networks**

NET 29.1: A New Routing Algorithm for Sparse Vehicular Ad-Hoc Networks with Moving Destinations Mohsen Ghaffari, Farid Ashtiani, Sharif University of Technology, Iran, Islamic Republic of

NET 29.2: Lifetime Benefits through Load Balancing in Homogeneous Sensor Networks Daniele Puccinelli, University of Applied Science of Southern Switzerl, Switzerland; Martin Haenggi, University of Notre Dame, United States

NET 29.3: On the Scalability Problem of Highway Ad-Hoc Network Florent Kaisser, Véronique Vèque, University of Paris-Sud - IEF, France

NET 29.4: Network Coding-Aware Flow Control in Wireless Ad-Hoc Networks Hee-Tae Roh, Jang-Won Lee, Yonsei University, Korea, Republic of

## Wednesday 8 April

14:30 - 16:20 István

# SVS 9: Trust, Authentication, and Privacy

SVS 9.1: Context-Aware Trust and Privacy Application for Mobile Identification System Nuno Pratas, Puri Anggraeni, Satya Wardana, Neeli Rashmi Prasad, Center for TeleInFrastruktur, Aalborg University, Denmark; António Rodrigues, Instituto Telecomunicações, Instituto Superior Técnico, Technical University of Lisbon, Portugal; Ramjee Prasad, Center for TeleInFrastruktur, Aalborg University, Denmark

SVS 9.2: Lightweight Broadcast Authentication Protocols Reconsidered Shigenori Yamakawa, Chuo University, Japan; Yang Cui, Kazukuni Kobara, National Institute of Advanced Industrial Science Technology (AIST), Japan; Hideki Imai, Chuo University / National Institute of Advanced Industrial Science and Technology (AIST), Japan

SVS 9.3: Reputation-based Content Dissemination for User Generated Wireless Podcasting Liang Hu, Lars Dittmann, Technical University of Denmark, Denmark; Jean-Yves Leboudec, Swiss Federal Institute of Technology, Lausanne, Switzerland

SVS 9.4: Mapping Third Party Call Control and Session Handoff in SIP Mobility to Content Sharing and Session Handoff in the Web Browsing Context

Michael Adeyeye, Neco Ventura, University of Cape Town, South Africa; David Humphrey, Seneca College, Toronto, Canada

SVS 9.5: IP-Based Overlay Signaling for Seamless Service Roaming in Heterogeneous Networks Kai Daniel, Thang Tran, Christian Wietfeld, Dortmund University of Technology, Germany

## Wednesday 8 April

16:40 - 18:30 Margit A

## **PHY 4: Interference Mitigation**

PHY 4.1: Spatial Interference Cancellation Algorithm Rizwan Ghaffar, Raymond Knopp, Eurecom, France

PHY 4.2: On Pilot Design for Channel Estimation and MUI Reduction in Uplink OFDMA Systems Wei-Chieh Huang, Graduate Institute of Communication Engineering, National Taiwan University, Taiwan; Xin-Zhe He, Chih-Peng Li, Institute of Communications Engineering, National Sun Yat-Sen University, Taiwan; Hsueh-Jyh Li, Graduate Institute of Communication Engineering, National Taiwan University, Taiwan

PHY 4.3: Multi-Antenna Interference Cancellation Techniques for Cognitive Radio Applications Omar Bakr, Mark Johnson, UC Berkeley, United States; Raghuraman Mudumbai, UC Santa Barbara, United States; Kannan Ramchandran, UC Berkeley, United States

PHY 4.4: Linear Interference Suppression for Spread Spectrum Systems with Switched Interleaving and Limited Feedback

Yunlong Cai, Rodrigo de Lamare, Rui Fa, University of York, United Kingdom

PHY 4.5: New Pilot Designs and ICI Mitigation for OFDM Downlink Systems based on IEEE 802.16m Standards over High Speed Vehicular Channels

Hyunkee Min, Yonsei University, South Korea; Jihyung Kim, Electronics Telecommunications Research Institute, South Korea; Hyungjong Kim, Dongkyu Kim, Yonsei University, South Korea; Dong Seung Kwon, Electronics Telecommunications Research Institute, South Korea; Daesik Hong, Yonsei University, South Korea

#### Wednesday 8 April

16:40 - 18:30 Erzsébet B

## PHY 12: Cooperative Communications and Network Coding

PHY 12.1: Full Interference Cancellation for Two-Path Cooperative Communications Chunbo Luo, Yu Gong, Fuchun Zheng, School of Systems Engineering, The University of Reading, United Kingdom

PHY 12.2: A Novel Network-Coding-based Coded CooperationScheme Suwen Wu, Jinkang Zhu, Ming Zhao, University of Science and Technology of China, China

PHY 12.3: Joint Distributed Source and Network Coding for Multiple Wireless Unicast Sessions Shahriar Etemadi Tajbakhsh, Ali Movaghar, Sharif University of Technology, Iran, Islamic Republic of

PHY 12.4: Network Coding Versus Superposition Coding for Two-Way Wireless Communication Ernest Lo, Stanford University, United States; Khaled Ben Letaief, Hong Kong University of Science and Technology, Hong Kong

## Wednesday 8 April

16:40 - 18:30

## Erzsébet A

## PHY 35: Coding

PHY 35.1: Design of Linear Dispersion Codes for MIMO Broadband Wireless Access Systems Ming Jiang, Alain Mourad, Samsung Electronics UK, United Kingdom

PHY 35.2: Distributed Space-Time Diversity System using Linear Constellation Precoding Chao Zhang, Huarui Yin, Weidong Wang, Guo Wei, University of Science & Technology of China, China

PHY 35.3: Precoding of (Non) Orthogonal Space-Time Block Codes over Arbitrarily Correlated Rayleigh Channel Manav Bhatnagar, Are Hjørungnes, UniK-University Graduate Center, University of Oslo, Norway

PHY 35.4: Turbo Codes in Coded Cooperation using the Forced Symbol Method

Jules Merlin Mouatcho Moualeu, Hongiun Xu, Fambirai Takawira, University of KwaZulu-Natal, South Africa

PHY 35.5: On the Designs and Challenges of Practical Binary Dirty Paper Coding Gyu Bum Kyung, Chih-Chun Wang, Purdue University, United States

# Wednesday 8 April

16:40 - 18:30 Corso A

## PHY 36: Beamforming

PHY 36.1: A Distributed Beam-Forming Algorithm for Single Frequency Networks Supporting Broadcast and Multicast Applications

Kiran Rege, Krishna Balachandran, Joseph H. Kang, Kemal Karakayali, Bell Labs, Alcatel-Lucent, United States

PHY 36.2: Digital Signal Design and Nonlinear Distortions in Antenna Array Beamforming Markku Kiviranta, Aarne Mämmelä, Henna Paaso, Marko Höyhtyä, Ilkka Moilanen, VTT Technical Research Centre of Finland, Finland

PHY 36.3: Improved Beamforming for Radio Links with Multi-Level Linearly Modulated Signals Zohaib Hassan Awan, Slimane Ben Slimane, The Royal Institute of Technology (KTH), Sweden

PHY 36.4: Low Complexity Power Control and Beamforming for Multigroup Multicast MIMO Downlink Channel Daniel Tomecki, Slawomir Stanczak, Michal Kaliszan, Fraunhofer German-Sino Lab for Mobile Communications MCI, Germany

PHY 36.5: The Minimum Number of Adaptive Array Antenna Elements for Interference Suppression in Ubiquitous Communication Environments

Masaaki Yamanaka, Hiroshima International University, Japan; Masayuki Enomoto, Sharp Corporation, Japan; Ryan J. Pirkl, Gregory D. Durgin, Georgia Institute of Technology, United States; Seiich Sampei, Osaka University, Japan; Norihiko Morinaga, Hiroshima International University, Japan

## Wednesday 8 April

16:40 - 18:30 Margit B

# PHY 41: OFDM Parameter Estimation and Synchronization

PHY 41.1: Bayesian CFO Estimation in OFDM Systems Kun Cai, Xiao Li, Yik-Chung Wu, The University of Hong Kong, Hong Kong

PHY 41.2: Reconstruction of the Samples Corrupted with Impulse Noise in Multicarrier Systems Josko Radic, Nikola Rozic, University of Split, Croatia

PHY 41.3: Carrier Frequency Offset Estimation for Multi-User MIMO OFDM Uplink Using CAZAC Sequences Yan Wu, Eindhoven University of Technology, The Netherlands; Samir Attallah, SIM University (SIM), Singapore; J.W.M. Bergmans, Eindhoven University of Technology, The Netherlands

PHY 41.4: Joint Time, Frequency and Sampling Clock Synchronization for OFDM-based Systems E. Del Castillo-Sánchez, F. J. López-Martínez, E. Martos-Naya, J. T. Entrambasaguas, University of Malaga, Spain

# Wednesday 8 April

16:40 - 18:30 Lánchíd A

#### **PHY 42: OFDM 2**

PHY 42.1: Parallel Packet Transmission Based on OFDM Xiaojing Huang, University of Wollongong, Australia; Y. Jay Guo, CSIRO ICT Centre, Australia

PHY 42.2: Performance Analysis of OFDM System over Time-Selective Fading Channels Yuexing Peng, Wenbo Wang, Beijing University of Posts and Telecommunications, China; Young Il Kim, Electronics and Telecommunication Research Institute. Korea. Republic of

PHY 42.3: Analysis of OFDM Receiver with Insufficient Guard Interval Zhonghao Zhang, Baojin Li, Yongyu Chang, Dacheng Yang, Beijing University of Posts and Telecommunications, China

PHY 42.4: Simple Bit Allocation Algorithms with BER-constraint for OFDM-based Systems Hyeonmok Ko, Seungyoul Oh, POSTECH, Korea, Republic of; Bongsu Kim, Hyundai Motor Company, Korea, Republic of; Cheeha Kim, POSTECH, Korea, Republic of

PHY 42.5: Jitter Mitigation in High-Frequency Bandpass-Sampling OFDM Radios Ville Syrjälä, Mikko Valkama, Tampere University of Technology, Finland

#### Wednesday 8 April

16:40 - 18:30 Corso B

# PHY 43: Relaying Systems

PHY 43.1: A Hybrid Relay Selection Scheme Using Differential Modulation Lingyang Song, Peking University, China; Yonghui Li, University of Sydney, Australia; Meixia Tao, Shanghai Jiao Tong University, China; Athanasios Vasilakos, University of Western Macedonia, Greece

PHY 43.2: An Incremental Relaying Approach for Superposition Modulated Cooperative Transmission Cengis Hasan, Umit Aygolu, Istanbul Technical University, Turkey

PHY 43.3: An Optical IM/DD Based Spatial Transmission Diversity Achievable Relay Scheme Jiang Liu, Hiroshi Takano, Shigeru Shimamoto, Waseda University, Japan

PHY 43.4: Outage Probabilities in Infrastructure-Based Single-Frequency Relay Links Taneli Riihonen, Stefan Werner, Risto Wichman, Jyri Hämäläinen, Helsinki University of Technology, Finland

# Wednesday 8 April

16:40 - 18:30 Lánchíd B

#### PHY 44: MIMO OFDM 2

PHY 44.1: Field Experiments on Open-Loop Precoding MIMO Using Testbed Targeted at IMT-Advanced System Yasuyuki Hatakawa, Noriaki Miyazaki, Toshinori Suzuki, KDDI R&D Laboratories Inc., Japan

PHY 44.2: Frequency and Space Precoded MIMO OFDM with Substream Adaptation Xiaojing Huang, University of Wollongong, Australia; Y. Jay Guo, CSIRO ICT Centre, Australia

PHY 44.3: On the Cramer-Rao Lower Bound for Spatial Correlation Matrices of Doubly Selective Fading Channels for MIMO OFDM Systems

Xiaochuan Zhao, Qingyi Quan, Tao Peng, Wenbo Wang, Beijing University of Posts and Telecommunications, China

PHY 44.4: Two-Step Signal Detection for MIMO-OFDM Systems without Cyclic Prefix Shaodan Ma, Tung-Sang Ng, The University of Hong Kong, Hong Kong

## Wednesday 8 April

16:40 - 18:30 Béla A

#### PHY 45: LDPC

PHY 45.1: Code-Matched Interleaver Design over Surrogate Channels
Jing Lei, WINLAB, Dept. of ECE, United States; Wen Gao, Thomson Corporate Research, United States

PHY 45.2: Log-Likelihood Ratios for LDPC Codes with Pilot-Symbol-Assisted BPSK Transmission over the Noncoherent Channel

Elisa Mo, Pooi Yuen Kam, National University of Singapore, Singapore

PHY 45.3: Thresholds Calculation of LDPC Code Ensembles Using a Novel Gaussian Approximation Algorithm Piming Ma, Kyung Sup Kwak, Inha University, Korea, Republic of

# Wednesday 8 April

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# PHY 46: Channel Propagation and Localization Techniques

PHY 46.1: A New Ray Optical Statistical Model for Multipath Characteristics Pertinent to Indoor Geolocation Ferit Akgul, Kaveh Pahlavan, Worcester Polytechnic Institute, United States

PHY 46.2: Realistic Radio Propagation Models (RPMs) for VANET Simulations
F. J. Martinez, University of Zaragoza, Spain; C.K. Toh, University of Hong Kong, Hong Kong; J.C. Cano, C.T. Calafate, P. Manzoni, Technical University of Valencia, Spain

PHY 46.3: ToA and TDoA Error Models for NLoS Propagation Based on Outdoor to Indoor Channel Measurement Wei Wang, Thomas Jost, Christian Mensing, Armin Dammann, German Aerospace Center (DLR), Germany

PHY 46.4: Use of a Simplified Maximum Likelihood Function in a WLAN-Based Location Estimation Shinsuke Hara, Daisuke Anzai, Osaka City University, Japan

#### Wednesday 8 April

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## NET 30: Multimedia QoS and Traffic Management 3

NET 30.1: Effectiveness of H.264 Error Resilience Techniques in 802.11e WLANs

Richard MacKenzie, University of Leeds, United Kingdom; David Hands, British Telecommunications PLC, United Kingdom; Timothy O'Farrell, Swansea University, United Kingdom

NET 30.2: Flexible Configuration in Power and Data Rate for QoS Guarantees in Multi-hop Wireless Networks using Goal Programming

John Paul Torregoza, Won-Joo Hwang, Inje University, Korea, Republic of

NET 30.3: Improving TCP Performance in Wireless Networks by Classifying Causes of Packet Losses Parag Kulkarni, Mahesh Sooriyabandara, Lu Li, Toshiba Research Europe Ltd., United Kingdom

NET 30.4: PAWES: A Flow Distribution Algorithm Based on Priority and Weight Self-Production Yi Sun, Institute of Computing Technology, China; Stephen Herborn, National ICT Australia, Australia; Yuming Ge, Jue Yuan, Institute of Computing Technology, China; Jihua Zhou, Institute of Computing Technology, China; Dongdong Chen, SINOSURE, China

NET 30.5: Modelling of Heterogeneous Wireless Networks under Batch Arrival Traffic with Communication Locality Yulei Wu, Geyong Min, University of Bradford, United Kingdom; Guojun Wang, Central South University, China; Jianmin Jiang, University of Bradford, United Kingdom

#### Wednesday 8 April

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#### **NET 31: MANET**

NET 31.1: A Fully Distributed Node Allocation Scheme for Partition Protection in MANET Ting Wang, Chor Ping Low, Nanyang Technological University, Singapore

NET 31.2: An Adaptive Genetic Fuzzy Control Gateway Discovery to Interconnect Hybrid MANETs Antonio Jesus Yuste Delgado, Universidad of Jaen, Spain; Francisco David Trujillo Aguilera, Alicia Triviño, Eduardo Casilari Perez, Antonio Diaz-Estrella, Universidad of Malaga, Spain

NET 31.3: An Efficient Group Partition Prediction Scheme for MANETs Yan Zhang, Chor Ping Low, Jim Mee Ng, Ting Wang, Nanyang Technological University, Singapore

NET 31.4: Efficient Dissemination Techniques for MANET Routing Control Messages Phong Khuu, Brian Loop, Gregory Sadosuk, Michael Weber, Kyle Guan, Reza Ghanadan, Jessica Hsu, BAE Systems - El&S, United States

NET 31.5: Graph Theoretic Models and Tools for the Analysis of Dynamic Wireless Multihop Networks Guoqiang Mao, The University of Sydney, Australia; Brian Anderson, The Australian National University, Australia

## Wednesday 8 April

16:40 - 18:30 Béla B

## **NET 32: Network Coding and Game Theory**

NET 32.1: A Queueing Model for Wireless Tandem Network Coding Farid Ashtiani, Mohammad Bagher Iraji, Mohammad H. Amerimehr, Sharif University of Technology, Iran, Islamic Republic of

NET 32.2: Reliable Wireless Broadcast with Random Network Coding for Real-time Applications Yoshihisa Kondo, Hiroyuki Yomo, Shinji Yamaguchi, Peter Davis, Ryu Miura, Sadao Obana, ATR, Japan

NET 32.3: Utility and Game-Theory Based Network Selection Scheme in Heterogeneous Wireless Networks Chung-Ju Chang, Tsung-Li Tsai, National Chiao Tung University, Taiwan; Yung-Han Chen, Industrial Technology Research Institute, Taiwan

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16:40 - 18:30 István

## **NET 33: Selected topics in Wireless Systems**

NET 33.1: Power-Aware Recovery for Geographic Routing

Amit Dvir, Ben-Gurion University of the Negev, Israel; Niklas Carlsson, University of Calgary, Canada

NET 33.2: Contentious Feedback in Cellular Systems Alex Reznik, Eldad Zeira, InterDigital, United States

NET 33.3: Novel WLAN Coverage Area Estimation Leveraging Transition of Cellular Signal using Multi-mode Mobile Terminal for Heterogeneous Networks
Haruki Izumikawa, Yoji Kishi, Riichiro Nagareda, KDDI R&D Laboratories, Japan