The full program is available as a PDF.

<table>
<thead>
<tr>
<th>Time</th>
<th>Auditorium Q-II</th>
<th>Room QBF09</th>
<th>Room QBF14</th>
<th>Room QBF15</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-10:40</td>
<td>T1: Tutorial 1</td>
<td>T2: Tutorial 2</td>
<td>T3: Tutorial 3</td>
<td></td>
</tr>
<tr>
<td>10:40-11:00</td>
<td>coffee break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00-11:20</td>
<td>T1: Tutorial 1</td>
<td>T2: Tutorial 2</td>
<td>T3: Tutorial 3</td>
<td></td>
</tr>
<tr>
<td>11:20-11:40</td>
<td>lunch break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:40-15:00</td>
<td>S1: Practical wireless</td>
<td>S2: Visible wireless</td>
<td>S3: Wireless feedback</td>
<td></td>
</tr>
<tr>
<td>15:00-16:30</td>
<td>T4: Tutorial 4</td>
<td>T5: Tutorial 5</td>
<td>T6: Tutorial 6</td>
<td></td>
</tr>
<tr>
<td>16:30-16:50</td>
<td>coffee break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:50-18:10</td>
<td>T4: Tutorial 4</td>
<td>T5: Tutorial 5</td>
<td>T6: Tutorial 6</td>
<td></td>
</tr>
<tr>
<td>18:30-20:00</td>
<td>Welcome reception</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Wednesday, May 20**

<table>
<thead>
<tr>
<th>Time</th>
<th>Auditorium Q-II</th>
<th>Room QBF09</th>
<th>Room QBF14</th>
<th>Room QBF15</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:15</td>
<td>Welcome addresses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:15-09:25</td>
<td>Salute from the sponsors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:25-10:40</td>
<td>K1: Keynote 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:40-11:00</td>
<td>coffee break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00-12:20</td>
<td>S4: Wireless coding</td>
<td>S5: Secure wireless</td>
<td>S6: Wireless applications</td>
<td></td>
</tr>
<tr>
<td>12:20-13:40</td>
<td>lunch break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:40-14:50</td>
<td>K2: Keynote 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Friday, May 22

09:00-10:20  K3: Keynote 3
10:20-
10:40    coffee break
12:20-
13:40    Lunch break
15:20-
15:40    coffee break
17:20-

Wednesday, May 20

09:00 - 10:40

T1: Tutorial 1

The Path Towards 5G - Essential Technologies, Protocols and Tools for Enabling 5G Mobile Communications
Marco Di Renzo, Christos Verikoukis, Erik G. Larsson, Eduard Jorswieck, Cheng-Xiang Wang
Room: Room QBF09

T2: Tutorial 2

Network Coding for Cloud Storage and Content Delivery
Daniel E. Lucani, Frank H.P. Fitzek
Room: Room QBF14

T3: Tutorial 3

Multi-Carrier waveforms: State of the Art and Challenges in a 5G perspective
Pierre Siohan (presenting), Hao Lin
Room: Room QBF15
10:40 - 11:00

coffee break

11:00 - 12:20

T1: Tutorial 1

back after the coffee break
Room: Room QBF09

T2: Tutorial 2

back after the coffee break
Room: Room QBF14

T3: Tutorial 3

back after the coffee break
Room: Room QBF15

12:20 - 13:40

Lunch break

13:40 - 15:00

S1: Practical wireless

Room: Room QBF09
Chair: László Lengyel (BME, Hungary)

13:40 Android Based Toolset for NFC Tag Testing and Performance Evaluation
Aage Andre Haaland Dahl (University of Oslo & Gold As, Norway); Thomas Plagemann (University of Oslo, Norway); Ali Zaher (Oslo University, Norway)

14:00 Off-Body Channel Measurements, Modelling & Comparison of Wrist Mounted Antennas
Mohammad W Abdullah, Evangelos Mellios, Maciej Klemm and Geoffrey Hilton (University of Bristol, United Kingdom)

14:20 Applicability of Frequency Selective Surfaces to Enhance Mobile Network Coverage in Future Energy-Efficient Built Environments
Ari Asp, Anil Baniya, Syed Fahad Yunas, Jarno Niinemäki and Mikko Valkama (Tampere University of Technology, Finland)

14:40 Adaptive Relay Activation in the Network Coding Protocols
Peyman Pahlevani and Daniel E. Lucani (Aalborg University, Denmark); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany)

S2: Visible wireless

Room: Room QBF14
Chair: Marcos D Katz (University of Oulu, Finland)

13:40 Precoded Single-Cell Multi-User MISO Visible Light Communications
Tezcan Cogalan (University of Edinburgh, United Kingdom); Harald Haas (The University of Edinburgh, United Kingdom); Erdal Panayirci (Kadir Has University, Turkey)

14:00 An Efficient Repeater Assisted Visible Light Communication
Samrat Vikramaditya Tiwari, Atul Sewaiwar and Yeonho Chung (Pukyong National University, Korea)

14:20 Data Downloading on the Coverage of Visible Light Communication
Helal Chowdhury (Telecommunication laboratory, university of oulu, Finland)

14:40 Linear Precoder Performance of Massive MIMO Systems in near LOS Environments: Application to mmWave Transmission
S3: Wireless feedback

Room: Room QBF15
Chair: Leonardo Badia (Università degli Studi di Padova, Italy)

13:40 Dynamic Outer Loop Link Adaptation for the 5G Centimeter-Wave Concept
Marta Gatnau Sarret (Aalborg University & Nokia, Denmark); Davide Catania (Aalborg University, Denmark); Frank Frederiksen (Nokia Siemens Networks, Denmark); Andrea F. Cattoni, Gilberto Berardinelli and Preben Mogensen (Aalborg University, Denmark)

14:00 Intercell Interference Management For Downlink Beamforming With Imperfect CSI
Mati Tshangini (Kings College, United Kingdom); Mohammad Reza Nakhai (King’s College London, United Kingdom)

14:20 Joint Power and Sensing Optimization for Hybrid Cognitive Radios with limited CSIT
George A Ropokis (Research Academic Computer Technology Institute, Greece); Christos G. Tsinos (University of Patras, Greece); Miltiades C. Filippou (University of Edinburgh, United Kingdom); Kostas Berberidis (University of Patras, Greece); David Gesbert (Eurecom Institute, France); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)

14:40 Interpolated UQ vs RVQ as Limited Feedback for Broadband Channels
Sara Teodoro (University of Aveiro & Instituto de Telecomunicações, Portugal); Adão Silva (Instituto de Telecomunicações (IT)/University of Aveiro, Portugal); Rui Dinis (Faculdade de Ciências e Tecnologia, University Nova de Lisboa, Portugal); Atílio Gameiro (Instituto de Telecomunicações / Universidade de Aveiro, Portugal)

15:00 - 16:30
T4: Tutorial 4

Small Cells and Device-to-Device Networks towards the 5G Era: Fundamentals, Applications, and Resource Allocation using Game Theory
Vaggelis G. Douros, George C. Polyzos
Room: Room QBF09

T5: Tutorial 5

Understanding the IoT evolution to master the IoT revolution
Antonio Iera, Giacomo Morabito, Luigi Atzori
Room: Room QBF14

T6: Tutorial 6

Efficient Network Handling Techniques on Android Platform
Peter Ekler, Bertalan Forstner
Room: Room QBF15

16:30 - 16:50

coffee break

16:50 - 18:10

T4: Tutorial 4

back after the coffee break
Room: Room QBF09
T5: Tutorial 5
back after the coffee break
Room: Room QBF14

T6: Tutorial 6
back after the coffee break
Room: Room QBF15

18:30 - 20:00
Welcome reception

Thursday, May 21

09:00 - 09:15
Welcome addresses
Local academic authorities
Room: Auditorium Q-II

09:15 - 09:25
Salute from the sponsors
Conference sponsors
Room: Auditorium Q-II

09:25 - 10:40
K1: Keynote 1
Erik Dahlman
Room: Auditorium Q-II

10:40 - 11:00
coffee break

11:00 - 12:20
S4: Wireless coding
Room: Room QBF09
Chair: Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany)

11:00 Relay-assisted Network Coding Multicast in the Presence of Neighbours
Hana Khamfroush (Penn State University, USA); Daniel E. Lucani and Peyman Pahlevani (Aalborg University, Denmark); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany); Joao Barros (Instituto de Telecomunicações & Universidade do Porto, Portugal)

11:20 Asymmetric Modulation Gains in Network Coded Relay Networks
Daniel E. Lucani (Aalborg University, Denmark); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany)

11:40 Single-Carrier Frequency-Division Multiple Access Transmission with Physical Layer Network Coding over ISI Channels
Armin Schmidt (University of Erlangen-Nuernberg, Germany); Robert Schober (Universität Erlangen-Nürnberg, Germany); Wolfgang Gerstacker (University of Erlangen-Nuernberg, Germany)
12:00 BER Performance of Three-Phase Digital Network Coding Employing Combined TAS/Alamouti OSTBC-OFDM in the Presence of Imperfect Channel State Information
Ahmet F Coskun (The Scientific and Technological Research Council of Turkey, Turkey); Oguz Kucur (Gebze Technical University, Turkey)

S5: Secure wireless

11:00 - 11:15 Introductory talk "Security in Programmable Network," by Peter Schneider (Nokia Networks)
Room: Room QBF14
Chair: Leonardo Badia (Università degli Studi di Padova, Italy)

11:15 On the outage probability of secrecy capacity in arbitrarily-distributed fading channels
Juan M. Romero-Jerez (University of Malaga, Spain); Gerardo Gomez (University of Málaga, Spain); Francisco Javier Lopez-Martinez (Universidad de Malaga, Spain)

11:33 Channel Correlation Map based Indoor-to-outdoor Artificial Noise Design and Secrecy Analysis
Huijun Li and Zekai Liang (RWTH Aachen University, Germany); Gunes Karabulut Kurt (Istanbul Technical University, Turkey); Gerd H. Ascheid and Guido Dartmann (RWTH Aachen University, Germany)

11:51 The Study of the Centralized Control Method to Hasten Link Set-up in IEEE 802.11ah Networks
Dmitry Bankov (Institute for Information Transmission Problems (IITP RAS), Russia); Evgeny Khorov and Andrey Lyakhov (IITP RAS, Russia)

12:09 A zero-sum jamming game with incomplete position information in wireless scenarios
Maria Scalabrin, Valentina Vadori and Anna Guglielmi (University of Padova, Italy); Leonardo Badia (Università degli Studi di Padova, Italy)

S6: Wireless applications

Room: Room QBF15
Chair: Péter Ekler (BME, Hungary)

11:00 Wireless Applications of Mobile Egomotion Estimation with Computer Vision
Laszlo Kundra (Budapest University of Technology and Economics, Hungary); Péter Ekler (BME, Hungary); Hassan Charaf (Budapest University of Technology and Economics, Hungary)

11:20 Distributed movement recognition algorithm based on wrist-mounted wireless sensor motes
Peter Sarcevic, Zoltán Kincses, Szilveszter Pletl and Laszlo Schaffer (University of Szeged, Hungary)

11:40 Social driving in connected car environment
Péter Ekler (BME, Hungary); Tamás Balogh and Tamás Ujj (Researcher, Hungary); Hassan Charaf (Budapest University of Technology and Economics, Hungary); László Lengyel (BME, Hungary)

12:00 Wakeup signal length optimization combined with payload aggregation and FEC in WSNs
Ákos Milánkovich, Gergely Ill and Károly Lendvai (Budapest University of Technology and Economics, Hungary); Sándor Imre (Technical University of Budapest, Hungary); Sándor Szabó (Budapest University of Technology and Economics, Hungary)

12:20 - 13:40
Lunch break

13:40 - 14:50
K2: Keynote 2

Muriel Méard
Room: Auditorium Q-II

14:50 - 16:10
S7: Wireless MIMO

Room: Room QBF09
Chair: Imre Kelényi (Budapest University of Technology and Economics, Hungary)

14:50 Performance Analysis of Large Centralized and Distributed MU-MIMO Systems in Indoor WLAN
Qing Wang (Eindhoven University of Technology, The Netherlands); Diptanil DebBarma (Eindhoven University of Technology & IISc, The Netherlands); Zizheng Cao (Eindhoven University of Technology, The Netherlands); Anthony Lo (Universiti Teknologi Malaysia, Sweden); Ignas Niemegeers (Eindhoven University of Technology, The Netherlands); Sonia Heemstra de Groot (Eindhoven Technical University, The Netherlands)

15:10 Establishing Lower Bounds on the Peak-to-Average-Power Ratio in Filter Bank Multicarrier Systems
Bálint Horváth and Peter Horvath (Budapest University of Technology and Economics, Hungary)

15:30 A Banking Mechanism of Diversity-Multiplexing Tradeoff for Massive MIMO Systems
Tsung-Wei Chiang and Ju-Hong Lee (National Taiwan University, Taiwan)

15:50 Preamble-based Estimation of Highly Frequency Selective Channels in MIMO-FBMC/OQAM Systems
Eleftherios Kofidis (University of Piraeus, Greece)

14:50 - 15:30
W1: Opening talk
invited talk for WD2DC
Gabor Fodor
Room: Room QBF14

14:50 - 17:50
W2: Special session 5GCodes
Workshop on Coding Techniques for 5G Networks
Room: Room QBF15
Chair: Daniel E. Lucani (Aalborg University, Denmark)

14:50 Precoding Techniques for Turbo Codes
Ronald Garzón Bohórquez (Telecom Bretagne, France); Charbel Abdel Nour (Institut Telecom - Telecom Bretagne, France); Catherine Douillard (Institut Mines Telecom - Telecom Bretagne, France)

15:10 Generalized Error Locating Codes with Soft Decoding of Inner Codes
Igor Zhilin (Institute for Information Transmission Problems, Russia); Fedor Ivanov (IITP, Russia); Victor V. Zyablov (Institute for Information Transmission Problems (IITP) RAS, Russia)

15:30 Orchestrating Feedback for Hybrid Rateless Codes
Carlos Faneca (University of Aveiro, Portugal); André Zúquete (University of Aveiro, Dep. of Electronics, Telecommunications and Informatics & IEETA, Portugal); Jose Vieira (Universidade de Aveiro & IEETA, Portugal); André Moreira (Instituto de Telecomunicações & Faculdade de Engenharia da Universidade do Porto, Portugal); Luis Almeida (Universidade do Porto, Portugal); Julio Cano (Universidade do Porto, Portugal)

15:50 Increasing data distribution in BitTorrent networks by using network coding techniques
Patrik János Braun and Márton Sipos (Budapest University of Technology and Economics, Hungary); Péter Ekler (BME, Hungary); Hassan Charaf (Budapest University of Technology and Economics, Hungary)

16:10 coffee break

16:30 On the Packet Delay Characteristics for Serially-Connected Links using Random Linear Network Coding with and without Recoding
Máté Tömösközi (Acticom GmbH, Germany); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany); Daniel E. Lucani and Morten V. Pedersen (Aalborg University, Denmark); Patrick Seeling (Central Michigan University, USA); Péter Ekler (BME, Hungary)

16:50 A Practical View on Tunable Sparse Network Coding
Chris W. Sørensen (Aalborg University, Denmark); Arash Shahbaz Badr (Technische Universität Hamburg –Harburg, Germany); Juan Cabrera and Daniel E. Lucani (Aalborg University, Denmark); Janus Heide (Steinwurf, Denmark); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany)

17:10 Sending policies in dynamic wireless mesh using network coding
Sreekrishna Pandi (Technical University of Dresden, Germany); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany); Jeppe Pihl (Steinwurf, Denmark); Morten V. Pedersen and Daniel E. Lucani (Aalborg University, Denmark)

17:30 Reliability Capacity of Half-Duplex Channels with Strict Deadlines
Rui A. Costa (Streambolic, Portugal); Daniel E. Lucani (Aalborg University, Denmark); Tiago T. Vinhoza (Instituto de Telecomunicações & University of Porto, Portugal); Joao Barros (Instituto de Telecomunicações & Universidade do Porto, Portugal)
15:30 - 17:50

**W1: Special session WD2DC**

Workshop on D2D communications  
Room: Room QBF14  
Chair: Leonardo Militano (Mediterranea University of Reggio Calabria, Italy)

15:30 *Efficient Data Uploading Supported by D2D Communications in LTE-A Systems*  
Antonino Orsino (University Mediterranea of Reggio Calabria, Italy); Leonardo Militano (Mediterranea University of Reggio Calabria, Italy); Giuseppe Araniti, Antonella Molinaro and Antonio Iera (University Mediterranea of Reggio Calabria, Italy)

15:50 *Network-Assisted Device-to-Device Connectivity: Contemporary Vision and Open Challenges*  
Sergey Andreev, Dmitri Moltchanov, Olga Galinina, Alexander Pyattaev, Aleksandr Ometov and Yevgeni Koucheryavy (Tampere University of Technology, Finland)

16:10 coffee break

16:30 *Location-based mode selection and resource allocation in cellular networks with D2D underlay*  
Marcin Rodziewicz (Poznan University of Technology, Poland)

16:50 *Optimal Schedule for LTE-Advanced Device-to-Device Communication in Aviation*  
Maciej Mühliesen (Hamburg University of Technology & RWTH Aachen University, Faculty 6, Germany); Jan Habermann and Andreas Timm-Giel (Hamburg University of Technology, Germany)

17:10 *Spectral Efficiency and Throughput Enhancement by Full-Duplex D2D Communication in Mobile Clouds*  
Hamidreza Bagheri (University of Oulu, Finland); Fernando Miranda Bonomi (FACET, Universidad Nacional de Tucumán, Argentina); Marcos Katz (University of Oulu, Finland)

17:30 *Joint Mode Selection and Radio Resource Allocation for D2D Communications Based on Dynamic Coalition Formation Game*  
Jingjing Zhao, Kok Keong Chai and Yue Chen (Queen Mary University of London, United Kingdom); John Schormans (Queen Mary, University of London, United Kingdom); Jesus Alonso-Zarate (Centre Tecnologic de Telecomunicacions de Catalunya - CTTC, Spain)

16:10 - 16:30

coffee break

Room: Room QBF09

16:30 - 17:50

**S8: Wireless OFDM**

Room: Room QBF09  
Chair: Bertalan Forstner (Budapest University of Technology and Economics, Hungary)

16:30 *A Robust Blind Time Synchronization Method in OFDM Systems over Multipath Fading Channels*  
Youssef El Hajj Shehadeh and Sebastian Baumgartner (Chemnitz University of Technology, Germany); Gangolf Hirtz (Chemnitz University, Germany)

16:50 *An analysis of out-of-band emission and in-band interference for precoded and classical OFDM systems*  
Medhat Mohamad (Luleå Technical University, Sweden); Rickard Nilsson (Luleå University of Technology, Sweden); Jaap van de Beek (Luleå University of Technology & Huawei Technologies, Sweden)

17:10 *DSFBC Transmission Scheme with OFDM in Adaptive Baseband Radio*  
Jin Nakazato (University of Electro-Communications, Japan); Yuki Morimoto and Yoshio Karasawa (The University of Electro-Communications, Japan)

17:30 *Managing inter-cell interference with advanced receivers and rank adaptation in 5G small cells*  
Fernando M. L. Tavares, Gilberto Berardinelli, Davide Catania, Troels B. Sørensen and Preben Mogensen (Aalborg University, Denmark)

18:30 - 23:00

Social dinner
Friday, May 22

09:00 - 10:20

K3: Keynote 3

Tommaso Melodia
Room: Auditorium Q-II

10:20 - 10:40

coffee break

10:40 - 12:20

S9: Wireless channel

Room: Room QBF09
Chair: Tim Esemann (Luebeck University of Applied Sciences & CoSA Center of Excellence, Germany)

10:40 Polarity reception for IR-UWB in wireless fading channel
Olonbayar Sonom and Dan Kreiser (IHP, Germany); Rolf Kraemer (IHP Microelectronics, Frankfurt/Oder, Germany); Gunter Fischer, Denys Martynenko and Oleksiy Klymenko (IHP, Germany)

11:00 In-Band Interference Detection on Reception for IEEE 802.15.4 Transmissions
Tim Esemann (Luebeck University of Applied Sciences & CoSA Center of Excellence, Germany); Horst Hellbrück (University of Applied Sciences Lübeck & CoSA Center of Excellence, Germany)

11:20 Exact SER Expressions of GFDM in Nakagami-m and Rician fading channels
Shravan Bandari (National Institute of Technology Warangal, India); Anastasios Drosopoulos (TEI of Western Greece, Greece); Venkata Mani Vakamulla (National Institute of Technology Warangal, India)

11:40 Doppler Detection in IEEE802.11p Signals for Cooperative Awareness in VANETs
Paul Fuxjaeger (FTW - Telecommunications Research Center Vienna, Austria); Stefan Ruehrup (FTW, Austria)

12:00 Identification of Taps in Time-Variant Multipath Channels for 3GPP LTE-Downlink
Nazar Muhammad Idrees (COMSATS Institute of Information Technology Sahiwal, Pakistan); Michael Rudolf Petit and Andreas Springer (Johannes Kepler University Linz, Austria)

S10: Green Wireless

Room: Room QBF14
Chair: Leonardo Militano (Mediterranea University of Reggio Calabria, Italy)

10:40 Reconstruction of Correlated Sources with Energy Harvesting Constraints
Miguel Calvo-Fullana (Centre Tecnològic de Telecomunicacions de Catalunya, Spain); Javier Matamoros (Centre Tecnologic de Telecomunicacions de Catalunya, Spain); Carles Antón-Haro (Centre Tecnologic de Telecomunicacions de Catalunya (CTTC), Spain)

11:00 Joint Online Transmission and Energy Transfer Policies for Energy Harvesting Devices with Finite Batteries
Alessandro Biason (University of Padova, Italy); Michele Zorzi (Università degli Studi di Padova, Italy)

11:20 Re-Dimensioning Number of Active eNodeBs for Green LTE Networks Using Genetic Algorithms
Sarah Azzam (German University in Cairo, Egypt); Tallal Elshabrawy (The German University in Cairo, Egypt)

11:40 Energy-Efficient Uplink Power Allocation in Multi-Cell MU-Massive-MIMO Systems
Kaifeng Guo (RWTH Aachen University & Institute for Communication Technologies and Embedded Systems, Germany); Yan Guo (RWTH Aachen University & Faculty of Electrical Engineering and Information Technology, Germany); Gerd H. Ascheid (RWTH Aachen University, Germany)

12:00 Evaluation of operation policies for energy harvesting sensor nodes with variable data traffic
Leonardo Badia and Giulia Mansutti (Università degli Studi di Padova, Italy)

S11: Wireless access

Room: Room QBF15
Chair: Vincenzo Sciancalepore (Institute IMDEA Networks & Politecnico di Milano, Italy)

10:40 **EchoRing: A Low-Latency, Reliable Token-Passing MAC Protocol for Wireless Industrial Networks**
Christian Dombrowski (RWTH Aachen University, Germany); James Gross (Royal Institute of Technology (KTH), Sweden)

11:00 **Interference Analysis for 5G Random Access with Short Message Support**
Gerhard Wunder (Heinrich-Hertz-Institut, Germany); Martin Kasparick (Technical University Berlin & Fraunhofer Heinrich Hertz Institute, Germany); Peter Jung (TU-Berlin, Communications and Information Theory Group & Fraunhofer HHI - Heinrich Hertz Institute, Germany)

11:20 **Analysis of RFID anti-collision protocols based on the standard EPCglobal Class-1 Generation-2**
Laura Arjona (Deustotech Institute of Technology- University of Deusto, Spain); Hugo Landaluze (Deustotech Institute of Technology - University of Deusto, Spain); Asier Parallos (Fundacion Deusto, Spain); Pedro Lopez-Garcia and Nikola Cmiljanic (Deustotech Institute of Technology- University of Deusto, Spain)

11:40 **Dynamic Queue Utilization Based MAC for Multi-Hop Ad Hoc Networks**
Jims Marchang (University of Plymouth & CSCAN Research Centre, United Kingdom); Bogdan Ghita (Plymouth University, United Kingdom); David Lancaster (University of Plymouth, United Kingdom)

12:00 **Performance Evaluation of IEEE 802.15.4k Priority Channel Access with DSSS PHY**
Berhane Gebremedhin (University of Oulu, Finland); Jussi P Haapola (Centre for Wireless Communications, University of Oulu, Finland); Jari Iinatti (University of Oulu, Finland)

12:20 - 13:40
Lunch break

13:40 - 15:20

**S12: Wireless learning**
Room: Room QBF09
Chair: Davide Del Testa (University of Padova, Italy)

13:40 **Analysis of 38 GHz mmWave Propagation Characteristics of Urban Scenarios**
Ignacio Rodriguez (Aalborg Universitet, Denmark); Huan Cong Nguyen (Aalborg University & Faculty of Engineering and Science, Denmark); Troels B. Sorensen (Aalborg University, Denmark); Jan Elling and Jens Åge Holm (Telenor A/S, Denmark); Preben Mogensen (Nokia Siemens Networks, Aalborg, Denmark); Benny Vejlgaard (Nokia Siemens Networks, Denmark)

14:00 **Pairwise Recognition of Digital Modulation Modes Using Optimized Circular Harmonic Functions**
Andrey V. Osipov (KTH Royal Institute of Technology, Sweden); Alexander B. Sergienko (St. Petersburg Electrotechnical University, Russia)

14:20 **Random Vector Differential Entropy Based Cognitive Radio Spectrum Sensing**
Usama Y. Mohamad and Dirk Dahlhaus (University of Kassel, Germany)

14:40 **Wavelet Preprocessed Neural Network Based Receiver for Low SNR Communication**
Husam Y Alzaq and Berk Ustundag (Istanbul Technical University, Turkey)

15:00 **Context Information for Fast Cell Discovery in mm-wave 5G Networks**
Antonio Capone and Ilario Filippini (Politecnico di Milano, Italy); Vincenzo Sciancalepore (Institute IMDEA Networks & Politecnico di Milano, Italy)

**S13: Wireless transport**
Room: Room QBF14
Chair: Gerhard Wunder (Heinrich-Hertz-Institut, Germany)

13:40 **Performance Evaluation of Multicast Video Distribution using 802.11n in Realistic Environments**
Berna Bulut, Evangelos Mellios, Denys Berkovskyy, Angela Doufexi and Andrew Nix (University of Bristol, United Kingdom)

14:00 **Modelling of YouTube Traffic in High Speed Mobile Networks**
Géza Horváth and Peter Fazekas (Budapest University of Technology and Economics, Hungary)

14:20 **Methodology to evaluate user experience in non-fully loaded wireless communication systems**
Moritz Lossow, Paul Arnold, Heinz Droste and Gerhard Kadel (Deutsche Telekom Innovation Laboratories, Germany); Oscar Dario Ramos-Cantor (Technische Universität Darmstadt, Germany)

14:40 **Performance Limits of Sparse Support Recovery Algorithms**
Georgios Angelopoulos (Massachusetts Institute of Technology, USA); Muriel Médard (MIT, USA)
15:00 Towards the Tactile Internet: Decreasing Communication Latency with Network Coding and Software Defined Networking
Dávid Szabó and András Gulyás (Budapest University of Technology and Economics, Hungary); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany); Daniel E. Lucani (Aalborg University, Denmark)

S14: Wireless sharing
Room: Room QBF15
Chair: Ramona Trestian (Middlesex University, United Kingdom)

13:40 Non-Orthogonal Multiple Access for Wireless Downlink in Cloud Radio Access Networks
Quoc-Tuan Vien, Ngozi Ogbonna, Huan X Nguyen and Ramona Trestian (Middlesex University, United Kingdom); Purav Shah (Middlesex University & School of Science and Technology, United Kingdom)

14:00 Closed-form Outage and Diversity Analysis of Opportunistic Nulling for Secondary Spectrum Sharing
Dae-Kyo Jeong and Dongwoo Kim (Hanyang University, Korea)

14:20 Distributed Hybrid Spectrum Sharing for OFDMA-based Cognitive Femtocells in 5G Networks
Pavel Mach and Zdenek Beovar (Czech Technical University in Prague, Czech Republic)

14:40 Outage Probability Analysis of Multihop Cognitive Networks under Multiple Primary Users Interference
Petros S. Bithas (Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, Greece); Athanasios A. Rontogiannis (National Observatory of Athens, Greece)

15:00 A Two-Stage Spectrum Access Selection and Pricing Game for Cognitive Radio Networks
Angeliki Kordali and Panayotis Cottis (National Technical University of Athens, Greece)

15:00 - 15:40 coffee break

15:40 - 17:20

S15: Wireless networking
Room: Room QBF14
Chair: Leonardo Badia (Università degli Studi di Padova, Italy)

15:40 On PLR Estimation for a Multipath Route with Failure Correlation
Igor Kargin and Evgeny Khorov (IITP RAS & MIPT, Russia); Andrey Lyakhov (IITP RAS, Russia)

16:00 Path Loss Interference in Mobile Random Waypoint Networks
Luis Iorio (Nova University of Lisbon, Portugal); António Furtado (Universidade Nova de Lisboa / UNINOVA, Portugal); Rodolfo Oliveira (Nova University of Lisbon, Portugal); Luís Bernardo (Universidade Nova de Lisboa, Portugal); Rui Dinis (Faculdade de Ciências e Tecnologia, University Nova de Lisboa, Portugal)

16:20 QoS Connectionless Multicast Routing for Mobile Ad Hoc Networks
Viet Thi Minh Do (Norwegian University of Science and Technology, Norway); Lars Landmark (Norwegian Defence Research Establishment (FFI), Norway); Øivind Kure (Norwegian University of Science and Technology (NTNU), Norway)

16:40 Design and Analysis of DistributedMobility Management Schemes for Wireless Sensor Networks
Luiz Henrique Suraty Filho and Benoit Denis (CEA-Leti Minatec, France); Mickael Maman (CEA-Leti Minatex Campus, France)

17:00 Network Coded Software Defined Networking: Design and Implementation
Jeppe Krigslund, Jonas Hansen and Daniel E. Lucani (Aalborg University, Denmark); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany); Muriel Médard (MIT, USA)

S16: Wireless relay
Room: Room QBF15
Chair: Sándor Imre (Technical University of Budapest, Hungary)

15:40 Joint Dynamic Resource Allocation and Load Balancing for LTE-Advanced Relay Networks in Heterogeneous Load Conditions
Miguel Eguizabal-Alonso and Angela Hernández-Solana (University of Zaragoza, Spain)

16:00 Relaying Techniques for LTE-Advanced
Asmaa Abdallah (Rafik Hariri University, Lebanon); Khalil Fakih (Lebanese University, Lebanon); Dina Serhal (Rafik Hariri University, Lebanon)

16:20 Power Allocation for the MAC-Phase of a Two-Way-Relay Interference Channel
   Stephan Schedler (Universität Rostock, Germany); Volker Kuehn (University of Rostock, Germany)

16:40 Spectral Efficiency of Small Cells Enhanced LTE System - Relay versus Picocell -
   Yuan Chen and Bernhard H. Walke (RWTH Aachen University, Germany)

17:00 Ergodic Capacity of Interference Coordinated HetNet with Full-Duplex Small Cells
   Mhd Omar Alkadri, Adnan Aijaz and Arumugam Nallanathan (King's College London, United Kingdom)

---

Prepared by EDAS. Page template by nodethirtythree + Free CSS Templates