



Final Technical Programme

1 September 2006

Programme at a Glance

Monday 11 September 2006

	Conference room 21	Congress Hall B	Congress Hall A	Conference room 22	Conference room 24	Conference room 25	Conference room 22
09:15-10:45	Tutorial 1 FD High Speed Downlink / Uplink Packet Access (HSDPA/HSUPA)	Tutorial 2 FD OFDM – A Flexible and Adaptive Air Interface for a 4G Communication System	Tutorial 3 FD (Tutorial 4) Part I: Theoretical Aspects of Wireless Sensor and Ad Hoc Networks	Tutorial 6 HD Introduction to Cognitive Radio			
10:45-11:15	Coffee break						
11:15-12:45	Tutorial 1 FD	Tutorial 2 FD	Tutorial 3 FD Part I	Tutorial 6 HD			
12:45-14:00	Lunch						
14:00-15:30	Tutorial 1 FD High Speed Downlink / Uplink Packet Access (HSDPA/HSUPA)	Tutorial 2 FD OFDM – A Flexible and Adaptive Air Interface for a 4G Communication System	Tutorial 3 FD (Tutorial 5) Part II: Theoretical Aspects of Wireless Sensor and Ad Hoc Networks		Tutorial 7 HD Network Coding	Tutorial 9 HD Roadmap to Cross-Layer and Cross-System Optimization for B3G	Tutorial 10 HD WiFi and UWB RF Localization – Principles and Applications
15:30-16:00	Coffee break						
16:00-17:30	Tutorial 1 FD	Tutorial 2 FD	Tutorial 3 FD Part II		Tutorial 7 HD	Tutorial 9 HD	Tutorial 10 HD
18:30-20:00	Welcome Reception in Helsinki City Hall (Departure by bus from Finlandia Hall, exit K1, at 18:10)						

Monday 11 September 2006

	Helsinki Hall	Exhibition Area 1 and 2
09:00-09:30	Registration and coffee	
09:30-11:15	GIGA Annual Seminar'06 Part I	Research Exhibition
11:15-11:30	Break	
11:30-12:30	GIGA Annual Seminar'06 Part I	
12:30-13:30	Lunch	
13:30-14:45	GIGA Annual Seminar'06 Part II	
14:45-15:15	Coffee break	
15:15-16:45	GIGA Annual Seminar'06 Part II	
18:30-20:00	Welcome Reception in Helsinki City Hall	

Tuesday 12 September 2006

	Helsinki Hall Track 0	Conference room 107 Track A: Business, Services and Applications	Conference room 22 Track B: 3G and WLAN Evolution	Congress Hall B Track C: Ad-hoc and Sensor Networks	Conference room 23 Track D: Network Management	Conference room 25 Track E: Cellular Network Techniques	Conference room 21 Track F: Transceiver Techniques	Congress Hall A Track G: MIMO Systems and Techniques	Conference room 24 Track H: Modulation and Coding	Conference room 26 Track I: Physical Layer and Channel Modelling	Exhibition Area 1 and 2	
08:30-10:30	Plenary Session I											
10:30-11:10	Coffee break											
11:10-12:50	Panel 1: Impregnating Wireless Communications into People's Life	Business & Applications	3G Evolution I	Wireless Sensor Networks I	Radio Resource Management I	Cellular Networks I	Interference Cancellation I	MIMO Techniques I	Modulation & Coding I	Channel Modeling I	Industry Exhibition	
12:50-14:00	Lunch											
14:00-15:40	Special Session 1: Global Research Activities on Future Broadband Wireless Systems	Vehicular Networking	3G Evolution II	Wireless Sensor Networks II	Radio Resource Management II	Cellular Networks II	SDR & Cognitive Radio I	MIMO Techniques II	UWB Techniques I	OFDM Techniques I		
15:40-18:00	Coffee break											
16:20-18:00	Panel 2: Ultra Wideband (UWB)	Applications & Services	3G Evolution III	Routing Protocols I	MAC Protocols	Cellular Networks III	SDR & Cognitive Radio II	MIMO Techniques III	Modulation & Coding II	MIMO Capacity		
20:00-00:00	Banquet in Restaurant Kalastajatorppa (Departure by bus from the conference hotels and Finlandia Hall at 19:30)											

Wednesday 13 September 2006

	Helsinki Hall Track 0	Conference room 107 Track A: Business, Services and Applications	Conference room 22 Track B: 3G and WLAN Evolution	Congress Hall B Track C: Ad-hoc and Sensor Networks	Conference room 23 Track D: Network Management	Conference room 25 Track E: Cellular Network Techniques	Conference room 21 Track F: Transceiver Techniques	Congress Hall A Track G: MIMO Systems and Techniques	Conference room 24 Track H: Modulation and Coding	Conference room 26 Track I: Physical Layer and Channel Modelling	Helsinki Hall Foyer Track J: Poster Sessions
08:30-10:30	Plenary Session II										
10:30-11:10	Coffee break										
11:10-12:50	Panel 3: Mobile IP and Mobile TV: Trends and Strategies	Location Based Services & Positioning I	3G Evolution IV	Routing Protocols II	Radio Resource Management III	Wireless Networks I	Receiver Algorithms	MIMO-OFDM Systems I	UWB Synchronization & Channel Estimation	Channel Estimation	MIMO Techniques
12:50-14:00	Lunch										
14:00-15:40	Special Session 2: Flexible Spectrum Usage	Location Based Services & Positioning II	WIMAX	Ad-Hoc & Sensor Networks I	Radio Resource Management IV	Wireless Networks II	MIMO Receivers I	MIMO-OFDM Systems II	Modulation & Coding III	Channel Modeling II	Multicarrier CDMA
15:40-16:20	Coffee break										
16:20-18:00	Panel 4: Issues in Dynamic Spectrum Management	Location Based Services & Positioning III	IEEE 802.11 Development I	Ad-Hoc Networks	Scheduling Schemes	Heterogeneous Networks	MIMO Receivers II	MIMO Scheduling	UWB Techniques II	Simulation and Modelling	Receiver Algorithms

Thursday 14 September 2006

	Helsinki Hall Track 0	Conference room 107 Track A: Business, Services and Applications	Conference room 22 Track B: 3G and WLAN Evolution	Congress Hall B Track C: Ad-hoc and Sensor Networks	Conference room 23 Track D: Network Management	Conference room 25 Track E: Cellular Network Techniques	Conference room 21 Track F: Transceiver Techniques	Congress Hall A Track G: MIMO Systems and Techniques	Conference room 24 Track H: Modulation and Coding	Conference room 26 Track I: Physical Layer and Channel Modelling	Helsinki Hall Foyer Track J: Poster Sessions
08:30-10:10	Special Session 3: Future Wireless Technologies	Packet Switched Networking	IEEE 802.11 Development II	Wireless Sensor Networks III	Radio Resource Management V	Multicarrier Techniques I	Equalization I	MIMO Algorithms	Modulation & Coding IV	OFDM Techniques II	Other Air-interference Techniques
10:10-10:50	Coffee break										
10:50-12:30	Panel 5: Trends and Challenges	Mobile TV	IEEE 802.11 Development III	Wireless Sensor Networks IV	Mobility Control I	Multicarrier Techniques II	Equalization II	MIMO Techniques IV	NEWCOM Special Session on UWB	Channel Modeling III	Radio Resource Management
12:30-13:40	Lunch										
13:40-15:20	Panel 6: Cooperative Techniques for Future Wireless Communication Systems	Resource Management for Mobile Multimedia	IEEE 802.11 Development IV	Ad-Hoc & Sensor Networks II	Mobility Control II	CDMA Techniques	SDR & Cognitive Radio III	MIMO Techniques V	Modulation & Coding V	Channel Modeling IV	Systems and Regulation
15:20-16:00	Coffee break										
16:00-17:40	Panel 7: Applications of Wireless Sensor Networks	Operator Business Models	IEEE 802.11 Development V	Ad-Hoc & Sensor Networks III	Physical Layer and Networking Technology	Cellular Networks IV	Interference Cancellation II	MIMO Techniques VI	UWB Techniques III	Frequency Synchronization	Wireless Networks, Applications and Services

Plenary Session I

Time: Tue 12 September 08:30-10:30

From Cell Phones to Multimedia Computers

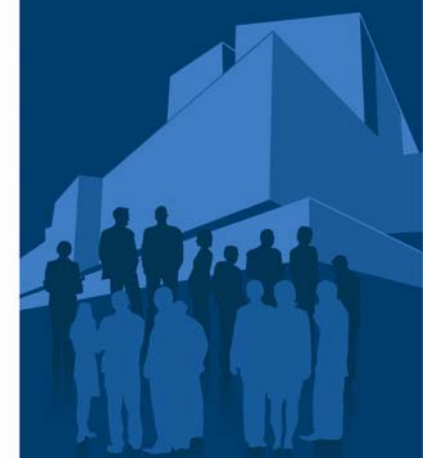
Dr. Yrjö Neuvo, Technology Adviser, Nokia (Finland)

Anatomy of the Single-chip Phone

Dr. Dennis Buss Vice President Silicon Technology Development Texas Instruments Inc. (USA)

The Seamless Mobile Generation

Ms. Padmasree Warrior Executive Vice President, Chief Technology Officer Motorola, Inc. (USA)



Plenary Session II

Time: Wed 13 September 08:30-10:30

Emerging Market View for the Business and Development

Mr. Harri Koponen CEO, Wataniya Telecom (Kuwait)

Mobile TV's Future - Boom or Bust?

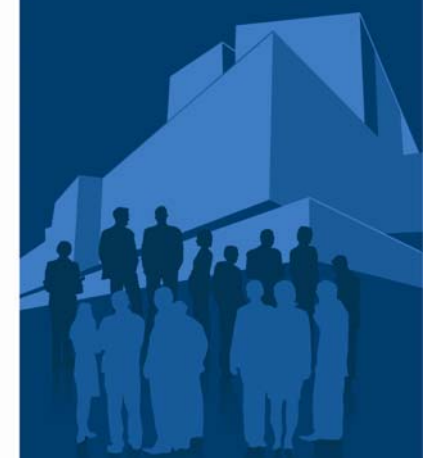
Ms. Marlis Humphrey Director, Growth Programs and Commercial Segments Growth, Harris Corporation (USA)

Choice in a Wireless World

Mr. Andrew Gilbert President, QUALCOMM Europe (UK)

"Diversity" as a Driver to the Networked Society

Dr. João Schwarz Da Silva Director Network and Communication Technologies European Commission



Session: T01 - Panel I Impregnating Wireless Communications into People's Life

Time: Tue 12 Sept 11:10-12:50

Place: Helsinki Hall

Chair: Luis M. Correia IST – Technical University of Lisbon (Portugal)

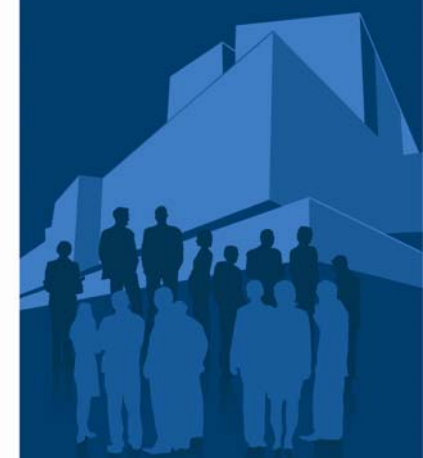
Panelists

Eduardo Dias, Vice-President for New Business & Strategic Development, YDreams (Portugal)

Ralf Herrtwich, Director Vehicle IT & Services Research, DaimlerChrysler (Germany)

Caj Södergård, Research Prof., VTT (Finland)

Piet Verhoeve, Senior Research Associate, Televic (Belgium)



Session: T02 - Special Session I: Global Research Activities on Future Broadband Wireless Systems

Time: Tue 12 Sept 14:00-15:40

Place: Helsinki Hall

Chair: Matti Latva-aho, Centre for Wireless Communications, University of Oulu (Finland)

- 14:00-14:20 **Finnish Innovation Environment for Telecommunications Research and Development (INVITED PRESENTATION)**
Kari Tilli, Director, Telecommunications and Electronics Industries, Finnish Funding Agency for Technology and Innovation (Tekes), Finland
- 14:20-14:40 **Wireless Broadband In Japan (INVITED PRESENTATION)**
Shigetoshi Kudoh, Technology Consultant, Finnish Funding Agency for Technology and Innovation (Tekes) Tokyo Office, Japan
- 14:40-15:00 **The eMobility Technology Platform - Staying Ahead with Simplicity, Efficiency and Trust (INVITED PRESENTATION)**
Fiona Williams, Research Director, Ericsson Research (Germany)
- 15:00-15:20 **Global Vision on Wireless World (INVITED PRESENTATION)**
Mikko Uusitalo, Head of International Cooperation in Nokia Research Center and Chair of WWRF, Nokia (Finland)



Session: T03 - Panel 2: Ultra Wideband (UWB)

Time: Tue 12 Sept 16:20-18:00

Place: Helsinki Hall

Chair: Ian Oppermann, University of Oulu (Finland)

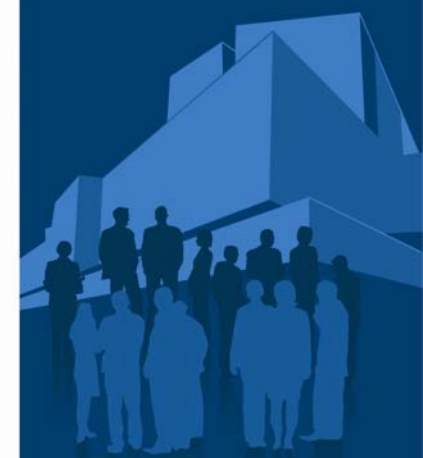
Panelists

John Farserotu, Head of Wireless Communication Section, CSEM (Switzerland)

Jeffrey R Foerster, Intel Architecture Labs (USA)

Jim Lansford, Ph.D., Chief Technology Officer, Alereon (USA)

Laurent Ouvry, Senior Researcher, LETI (France)



Session: T04 - Panel 3 Mobile IP and Mobile TV: Trends and Strategies

Time: Wed 13 Sept 11:10-12:50

Place: Helsinki Hall

Chair: Marlis Humphrey, Harris Corporation (USA)

Organisers

Mikko A. Uusitalo, Head of International Cooperation in Nokia Research Center and Chair of WWRF (Finland)

Jorge Pereira, European Commission

Marlis Humphrey, VP Strategic Marketing Telco Segments, Harris Corporation (USA)

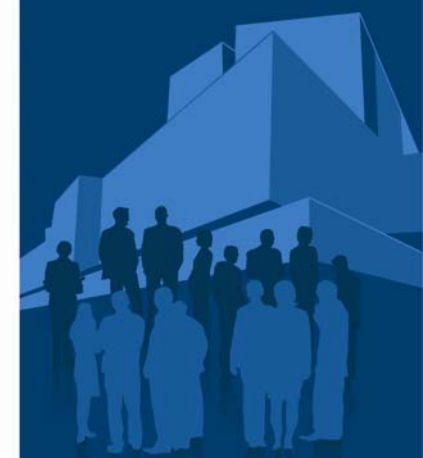
Panelists

Marlis Humphrey, VP Strategic Marketing Telco Segments, Harris corporation (USA)

Mika Kavanti, Senior Manager Product Marketing, Nokia (Finland)

G. Q. "Chip" Maguire Jr., Professor, KTH (Sweden)

Ville Saarikoski, Tieke, Finnish Information Society Development Centre (Finland)



Session: T05 - Special Session 2: Flexible Spectrum Usage

Time: Wed 13 Sept 14:00-15:40

Place: Helsinki Hall

Chair: Don Shaver, Texas Instruments (USA)

- 14:00-14:20 **Evolution Towards Dynamic Spectrum Sharing in Mobile Communications (INVITED PAPER)**
Hamid R. Karimi, Bell Laboratories, Lucent Technologies (United Kingdom); Lester T. W. Ho, Bell Laboratories, Lucent Technologies (United Kingdom); Holger Claussen, Bell Laboratories, Lucent Technologies (United Kingdom); Louis G. Samuel, Bell Laboratories, Lucent Technologies (United Kingdom)
- 14:20-14:40 **Spectrum Regulation for a World of Dynamic Spectrum Access? (INVITED PRESENTATION)**
William Webb, Professor, Head of R&D, OFCOM, United Kingdom
- 14:40-15:00 **Flexible Spectrum Control and Receiver Performance Improvement Technologies for B3G Wireless Systems (INVITED PAPER)**
Seiichi Sampei, Department of Information and Communication Technology, Osaka University (Japan); Shinsuke Ibi, Department of Information and Communication Technology, Osaka University (Japan)
- 15:00-15:20 **Flexible Spectrum Allocation Methods for Wireless Network Providers**
Yong Bai, DoCoMo (Beijing) Communications Laboratories Co., Ltd (China); Lan Chen, DoCoMo (Beijing) Communications Laboratories Co., Ltd (China)



Session: T06 - Panel 4: Issues in Dynamic Spectrum Management

Time: Wed 13 Sept 16:20-18:00

Place: Helsinki Hall

Chair: Jorge Pereira, European Commission

Panelists

Linda Doyle, Lecturer, Trinity College, University of Dublin (Ireland)

Klaus Moessner, Senior Research Fellow, University of Surrey (United Kingdom)

Petri Mähönen, Professor, RWTH Aachen (Germany)

William Webb, Professor, OFCOM (United Kingdom)



Session: T07 - Special Session 3: Future Wireless Technologies

Time: Thu 14 Sept 8:30-10:15

Place: Helsinki Hall

Chair: Hamid Aghwami, King's College London (United Kingdom)

8:30- 8:50 **Emerging Wireless Technologies and Their Impact on Future Internet Architecture (INVITED PRESENTATION)**

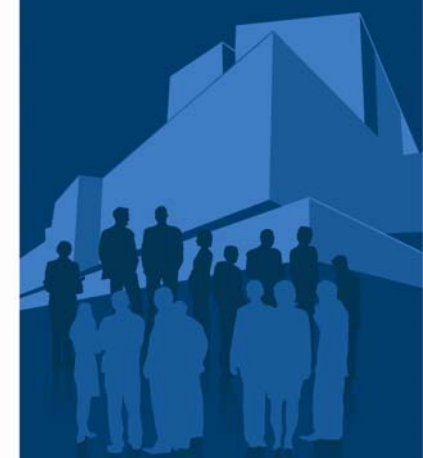
Dipankar Raychaudhuri, Professor, WINLAB, Rutgers University, USA

8:50-9:10 **Competitive Wireless Multi-Access - Implications and Research Issues (INVITED PAPER)**

Jens Zander, Wireless@KTH (Sweden)

9:10-9:30 **Mesh Networking: A Look Into the Future! (INVITED PRESENTATION)**

Sudhir Dixit, Nokia Research Center, USA



Session: T08 - Panel 5: Trends and Challenges

Time: Thu 14 Sept 10:50-12:30

Place: Helsinki Hall

Chair: Mikko A. Uusitalo, Head of International Cooperation in Nokia Research Center and Chair of WWRF (Finland)

Panelists

Jarmo Eskelinen, Director, Forum Virium (Finland)

Dipankar Raychaudhuri, Professor ECE Dept & Director, WINLAB, Rutgers University (USA)

Rahim Tafazolli, Prof., University of Surrey (United Kingdom)

Patrick Waters, Head of Group R&D Netherlands, Vodafone Group Research & Development NL (Netherlands)



Session: T09 - Panel 6: Cooperative Techniques for Future Wireless Communication Systems

Time: Thu 14 Sept 13:40-15:20

Place: Helsinki Hall

Chair: Marcos Katz, VTT (Finland)

Organisers

Frank Fitzek, Associate Professor, Aalborg University

Marcos Katz, Technical Research Centre of Finland (VTT)

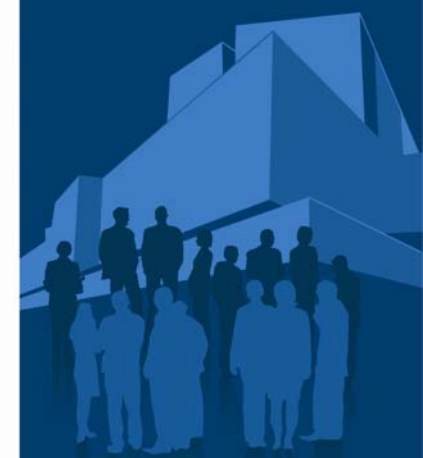
Panelists

Mischa Dohler, Senior Expert, France Telecom (France)

Mark Felegyhazi, EPFL, Lausanne (Switzerland)

Frank Fitzek, Associate Professor, Aalborg University (Denmark)

Petri Mähönen, Professor, RWTH Aachen (Germany)



Session: T010 - Panel 7: Applications of Wireless Sensor Networks

Time: Thu 14 Sept 16:00-17:40

Place: Helsinki Hall

Chair: Jorge Pereira, European Commission

Panelists

Jean-Pierre Hubaux, Professor, EPFL (Switzerland)

Laurent Hérault, CEA/LETI (France)

Chiara Petrioli, Professor, Università di Roma 'La Sapienza' (Italy)

Zach Shelby, CEO, Sensinode Ltd (Finland)



Session: TAI - Business & Applications

Time: Tue 12 Sept 11:10-12:50

Place: Conference room 107

Chair: Tatu Koljonen, VTT Electronics (Finland)

11:10-11:30 Ubiquitous World and Needs for New Radios (INVITED PRESENTATION)

Reijo Paaanen, Chief Technology Officer, Elektrobit Group, Finland

11:30-11:50 Issues in Developing the EPC Global Network, (INVITED PRESENTATION)

John R. Williams, Professor, Information Engineering, MIT, USA

11:50-12:10 Expanding Growth Markets with Subscriber Segmentation

Michael Abramowski, Nokia (Finland); Uwe Schwarz, Nokia (Finland); David Bohatý, Nokia (Finland)

12:10-12:30 Business Aspects of Advertising and Discovery concepts in Ambient Networks

Lester Ho, Lucent Technologies (United Kingdom); Jan Markendahl, KTH (Sweden); Miguel Berg, KTH (Sweden)



Session: TA2 - Vehicular Networking

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 107

Chair: Friedhelm Ramme, Ericsson Eurolab (Germany)

- 14:00-14:20 **Cars and Networks: The Road Ahead (INVITED PRESENTATION)**
Ralf G. Herrtwich, Director, Vehicle IT and Services Reserach (REI/V), DaimlerChrysler AG, Germany
- 14:20-14:40 **Adaptive Dissemination of Safety Data among Vehicles**
Ioan Chisalita, Linköping University (Sweden); Nahid Shahmehri, Linköping University (Sweden)
- 14:40-15:00 **Wireless Audio Communication Network for In Vehicle Access of Infotainment Services in Motorcycles**
Daniele Audino, University of Pisa (Italy); Federico Baronti, University of Pisa (Italy); Roberto Roncella, University of Pisa (Italy); Roberto Saletti, University of Pisa (Italy)
- 15:00-15:20 **Vehicle Satellite Interactivity Database by GPS Signal Reception Collected in the Civil Activities**
Masato Takahashi, National Institute of Information and Communications Technology and Tokyo University (Japan)



Session: TA3 - Applications & Services

Time: Tue 12 Sept 16:20-18:00

Place: Conference room 107

Chair: Sastri Kota, Harris Corporation (USA)

16:20-16:40 A Seamless Service Continuity Scheme for Enhanced Network Performance in UMTS/WLAN Networks

George Lampropoulos, Department of Informatics and Telecommunications, University of Athens (Greece); Alexandros Kaloxylos, Department of Telecommunications Science and Technology, University of Peloponnese (Greece); Nikos Passas, Department of Informatics and Telecommunications, University of Athens (Greece); Lazaros Merakos, Department of Informatics and Telecommunications, University of Athens (Greece)

16:40-17:00 Interface Selection for Multihomed Mobile Hosts

Jani Puttonen, Department of Mathematical Information Technology, University of Jyväskylä (Finland); Gábor Fekete, Department of Mathematical Information Technology, University of Jyväskylä (Finland)

17:00-17:20 Improving Multiple Mobile Application Interaction with Unified Session Management

Jussi Ala-Kurikka, University of Oulu (Finland); Juuso Ohtonen, University of Oulu (Finland); Erkki Harjula, University of Oulu; Mika Ylianttila, University of Oulu (Finland)

17:20-17:40 User Profiling and Preference Modelling in 4G Terminals

Artemis Koutsorodi, National Technical University of Athens (Greece); Evgenia Adamopoulou, National Technical University of Athens (Greece); Konstantinos Demestichas, National Technical University of Athens (Greece); Michael Theologou, National Technical University of Athens (Greece)

17:40-18:00 On the Jitter Performance of FIFO and Priority Queues Mixture

Chiara Taddia, University of Ferrara (Italy); Gianluca Mazzini, University of Ferrara (Italy)



Session: TA4 - Location Based Services & Positioning I

Time: Wed 13 Sept 11:10-12:50

Place: Conference room 107

Chair: Giuseppe Abreu, Center for Wireless Communications, University of Oulu (Finland)

- 11:10-11:30 **Feasibility Study of a Mobile Peer-to-peer Navigation Application**
Juuso Ohtonen, MediaTeam, University of Oulu (Finland); Otso Kassinen, MediaTeam, University of Oulu (Finland);
Mika Ylianttila, MediaTeam, University of Oulu (Finland)
- 11:30-11:50 **A Study of the Effects of Reference Point Density on TOA-based UWB Indoor Positioning Systems**
Muzaffer Kanaan, Worcester Polytechnic Institute (USA); Ferit Ozan Akgul, Worcester Polytechnic Institute (USA);
Bardia Alavi, Worcester Polytechnic Institute (USA); Kaveh Pahlavan, Worcester Polytechnic Institute (USA)
- 11:50-12:10 **The Effect of Locality on Coordinate Dissemination**
Farid Benbadis, University Pierre et Marie Curie ? Paris VI (France); Marcelo Dias de Amorim, University Pierre et
Marie Curie ? Paris VI (France); Serge Fdida, University Pierre et Marie Curie ? Paris VI (France)
- 12:10-12:30 **A Neural Method for Identifying Transmission Source Locations**
Thomas Hemminger, Penn State University (USA); David Loker, Penn State University (USA); Carlos Pomalaza-Raez,
Indiana University, Purdue University (USA)
- 12:30-12:50 **Multiple Frequencies for Accuracy Improvement in Near Field Electromagnetic Ranging (NFER)**
Chee Wee Kim, National University of Singapore (Singapore); Francois Chin, Institute for Infocomm Research
(Singapore); Hari Krishna Garg, National University of Singapore (Singapore)



Session: TA5 - Location Based Services & Positioning II

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 107

Chair: Kaveh Pahlavan, Worcester Polytechnic Institute (USA)

14:00-14:20

A Novel Approach to Context Prediction in Ubicomp Environments

Stephan Sigg, University of Kassel, chair for communicatin technology (Germany); Sandra Haseloff, University of Kassel, chair for communicatin technology (Germany); Klaus David, University of Kassel, chair for communicatin technology (Germany)

14:20-14:40

Performance Comparison of RSS and TOA Indoor Geolocation Based on UWB Measurement of Channel Characteristics

Ahmad Hatami, CWINS, Worcester Polytechnic Institute (USA); Kaveh Pahlavan, CWINS, Worcester Polytechnic Institute (USA)

14:40-15:00

Enhancing Location Estimation Through Data Fusion

Odysseas Sekkas, Department of Informatics and Telecommunications, University of Athens (Greece); Stathes Hadjiefthymiades, Department of Informatics and Telecommunications, University of Athens (Greece); Evangelos Zervas, Department of Electronics, TEI-Athens (Greece)

15:00-15:20

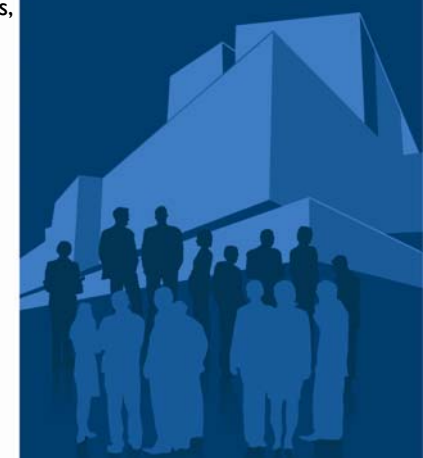
Localization from Imperfect and Incomplete Ranging

Giuseppe Destino, Centre for Wireless Communication, University of Oulu (Finland); Giuseppe Thadeu Freitas de Abreu, Centre for Wireless Communication, University of Oulu (Finland)

15:20-15:40

TOA Extraction in Multipath Fading Channels for Location Estimation

Ata Sattarzadeh, IUST (Iran); Bahman Abolhassani, IUST (Iran)



Session: TA6 - Location Based Services & Positioning III

Time: Wed 13 Sept 16:20-18:00

Place: Conference room 107

Chair: Giuseppe Abreu, Center for Wireless Communications, University of Oulu (Finland)

16:20-16:40

A Novel Cooperative Localization Algorithm for Indoor Sensor Networks

Nayef Alsindi, Center for Wireless Information Network Studies, Worcester Polytechnic Institute (USA); Kaveh Pahlavan, Center for Wireless Information Network Studies, Worcester Polytechnic Institute (USA); Bardia Alavi, Center for Wireless Information Network Studies, Worcester Polytechnic Institute (USA); Xinrong Li, Department of Electrical Engineering, University of North Texas (USA)

16:40-17:00

Neural Network and Fingerprinting-Based Geolocation on Time-Varying Channels

Chahé Nerguizian, École Polytechnique de Montréal (Canada); Charles Despins, Prompt-Québec (Canada); Sofiene Affes, INRS-EMT (Université du Québec) (Canada); Gilles Ibrahim Wassi, Université Laval (Canada); Dominic Grenier, Université Laval (Canada)

17:00-17:20

TDOA Positioning Based on Factor Graphs

Christian Mensing, German Aerospace Center (DLR) (Germany); Simon Plass, German Aerospace Center (DLR) (Germany)

17:20-17:40

TDOA Mobile Terminal Positioning with Weight Control Based on Received Power of Pilot Symbol in Taylor-Series Estimation

Ryuichiro Shimura, Keio University (Japan); Iwao Sasase, Keio University (Japan)

17:40-18:00

An Indoor Location Algorithm Based on Taylor Series Expansion and Maximum Likelihood Estimation

Wei Ni, Alcatel R&I center (P. R. China); Gang Shen, Alcatel R&I center (P. R. China); Xiaobing Leng, Alcatel R&I center (P. R. China); Luoning Gui, Alcatel R&I center (P. R. China)

Session: TA7 - Packet Switched Networking

Time: Thu 14 Sept 8:30-10:10

Place: Conference room 107

Chair: Sastri Kota, Harris Corporation (USA)

8:30- 8:50

Supporting QoS over IPv6 Wireless Networks with IntServ6

Jhon Padilla, Pontificia Bolivariana University (Colombia); Josep Paradells, Technical University of Catalonia (Spain); Alvaro Rodríguez, Pontificia Bolivariana University (Colombia)

8:50-9:10

Comparison of Available Bandwidth Estimation Techniques in Packet-Switched Mobile Networks

Carlos Ubeda Castellanos, Aalborg University, Center for TeleInFratraktur, Cellular Systems Group (Denmark); Dimas Lopez Villa, Aalborg University, Center for TeleInFratraktur, Cellular Systems Group (Denmark); Oumer Teyeb, Aalborg University, Center for TeleInFratraktur, Cellular Systems Group (Denmark); Jan Elling, Aalborg University, Center for TeleInFratraktur, Cellular Systems Group (Denmark); Jeroen Wigard, Nokia Networks, Aalborg R&D (Denmark)

9:10-9:30

HIP Based Approach for Configuration Provisioning

Seppo Heikkinen, Tampere University of Technology (Finland); Hannes Tschofenig, Siemens AG (Germany)

9:30-9:50

A Novel Model of Drive Test Data Processing in Wireless Network Optimization

Wu Jiao, Beijing University of Posts and Telecommunications (China); Huang Yiling, Beijing University of Posts and Telecommunications (China); Wei Zaixue, Beijing University of Posts and Telecommunications (China); Yang Dacheng, Beijing University of Posts and Telecommunications (China)

9:50-10:10

Dynamic Channel Assignment Performance Analysis in Multiservice Hierarchical Wireless Networks

Li Liu, Institute of Electronic Information Engineering, Beijing Jiaotong University (China)



Session: TA8 - Mobile TV

Time: Thu 14 Sept 10:50-12:30

Place: Conference room 107

Chair: Juha Saarnio, Nokia (Finland)

10:50-11:10 On the Use of DVB-H for Satellite Multimedia Networks (INVITED PAPER)

S. Cioni, DEIS/ARCES - University of Bologna (Italy); Giovanni Corazza, DEIS/ARCES - University of Bologna (Italy); M. Neri, DEIS/ARCES - University of Bologna (Italy); A. Vanelli-Coralli, DEIS/ARCES - University of Bologna (Italy)

11:10-11:30 Spliced Video and Buffering Considerations for Tune-In Time Minimization in DVB-H for Mobile TV

Mehdi Rezaei, Institute of Signal Processing, Tampere University of Technology (Finland); Miska M. Hannuksela, Nokia Research Center, Tampere (Finland); Vinod Kumar Malamal Vadakital, Institute of Signal Processing, Tampere University of Technology (Finland); Moncef Gabbouj, Institute of Signal Processing, Tampere University of Technology (Finland)

11:30-11:50 Method for Unequal Error Protection in DVB-H for Mobile Television.

Vinod Kumar Malamal Vadakital, Tampere University of Technology (Finland); Miska Matias Hannuksela, Nokia Research Center (Finland); Mehdi Rezaei, Tampere University of Technology (Finland); Moncef Gabbouj, Tampere University of Technology (Finland)

11:50-12:10 Equalization of ATSC DTV Systems Based on Space-time Signal Processing for Mobile Reception

Hae-Sock Oh, SCHOOL OF EE & CS, KYUNGPOOK NAT'L UNIV. (KOREA); Dong Seog Han, SCHOOL OF EE & CS, KYUNGPOOK NAT'L UNIV. (KOREA); Chae-Hyun Lim, SCHOOL OF EE & CS, KYUNGPOOK NAT'L UNIV. (KOREA)

12:10-12:30 Distortion and Cost Controlled Video Streaming in a Heterogeneous Wireless Network Environment

Kuan-Jen Peng, National Taiwan University, Graduate Institute of Communication Engineering (Taiwan); Zsehong Tsai, National Taiwan University, Graduate Institute of Communication Engineering (Taiwan)



Session: TA9 - Resource Management for Mobile Multimedia

Time: Thu 14 Sept 13:40-15:00

Place: Conference room 107

Chair: Mika Ylianttila, University of Oulu (Finland)

- 13:40-14:00 **Quantitative Robustness Metric for QoS Performances of Communication Networks**
Qinghe Yin, Institute for Infocomm Research (Singapore); Peng-Yong Kong, Institute for Infocomm Research (Singapore); Haiguang Wang, Institute for Infocomm Research (Singapore)
- 14:00-14:20 **Performance Analysis and Optimization of TCP over Adaptive Wireless Links**
Claudia Rinaldi, University of L'Aquila - Center of Excellence DEWS (Italy); Karl-Henrik Johansson, KTH - Dept. of Signals, Sensors and Systems (Sweden); Niels Moller, KTH - Dept. of Signals, Sensors and Systems (Sweden); Piergiuseppe Di Marco, University of L'Aquila - Center of Excellence DEWS (Italy); Fortunato Santucci, University of L'Aquila - Center of Excellence DEWS (Italy)
- 14:20-14:40 **Minimal Cost Planning of DVB-H Networks on Existing Wireless Infrastructure**
David Gomez-Barquero, Polytechnic University of Valencia (Spain); Aurelian Bria, Royal Institute of Technology (Sweden); Jose F. Monserrat, Polytechnic University of Valencia (Spain); Narcis Cardona, Polytechnic University of Valencia (Spain)
- 14:40-15:00 **On the Use of Cellular Technology for Digital TV Bi-directional Return Channel Services**
Guilherme Jaime, PESC/COPPE/UFRJ (Brazil); Flavio Duarte, PESC/COPPE/UFRJ (Brazil); Rosa Leão, PESC/COPPE/UFRJ (Brazil); Edmundo de Souza e Silva, PESC/COPPE/UFRJ (Brazil); Patrícia Berquó, CETUC - PUC/Rio (Brazil); J. Roberto de Marca, CETUC - PUC/Rio (Brazil)



Session: TAI0 - Operator Business Models

Time: Thu 14 Sept 16:00-17:40

Place: Conference room 107

Chair: Heikki Hämmäinen, Helsinki University of Technology (Finland)

16:00-16:20 Drivers of Novel Access Provisioning - Re-use Aspects and Operator Cooperation

Jan Werding, Royal Institute of Technology (Sweden); Jan Markendahl, Royal Institute of Technology (Sweden); Östen Mäkitalo, Royal Institute of Technology (Sweden)

16:20-16:40 Universal Plug and Play based Billing System for Moving Networks

Prashant Pillai, University of Bradford (United Kingdom); Andrea Lorelli, Ericsson Telecomunicazioni SpA (Italy); Yim Fun Hu, University of Bradford (United Kingdom)

16:40-17:00 Multimedia Mobile Services for the Semantic Web

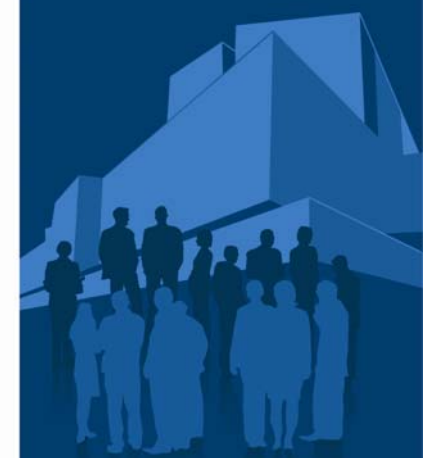
Andrzej Ciarkowski, Gdansk University of Technology (Poland); Pawel Zwan, Gdansk University of Technology (Poland); Grzegorz Szwoch, Gdansk University of Technology (Poland); Andrzej Czyzewski, Gdansk University of Technology (Poland)

17:00-17:20 Wireless IP Access System (WIPAS) -Broadband Access System by "fiber + radio"-

Tomotaka Yoshie, NTT Corporation (Japan); Hiroki Yoshioka, NTT Corporation (Japan); Yoshihiko Shindo, NTT Corporation (Japan)

17:20-17:40 On Maximizing Revenue for Client-Server Based Wireless Data Access in the Presence of Peer-to-Peer Sharing

Mark Yeung, The University of Hong Kong (Hong Kong); Yu Kwong Kwok, The University of Hong Kong (Hong Kong)



Session: TBI - 3G Evolution I

Time: Tue 12 Sept 11:10-12:50

Place: Conference room 22

Chair: Hendrik Berndt, DoCoMo Communications Laboratories Europe (Germany)

- 11:10-11:30 **UTRAN Long Term Evolution in 3GPP**
Antti Toskala, Nokia Networks (Finland); Harri Holma, Nokia Networks (Finland); Esa Tiirola, Nokia Networks (Finland); Kari Pajukoski, Nokia Networks (Finland)
- 11:30-11:50 **Using RF Repeaters to Improve WCDMA HSDPA Coverage and Capacity Inside Buildings**
Kimmo Hiltunen, NomadicLab, Ericsson Research (Finland)
- 11:50-12:10 **HSDPA Performance Enhancement Using Repeaters and Remote RF Heads**
Pathma Rathinavelu, Hamburg University of Technology (Germany); Gottfried Schapeler, Alcatel Research and Innovation Center (Germany); Andreas Weber, Alcatel Research and Innovation Center (Germany)
- 12:10-12:30 **VoIP over HSPA with 3GPP Release 7**
Harri Holma, Nokia (Finland); Markku Kuusela, Nokia (Finland); Esa Malkamäki, Nokia (Finland); Karri Ranta-aho, Nokia (Finland); Tao Chen, Nokia (China)
- 12:30-12:50 **Realization and Performance Evaluation of IMS Multimedia Telephony for HSPA**
Stefan Wänstedt, Ericsson Research (Sweden); Mårten Ericson, Ericsson Research (Sweden); Kristofer Sandlund, Ericsson Research (Sweden); Mats Nordberg, Ericsson Research (Sweden); Tomas Frankkila, Ericsson Research (Sweden)



Session: TB2 - 3G Evolution II

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 22

Chair: Victor Kueh, Fujitsu Labs of Europe (United Kingdom)

14:00-14:20 Performance of Downlink Frequency Domain Packet Scheduling for the UTRAN Long Term evolution

Akhilesh Pokhariyal, Aalborg University, CSYS (Denmark); Troels Emil Kolding, Nokia Networks (Denmark); Preben Elgaard Mogensen, Aalborg University, CSYS and Nokia Networks (Denmark)

14:20-14:40 Optimal Tradeoff Between RT and NRT Services in 3G-CDMA Networks Using Dynamic Fuzzy Q-Learning

Ridha Nasri, France Telecom Research & Development Division (France); Zwi Altman, France Telecom Research & Development Division (France); Herve Dubreil, France Telecom Research & Development Division (France)

14:40-15:00 Cross-layer Backpressure to Improve HSDPA performance

Lajos Bajzik, Nokia Research Center (Hungary); László Körössy, Nokia Research Center (Hungary); Kari Veijalainen, Nokia Networks (Finland); Csaba Vulkán, Nokia Research Center (Hungary)

15:00-15:20 3GPP Release 5 HSDPA Measurements

Harri Holma, Nokia (Finland); Jussi Reunanen, Nokia (Thailand)

15:20-15:40 High Speed Uplink Packet Access Evaluation by Dynamic Network Simulations

Jeroen Wigard, Nokia Networks (Denmark); Malek Boussif, Nokia Networks (Denmark); Nina Madsen, Nokia Networks (Denmark); Mads Brix, Nokia Networks (Denmark)



Session: TB3 - 3G Evolution III

Time: Tue 12 Sept 16:20-18:00

Place: Conference room 22

Chair: Kari Leppänen, Nokia (Finland)

- 16:20-16:40 **IMT-Advanced Vision from Users' Perspective and Related Research Activities (INVITED PRESENTATION)**
Shin Nomoto, Chief Executive Director, YRP Research Center, KDDI R&D Labs. Inc., Japan
- 16:40-17:00 **On Frequency Allocation in 3G LTE Systems**
Salah Eddine Elayoubi, France Telecom R&D (France); Benoit Fourestié, France Telecom R&D (France)
- 17:00-17:20 **Packet Scheduling for VoIP over HSDPA in Mixed Traffic Scenarios**
André Braga, Wireless Telecommunication Research Group - GTEL / Federal University of Ceará - UFC (Brazil);
Emanuel Rodrigues, Wireless Telecommunication Research Group - GTEL / Federal University of Ceará - UFC (Brazil);
Francisco Cavalcanti, Wireless Telecommunication Research Group - GTEL / Federal University of Ceará - UFC (Brazil)
- 17:20-17:40 **Spectral Efficiency of Closed-Loop Transmit Diversity with Limited Feedback for UTRA Long Term Evolution**
Na Wei, Aalborg University (Denmark); Batool Talha, Aalborg University (Denmark); Troels B. Sorensen, Aalborg University (Denmark); Troels E. Kolding, Nokia Networks (Denmark); Preben E. Mogensen, Nokia Networks (Denmark)



Session: TB4 - 3G Evolution IV

Time: Wed 13 Sept 11:10-12:50

Place: Conference room 22

Chair: Harri Holma, Nokia (Finland)

- 11:10-11:30 **Application of Context Transfer for Roaming in IP-based Evolved 3G Networks**
Victor Kueh, Fujitsu Laboratories of Europe Ltd (United Kingdom); Mick Wilson, Fujitsu Laboratories of Europe Ltd (United Kingdom)
- 11:30-11:50 **Protocol Interference between Up- and Downlink Channels in HSDPA**
Marc Necker, University of Stuttgart (Germany); Andreas Weber, Alcatel SEL AG, Research and Innovation (Germany)
- 11:50-12:10 **HSDPA Performance in Mixed Outdoor-Indoor Micro Cell Scenarios**
Istvan Kovacs, Nokia Danmark A/S, Nokia Networks, Aalborg (Denmark); Klaus Pedersen, Nokia Danmark A/S, Nokia Networks, Aalborg (Denmark); Jeroen Wigard, Nokia Danmark A/S, Nokia Networks, Aalborg (Denmark); Frank Frederiksen, Nokia Danmark A/S, Nokia Networks, Aalborg (Denmark); Troels Kolding, Nokia Danmark A/S, Nokia Networks, Aalborg (Denmark)
- 12:10-12:30 **Optimisation of Base Station Location in UMTS-FDD for Realistic Traffic Distributions**
João Cardeiro, IST (Portugal); Luis M. Correia, IST (Portugal)
- 12:30-12:50 **Simulation-based Analysis of TCP over Beyond 3G Cellular Multi-hop Networks**
Anthony Lo, Delft University of Technology (The Netherlands); Jinglong Zhou, Delft University of Technology (The Netherlands); Ignas Niemegeers, Delft University of Technology (The Netherlands)



Session: TB5 - WIMAX

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 22

Chair: Jaakko Talvitie, Elektrobit (Finland)

- 14:00-14:20 **A Synthesizable IP Core for WiMax 802.16e LDPC Code Decoding**
Torben Brack, University of Kaiserslautern (Germany); Matthias Alles, University of Kaiserslautern (Germany); Frank Kienle, University of Kaiserslautern (Germany); Norbert Wehn, University of Kaiserslautern (Germany)
- 14:20-14:40 **On the Impact of Mobility on the Channel Estimation in WIMAX OFDMA-Uplink**
Aydin Sezgin, Fraunhofer-Institute for Telecommunications (Germany); Peter Jung, Fraunhofer-Institute for Telecommunications (Germany); Malte Schellmann, Fraunhofer-Institute for Telecommunications (Germany); Hardy Halbauer, Alcatel Research and Innovation Stuttgart (Germany); Roland Muenzner, Alcatel Research and Innovation Stuttgart (Germany)
- 14:40-15:00 **Distributed Scheduling for WiMAX Mesh Network**
Boris Makarevitch, Helsinki University of Technology (Finland)
- 15:00-15:20 **Simple Capacity Estimations in WiMAX/802.16 System**
Loutfi Nuaymi, ENST Bretagne (France); Ziad Noun, ENST Bretagne (France)
- 15:20-15:40 **Design of 802.16 WiMax based Radio Access Network**
Hung-Yu Wei, National Taiwan University (Taiwan); Samrat Ganguly, NEC Labs America (USA)



Session: TB6 - IEEE 802.11 Development I

Time: Wed 13 Sept 16:20-17:40

Place: Conference room 22

Chair: Bernhard Walke, RWTH Aachen University (Germany)

- 16:20-16:40 **Performance Evaluation of Automatic Channel Assignment Mechanism for IEEE 802.11 Based on Graph Colouring**
- Janne Riihijärvi, RWTH Aachen University (Germany); Marina Petrova, RWTH Aachen University (Germany); Petri Mähönen, RWTH Aachen University (Germany); Jovander de Almeida Barbosa, RWTH Aachen University (Germany)
- 16:40-17:00 **Optimal Average Number of Data Block Transmissions for the ARQ Mechanism in the IEEE 802.16 OFDMA System**
- Sergey Moiseev, Kodofon (Russia); Stanislav Filin, Kodofon (Russia); Mikhail Kondakov, Kodofon (Russia); Alexandre Garmonov, Kodofon (Russia); Andrew Savinkov, Kodofon (Russia); Yun Sang Park, SAMSUNG Electronics Co., LTD. (Korea); Do Hyon Yim, SAMSUNG Electronics Co., LTD. (Korea); Jae Ho Lee, SAMSUNG Electronics Co., LTD. (Korea); Seok Ho Cheon, SAMSUNG Electronics Co., LTD. (Korea); Ki Tae Han, SAMSUNG Electronics Co., LTD. (Korea)
- 17:00-17:20 **Development of Access Point Selection Architecture with Avoiding Interference for WLANs**
- Yutaka Fukuda, Information Science Center, Kyushu Institute of Technology (Japan); Masanori Honjyo, Research and Development Lab., Panasonic Communications Co., Ltd (Japan); Yuji Oie, Dept. of Computer Science and Electronics, Kyushu Institute of Technology (Japan)
- 17:20-17:40 **Effect of TXOP-Bursting and Transmission Error on Application-Level and User-Level QoS in Audio-Video Transmission with IEEE 802.11e EDCA**
- Takahiro Suzuki, Faculty of Social and Information Sciences, Nihon Fukushi University (Japan); Atsunori Noguchi, Graduate School of Engineering, Nagoya Institute of Technology (Japan); Shuji Tasaka, Graduate School of Engineering, Nagoya Institute of Technology (Japan)



Session: TB7 - IEEE 802.11 Development II

Time: Thu 14 Sept 8:30-10:10

Place: Conference room 22

Chair: Anja Klein, Technische Universitaet Darmstadt (Germany)

- 8:30- 8:50 **A Comparison of MIMO Receiver Structures for 802.11 In WLAN - Performance and Complexity**
Irina Medvedev, Qualcomm (USA); Bjorn Bjerke, Qualcomm (USA); Rod Walton, Qualcomm (USA); John Ketchum, Qualcomm (USA); Mark Wallace, Qualcomm (USA); Steven Howard, Qualcomm (USA)
- 8:50-9:10 **Capacity of IEEE 802.11-based Ad Hoc Networks with Fairness Constraints**
Andreas Heinrich, Institut für Kommunikationstechnik, University of Hanover (Germany); Silke Feldmann, Institut für Kommunikationstechnik, University of Hanover (Germany)
- 9:10-9:30 **Interferential Packet Detection Scheme for a Solution to Overlapping BSS Issues in IEEE 802.11 WLANs**
Tomoya Tandai, Toshiba (Japan); Kiyoshi Toshimitsu, Toshiba (Japan); Takafumi Sakamoto, Toshiba (Japan)
- 9:30-9:50 **324Mbps WLAN Equipment with MAC Frame Aggregation**
Yukimasa Nagai, Mitsubishi Electric Corporation (JAPAN); Hiroyuki Nakase, Tohoku University (JAPAN); Akinori Fujimura, Mitsubishi Electric Corporation (JAPAN); Yoshihiko Shirokura, Mitsubishi Electric Corporation (JAPAN); Yoji Isota, Mitsubishi Electric Corporation (JAPAN); Fumio Ishizu, Mitsubishi Electric Corporation (JAPAN); Suguru Kameda, Tohoku University (JAPAN); Hiroshi Oguma, Tohoku University (JAPAN); Kazuo Tsubouchi, Tohoku University (JAPAN)
- 9:50-10:10 **Performance Analysis and Resource Allocation for IEEE 802.11 based Wireless Networks**
Lingzhi Sheng, Institute of Software, Chinese Academy of Science (China); Limin Sun, Institute of Software, Chinese Academy of Science (China); Xinyun Zhou, Institute of Software, Chinese Academy of Science (China); Jian Ma, Nokia China R&D Center (China); Zhimei Wu, Institute of Software, Chinese Academy of Science (China); Jian Ma, Nokia China R&D Center (China)

Session: TB8 - IEEE 802.11 Development III

Time: Thu 14 Sept 10:50-12:10

Place: Conference room 22

Chair: Kaveh Pahlavan, Worcester Polytechnic Institute (USA)

- 10:50-11:10 **Traffic Statistics on the Coverage of WLAN-Based Music Shower**
Helal Chowdhury, Telecommunication Laboratory (Finland); Juha-Pekka Mäkelä, Telecommunication Laboratory; Kaveh Pahlavan, Worcester Polytechnic Institute
- 11:10-11:30 **Adaptive Multimedia Packet Transmission for Broadband IEEE 802.11 Wireless LANs**
Joshua Wall, University of Newcastle (Australia); Jamil Y. Khan, University of Newcastle (Australia)
- 11:30-11:50 **Modelling and Radio Resource Management in IEEE 802.11b WLAN for Semi-Dynamic Simulator**
Abed Ellatif Samhat, France Telecom R&D (France); Zwi Altman, France Telecom R&D (France)
- 11:50-12:10 **Proposal of Multi-hop Wireless LAN System for QoS Guaranteed Transmission**
Phuc Khanh Kieu, Graduate School of Engineering, Osaka University (Japan); Shinichi Miyamoto, Graduate School of Engineering, Osaka University (Japan)



Session: TB9 - IEEE 802.11 Development IV

Time: Thu 14 Sept 13:40-15:00

Place: Conference room 22

Chair: Zexian Li , Nokia (Finland)

- 13:40-14:00 **The Effects of Background Traffic on the End-to-End Delay for Video Streaming Applications over IEEE 802.11B WLAN Networks**
Nicola Cranley, CNRI, DIT (Ireland); Mark Davis, CNRI, DIT (Ireland)
- 14:00-14:20 **Coordinated Multihop Scheduling in IEEE802.11e Wireless Ad Hoc Networks**
Antonio Iera, University "Mediterranea" of Reggio Calabria - Dept. DIMET (Italy); Antonella Molinaro, University "Mediterranea" of Reggio Calabria - Dept. DIMET (Italy); Sergio Polito, University "Mediterranea" of Reggio Calabria - Dept. DIMET (Italy); Giuseppe Ruggeri, University "Mediterranea" of Reggio Calabria - Dept. DIMET (Italy)
- 14:20-14:40 **Revisit of Fading Channel Characteristics in IEEE 802.11 WLANs: Independent and Burst Transmission Errors**
Periklis Chatzimisios, TEI of Thessaloniki (Greece); Vasileios Vitsas, TEI of Thessaloniki (Greece); Anthony Boucouvalas, Bournemouth University (UK)
- 14:40-15:00 **Throughput and Optimal Behavior Analysis of Non-Saturated Contending IEEE 802.11a Systems in Rayleigh Fading Channels**
Vladimir Atanasovski, Faculty of Electrical Engineering - Skopje (Macedonia); Liljana Gavrilovska, Faculty of Electrical Engineering - Skopje (Macedonia)



Session: TB10 - IEEE 802.11 Development V

Time: Thu 14 Sept 16:00-17:40

Place: Conference room 22

Chair: Zexian Li , Nokia (Finland)

- 16:00-16:20 **Performance Analysis of the IEEE 802.11 Distributed Coordination Function with Unicast and Broadcast Traffic**
Rodolfo Oliveira, Universidade Nova de Lisboa / Uninova (Portugal); Luis Bernardo, Universidade Nova de Lisboa / Uninova (Portugal); Paulo Pinto, Universidade Nova de Lisboa / Uninova (Portugal)
- 16:20-16:40 **On the Mitigation of Long-range Dependence in IEEE 802.11 Networks**
Cristina Cano, Pompeu Fabra University (UPF) (Spain); Rincón David, Technical University of Catalonia (UPC) (Spain); Remondo David, Technical University of Catalonia (UPC) (Spain)
- 16:40-17:00 **Using an Extended Anomaly Model to Provide RSVP-Based QoS in Wireless-LANS**
René Böringer, Ilmenau University of Technology (Germany); Andreas Mitschele-Thiel, Ilmenau University of Technology (Germany); Mario Winkler, Ilmenau University of Technology (Germany)
- 17:00-17:20 **Load-Balancing QoS-Guaranteed Handover in the IEEE 802.11 Network**
Sergey Moiseev, Kodofon (Russia); Stanislav Filin, Kodofon (Russia); Mikhail Kondakov, Kodofon (Russia); Alexandre Garmonov, Kodofon (Russia); Andrew Savinkov, Kodofon (Russia); Yun Sang Park, SAMSUNG Electronics Co., LTD. (Korea); Do Hyon Yim, SAMSUNG Electronics Co., LTD. (Korea); Jae Ho Lee, SAMSUNG Electronics Co., LTD. (Korea); Seok Ho Cheon, SAMSUNG Electronics Co., LTD. (Korea); Ki Tae Han, SAMSUNG Electronics Co., LTD. (Korea)
- 17:20-17:40 **Reduced Complexity Maximum Likelihood Multiuser Detection for OFDM-Based IEEE 802.11a WLANs Utilizing Post-FFT Mode**
Ali Reza Enayati, Iran Telecommunication Research Center (Iran); Esrafil Jedari, Iran Telecommunication Research Center (Iran); Reza Alihemmati, Iran Telecommunication Research Center (Iran); Mahdi Golparvar Roozbahani, Iran Telecommunication Research Center (Iran); Amir Ahmad Shishegar, Sharif University of Technology (Iran); Gholamreza Dadashzadeh, Iran Telecommunication Research Center (Iran); Hamid Ebrahimzad, Iran Telecommunication Research Center (Iran)



Session: TCI - Wireless Sensor Networks I

Time: Tue 12 Sept 11:10-12:50

Place: Congress Hall B

Chair: Carlos Pomalaza-Raez, Centre for Wireless Communications, University of Oulu (Finland)

- 11:10-11:30 **Statistical Analysis of the Effect of Capacity Limitation and Retry for Hierarchical Wireless Hybrid Networks**
John Orriss, University of Manchester (UK); Roberto Verdone, University of Bologna / CNIT (Italy)
- 11:30-11:50 **A "Relay Node Division Duplex" Relaying Approach for MIMO Relay Networks**
Hui Shi, NTT DoCoMo, Inc. (Japan); Takahiro Asai, NTT DoCoMo, Inc. (Japan); Hitoshi Yoshino, NTT DoCoMo, Inc. (Japan)
- 11:50-12:10 **Configurable Protocol Engine for Runtime-Configurable Communication Subsystems on Multiprocessor SoC**
Petri Kukkala, Tampere University of Technology (Finland); Marko Hännikäinen, Tampere University of Technology (Finland); Timo D. Hämäläinen, Tampere University of Technology (Finland)
- 12:10-12:30 **Iterative FDE for DD-based Cooperative Relaying with FD-STBC in Quasi-Synchronous Networks**
Toshiaki Koike, Kyoto University (Japan); Hidekazu Murata, Tokyo Institute of Technology (Japan); Susumu Yoshida, Kyoto University (Japan)
- 12:30-12:50 **Reuse Partitioning Based Frequency Planning for Cellular Network with Two-hop Fixed Relay Nodes**
Ping Li, Shanghai Jiaotong university (China); Mengtian Rong, Shanghai Jiaotong university (China); Tao Liu, Shanghai Jiaotong university (China); Yisheng Xue, Siemens Ltd. China (China); Dan Yu, Siemens Ltd. China (China); Egon Schulz, Siemens AG (Germany)



Session: TC2 - Wireless Sensor Networks II

Time: Tue 12 Sept 14:00-15:40

Place: Congress Hall B

Chair: Roberto Verdone, DEIS, University of Bologna (Italy)

14:00-14:20 Mobile-Centric Wireless Sensor Networks (INVITED PRESENTATION)

Henry Tirri, Research Fellow, Director, Strategic Research Initiatives, Nokia Research Center, Finland

14:20-14:40 Experimenting TCP/IP for Low-Power Wireless Sensor Networks

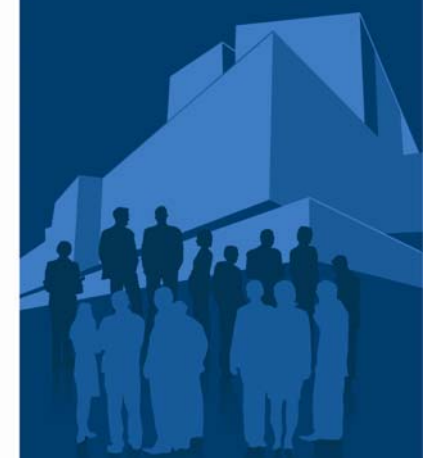
Mauri Kuorilehto, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Jukka Suhonen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Mikko Kohvakka, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Marko Hännikäinen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Timo D. Hämäläinen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland)

14:40-15:00 A Game-theoretic Framework for Distributed Power Control in Wireless Ad Hoc Networks

Stepan Kucera, Graduate School of Informatics, Kyoto University (Japan); Koji Yamamoto, Graduate School of Informatics, Kyoto University (Japan); Susumu Yoshida, Graduate School of Informatics, Kyoto University (Japan)

15:00-15:20 On the Number of Cluster Heads Minimizing the Error Rate for a Wireless Sensor Network Using a Hierarchical Topology over IEEE802.15.4

Chiara Buratti, DEIS, University of Bologna (Italy); Roberto Verdone, DEIS, University of Bologna (Italy)



Session: TC3 - Routing Protocols I

Time: Tue 12 Sept 16:20-18:00

Place: Congress Hall B

Chair: Frank Fitzek, Aalborg University (Denmark)

16:20-16:40

Tuning OLSR

Yangcheng Huang, Dept of Computer Science, University College London (UK); Saleem Bhatti, School of Computer Science, University of St. Andrews (UK); Daryl Parker, Ericsson R&D Ireland (Ireland)

16:40-17:00

LQHR: A Link Quality-based Hybrid Routing Protocol for Wireless Ad Hoc Networks

Ken Nakaoka, Digital Systems Research Center, SANYO Electric Co., Ltd. (Japan); Makoto Oba, Graduate School of Engineering, Nagoya Institute of Technology (Japan); Shuji Tasaka, Graduate School of Engineering, Nagoya Institute of Technology (Japan)

17:00-17:20

Routing Strategies for Coverage Extension in Heterogeneous Wireless Networks

Marco Miozzo, Consorzio Ferrara Ricerche (Italy); Michele Rossi, University of Padova, Dept. of Engineering (DEI) (Italy); Michele Zorzi, University of Padova, Dept. of Engineering (DEI) (Italy)

17:20-17:40

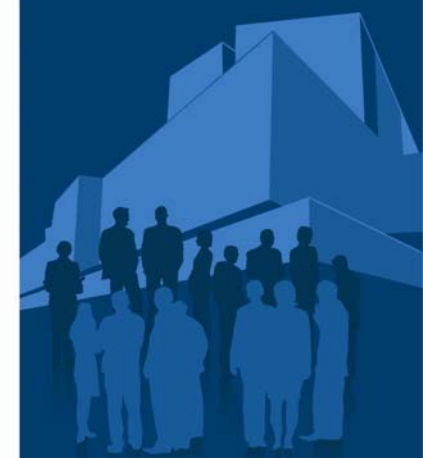
On the Packet Header Size and Network State Tradeoff for Trajectory-Based Routing in Wireless Networks

Rajagopal Iyengar, Rensselaer Polytechnic Institute (USA); Murat Yuksel, Rensselaer Polytechnic Institute (USA)

17:40-18:00

Centralised Link-State Routing in ZRP

Thafer Sulaiman, Brunel University (UK); Hamed Al-Raweshidy, Brunel University (UK)



Session: TC4 - Routing Protocols II

Time: Wed 13 Sept 11:10-12:50

Place: Congress Hall B

Chair: Christian Wietfeld, University of Dortmund (Germany)

11:10-11:30

Adaptive Routing In Wireless Multi-Hop Networks

Hans-Martin Zimmermann, TU München (Germany); Florian Franz, TU München (Germany); Ruediger Halfmann, Siemens, COM (Germany)

11:30-11:50

Performance Evaluation of Micro-Mobility Protocols in Fail-Tolerant Mesh Networks

Pedro Estrela, IST/INESC-ID (Portugal); Teresa Vazão, IST/INESC-ID (Portugal); Mario Nunes, IST/INESC-ID/INOV (Portugal)

11:50-12:10

Load-Sensitive Routing with Directional Antennas

Ariadna Quattoni, MIT (USA); Daniel Engels, MIT (USA)

12:10-12:30

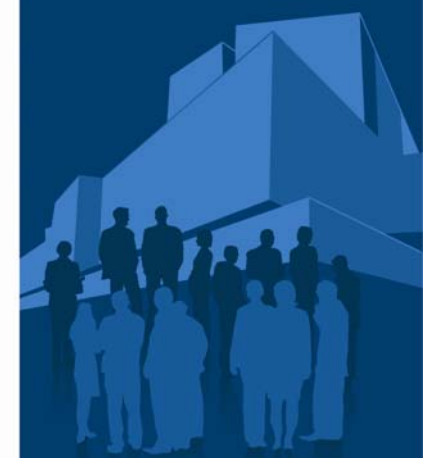
TLQR: Topology-Control-based QoS Routing in Wireless Ad Hoc Networks

Hsien-Ping Suen, computer science and information engineering dept. National Taiwan University (taiwan); Cheng-Fu Chou, computer science and information engineering dept. National Taiwan University (taiwan)

12:30-12:50

Efficient Lightweight Broadcasting Protocols for Multi-hop Ad Hoc Networks

Qing Huang, DoCoMo Beijing Communication Labs (China); Yong Bai, DoCoMo Beijing Communication Labs (China); Lan Chen, DoCoMo Beijing Communication Labs (China)



Session: TC5 - Ad-Hoc & Sensor Networks I

Time: Wed 13 Sept 14:00-15:40

Place: Congress Hall B

Chair: Timo Bräysy, University of Oulu, Centre for Wireless Communications (Finland)

- 14:00-14:20 **Two-Layer Optimized Forwarding for Cluster-Based Sensor Networks (INVITED PAPER)**
Abbas Jamalipour, School of Electrical and Information Engineering, University of Sydney (Australia); Mohammad Abdul Azim, School of Electrical and Information Engineering, University of Sydney (Australia)
- 14:20-14:40 **Source-Destination Hybrid ARQ for Multi-route Coding in Wireless Multi-hop Networks**
Hiraku Okada, Niigata University (Japan); Tadahiro Wada, Shizuoka University (Japan); Kouji Ohuchi, Shizuoka University (Japan); Masato Saito, Nara Institute of Science and Technology (Japan); Kenichi Mase, Niigata University (Japan)
- 14:40-15:00 **Recognizing Moving Groups with Infrastructure Support**
Dániel Hollós, Technical University of Berlin (Germany); Adam Wolisz, Technical University of Berlin
- 15:00-15:20 **Forward Interference Avoidance Concept for MANET using Adaptive Array Antennas**
Tomofumi Sakaguchi, Tokyo University of Agriculture & Technology (Japan); Yukihiro Kamiya, Tokyo University of Agriculture & Technology (Japan); Takeo Fujii, Tokyo University of Agriculture & Technology (Japan); Yasuo Suzuki, Tokyo University of Agriculture & Technology (Japan)



Session: TC6 - Ad-Hoc Networks

Time: Wed 13 Sept 16:20-18:00

Place: Congress Hall B

Chair: Carlos Pomalaza-Raez, Centre for Wireless Communications, University of Oulu (Finland)

- 16:20-16:40 **Cross-Layer Routing for QoS Provision in Multiservice Mobile Ad Hoc Networks**
María Canales, University of Zaragoza (Spain); José Ramón Gállego, University of Zaragoza (Spain); Ángela Hernández-Solana, University of Zaragoza (Spain); Antonio Valdovinos, University of Zaragoza (Spain)
- 16:40-17:00 **A Novel Location-Based Multicast Protocol for Ad-Hoc Networks**
Giuseppe Caizzone, Politecnico di Milano (Italy); Walter Erangoli, Politecnico di Milano (Italy); Paolo Giacomazzi, Politecnico di Milano (Italy); Giacomo Verticale, Politecnico di Milano (Italy)
- 17:00-17:20 **A Simulation Study on Multipoint-To-Point Video Streaming over Mobile Ad Hoc Networks**
CheeOnn Chow, Tokai Unified Graduate School , Tokai University (Japan); Hiroshi Ishii, Dept. of Communications Engineering, Tokai University (Japan)
- 17:20-17:40 **Capacity Enhancement using ad hoc Pico-Cells and TDD Underlay**
Premvir Jain, International University Bremen (Germany); Harald Haas, International University Bremen (Germany); Stephen McLaughlin, The University of Edinburgh (United Kingdom)
- 17:40-18:00 **Power-Aware Cooperative Relay Selection Strategies in Wireless Ad Hoc Networks**
Yan Chen, Institute of Information and Communication Engineering, Zhejiang University (China); Guanding Yu, Institute of Information and Communication Engineering, Zhejiang University (China); Peiliang Qiu, Institute of Information and Communication Engineering, Zhejiang University (China); Zhaoyang Zhang, Institute of Information and Communication Engineering, Zhejiang University (China)



Session: TC7 - Wireless Sensor Networks III

Time: Thu 14 Sept 8:30-9:50

Place: Congress Hall B

Chair: Mischa Dohler, France Telecom (France)

8:30- 8:50

A Belief Propagation-based Iterative Location Estimation Method for Wireless Sensor Networks

Rihito Mino, Osaka University (Japan); Kazuya Iwamoto, Osaka University (Japan); Masahiro Takashima, Osaka University (Japan); Radim Zemek, Osaka University (Japan); Kentaro Yanagihara, Oki Electric Industry Co.ltd. (Japan); Shinsuke Hara, Osaka City University (Japan); Ken-ichi Kitayama, Osaka University (Japan)

8:50-9:10

Experimental Verification of An Analytical Interference Model for Bluetooth Networks

Andre Stranne, TeliaSonera AB (Sweden); Ove Edfors, Lund University (Sweden); Bengt-Arne Molin, Obigo AB (Sweden)

9:10-9:30

Cluster Head Selection using Analytical Hierarchy Process for Wireless Sensor Networks

Yaoyao Yin, Beijing University of Posts and Telecommunications (China); Juwei Shi, Beijing University of Posts and Telecommunications (China); Yinong Li, Beijing University of Posts and Telecommunications (China); Ping Zhang, Beijing University of Posts and Telecommunications (China)

9:30-9:50

A Two-way Coverage Mechanism for Wireless Sensor Networks

Tzu-Ting Wu, Department of Electrical Engineering, National Cheng Kung University (Taiwan); Kuo-Feng Ssu, Department of Electrical Engineering, National Cheng Kung University (Taiwan); Hewijin Christine Jiau, Department of Electrical Engineering, National Cheng Kung University (Taiwan)



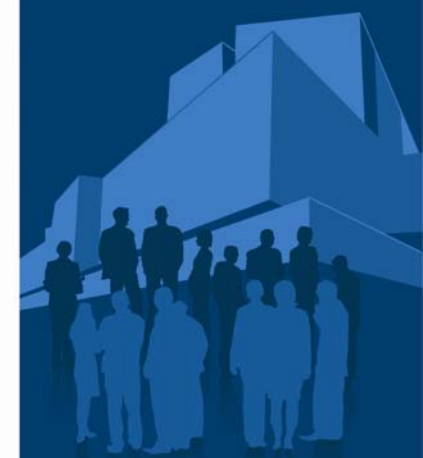
Session: TC8 - Wireless Sensor Networks IV

Time: Thu 14 Sept 10:50-12:30

Place: Congress Hall B

Chair: Riku Jäntti, Helsinki University of Technology (Finland)

- 10:50-11:10 **Extremely Simple Sensor Radio Protocol for Processorless Implementation**
Mauri Honkanen, Nokia Research Center (Finland); Jukka Reunamäki, Nokia Research Center (Finland); Juha-Matti Tuupola, Nokia Technology Platforms (Finland)
- 11:10-11:30 **Measuring Energy Consumption in Wireless Sensor Networks Using GSP**
Maria Calle, University of Pittsburgh, Universidad del Norte (Colombia); Joseph Kabara, University of Pittsburgh (United States)
- 11:30-11:50 **Cost-Aware Dynamic Routing Protocol for Wireless Sensor Networks - Design and Prototype Experiments**
Jukka Suhonen, Tampere University of Technology (Finland); Mauri Kuorilehto, Tampere University of Technology (Finland); Marko Hännikäinen, Tampere University of Technology (Finland); Timo D. Hämäläinen, Tampere University of Technology (Finland)
- 11:50-12:10 **A Cross Layer Design of Coding and Awake/Sleep Periods in WSNs**
Heikki Karvonen, Centre for Wireless Communications, University of Oulu (Finland); Carlos Pomalaza-Ráez, Telecommunications Laboratory, University of Oulu (Finland)
- 12:10-12:30 **Energy Implications of Clustering in Heterogeneous Wireless Sensor Networks ? An Analytical View**
Han Yong Lee, National University of Singapore (Singapore); Winston Khoon Guan Seah, Institute for Infocomm Research (Singapore); Peng Sun, Institute for Infocomm Research (Singapore)



Session: TC9 - Ad-Hoc & Sensor Networks II

Time: Thu 14 Sept 13:40-15:20

Place: Congress Hall B

Chair: Carlos Pomalaza-Raez, Centre for Wireless Communications, University of Oulu (Finland)

13:40-14:00

SINR-based Ad-hoc Networking (INVITED PAPER)

Anthony Ephremides, Institute Of Systems Research, University of Maryland (United States); Vangelis Angelakis, Institute of Computer Science-FORTH & Dept. of Computer Science University of Crete (Greece); Apostolos Traganitis, Institute of Computer Science-FORTH & Dept. of Computer Science University of Crete (Greece)

14:00-14:20

An Energy Aware Routing Algorithm for Ad Hoc and Sensor Networks: Concept and Performance

Ana M. Bernardos, Universidad Politécnica de Madrid (Spain); Paula Tarrío, Universidad Politécnica de Madrid (Spain); José R. Casar, Universidad Politécnica de Madrid (Spain)

14:20-14:40

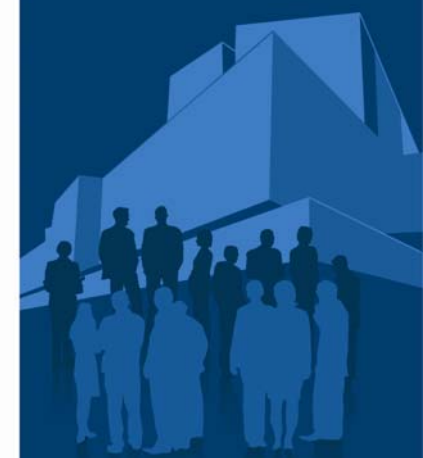
DispersiveCast: Dispersive Packets Transmission to Multiple Sinks for Energy Saving in Sensor Networks

Takaaki Suzuki, Shizuoka University (Japan); Masaki Bandai, Shizuoka University (Japan); Takashi Watanabe, Shizuoka University (Japan)

14:40-15:00

A Power-Aware Broadcasting Algorithm

Hugo Miranda, Universidade de Lisboa (Portugal); Simone Leggio, University of Helsinki (Finland); Luís Rodrigues, Universidade de Lisboa (Portugal); Kimmo Raatikainen, University of Helsinki (Finland)



Session: TC10 - Ad-Hoc & Sensor Networks III

Time: Thu 14 Sept 16:00-17:20

Place: Congress Hall B

Chair: Anthony Ephremides, University of Maryland (USA)

- 16:00-16:20 **Analysis of Scatternet Formation in High-Rate Multi-Hop WPANS**
Attila Török, Bay Zoltán Foundation for Applied Research (Hungary); Lóránt Vajda, Bay Zoltán Foundation for Applied Research (Hungary); Péter Laborczi, Bay Zoltán Foundation for Applied Research (Hungary); Zoltán Fülöp, Budapest University of Technology and Economics (Hungary); Attila Vidács, Budapest University of Technology and Economics (Hungary)
- 16:20-16:40 **Transmission Power Based Path Loss Metering for Wireless Sensor Networks**
Mikko Kohvakka, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Jukka Suhonen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Marko Hännikäinen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Timo D. Hämäläinen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland)
- 16:40-17:00 **Modelling Mobile Encounter Networks**
Jani Kurhinen, University of Jyväskylä (Finland); Vesa Korhonen, University of Jyväskylä (Finland); Mikko Vapa, University of Jyväskylä (Finland); Matthieu Weber, University of Jyväskylä (Finland)
- 17:00-17:20 **A Slow Start Power Control MAC Protocol for Mobile ad hoc Networks**
Vasilis Gkamas, University of Patras, Department of Computer Engineering and Informatics, Research Academic Computer Technology Institute (Greece); Emmanouel Varvarigos, University of Patras, Department of Computer Engineering and Informatics, Research Academic Computer Technology Institute (Greece)



Session: TDI - Radio Resource Management I

Time: Tue 12 Sept 11:10-12:50

Place: Conference room 23

Chair: Ian Oppermann, Nokia (Finland)

11:10-11:30 Combined Power Control and Rate Management for Multimedia CDMA Systems

Mehmet Akar, Hamilton Institute, NUIM (Ireland)

11:30-11:50 Enhanced Radio Access Technology Selection exploiting Path Loss Information

Jordi Perez-Romero, Universitat Politecnica de Catalunya (UPC) (Spain); Oriol Sallent, Universitat Politecnica de Catalunya (UPC) (Spain); Ramon Agusti, Universitat Politecnica de Catalunya (UPC) (Spain)

11:50-12:10 On the Computation of the Maximum Capacity of TDMA-CDMA/TDD Systems

Jad Nasredcine, Universitat Politecnica de Catalunya (UPC) (Spain); Xavier Lagrange, GET/ENST Bretagne (France)

12:10-12:30 Node B-located OLPC for Enhanced Uplink

Carlos Héracles Lima, Wireless Telecommunication Research Group - GTEL (Brazil); Kjell Larsson, Ericsson (Sweden); Peter Ökvist, Ericsson (Sweden)

12:30-12:50 Decentralized Fair Rate Control in Micro-cellular CDMA System for Reverse Link

Zhang Yong, BUPT-Qualcomm Research Center, Beijing University of Post and Telecommunication (China); Xue Ting, BUPT-Qualcomm Research Center, Beijing University of Post and Telecommunication (China)



Session: TD2 - Radio Resource Management II

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 23

Chair: Sastri Kota, Harris Corporation (USA)

- 14:00-14:20 **Performance of Energy Efficient Game Theoretical-based Power Control Algorithm in WCDMA**
F. de S. Chaves, Federal University of Ceara (Brazil); Vicente A. de Sousa Jr., Federal University of Ceara (Brazil); R. A. de O. Neto, Federal University of Ceara (Brazil); Carlos H. M. de Lima, Federal University of Ceara (Brazil); F. R. P. Cavalcanti, Federal University of Ceara (Brazil)
- 14:20-14:40 **Limiting UMTS Dropping Rate with Control-based CAC Algorithm**
Florian Liers, Technical University of Ilmenau (Germany); Bernd Hochberg, Technical University of Ilmenau (Germany); Markus Malicke, Technical University of Ilmenau (Germany); Andreas Mitschele-Thiel, Technical University of Ilmenau (Germany)
- 14:40-15:00 **Exploiting Recurrent Paths of Vehicular Users in a Third Generation Cellular System Urban Scenario**
Enrico Natalizio, DEIS - University of Calabria (Italy); Gianluca Aloï, DEIS - University of Calabria (Italy)
- 15:00-15:20 **Verification of Mobility-Based GSM/WCDMA Intersystem Handover Using Measurement Data**
Rong-Terng Juang, Institute of Computer and Communication, National Taipei University of Technology (Taiwan); Hsin-Piao Lin, Institute of Computer and Communication, National Taipei University of Technology (Taiwan); Ding-Bing Lin, Institute of Computer and Communication, National Taipei University of Technology (Taiwan); Wei-Cheng Zeng, Institute of Computer and Communication, National Taipei University of Technology (Taiwan)
- 15:20-15:40 **Research on Rate Allocation Schemes for the Reverse Link in CDMA2000 System**
Liu Bingzhang, Beijing University of Posts and Telecommunications (China); Zhang Xin, Beijing University of Posts and Telecommunications (China); Yang Dacheng, Beijing University of Posts and Telecommunications (China)

Session: TD3 - MAC Protocols

Time: Tue 12 Sept 16:20-18:00

Place: Conference room 23

Chair: KC Chen, National Taiwan University (Taiwan)

- 16:20-16:40 **Concurrent Packet Reception Bounds of On-Demand MAC Protocols for Multiple Beam Antennas**
Vivek Jain, University of Cincinnati (USA); Dharma Agrawal, University of Cincinnati (USA)
- 16:40-17:00 **Performance Analysis of Multi-rate capable Random Access MAC protocols in Wireless Multi-hop Networks**
Ju-Lan Hsu, Electrical Engineering Department, University of California, Los Angeles (USA); Izhak Rubin, Electrical Engineering Department, University of California, Los Angeles (USA)
- 17:00-17:20 **Performance Analysis of an Interference-Aware MAC Protocol with Power Control for Wireless Ad Hoc Networks**
José Ramón Gállego, University of Zaragoza (Spain); María Canales, University of Zaragoza (Spain); Ángela Hernández-Solana, University of Zaragoza (Spain); Antonio Valdovinos, University of Zaragoza (Spain)
- 17:20-17:40 **Direction and Communication-Aware Directional MAC Protocol in Ad Hoc Networks using Directional Antenna**
Tetsuro Ueda, YRP Research Center, KDDI R&D Laboratories Inc. (Japan)
- 17:40-18:00 **Performance of Admission Control Strategies for Dual Transfer Mode in EGPRS Networks**
Talal Diab, ENST (France); Philippe Martins, ENST (France); Laurent Decreusefond, ENST (France)



Session: TD4 - Radio Resource Management III

Time: Wed 13 Sept 11:10-12:50

Place: Conference room 23

Chair: Harald Haas, International University Bremen (Germany)

11:10-11:30 A Measurement-Based Admission Control Algorithm for Resource Management in Diffserv IP Networks

Hommad el Allali, Delft University of Technology (The Netherlands); Anthony Lo, Delft University of Technology (The Netherlands); Ignas Niemegeers, Delft University of Technology (The Netherlands)

11:30-11:50 Unified Link-Layer API Enabling Wireless-Aware Applications

Marten Bandholz, RWTH Aachen University (Germany); Alain Gefflaut, European Microsoft Innovations Center (Germany); Janne Riihijärvi, RWTH Aachen University (Germany); Matthias Wellens, RWTH Aachen University (Germany); Petri Mähönen, RWTH Aachen University (Germany)

11:50-12:10 EQoS Call Admission and Scheduler Parameter Evaluation for GERAN

Robson Vieira, Nokia Technology Institute - INdT (Brazil); Leonardo Aguayo, Nokia Technology Institute - INdT (Brazil); Gustavo Costa, Nokia Technology Institute - INdT (Brazil)

12:10-12:30 Performance of Distributed MxRRM

Guihua Piao, Chair of communication technology, FB16, University of Kassel (Germany); Klaus David, Chair of communication technology, FB16, University of Kassel (Germany); Ingo Karla, Alcatel SEL AG (Germany); Rolf Sigle, Alcatel SEL AG (Germany)

12:30-12:50 The Effect of Multipath Hybrid Routing Protocol in Multihop Cellular Networks

Hitoshi Imai, Department of Electrical Engineering and Computer Science, Graduate School of Engineering, Nagoya University (Japan); Hiraku Okada, Center for Transdisciplinary Research, Niigata University (Japan); Takaya Yamazato, EcoTopia Science Institute, Nagoya University (Japan); Masaaki Katayama, EcoTopia Science Institute, Nagoya University (Japan)



Session: TD5 - Radio Resource Management IV

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 23

Chair: Jorma Lilleberg, Nokia (Finland)

- 14:00-14:20 **Adaptive Resource Allocation for Spectral Efficiency Maximization in Uplink WCDMA**
Farhad Zarringhalam, King's College London (United Kingdom); Mohammad Reza Shikh-Bahaei, King's College London (United Kingdom); Gilles Charbit, Nokia UK Ltd (United Kingdom)
- 14:20-14:40 **Opportunistic Frequency Reuse in Wireless Cellular Networks**
Diego Piazza, Politecnico di Milano (Italy); Guido Tartara, Politecnico di Milano (Italy)
- 14:40-15:00 **Opportunistic Best-Effort Scheduling for QoS-aware Flows**
Mohammed Al Rawi, University of Vaasa (Finland); Riku Jäntti, University of Vaasa (Finland)
- 15:00-15:20 **Cross-Layer Scheduling and Adaptive Modulation for QoS Support on Wireless Multimedia Networks**
João Reis, Instituto de Telec./Univ. de Aveiro (Portugal); Atilio Gameiro, Instituto de Telec./Univ. de Aveiro (Portugal)
- 15:20-15:40 **Cross-layer Performance Analysis of Two-hop Wireless Links with Adaptive Modulation**
Peng Cheng, Institute of Information and Communication Engineering, Zhejiang University, China (China); Guanding Yu, Institute of Information and Communication Engineering, Zhejiang University, China (China); Zhaoyang Zhang, Institute of Information and Communication Engineering, Zhejiang University, China (China); Huiling Jia, Institute of Information and Communication Engineering, Zhejiang University, China (China); Hsiao-Hwa Chen, Institute of Communications Engineering, National Sun Yat-Sen University, Taiwan (Taiwan); Peiliang Qiu, Institute of Information and Communication Engineering, Zhejiang University, China (China)



Session: TD6 - Scheduling Schemes

Time: Wed 13 Sept 16:20-18:00

Place: Conference room 23

Chair: Abbas Jamalipour, University of Sydney (Australia)

- 16:20-16:40 **Dynamic Buffering Control Scheme for Mobile Handoff (INVITED PAPER)**
Ashutosh Dutta, Telcordia Technologies (United States); E. Van den berg, Telcordia Technologies (United States); D. Famolari, Telcordia Technologies (United States); V. Fajardo, Toshiba America Research Inc. (United States); Y. Ohba, Toshiba America Research Inc. (United States); K. Taniuchi, Toshiba America Research Inc. (United States); T. Kodama, Toshiba America Research Inc. (United States); H. Schulzrinne, Columbia University (United States)
- 16:40-17:00 **Challenges in Packet Scheduling in 4G Wireless Networks**
Harri Paloheimo, Nokia Research Center (Finland); Jukka Manner, Helsinki University of Technology (Finland); Johanna Nieminen, Helsinki University of Technology (Finland); Antti Ylä-Jääski, Helsinki University of Technology (Finland)
- 17:00-17:20 **Proportional Fair Scheduling of Uplink Single-Carrier FDMA Systems**
Junsung Lim, Polytechnic University (USA); Hyung Myung, Polytechnic University (USA); Kyungjin Oh, Polytechnic University (USA); David Goodman, Polytechnic University (USA)
- 17:20-17:40 **Distributed DL/UL Asymmetry Synchronization for Adaptive-TDD Wireless Access Networks**
Konstantinos Ntagkounakis, Emerging Technologies & Markets, Intracom S.A. (GREECE); Panos Dallas, Emerging Technologies & Markets, Intracom S.A. (GREECE); Bayan Sharif, EECE School, University of Newcastle (U.K.); Gregory Yovanof, Broadband Wireless & Sensor Net-works, Athens Information Technology (GREECE)



Session: TD7 - Radio Resource Management V

Time: Thu 14 Sept 8:30-10:10

Place: Conference room 23

Chair: Harald Haas, International University Bremen (Germany)

- 8:30- 8:50 **Reduction of Computation and Control Costs for Opportunistic Scheduling in Slotted DS-CDMA Uplinks**
Ryoichi Shinkuma, Graduate School of Informatics, Kyoto University (Japan); Tatsuro Takahashi, Graduate School of Informatics, Kyoto University (Japan)
- 8:50-9:10 **An Agent System to Manage Mobile Connections in a Distributed Base Station Scheme**
Philippe Leroux, Université Laval (Canada); Sébastien Roy, Université Laval (Canada); Jean-Yves Chouinard, Université Laval (Canada)
- 9:10-9:30 **Radio Link Protocol Based SCH Power Control in cdma2000**
Jian Gu, Beijing Univ. of Posts and Telecom (China); Xiangguang Che, Nokia Research Center (China); Giridhar D. Mandyam, Nokia Research Center (USA)
- 9:30-9:50 **RNC-located filtering-based OLPC solution for E-UL**
Carlos Hércules Lima, Wireless Telecommunication Research Group - GTEL (Brazil); Kjell Larsson, Ericsson Research (Sweden); Peter Ökvist, Ericsson Research (Sweden)
- 9:50-10:10 **Energy Efficient TCP Transmission for IEEE 802.15.3 WPAN**
Shao-Yi Hung, National Taiwan University (Taiwan); Po-Yu Chuang, National Taiwan University (Taiwan); Yi-Hsien Tseng, National Taiwan University (Taiwan); Hsiao-kuang Wu, National Central University (Taiwan); Gen-Huey Chen, National Taiwan University (Taiwan)



Session: TD8 - Mobility Control I

Time: Thu 14 Sept 10:50-12:30

Place: Conference room 23

Chair: Christian Wietfeld, University of Dortmund (Germany)

- 10:50-11:10 **A Framework to Support Fast Inter-Domain Mobility in ALL-IP Networks**
Ali Diab, Technical university of Ilmenau (Germany); Andreas Mitschele-Thiel, Technical university of Ilmenau (Germany); René Böringer, Technical university of Ilmenau (Germany)
- 11:10-11:30 **The Reconfigurable IP Mobility Component: Simultaneous Operation of Micro/Macro Mobility Protocols**
Konstantinos Boukis, King's College London (United Kingdom); Nikos Georganopoulos, Toshiba Research Europe Ltd. (United Kingdom); Hamid Aghvami, King's College London (United Kingdom)
- 11:30-11:50 **Wireless Shadow Network Setup through the MEHROM Micromobility Protocol**
Liesbeth Peters, Ghent University (Belgium); Filip De Turck, Ghent University (Belgium); Ingrid Moerman, Ghent University (Belgium); Bart Dhoedt, Ghent University (Belgium); Piet Demeester, Ghent University (Belgium)
- 11:50-12:10 **Advanced Mobility Support in Next-Generation All-IP Wireless Networks: A Cross-Layer Approach ? Part I**
George Kalebaila, University of Cape Town (South Africa); Anthony Chan, University of Cape Town (South Africa)
- 12:10-12:30 **IP Packet Loss Compensation Scheme with Bicast and Forwarding for Handover in Mobile Communications**
Masahiko Saito, Keio University (Japan); Akihito Morimoto, NTT DoCoMo (Japan); Osamu Takyu, Keio University (Japan); Masao Nakagawa, Keio University (Japan)



Session: TD9 - Mobility Control II

Time: Thu 14 Sept 13:40-15:20

Place: Conference room 23

Chair: Savo Glisic, Telecommunication Laboratory, University of Oulu (Finland)

- 13:40-14:00 **Evaluation of Handover Performance for TCP Traffic Based on Generic Link Layer Context Transfer**
Joachim Sachs, Ericsson Research (Germany); Birinder Singh Khurana, Ericsson GmbH (Germany); Petri Mähönen, Aachen University (Germany)
- 14:00-14:20 **A Time-Adaptive Vertical Handoff Decision Scheme in Wireless Overlay Networks**
Qingyang Song, University of Sydney (Australia); Abbas Jamalipour, University of Sydney (Australia)
- 14:20-14:40 **An Effective Authentication Procedure Considering User Expiry Time during Handover**
Takashi Matsunaka, KDDI R&D Laboratories Inc. (Japan); Haruki Izumikawa, KDDI R&D Laboratories Inc. (Japan); Keizo Sugiyama, KDDI R&D Laboratories Inc. (Japan)
- 14:40-15:00 **Effective Link Triggers to Improve Handover Performance**
Steve Woon, NIST (USA); Nada Golmie, NIST (USA); Y. Ahmet Sekercioglu, Monash University (Australia)
- 15:00-15:20 **Handoff Management Schemes and Performance Analysis for IP/MPLS-Based Cellular Networks**
Rami Langar, ENST-Telecom Paris (France); Nizar Bouabdallah, INRIA (France); Samir Tohme, PRISM Laboratory (France)



Session: TD10 - Physical Layer and Networking Technology

Time: Thu 14 Sept 16:00-17:40

Place: Conference room 23

Chair: Timo Korhonen, Helsinki University of Technology (Finland)

- 16:00-16:20 **Control Channel Scheduling for APCO Phase 2 Air Interface**
Talal Diab, ENST (France); Philippe Martins, ENST (France); Philippe Godlewski, ENST (France)
- 16:20-16:40 **Delay Spread and Its Effect on Bandwidth in Gaussian Parallel Relay Networks**
Taneli Riihonen, Helsinki University of Technology (Finland); Risto Wichman, Helsinki University of Technology (Finland); Jyri Hämäläinen, Nokia Networks (Finland)
- 16:40-17:00 **Non-Data-Aided I/Q Imbalance Compensation Using Measured Receiver Front-End Signals**
Piotr Rykaczewski, Universität Karlsruhe (Germany); Mikko Valkama, Tampere University of Technology (Finland); Markku Renfors, Tampere University of Technology (Finland); Friedrich Jondral, Universität Karlsruhe (Germany)
- 17:00-17:20 **Performance of IEEE802.16-2004 Based System in Jamming Environment and its Improvement with Link Adaptation**
Juan Li, Communications Laboratory, Helsinki University of Technology (Finland); Sven-Gustav Häggman, Communications Laboratory, Helsinki University of Technology (Finland)
- 17:20-17:40 **Self-Cancellation of Inter-carrier Interference in OFDM Systems with Phase Noise**
Shigang Tang, Department of Electronic Engineering, Tsinghua University (China); Ke Gong, Department of Electronic Engineering, Tsinghua University (China); Changyong Pan, Department of Electronic Engineering, Tsinghua University (China); Jun Wang, Department of Electronic Engineering, Tsinghua University (China); Zhixing Yang, Department of Electronic Engineering, Tsinghua University (China)



Session: TE1 - Cellular Networks I

Time: Tue 12 Sept 11:10-12:30

Place: Conference room 25

Chair: Savo Glisic, Telecommunication Laboratory, University of Oulu (Finland)

11:10-11:30

Smart Quality Enhancement in High Capacity GERAN Networks

Kolio Ivanov, SIEMENS AG (Germany); Carsten Ball, SIEMENS AG (Germany); Robert Müllner, SIEMENS AG (Germany); Hubert Winkler, SIEMENS AG (Austria); Rene Perl, SIEMENS AG (Austria); Kurt Kremnitzer, SIEMENS AG (Austria)

11:30-11:50

Dual Symbol Rate for GERAN Uplink Evolution

Mikko Säily, Nokia (Finland); Jari Hulkkonen, Nokia (Finland); Kari Niemelä, Nokia (Finland); Olli Piirainen, Nokia (Finland)

11:50-12:10

Supervised Prediction for Radio Network Planning Tool Using Measurements

Zakaria Nour, France Telecom R&D (France); Berna Sayrac, France Telecom R&D (France); Benoit Fourestie, France Telecom R&D (France)

12:10-12:30

Performance Analysis of Non-Cosited Evolved 2G and 3G Multi-Access Systems

Johan Hultell, Wireless@KTH, Royal Institute of Technology (Sweden); Klas Johansson, Wireless@KTH, Royal Institute of Technology (Sweden)



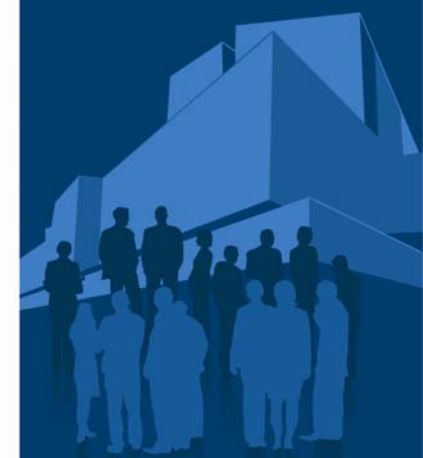
Session: TE2 - Cellular Networks II

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 25

Chair: Pentti Leppänen, Telecommunication Laboratory, University of Oulu (Finland)

- 14:00-14:20 **Generalized Moment Matching for the Linear Combination of Lognormal RVs -- Application to Outage Analysis in Wireless Systems**
Marco Pratesi, University of L'Aquila, Dpt. of Electrical Engineering (Italy); Fortunato Santucci, University of L'Aquila, Dpt. of Electrical Engineering (Italy); Fabio Graziosi, University of L'Aquila, Dpt. of Electrical Engineering (Italy)
- 14:20-14:40 **Performance Analysis of CDMA Cellular Networks Based On Alternative Hexagonal Network Layouts**
Jarkko Itkonen, European Communications Engineering Ltd (Finland); Balázs P. Tuzson, European Communications Engineering Ltd (Hungary); Jukka Lempiäinen, Tampere University of Technology (Finland)
- 14:40-15:00 **Analysis of Intercellular Timeslot Allocation in Self-Organising TDD Cellular Mobile Systems**
Peter Omiyi, International University Bremen (Germany); Harald Haas, International University Bremen (Germany); Gunther Auer, DoCoMo Euro-Labs (Germany)
- 15:00-15:20 **The Interference on WCDMA System in 3G Coexistence Network**
Muhammad Suryanegara, Department of Electrical Engineering University of Indonesia (Indonesia)
- 15:20-15:40 **Adaptive Radio Resource Management for Multi-Operator WCDMA Based Cellular Wireless Networks with Heterogeneous Traffic**
Salman Alqahtani, King Fahad university of petroleum and minerals (Saudi Arabia); Ashraf Mahmoud, King Fahad university of petroleum and minerals (Saudi Arabia); Tarek Sheltami, King Fahad university of petroleum and minerals (Saudi Arabia); Mohamed El-Tarhuni, American University of Sharjah (UAE)



Session: TE3 - Cellular Networks III

Time: Tue 12 Sept 16:20-18:00

Place: Conference room 25

Chair: Roberto de Marca, Pontif. Catholic University of Rio de Janeiro (Brazil)

- 16:20-16:40 **Single-User Performance of Uplink DS-CDMA Using Relay-Assisted Diversity**
Wei Fang, University of Southampton (United Kingdom); Lie-Liang Yang, University of Southampton (United Kingdom); Lajos Hanzo, University of Southampton (United Kingdom)
- 16:40-17:00 **Evaluation of Soft Handover Micro Diversity Gain on the UMTS System Capacity and QoS**
Jose F Monserrat, Polytechnic University of Valencia (Spain); David Gomez-Barquero, Polytechnic University of Valencia (Spain); Daniel Calabuig, Polytechnic University of Valencia (Spain); Lorenzo Rubio, Polytechnic University of Valencia (Spain); Narcis Cardona, Polytechnic University of Valencia (Spain)
- 17:00-17:20 **Microscopic Spectrum Control Technique using Carrier Interferometry for One-Cell Reuse Single Carrier TDMA Systems**
Keigo Mashima, Graduate School of Engineering, Osaka University (Japan); Seiichi Sampei, Graduate School of Engineering, Osaka University (Japan)
- 17:20-17:40 **Forward Link Performance for Packet Data Services of a Microcellular System Based on cdma2000**
José Ernesto Rojas-Lima, ESIME Zacatenco - IPN (México); Jaime Pedro Abarca-Reyna, CINVESTAV-IPN (México); Domingo Lara-Rodríguez, CINVESTAV-IPN (México)
- 17:40-18:00 **Dynamic Subband and Code Channel Assignment for Multicast Band Division MC-CDMA Systems**
Kazuo Mori, Mie University (Japan); Katsuhiko Naito, Mie University (Japan); Hideo Kobayashi, Mie University (Japan); Hamid Aghvami, Kings College London (UK)



Session: TE4 - Wireless Networks I

Time: Wed 13 Sept 11:10-12:50

Place: Conference room 25

Chair: Marcos Katz, VTT Electronics (Finland)

- 11:10-11:30 **Performance Evaluation of Novel Frequency Channel Allocation Algorithm for Pico-cell System**
Kosuke Yamazaki, KDDI R&D Laboratories Inc. (Japan); Kenya Yonezawa, KDDI R&D Laboratories Inc. (Japan);
Hiroyasu Ishikawa, KDDI R&D Laboratories Inc. (Japan); Yoshio Takeuchi, KDDI R&D Laboratories Inc. (Japan)
- 11:30-11:50 **Improved Modeling of Highly Loaded UMTS Network with Nonnegative Constraints**
Rafal Zdunek, Wroclaw University of Technology (Poland); Maciej Nawrocki, Wroclaw University of Technology
(Poland)
- 11:50-12:10 **Analysis of the RTS/CTS Multiple Access Scheme with Capture Effect**
Chin Keong Ho, Eindhoven University of Technology (The Netherlands); Jean-Paul M. G. Linnartz, Philips Research
Laboratories (The Netherlands)
- 12:10-12:30 **Performance Analysis of Scheduling-Based Systems in Rayleigh Fading Channels**
Seon Yeob Baek, KAIST (Korea); Ho Young Hwang, KAIST (Korea); Dan Keun Sung, KAIST (Korea)
- 12:30-12:50 **Fair Adaptive Radio Resource Allocation Of Mobile OFDMA**
Feng Seng Chu, Institute of Communication Engineering, National Taiwan University, Taiwan, R.O.C (Taiwan); Kwang
Cheng Chen, Institute of Communication Engineering, National Taiwan University, Taiwan, R.O.C (Taiwan)



Session: TE5 - Wireless Networks II

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 25

Chair: Ashutosh Dutta, Telcordia Technologies (USA)

- 14:00-14:20 **Application of Intra-RAN Flexible Spectrum Use to Networks with Multi-Rate Services**
Miia Mustonen, VTT Technical Research Centre of Finland (Finland); Kari Hooli, Centre for Wireless Communications (Finland); Juha Ylitalo, Centre for Wireless Communications (Finland); Antti Tölli, Centre for Wireless Communications (Finland)
- 14:20-14:40 **QoMIFA: A QoS Enabled Mobility Management Framework in ALL-IP Networks**
Esam Alnasouri, Technical university of Ilmenau (Germany); Andreas Mitschele-Thiel, Technical university of Ilmenau (Germany); Rene' Böringer, Technical university of Ilmenau (Germany); Ali Diab, Technical university of Ilmenau (Germany)
- 14:40-15:00 **Stochastic Behavior Study of Backoff Algorithms in Case of Hidden Terminals**
Tahiry Razafindralambo, INRIA ARES - INSA LYON (France); Fabrice Valois, INRIA ARES - INSA LYON (France)
- 15:00-15:20 **UPnP Service Discovery for Heterogeneous Networks**
José M. Sánchez Santana, RWTH Aachen University (Germany); Marina Petrova, RWTH Aachen University (Germany); Petri Mähönen, RWTH Aachen University (Germany)
- 15:20-15:40 **Radio Aware SCTP Extension for Handover Data in EGPRS**
Meriem Afif, Mediatron, Ecole Supérieure des Communications de Tunis (Sup'Com) and ENST-Paris - Ecole Nationale Supérieure des Télécommunications (Tunisia); Philippe Martins, ENST-Paris - Ecole Nationale Supérieure des Télécommunications (France); Sami Tabbane, Mediatron, Ecole Supérieure des Communications de Tunis (Sup'Com) (Tunisia); Philippe Godlewski, ENST-Paris - Ecole Nationale Supérieure des Télécommunications (France)



Session: TE6 - Heterogeneous Networks

Time: Wed 13 Sept 16:20-18:00

Place: Conference room 25

Chair: Tapio Frantti, VTT (Finland)

16:20-16:40 Service Provisioning and Terminal Cooperation in User-Deployed Networks

Nicolas Debernardi, Wireless@KTH, The Royal Institute of Technology (Sweden); Markus Jäger, Wireless@KTH, The Royal Institute of Technology (Sweden); Jean-Christophe Laneri, Wireless@KTH, The Royal Institute of Technology (Sweden); Malek Sraj, Wireless@KTH, The Royal Institute of Technology (Sweden); Pietro Lungaro, Wireless@KTH, The Royal Institute of Technology (Sweden)

16:40-17:00 Access Selection in Partially Backhaul-Limited Multi-Operator IEEE 802.11 Networks

Miguel Berg, Wireless@KTH, Royal Institute of Technology (Sweden); Johan Hultell, Wireless@KTH, Royal Institute of Technology (Sweden)

17:00-17:20 An Access Network Selection Algorithm Dynamically Adapted to user Needs and Preferences

Antonio Iera, University "Mediterranea" of Reggio Calabria (Italy); Antonella Molinaro, University "Mediterranea" of Reggio Calabria (Italy); Claudia Campolo, University "Mediterranea" of Reggio Calabria (Italy); Marica Amadeo, University "Mediterranea" of Reggio Calabria

17:20-17:40 Dynamic Pricing for Decentralised RAT Selection in Heterogeneous Scenarios

Roger Piqueras, Universitat Politecnica de Catalunya (UPC) (Spain); Jordi Perez-Romero, Universitat Politecnica de Catalunya (UPC) (Spain); Oriol Sallent, Universitat Politecnica de Catalunya (UPC) (Spain); Ramon Agusti, Universitat Politecnica de Catalunya (UPC) (Spain)

17:40-18:00 Attractiveness of Intelligent Access Selection for Multi-Access beyond 3G Wireless Networks

Vicente A. de Sousa Jr., Federal University of Ceara (Brazil); R. A. de O. Neto, Federal University of Ceara (Brazil); F. de S. Chaves, Federal University of Ceara (Brazil); F. R. P. Cavalcanti, Federal University of Ceara (Brazil)



Session: TE7 - Multicarrier Techniques I

Time: Thu 14 Sept 8:30-10:10

Place: Conference room 25

Chair: Mohamed El-Tarhuni, American University of Sharjah (United Arab Emirates)

- 8:30- 8:50 **Performance Analysis of Oversaturated Group Orthogonal CDMA System in Multipath Channel**
Jarkko Paavola, Turku Centre for Computer Science (TUUS) (FINLAND); Valery Ipatov, University of
Turku/Department of Information Technology (FINLAND)
- 8:50-9:10 **Rate-Aware Adaptive Channel Allocation for Multi-User OFDM Systems**
Amanpreet Singh, Bell Labs Europe - Lucent Technologies GmbH (Germany); Armin Dekorsy, Bell Labs Europe - Lucent
Technologies GmbH (Germany)
- 9:10-9:30 **Frequency Domain Power Adaptation Scheme for Multi-Carrier Systems**
Wladimir Bocquet, France Telecom R&D, Tokyo Lab. (Japan); Kazunori Hayashi, Kyoto University (Japan); Hideaki
Sakai, Kyoto University (Japan)
- 9:30-9:50 **Low Complexity Power Loading Strategies in OFDM-based Transmission Systems**
Natalia Ermolova, Helsinki University of Technology (Finland)
- 9:50-10:10 **Proportional-Fair Bit and Power Adaptation in Multiuser OFDM Systems**
Qian Wang, Shanghai Research Center for Wireless Communications (China); Jing Xu, Shanghai Research Center for
Wireless Communications (China); Zhiyong Bu, Shanghai Research Center for Wireless Communications (China)



Session: TE8 - Multicarrier Techniques II

Time: Thu 14 Sept 10:50-12:30

Place: Conference room 25

Chair: Valery Ipatov, University of Turku (Finland)

- 10:50-11:10 **A Multicarrier Direct Sequence Spread Spectrum System Employing Parity Bit Selected Spreading Waveforms**
Claude D'Amours, University of Ottawa (Canada); Wei Zhang, University of Ottawa (Canada)
- 11:10-11:30 **An Efficient Framework to Exploit Frequency Diversity in OFDM: Precoding with Adaptive Subcarrier Selection**
Chandranath Athaudage, The University of Melbourne (Australia); Jian Wang, The University of Melbourne (Australia);
Dhammika Jayalath, Australian National University and National ICT Australia (Australia)
- 11:30-11:50 **Analysis of Per-Channel Equalized Filtered Multitone Modulations over Time-varying Fading Channels**
Teijun Wang, University of California, San Diego (USA); John Proakis; James Zeidler
- 11:50-12:10 **Linear Scalable Dispersion Codes for Downlink MIMO MC-CDMA Systems**
Mireille Sarkiss, France Telecom Research and Development (France); Yi Yuan, France Telecom Research and
Development (France)
- 12:10-12:30 **DFT Spread Generalized Multi-Carrier Scheme for Broadband Mobile Communications**
Xiaodong Zhang, Shanghai Research Center for Wireless Communications (China); Mingqi Li, Shanghai Research Center
for Wireless Communications (China); Honglin Hu, Shanghai Research Center for Wireless Communications (China);
Haifeng Wang, Nokia Mobile Phones (Finland); Bin Zhou, Shanghai Research Center for Wireless Communications
(China); Xiaohu You, Shanghai Research Center for Wireless Communications (China)

Session: TE9 - CDMA Techniques

Time: Thu 14 Sept 13:40-15:20

Place: Conference room 25

Chair: Simone Morosi, CNIT - University of Firenze (Italy)

- 13:40-14:00 **Throughput of WLAN with TDMA and Superimposed Transmission with Resource and Traffic Constraints**
Thomas Deckert, Technische Universität Dresden (Germany); Gerhard Fettweis, Technische Universität Dresden (Germany)
- 14:00-14:20 **On the Effect of Channel-aware Scheduling to CDMA Uplink Capacity**
Kati Tenhonen, Helsinki University of Technology (Finland); Jyri Hämäläinen, Nokia Networks/ University of Oulu (Finland); Risto Wichman, Helsinki University of Technology (Finland); Kari Horneman, Nokia Networks (Finland)
- 14:20-14:40 **Theoretical Characterization of Nonlinear Distortion Noise in MC-CDMA Transmissions**
Filippo Giannetti, University of Pisa (Italy); Vincenzo Lottici, University of Pisa (Italy); Ivan Stupia, University of Pisa (Italy)
- 14:40-15:00 **A Novel Code Allocation Scheme for LS-CDMA System**
Jing Li, Institute of Information and Communication Engineering,Zhejiang University (China); Aiping Huang, Institute of Information and Communication Engineering,Zhejiang University (China); Jiangli Zhu, Institute of Information and Communication Engineering,Zhejiang University (China); Zhaoyang Zhang, Institute of Information and Communication Engineering,Zhejiang University (China); Kai Yang, Institute of Information and Communication Engineering,Zhejiang University (China)
- 15:00-15:20 **Group Transmission in Downlink of Overloaded CDMA Systems**
S. Mohammad Razavizadeh, Iran Telecomm. Research Center (Iran); Paeiz Azmi, Tarbiat Modarres University (Iran); Vahid T. Vakili, Iran University of Science and Technology (Iran)



Session: TE10 - Cellular Networks IV

Time: Thu 14 Sept 16:00-17:40

Place: Conference room 25

Chair: Markku Juntti , Centre for Wireless Communications, University of Oulu (Finland)

- 16:00-16:20 **How to Veritably Determine the Accomplishments of Static and Dynamic OVFS Code Assignment Algorithms (INVITED PAPER)**
Maria Luisa Merani, Department of Information Engineering, University of Modena and Reggio Emilia (Italy)
- 16:20-16:40 **Multihop Communication in Relay Enhanced IEEE 802.16 Networks**
Christian Hoymann, Chair of Communication Networks, RWTH Aachen University (Germany); Karsten Klagges, Chair of Communication Networks, RWTH Aachen University (Germany); Marc Schinnenburg, Chair of Communication Networks, RWTH Aachen University (Germany)
- 16:40-17:00 **Opportunistic Scheduling for Streaming Services in HSDPA**
Mohamad Assaad, supelec (France); Djamal Zeghlache, INT (France)
- 17:00-17:20 **Multihop Mobile Communications System Adopting Fixed Relay Stations and its Time Slot Allocation Schemes**
Takeo Ohseki, KDDI R&D Laboratories, Inc. (Japan); Naoki Fuke, KDDI R&D Laboratories, Inc. (Japan); Hiroyasu Ishikawa, KDDI R&D Laboratories, Inc. (Japan); Yoshio Takeuchi, KDDI R&D Laboratories, Inc. (Japan)
- 17:20-17:40 **Enhanced Wireless Hotspot Downlink Supporting IEEE802.11 and WCDMA**
Roland Yuen, Ryerson University (Canada); Xavier Fernando, Ryerson University (Canada)



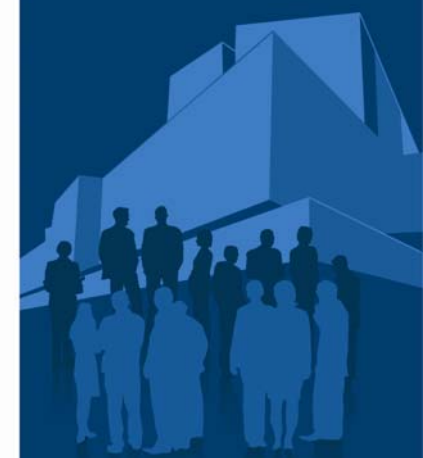
Session: TFI - Interference Cancellation I

Time: Tue 12 Sept 11:10-12:50

Place: Conference room 21

Chair: Pål Orten, Nera SatCom AS (Norway)

- 11:10-11:30 **Linear Interference Cancellation for Downlink MAP Reception in IEEE 802.16e**
Raja Bachu, Motorola Inc., (USA); Guocong Song, Motorola Inc., (USA); Kenneth Stewart, Motorola Inc., (USA);
Xiangyang Zhuang, Motorola Inc., (USA)
- 11:30-11:50 **Employing Dual Antenna Interference Suppression Techniques in GSM 8PSK Downlink**
Hanguang Wu, BenQ Mobile GmbH & Co. OHG (Germany); Ralf Heddergott, BenQ Mobile GmbH & Co. OHG
(Germany); Wen Xu, BenQ Mobile GmbH & Co. OHG (Germany); Sabah Badri-Hoeher, University of Kiel (Germany);
Peter Hoeher, University of Kiel (Germany)
- 11:50-12:10 **Adaptive Array Processing for Time-Varying Interference Mitigation in IEEE 802.16 Systems**
Monica Nicoli, Politecnico di Milano (Italy); Massimiliano Sala, Politecnico di Milano (Italy); Osvaldo Simeone, Politecnico
di Milano (Italy); Luigi Sampietro, Siemens S.p.A. Com CRD MW, Cassina de' Pecchi (Milano) (Italy); Claudio
Santacesaria, Siemens S.p.A. Com CRD MW, Cassina de' Pecchi (Milano) (Italy)
- 12:10-12:30 **Successive Interference Cancellation for SC/FDE-MIMO Systems**
Steffen Reinhardt, Institute for Electronic Engineering (Germany); Tufik Buzid, Institute for Electronic Engineering
(Germany); Mario Huemer, Institute for Electronic Engineering (Germany)
- 12:30-12:50 **Multi-User Interference Cancellation Scheme(S) for Multiple Carrier Frequency Offset Compensation in Uplink**
Huan Nguyen, Aalborg University (Denmark); Elisabeth de Carvalho, Aalborg University (Denmark); Ramjee Prasad,
Aalborg University (Denmark)



Session: TF2 - SDR & Cognitive Radio I

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 21

Chair: Laurent Hereault, CEA-LETI (France)

- 14:00-14:20 **Reconfigurable Low Complexity FIR Filters for Software Radio Receivers**
R Mahesh, Nanyang Technological University (Singapore); A.P Vinod, Nanyang Technological University (Singapore)
- 14:20-14:40 **A Decentralized CR System Algorithm for Cognitive Borrowing Scheme from Primary Users**
Shang-Ching Hung, National Taiwan University (Taiwan); Shao-Yi Hung, National Taiwan University (Taiwan); Hsiao-kuang Wu, National Central University (Taiwan); Gen-Huey Chen, National Taiwan University (Taiwan)
- 14:40-15:00 **A Universal Resource Awareness Channel for Cognitive Radio**
Oliver Holland, King's College London (United Kingdom); Alireza Attar, King's College London (United Kingdom); Nikolas Olaziregi, King's College London (United Kingdom); Nima Sattari, King's College London (United Kingdom); Hamid Aghvami, King's College London (United Kingdom)
- 15:00-15:20 **A Distributed Spectrum Sensing Scheme Based on Credibility and Evidence Theory in Cognitive Radio Context**
Peng Qihang, National Key Laboratory of Communication, University of Electronic Science and Technology of China (China); Zeng Kun, National Key Laboratory of Communication, University of Electronic Science and Technology of China (China); Wang Jun, National Key Laboratory of Communication, University of Electronic Science and Technology of China (China); Li Shaoqian, National Key Laboratory of Communication, University of Electronic Science and Technology of China (China)
- 15:20-15:40 **A Spectrum Exchange Mechanism in Cognitive Radio Contexts**
Chuan Han, National Key Laboratory of Communications, University of Electronic Science and Technology of China (P.R. China); Jun Wang, National Key Laboratory of Communications, University of Electronic Science and Technology of China (P.R. China); Shaoqian Li, National Key Laboratory of Communications, University of Electronic Science and Technology of China (P.R. China)

Session: TF3 - SDR & Cognitive Radio II

Time: Tue 12 Sept 16:20-18:00

Place: Conference room 21

Chair: Friedrich Jondral, University of Karlsruhe (Germany)

16:20-16:40

Simulation Platform for Opportunistic Radio Systems

Artur Pereira, Instituto de Telecomunicações - Universidade de Aveiro (portugal); Helder Fontes, Instituto de Telecomunicações - Universidade de Aveiro (Portugal); Atilio Gameiro, Instituto de Telecomunicações - Universidade de Aveiro (Portugal)

16:40-17:00

Generated Implementation Of A Wlan Protocol Stack

Sergey Kolevatov, BenQ Mobile (Germany); Matthias Wesseling, BenQ Mobile (Germany); Axel Hunger, University of Duisburg-Essen, Professorship Computer Engineering (Germany)

17:00-17:20

Implementation of Low Power and High-Speed Higher Order Channel Filters for Software Radio Receivers

A.P Vinod, School of Computer Engineering, Nanyang Technological University (Singapore); E.M-K. Lai, School of Computer Engineering, Nanyang Technological University (Singapore); S. Emmanuel, School of Computer Engineering, Nanyang Technological University (Singapore)

17:20-17:40

A Bayesian Approach for Automated Troubleshooting for UMTS Networks

Rana Khanafer, France Telecom R&D (France); Lars Moltsen, Moltsen Intelligent Software; Hervé Dubreil, France Telecom R&D; Zwi Altman, France Telecom R&D; Raquel Barco, University of Malaga

17:40-18:00

A Two-Phase Channel and Power Allocation Scheme for Cognitive Radio Networks

Anh Tuan Hoang, Institute for Infocomm Research (Singapore); Ying-Chang Liang, Institute for Infocomm Research (Singapore)



Session: TF4 - Receiver Algorithms

Time: Wed 13 Sept 11:10-12:50

Place: Conference room 21

Chair: Miyake Makoto, Mitsubishi Electric Corporation (Japan)

- 11:10-11:30 **EM Based Iterative Receiver for Joint Decoding and Channel Parameter Estimation in Space-Frequency Turbo Coded OFDM**
Jari Ylinoias, CWC/University of Oulu (Finland); Markku Juntti, CWC/University of Oulu (Finland)
- 11:30-11:50 **Detection of Interference, Dominance and Coverage Problems in WCDMA Networks**
Paolo Zanier, Nokia Networks (Finland); Riccardo Guerzoni, Nokia Networks (Italy); David Soldani, Nokia Networks (Finland)
- 11:50-12:10 **Blind Moment Estimation Techniques for I/Q Imbalance Compensation in Quadrature Receivers**
Lauri Anttila, Institute of Communications Engineering, Tampere University of Technology (Finland); Mikko Valkama, Institute of Communications Engineering, Tampere University of Technology (Finland); Markku Renfors, Institute of Communications Engineering, Tampere University of Technology (Finland)
- 12:10-12:30 **Single Antenna Interference Cancellation (SAIC) for Cellular TDMA Networks by Means of Decoupled Linear Filtering/Nonlinear Detection**
Peter Adam Hoehner, University of Kiel (Germany); Wen Xu, BenQ Mobile (Germany)
- 12:30-12:50 **Adaptive Decision Feedback Space-Time Equalization with Generalized Sidelobe Cancellation**
Yinman Lee, National Chiao Tung University (Taiwan); Wen-Rong Wu, National Chiao Tung University (Taiwan)



Session: TF5 - MIMO Receivers I

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 21

Chair: Luis Correia, IST - Tech Univ. Lisbon (Portugal)

- 14:00-14:20 **Linear MIMO Receivers vs. Tree Search Detection: A Performance Comparison Overview (INVITED PAPER)**
Clemens Michalke, Vodafone Chair Mobile Communications Systems, TU Dresden (Germany); Ernesto Zimmermann, Vodafone Chair Mobile Communications Systems, TU Dresden (Germany); Gerhard Fettweis, Vodafone Chair Mobile Communications Systems, TU Dresden (Germany)
- 14:20-14:40 **Design of Timing Error Detectors for Orthogonal Space-Time Block Codes**
Pawel A. Dmochowski, Queen's University (Canada); Peter J. McLane, Queen's University (Canada)
- 14:40-15:00 **New Approach for Resolving Ambiguities for Semi-blind Equalization of MIMO Frequency Selective Channels**
Oomke Weikert, Helmut Schmidt University - University of the Federal Armed Forces Hamburg (Germany); Udo Zoelzer, Helmut Schmidt University - University of the Federal Armed Forces Hamburg (Germany)
- 15:00-15:20 **Fano-Based Iterative Sequential Detection Algorithm for Double-STTD System**
Sooyoung Hur, Information and Communications University (Republic of Korea); Jongsub Cha, Information and Communications University (Republic of Korea); Joonhyuk Kang, Information and Communications University (Republic of Korea)
- 15:20-15:40 **Soft Decision Equalization of Multiple Antenna Systems over Dispersive Channels via Max-Log-Map Sphere Decoder**
Xiaojun Li, Beijing Univeristy of Posts and Telecommunications (China); Changchuan Yin, Beijing Univeristy of Posts and Telecommunications (China); Guangxin Yue, Beijing Univeristy of Posts and Telecommunications (China)

Session: TF6 - MIMO Receivers II

Time: Wed 13 Sept 16:20-18:00

Place: Conference room 21

Chair: Gerhard Fettweis, TU Dresden (Germany)

- 16:20-16:40 **Reduced-Rank MMSE Detection in Space-Time Coded Space-Division Multiple-Access Systems**
Lie-Liang Yang, University of Southampton (United Kingdom)
- 16:40-17:00 **Pilot Design for Frequency Offset Tracking in MIMO OFDM Systems**
Tsuguhide Aoki, Mobile communication laboratory, Corporate R&D center, Toshiba corporation (Japan); Magnus Sandell, Telecommunications Research Laboratory (TRL), Toshiba Research Europe (United Kingdom)
- 17:00-17:20 **Comparison of Two Novel List Sphere Detector Algorithms for MIMO-OFDM Systems**
Markus Myllylä, University of Oulu, CWC (Finland); Pirkka Silvola, University of Oulu, CWC (Finland); Joseph R. Cavallaro, Dept. of Electrical & Computer Engineering, Rice University (USA); Markku Juntti, University of Oulu, CWC (Finland)
- 17:20-17:40 **Efficient Detection Algorithms for Spatial Multiplexing Systems**
Wenjie Jiang, NTT Corporation (Japan); Yusuke Asai, NTT Corporation (Japan); Takeshi Onizawa, NTT Corporation (Japan); Satoru Aikawa, NTT Corporation (Japan)
- 17:40-18:00 **Multi-User MIMO Detection for Enhanced High Speed Uplink Packet Access (HSUPA)**
Wei Ni, Alcatel Reseach & Innovation Center (P. R. China); Gang Shen, Alcatel Reseach & Innovation Center (P. R. China); Wei Zou, Alcatel Reseach & Innovation Center (P. R. China); Luoning Gui, Alcatel Reseach & Innovation Center (P. R. China)



Session: TF7 - Equalization I

Time: Thu 14 Sept 8:30-9:50

Place: Conference room 21

Chair: Hiroshi Kubo, Mitsubishi Electric Corp. (Japan)

8:30- 8:50 Turbo Equalizers for MIMO Systems: Optimality Consideration

Mauri Nissila, Nokia Networks (Finland)

8:50-9:10 CDMA Voice Capacity with Adaptive Equalizer Receivers

Srikant Jayaraman, Qualcomm Incorporated (United States of America); Ivan Fernandez i Corbaton, Qualcomm Incorporated (Germany)

9:10-9:30 HSDPA MIMO Performance with Turbo Equalizer

Marko Lampinen, Nokia (Finland); Ville Haikola, Nokia (Finland)

9:30-9:50 Blind Equalization with Fractional Sampling Metric Combining for Avoiding Channel Estimate Ambiguity in Mobile Radio

Issei Kanno, Tokyo Institute of Technology (Japan); Hiroshi Suzuki, Tokyo Institute of Technology (Japan); Kazuhiko Fukawa, Tokyo Institute of Technology (Japan)



Session: TF8 - Equalization II

Time: Thu 14 Sept 10:50-12:30

Place: Conference room 21

Chair: Miyake Makoto, Mitsubishi Electric Corporation (Japan)

10:50-11:10 Frequency-Domain Equalization Incorporated with Frequency-Domain Redundancy for OFDM Systems

Akihiro Okazaki, Mitsubishi Electric Corporation (Japan); Katsuyuki Motoyoshi, Mitsubishi Electric Corporation (Japan); Masatsugu Higashinaka, Mitsubishi Electric Corporation (Japan); Takayuki Nagayasu, Mitsubishi Electric Corporation (Japan); Hiroshi Kubo, Mitsubishi Electric Corporation (Japan); Akihiro Shibuya, Mitsubishi Electric Corporation (Japan)

11:10-11:30 System Level Study of the Performance Losses caused by Inaccurate Interference Modeling for Indirect Linear Equalizers utilized in Cellular Downlinks

Ivan Fernandez Corbaton, Qualcomm Incorporated (Germany); Christoph Joetten, Qualcomm Incorporated (Germany)

11:30-11:50 Estimation of Input-Decision Correlation (IDC) for Block-Iterative Generalized Decision Feedback Equalizer

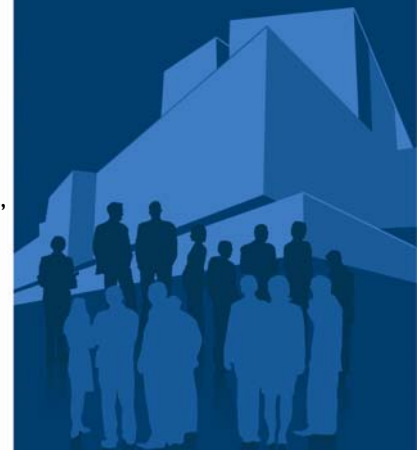
Eng Yeow Cheu, Institute for Infocomm Research (Singapore); Ying Chang Liang, Institute for Infocomm Research (Singapore)

11:50-12:10 Filter Bank Based Frequency-Domain Equalization with Noise Prediction

Yuan Yang, Tampere University of Technology (Finland); Mika Rinne, Nokia Research Center (Finland); Markku Renfors, Tampere University of Technology (Finland)

12:10-12:30 A Complexity Reduced Blind Channel Equalization Scheme for OFDM Systems

Wei Li, Southeast university, Nanjing, Jiangsu P.R. (P.R.China); Haifeng Wang, Nokia, 7FL, Shanghai Bund Center (Finland)



Session: TF9 - SDR & Cognitive Radio III

Time: Thu 14 Sept 13:40-15:20

Place: Conference room 21

Chair: Ari Pouttu, Centre for Wireless Communications, University of Oulu (Finland)

13:40-14:00 Military Applications of Software Radio Technology (INVITED PRESENTATION)

Topi Tuukkanen, Finnish Defense Forces CIS Centre, Finland

14:00-14:20 An Optimal Architecture for a Multi-Standard Reconfigurable Radio: A Network Theory Re-Formulation

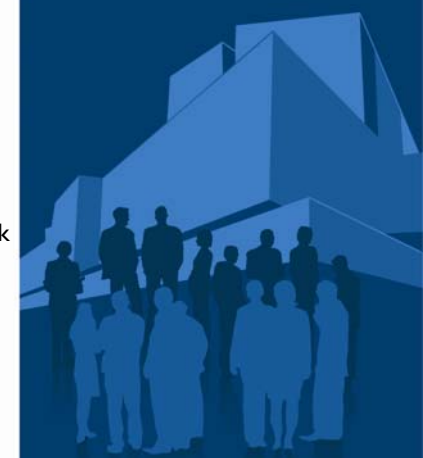
Virgilio Rodriguez, Supelec (France); Christophe Moy, Supelec (France); Jacques Palicot, Supelec (France)

14:20-14:40 Soft-prioritization Based System Selection Strategy for Software Defined Radio in Heterogeneous Networks

Tomoya Tandai, Toshiba (Japan); Toshihisa Nabetani, Toshiba (Japan); Kiyoshi Toshimitsu, Toshiba (Japan); Takafumi Sakamoto, Toshiba (Japan)

14:40-15:00 FALCON, A Software Defined Radio Transceiver Concept

Peter Jung, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Alexander Vießmann, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Tobias Scholand, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Arjang Hessamian-Alinejad, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Admir Burnic, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Christoph Spiegel, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Andreas Waadt, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Guido H. Bruck, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany)



Session: TF10 - Interference Cancellation II

Time: Thu 14 Sept 16:00-17:20

Place: Conference room 21

Chair: Harold Elders-Boll, Cologne University Of Applied Sciences (FH Koeln) (Germany)

- 16:00-16:20 **Capacity and Asymptotic User Capacity of a Multiservice CDMA Uplink with Successive Interference Cancellation**
Stefan Ataman, ETIS-CNRS-UCP 8051 (France); Armelle Wautier, SUPELEC, Departement de Telecommunications (France)
- 16:20-16:40 **Joint Multiuser Detection and Cancellation of Nonlinear Distortion Effects for the Uplink of MC-CDMA Systems**
Paulo Dinis, IST (Portugal); Rui Dinis, ISR-IST (Portugal)
- 16:40-17:00 **A Very Near Optimum Interference Cancellation Algorithm for CDMA Signals**
Ebrahim Karami, University of Tehran (Iran)
- 17:00-17:20 **An Equalization-Interference Cancellation Receiver for Multicode CDMA**
Boon Sim Thian, Institute for Infocomm Research (Singapore); Yuhong Wang, Singapore Technologies Electronics (Singapore); Tjeng Thiang Tjhung, Institute for Infocomm Research (Singapore); Lawrence W.C Wong, Institute for Infocomm Research (Singapore)



Session: TGI - MIMO Techniques I

Time: Tue 12 Sept 11:10-12:50

Place: Congress Hall A

Chair: Tad Matsumoto, Centre for Wireless Communications, University of Oulu (Finland)

- 11:10-11:30 **Comparison of Adaptive MIMO OFDM Schemes for 3G LTE**
Nenad Veselinovic, Elektrobit Ltd. (Finland); Markku Juntti, CWC (Finland)
- 11:30-11:50 **Performance Evaluation of 8x8 Multi-User MIMO-OFDM Testbed in an Actual Indoor Environment**
Kentaro Nishimori, NTT Corporation (Japan); Riichi Kudo, NTT Corporation (Japan); Yasushi Takatori, NTT Corporation (Japan); Atsushi Ohta (Japan); Koichi Tsunekawa, NTT Corporation (Japan)
- 11:50-12:10 **Relationship Between Capacity and Pathloss for Indoor MIMO Channels**
Jesper Ødum Nielsen, Aalborg University, Dept. of Communication Technology (Denmark); Jørgen Bach Andersen, Aalborg University, Dept. of Communication Technology (Denmark); Gerhard Bauch, DoCoMo Euro-Labs (Germany); Markus Herdin, DoCoMo Euro-Labs (Germany)
- 12:10-12:30 **A Low-Complexity SDMA Grouping Strategy for the Downlink of Multi-User MIMO Systems**
Tarcisio Maciel, Darmstadt University of Technology (Germany); Anja Klein, Darmstadt University of Technology (Germany)
- 12:30-12:50 **Impact of Feedback Delay on Rate Adaptation for Multiple Antenna Systems**
Daniel V.P. Figueiredo, Aalborg University (Denmark); Elisabeth de Carvalho, Aalborg University (Denmark); Luc Deneire, Aalborg University (Denmark); Ramjee Prasad, Aalborg University (Denmark)



Session: TG2 - MIMO Techniques II

Time: Tue 12 Sept 14:00-15:40

Place: Congress Hall A

Chair: Chandra Athaudage, University of Melbourne (Australia)

- 14:00-14:20 **Cooperative MIMO Relaying with Distributed Space-Time Block Codes**
Timo Unger, Darmstadt University of Technology (Germany); Anja Klein, Darmstadt University of Technology (Germany)
- 14:20-14:40 **Experimental Evaluation of Transmit Antenna Selection Implemented in FPGA for Eigenbeam MIMO-OFDM**
Takeshi Onizawa, NTT Corporation (Japan); Atsushi Ohta, NTT Corporation (Japan); Yusuke Asai, NTT Corporation (Japan); Satoru Aikawa, NTT Corporation (Japan)
- 14:40-15:00 **Soft Handover in Adaptive MIMO-OFDM Cellular System with Cooperative Processing**
Antti Tölli, CWC, Univ. of Oulu (Finland); Marian Codreanu, CWC, Univ. of Oulu (Finland); Markku Juntti, CWC, Univ. of Oulu (Finland)
- 15:00-15:20 **MIMO Broadcast Communications using Block Diagonal Uniform Channel Decomposition (BD-UCD)**
Shaowei Lin, Institute for Infocomm Research (Singapore); Winston Ho, Institute for Infocomm Research (Singapore); Ying-Chang Liang, Institute for Infocomm Research (Singapore)
- 15:20-15:40 **Block-Diagonal Geometric Mean Decomposition (BD-GMD) for Multiuser MIMO Broadcast Channels**
Shaowei Lin, Institute for Infocomm Research (Singapore); Winston Ho, Institute for Infocomm Research (Singapore); Ying-Chang Liang, Institute for Infocomm Research (Singapore)



Session: TG3 - MIMO Techniques III

Time: Tue 12 Sept 16:20-18:00

Place: Congress Hall A

Chair: Ernesto Zimmerman, TU Dresden (Germany)

- 16:20-16:40 **Low-Complexity Detection Exploiting Subcarrier Correlation in Multi-Layer STBC OFDM**
Ming Lei, National Institute of Information and Communications Technology (NICT) (Japan); Hiroshi Harada, National Institute of Information and Communications Technology (NICT) (Japan)
- 16:40-17:00 **Remote Control of Transmit Beamforming in TDD/MIMO Systems**
Yoshitaka Hara, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (France); Kazuyoshi Oshima, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (France)
- 17:00-17:20 **Unitary Matrix Design via Genetic Search for Differential Space-Time Modulation and Limited Feedback Precoding**
Alireza Ghaderipoor, University of Alberta (Canada); Mahdi Hajiaghayi, University of Alberta (Canada); Chintha Tellambura, University of Alberta (Canada)
- 17:20-17:40 **Optimal MIMO-OFDM Loading with Power-Constrained Antennas**
Brian Krongold, University of Melbourne (Australia)
- 17:40-18:00 **Random Beamforming with Systematic Beam Selection**
Jörg Wagner, Institute for Infocomm Research (Singapore); Ying-Chang Liang, Institute for Infocomm Research (Singapore); Rui Zhang, Stanford University (USA)



Session: TG4 - MIMO-OFDM Systems I

Time: Wed 13 Sept 11:10-12:50

Place: Congress Hall A

Chair: Seichi Sampei, Graduate School of Engineering, Osaka University (Japan)

- 11:10-11:30 **Space-Time-Frequency Coded MIMO-OFDM System: Achieving Full-Diversity Invariant to Channel Variations**
Chao-Cheng Tu, McGill University (Canada)
- 11:30-11:50 **A Comparison of DFT and SVD Based Channel Estimation in MIMO OFDM Systems**
Peter Hammarberg, Lund University (United Kingdom); Ove Edfors, Lund University (Sweden)
- 11:50-12:10 **Experimental Analysis of MIMO-OFDM Transmission with MMSE Interference Canceller**
Yuichi Kakishima, Tokyo Institute of Technology (Japan); Hai Doan Le, Tokyo Institute of Technology (Japan); See Ho Ting, Tokyo Institute of Technology (Japan); Kei Sakaguchi, Tokyo Institute of Technology (Japan); Kiyomichi Araki, Tokyo Institute of Technology (Japan)
- 12:10-12:30 **Preamble Structure for MIMO-OFDM WLAN Systems based on IEEE 802.11a**
Tsuguhide Aoki, Mobile communication laboratory, Corporate R&D center, Toshiba corporation (Japan); Yoshimasa Egashira, Mobile communication laboratory, Corporate R&D center, Toshiba corporation (Japan); Daisuke Takeda, Mobile communication laboratory, Corporate R&D center, Toshiba corporation (Japan)
- 12:30-12:50 **Iterative Receiver for MIMO Systems with Hybrid Detector**
Sangheon Kim, Yonsei University (Korea, South); Chungyong Lee, Yonsei University (Korea, South)



Session: TG5 - MIMO-OFDM Systems II

Time: Wed 13 Sept 14:00-15:40

Place: Congress Hall A

Chair: Ove Edfors, Lund University (Sweden)

- 14:00-14:20 **A Receive Antenna Selection for MIMO-OFDM System**
Quoc Tuan Tran, Osaka University (Japan); Shinsuke Hara, Osaka City University (Japan); Atsushi Honda, Fujitsu Limited (Japan); Yuuta Nakaya, Fujitsu Limited (Japan); Ichirou Ida, Fujitsu Limited (Japan); Yasuyuki Oishi, Fujitsu Limited (Japan)
- 14:20-14:40 **Tensor-Based Space-Time Multiplexing Codes for MIMO-OFDM Systems With Blind Detection**
André Lima Férrer de Almeida, Laboratoire I3S/ Université de Nice-Sophia Antipolis (France); Gérard Favier, Laboratoire I3S/ Université de Nice-Sophia Antipolis (France); Charles Casimiro Cavalcante, Wireless Telecom Research Group (GTEL) / Federal University of Ceara (Brazil); João Cesar Mota, Wireless Telecom Research Group (GTEL) / Federal University of Ceara (Brazil)
- 14:40-15:00 **Lattice Reduction Based Detection Algorithms in High Correlated MIMO-OFDM System**
Xiaojia Lu, Center for Wireless Communication, Oulu University (Finland); Pirkka Silvola, Center for Wireless Communication, Oulu University (Finland); Markku Juntti, Center for Wireless Communication, Oulu University (Finland)
- 15:00-15:20 **A Wireless MIMO STC OFDM System Implementation**
Sandrine Boumard, VTT (Finland); Matti Weissenfelt, VTT (Finland); Huageng Chi, VTT (Finland); Jari Nurmi, Elektrobit (Finland)
- 15:20-15:40 **Optimal Chunk Processing For Multi-User MIMO OFDM Wireless Systems**
Eduard Jorswieck, Fraunhofer Institute for Telecommunications (Germany); Walid Ben Chamekh, Technical University of Berlin (Germany); Martin Weckerle, Siemens AG Communications (Germany)

Session: TG6 - MIMO Scheduling

Time: Wed 13 Sept 16:20-18:00

Place: Congress Hall A

Chair: Edward Jorswieck, School of Electrical Engineering, EE (Sweden)

- 16:20-16:40 **Up-link Channel Allocation Strategies for CDMA-based Multi-user MIMO Systems**
Tariq Al-Khasib, University of British Columbia (Canada); Lutz Lampe, University of British Columbia (Canada); Hussein Alnuweiri, University of British Columbia (Canada)
- 16:40-17:00 **Simplification of Transmit Resource Control in E-SDM with Adaptive Modulation**
Toshihiko Nishimura, Hokkaido University (Japan); Yasuo Hata, Hokkaido University (Japan); Takeo Ohgane, Hokkaido University (Japan); Yasutaka Ogawa, Hokkaido University (Japan)
- 17:00-17:20 **Uplink Spatial Scheduling with Adaptive Transmit Beamforming in Multiuser MIMO Systems**
Yoshitaka Hara, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (ITE) (France); Loic Brunel, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (ITE) (France); Kazuyoshi Oshima, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (ITE) (France)
- 17:20-17:40 **Downlink Spatial Scheduling with Mutual Interference Cancellation in Multiuser MIMO Systems**
Yoshitaka Hara, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (ITE) (France); Loic Brunel, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (ITE) (France); Kazuyoshi Oshima, MITSUBISHI ELECTRIC Information Technology Centre Europe B.V. (ITE) (France)
- 17:40-18:00 **Dynamic Transmit Power Allocation Scheme for Space-Time Turbo Trellis Codes with Partial CSI Feedback**
James Kingsley Anthony Allan, University of Sydney (Australia); Yonghui Li, University of Sydney (Australia); Agus Santoso, University of Sydney (Australia); Branka Vucetic, University of Sydney (Australia)



Session: TG7 - MIMO Algorithms

Time: Thu 14 Sept 8:30-10:10

Place: Congress Hall A

Chair: Tad Matsumoto, Centre for Wireless Communications, University of Oulu (Finland)

- 8:30- 8:50 **Krylov Subspace Method Based Low-Complexity MIMO Multi-User Receiver for Time-Variant Channels**
Charlotte Dumard, ftw. Forschungszentrum Telekommunikation Wien (Austria); Thomas Zemen, ftw. Forschungszentrum Telekommunikation Wien (Austria)
- 8:50-9:10 **ML Time-Frequency Synchronization for MIMO-OFDM Systems in Unknown Frequency Selective Fading Channels**
Amir Saemi, University of Limoges/ENSIL (France); Vahid Meghdadi, University of Limoges/ENSIL (France); Jean Pierre Cances, University of Limoges/ENSIL (France); Mohammad Reza Zahabi, University of Limoges/ENSIL (France); Jean Michel Dumas, University of Limoges/ENSIL (France)
- 9:10-9:30 **Performance Evaluation of Layered Space-Frequency Equalization with Iterative Cancellation**
Amane Inoue, Tokyo University of Science (Japan); Tomoaki Ohtsuki, Department of Information and Computer Science, Keio University (Japan)
- 9:30-9:50 **Lower Bound on Probability of Error of Alamouti ST-Coded OFDM Systems With Frequency Offset**
Chandra Athaudage, The University of Melbourne (Australia); Satha Sathananthan, NEC Australia (Australia)
- 9:50-10:10 **Performance Investigation of Distributed STBC-OFDM System with Multiple Carrier Frequency Offsets**
Wenshu Zhang, Huazhong University of Science and Technology (China); Daiming Qu, Huazhong University of Science and Technology (China); Guangxi Zhu, Huazhong University of Science and Technology (China)



Session: TG8 - MIMO Techniques IV

Time: Thu 14 Sept 10:50-12:10

Place: Congress Hall A

Chair: Chandra Athaudage, University of Melbourne (Australia)

- 10:50-11:10 **Layered Space-Time Coding for 3xn Transmit Antenna Communication Systems**
Guillaume Ferré, ENSIL University of Limoges (France); Jean Pierre Cances, ENSIL University of Limoges (France); Vahid Meghdadi, ENSIL University of Limoges (France); Jean Michel Dumas, ENSIL University of Limoges (France); Amir Saemi, ENSIL University of Limoges (France)
- 11:10-11:30 **A Near Optimal Performance Based Receive Antenna Selection Algorithm for MMSE V-BLAST System**
Di Lu, School of Electrical and Electronic Engineering, University of Manchester (United Kingdom); Daniel K. C. So, School of Electrical and Electronic Engineering, University of Manchester (United Kingdom)
- 11:30-11:50 **On The Probability of Adaptation Error in MIMO Systems**
Ping-Heng Kuo, Electrical & Computer Engineering, University of Canterbury (New Zealand); Peter Smith, Electrical & Computer Engineering, University of Canterbury (New Zealand)
- 11:50-12:10 **An Improved Detection Based on Lattice Reduction in MIMO Systems**
Xinglin Wang, Beijing University of Posts and Telecommunications (China); Zhiqiang He, Beijing University of Posts and Telecommunications (China); Kai Niu, Beijing University of Posts and Telecommunications (China); Weilin Wu, Beijing University of Posts and Telecommunications (China); Xin Zhang, Network Management Center, Hubei Mobile Communication CO.LTD (China)



Session: TG9 - MIMO Techniques V

Time: Thu 14 Sept 13:40-15:00

Place: Congress Hall A

Chair: Holger Claussen, Bell Labs Wireless Research, Lucent Technologies (United Kingdom)

- 13:40-14:00 **On Closely Coupled Dipoles with Load Matching in a Random Field**
Buon Kiong Lau, Department of Electrosience, Lund University (Sweden); Jørgen Bach Andersen, Department of Communications Technology, Aalborg University (Denmark)
- 14:00-14:20 **Adaptive vs. Hybrid Iterative MIMO Receivers Based on MMSE Linear and Soft-SIC Detection**
Ernesto Zimmermann, TU Dresden, Vodafone Chair (Germany); Gerhard Fettweis, TU Dresden, Vodafone Chair (Germany)
- 14:20-14:40 **On the Implementation of Regular Spatial Sampling (RSS) Beamforming for UMTS LCR-TDD**
Peter Jung, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Arjang Hessamian-Alinejad, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Achim Seebens, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Guido H. Bruck, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany)
- 14:40-15:00 **Detection Scheme of Orthogonal Space-Time Block Codes over Time-Selective Fading Channels**
Donghun Yu, Seoul National University (Korea)



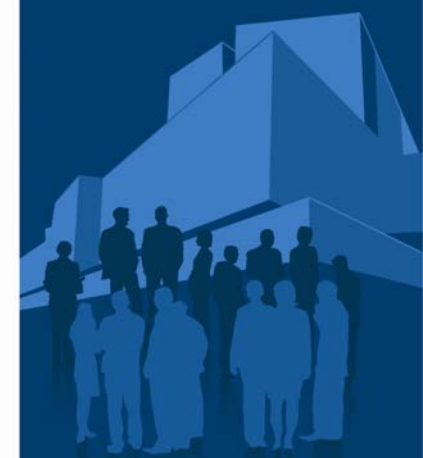
Session: TG10 - MIMO Techniques VI

Time: Thu 14 Sept 16:00-17:40

Place: Congress Hall A

Chair: Hiroshi Kubo, Mitsubishi Electric Corp. (Japan)

- 16:00-16:20 **Fixed-Beam MIMO Scheme**
Juha Ylitalo, University of Oulu (Finland)
- 16:20-16:40 **Linear MMSE Multi-User MIMO Downlink Precoding for Users with Multiple Antennas**
Bernd Bandemer, Nokia Research Center (Finland); Martin Haardt, Ilmenau University of Technology (Germany);
Samuli Visuri, Nokia Research Center (Finland)
- 16:40-17:00 **Adaptive Antenna Arrays for Spatial Multicarrier Access**
Diakoumis Gerakoulis, GD-AIS (USA); George Eftymoglou, Department of Digital Systems, University of Piraeus
(Greece)
- 17:00-17:20 **Enhanced Partial Update Beamforming for Closed Loop MIMO Systems**
Eduardo Zacarias, SPL/TKK (Finland); Stefan Werner, SPL/TKK (Finland); Risto Wichman, SPL/TKK (Finland)
- 17:20-17:40 **Receive Antenna Subsets Selection Based on Orthogonal Components**
Peng Lan, Shandong University (China)



Session: TH1 - Modulation & Coding I

Time: Tue 12 Sept 11:10-12:30

Place: Conference room 24

Chair: Helmut Rohling, Hamburg University of Technology (Germany)

- 11:10-11:30 **Filter-Bank Based Technique for Fast Acquisition of Galileo and GPS Signals**
Elena Simona Lohan, Tampere University of Technology (Finland)
- 11:30-11:50 **Effect of Phase Noise on Spectral Efficiency for UTRA Long Term Evolution**
Basuki Endah Priyanto, Dept. of Communication Technology, Aalborg University (Denmark); Christian Rom, Dept. of Communication Technology, Aalborg University (Denmark); Carles Navarro, Dept. of Communication Technology, Aalborg University (Denmark); Troels B. Sørensen, Dept. of Communication Technology, Aalborg University (Denmark); Preben Mogensen, Dept. of Communication Technology, Aalborg University (Denmark); Ole Kiel Jensen, Dept. of Communication Technology, Aalborg University (Denmark)
- 11:50-12:10 **A Study on Likelihood Estimation Method Taking Account of Mutual Information in Multi-Level Symbol
~ A Proposal of Twin Turbo Decoder ~**
Noriaki Miyazaki, KDDI R&D Laboratories (Japan); Yasuyuki Hatakawa, KDDI R&D Laboratories (Japan); Toshiaki Yamamoto, KDDI R&D Laboratories (Japan); Hiroyasu Ishikawa, KDDI R&D Laboratories (Japan); Toshinori Suzuki, KDDI R&D Laboratories (Japan)
- 12:10-12:30 **Robust ML Detection Algorithm for MIMO Receivers in Presence of Channel Estimation Error**
Ahmad A Farhoodi, Dept. of Elec. and Electronics Eng., Shiraz University (Iran); Mehrzad Biguesh, Dept. of Elec. and Electronics Eng., Shiraz University (Iran)



Session: TH2 - UWB Techniques I

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 24

Chair: Jari Linatti, Center for Wireless Communications, University of Oulu (Finland)

- 14:00-14:20 **Experimental Analysis of the Ultra Wideband Propagation Channel over the 3.1 GHz - 10.6 GHz Frequency Band**
Pascal Pagani, France Telecom Research and Development Division (France); Patrice Pajusco, France Telecom Research and Development Division (France)
- 14:20-14:40 **MIMO UWB Communications Using Modified Hermite Pulses**
Chadi Abou-Rjeily, CEA-LETI (France); Norbert Daniele, CEA-LETI (France); Jean-Claude Belfiore, ENST-Paris (France)
- 14:40-15:00 **Pulse Shaping in UWB Systems Using Semidefinite Programming with Non-Constant Upper Bounds**
Christian R. Berger, Universitaet Karlsruhe (Germany); Michael Eisenacher, Universitaet Karlsruhe (Germany); Holger Jaekel, Universitaet Karlsruhe (Germany); Friedrich Jondral, Universitaet Karlsruhe (Germany)
- 15:00-15:20 **Capacity Evaluation of UWB Systems in Indoor Environment**
Annalisa Durantini, RadioLabs (Italy); Romeo Giuliano, RadioLabs (Italy); Franco Mazzenga, University of Rome Tor Vergata (Italy)
- 15:20-15:40 **Simple Multiuser Detectors for DS-UWB Systems**
Chandrashekhar Thejaswi PS, Senior Engineer, HTSL, (India); Manohar Shamaiah, Senior Engineer, HTSL, (India); Viswanath Ganapathy, Principal Engineer, HTSL, (India); Ranjeet Patro, Senior Engineer, HTSL, (India); Manik Raina, Senior Principal Engineer, HTSL, (India)



Session: TH3 - Modulation & Coding II

Time: Tue 12 Sept 16:20-18:00

Place: Conference room 24

Chair: Markku Juntti, Centre for Wireless Communications, University of Oulu (Finland)

- 16:20-16:40 **Multi-Rate High-Throughput LDPC Decoder: Tradeoff Analysis between Decoding Throughput and Area**
Predrag Radosavljevic, Rice University (USA); Alexandre de Baynast, Rice University (USA); Marjan Karkooti, Rice University (USA); Joseph Cavallaro, Rice University (USA)
- 16:40-17:00 **Rate-Compatible Puncturing for Finite-Length Low-Density Parity-Check Codes with Zigzag Parity Structure**
Song-Nam Hong, Samsung Electronics (Korea, South); Jaeweon Cho, Samsung Electronics (Korea, South); DS Park, Samsung Electronics (Korea, South)
- 17:00-17:20 **Error Correction in Impulsive Noise Environments by Applying Turbo Codes**
Peter Jung, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Admir Burnic, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Arjang Hessamian-Alinejad, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Tobias Scholand, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Thomas E. Faber, European Patent Office (Netherlands); Guido H. Bruck, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany)
- 17:20-17:40 **Extended Mappings for Bit-Interleaved Coded Modulation**
Patrick Henkel, Munich University of Technology (TUM) (Germany)
- 17:40-18:00 **Throughput of WLAN Systems with LDPC Codes and Adaptive Bit Loading**
Andrey Belogolov, Intel Corporation (Russia); Mikhail Yu. Lyakh, Intel Corporation (Russia); Oleg Semenov, Intel Corporation (Russia); Andrei Ovchinnikov, State University of Airspace Instrumentation (Russia)



Session: TH4 - UWB Synchronization & Channel Estimation

Time: Wed 13 Sept 11:10-12:50

Place: Conference room 24

Chair: Pekka Ranta, Nokia Research Center (Finland)

- 11:10-11:30 **Channel Estimation Algorithms Comparison for Multiband-OFDM**
Raffaello Tesi, Centre for Wireless Communications (Finland); Matti Hämäläinen, Centre for Wireless Communications (Finland); Jari Linatti, Centre for Wireless Communications (Finland)
- 11:30-11:50 **Data-Aided Timing Acquisition in UWB Differential Transmitted Reference Systems**
Gustave Franck Tchere, Center for Sensorsystems / University of Siegen (Germany)
- 11:50-12:10 **GML TOA Estimation based on Low Complexity UWB Energy Detection**
Alberto Rabbachin, University of Oulu, CWC (Finland); Ian Oppermann, University of Oulu (Finland); Benoit Denis, CEA-LETI (France)
- 12:10-12:30 **Modelling and Simulation of a Non-coherent IR UWB Transceiver Architecture with TOA estimation**
Lucian Stoica, Centre for Wireless Communications (Finland); Ian Oppermann, Centre for Wireless Communications (Finland)
- 12:30-12:50 **Time-Hopping Multicarrier Code-Division Multiple-Access: System Outline and Performance**
Lie-Liang Yang, University of Southampton (United Kingdom)



Session: TH5 - Modulation & Coding III

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 24

Chair: Pål Orten, Nera SatCom AS (Norway)

- 14:00-14:20 **A Performance Improved Iterative Channel Code Decoder for High Order Modulation Signals**
Xiaoyong Yu, Motorola, Inc. (USA)
- 14:20-14:40 **Comparison of DVB-H Link Layer FEC Decoding Strategies in a Mobile Fading Channel**
Heidi Himmanen, Turku Center for Computer Science, University of Turku (Finland); Ali Hazmi, Institute of Communications Engineering, Tampere University of Technology (Finland); Jarkko Paavola, Turku Center for Computer Science, University of Turku (Finland)
- 14:40-15:00 **Efficient and Fast Tracking Algorithm for Minor Component Analysis**
Steve Bartelmaos, ENST-Paris, TSI Department (France); Karim Abed-Meraim, ENST-Paris, TSI Department (France); Samir Attallah, NUS university, Dept. of Elec. & Comp. Eng. (Singapore)
- 15:00-15:20 **Sub-optimal Soft-output MAP Detector with Lattice Reduction in MIMO-OFDM System**
Pirkka Silvola, Centre for Wireless Communications (Finland); Kari Hooli, Centre for Wireless Communications (Finland); Markku Juntti, Centre for Wireless Communications (Finland)
- 15:20-15:40 **Perturbed Decoding Algorithm for Concatenated Error Correcting and Detecting Codes System**
Kai-ting Shih, Graduate Institute of Communication Engineering, Department of Electrical Engineering, National Taiwan University. (Taiwan); Da-shan Shiu, Graduate Institute of Communication Engineering, Department of Electrical Engineering, National Taiwan University. (Taiwan)



Session: TH6 - UWB Techniques II

Time: Wed 13 Sept 16:20-17:40

Place: Conference room 24

Chair: Mischa Dohler, France Telecom (France)

16:20-16:40 Frequency and Bandwidth Dependency of UWB Propagation Channels

Suiyan Geng, Radio Laboratory of Helsinki University of Technology (Finland); Pertti Vainikainen, Radio Laboratory of Helsinki University of Technology (Finland)

16:40-17:00 A New Self Organized Clustering Scheme for Hierarchical TH-PPM UWB Wireless Ad Hoc Networks

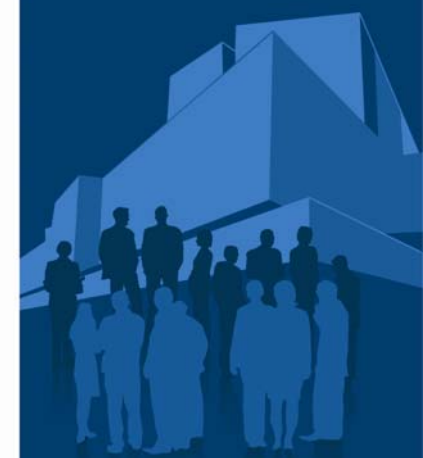
Yang Liu, The University of Hong Kong (Hong Kong); Yu Kwong Kwok, The University of Hong Kong (Hong Kong)

17:00-17:20 Performance Evaluation of Optimized Medium Access Control Schemes based on Ultra Wideband Technology

Vanni Bacci, University of Florence (Italy); Francesco Chiti, University of Florence (Italy); Simone Morosi, University of Florence (Italy); Jussi Haapola, Centre for Wireless Communications (Finland); Zach Shelby, Centre for Wireless Communications (Finland)

17:20-17:40 Energy Consumption of Beacon Period Extension and Contraction in Distributed Medium Access Control

Leonardo Goratti, Centre for Wireless Communications (CWC) (Finland); Ulrico Celentano, Centre for Wireless Communications (CWC) (Finland); Juha Salokannel, Nokia Research Center (Finland)



Session: TH7 - Modulation & Coding IV

Time: Thu 14 Sept 8:30-9:50

Place: Conference room 24

Chair: Giovanni Corazza, DEIS/ARCES - University of Bologna (Italy)

- 8:30- 8:50 **Wireless Channel Access through Jointly Formed Signal Constellations**
Gill Rafael Tsouri, Ben Gurion University (Israel); Dov Wulich, Ben Gurion University (Israel)
- 8:50-9:10 **Performance of Bayesian Estimation based Variable Rate Variable Power MQAM System**
Lay Teen Ong, Cardiff University (UK); Sangarapillai Lambotharan, Cardiff University (UK); Jonathon A. Chambers, Cardiff University (UK); Mohammad Shikh-Bahaei (UK)
- 9:10-9:30 **Improving Object Delivery Using Application Layer Tornado Codes in DVB-H Systems**
Kristian Nybom, Departement of Information Technologies, Åbo Akademi Univeristy (Finland); Janne Kempe, Departement of Information Technologies, Åbo Akademi Univeristy (Finland); Jerker Björkqvist, Departement of Information Technologies, Åbo Akademi Univeristy (Finland)
- 9:30-9:50 **Applying Zero-Crossing Demodulation to the Bluetooth Enhanced Data Rate Mode**
Peter Jung, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Tobias Scholand, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Admir Burnic, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Christoph Spiegel, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Andreas Waadt, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany); Arjang Hessamian-Alinejad, Universität Duisburg-Essen, Lehrstuhl für Kommunikationstechnik (Germany)



Session: TH8 - NEWCOM Special Session on UWB

Time: Thu 14 Sept 10:50-12:30

Place: Conference room 24

Chair: Jocelyn Fiorina, Supélec (France)

- 10:50-11:10 **Analysis of Hybrid Acquisition Schemes for Ultra Wide Band Impulse Radio**
Luca Reggiani, Politecnico di Milano (Italy); Jocelyn Fiorina, Supelec (Ecole Supérieure d' Electricité) (France)
- 11:10-11:30 **Time-Frequency Channel Estimation for MB-OFDM UWB Systems**
Florent Munier, Chalmers University of Technology (sweden); Thomas Eriksson, Chalmers University of Technology (Sweden)
- 11:30-11:50 **On the Comparison between Pulse Repetition and Cyclic Prefix Communication Techniques in Impulse Radio UWB Systems**
Simone Morosi, University of Firenze - CNIT (Italy); Tiziano Bianchi, University of Firenze - CNIT (Italy)
- 11:50-12:10 **On the Benefit of a One-Bit Sampling Receiver and Hard Decoding in Impulse Radio Ultra Wide Band Communications with Multi-User Interferences**
Jocelyn Fiorina, Supélec (France)
- 12:10-12:30 **Time-Frequency Codes for Multiband UWB with Polarization Diversity**
Lorenzo Mucchi, university of florence - CNIT (italy); Fabrizio Argenti, university of florence - CNIT (italy); Luca Ronga, university of florence - CNIT (italy); Tiziano Bianchi, university of florence - CNIT (italy)



Session: TH9 - Modulation & Coding V

Time: Thu 14 Sept 13:40-15:00

Place: Conference room 24

Chair: Gerd Ascheid, RWTH Aachen University (Germany)

- 13:40-14:00 **Diversity Combining with Up-Link Power Control**
Sung Sik Nam, TAMU (USA); Mohamed-Slim Alouini, TAMU-Q (Qatar); Khalid Qaraqe, TAMU-Q (Qatar)
- 14:00-14:20 **Performance of Enhanced PSM/CSK System Using Quadriphase E-Sequences**
Fumie Ono, Tokyo University of Science (Japan); Hiromasa Habuchi, Ibaraki University (Japan); Kouji Ohuchi, Shizuoka University (Japan)
- 14:20-14:40 **New Construction of Rate-Compatible Block-Type Low-Density Parity-Check Codes Using Splitting**
Hyeong-Gun Joo, hanyang university (Korea,south); Song-Nam Hong, samsung electronics co (Korea,south); Dong-Joon Shin, hanyang university (Korea,south)
- 14:40-15:00 **Combined Power Allocation and Coding for Compressed Image Transmission**
Mohamed El-Tarhuni, American University of Sharjah (UAE); Akram Bin Sediq, American University of Sharjah (UAE)



Session: TH10 - UWB Techniques III

Time: Thu 14 Sept 16:00-17:20

Place: Conference room 24

Chair: Mohammed Abdel-Hafez, United Arab Emirates University (United Arab Emirates)

- 16:00-16:20 **UWB Transmitted Reference Receivers in the Presence of Co-Channel Interference**
Thomas Zasowski, Communication Technology Laboratory, ETH Zurich (Switzerland); Armin Wittneben,
Communication Technology Laboratory, ETH Zurich (Switzerland)
- 16:20-16:40 **Pulse-Coded Orthogonal PPM for Non-Coherent Receivers in Low-Data-Rate UWB Communications**
Xiaoli Chu, King's College London (UK); Junsheng Liu, King's College London (UK); Mohammad Ghavami, King's
College London (UK)
- 16:40-17:00 **Cellular Topology and Outage Evaluation for DS-UWB System with Correlated Lognormal Multipath
Fading**
Pekka Pirinen, University of Oulu, Centre for Wireless Communications (Finland)
- 17:00-17:20 **Bluetooth Host Protocol Usage over the Ultra Wideband Radio**
Arto Palin, NRC (Finland); Jukka Reunamäki (Finland); Juha Salokannel (Finland); Jussi Ylänen (Finland)



Session: T11 - Channel Modeling I

Time: Tue 12 Sept 11:10-12:50

Place: Conference room 26

Chair: Pertti Vainikainen, Helsinki University of Technology (Finland)

- 11:10-11:30 **The Large Office Environment-Measurement and Modeling of the Wideband Radio Channel**
Jørgen Bach Andersen, Aalborg University (Denmark); Jesper Ødum Nielsen, Aalborg University (Denmark); Gerhart Bauch, DoCoMo Euro-Labs (Germany); Markus Herdin, DoCoMo Euro-Labs (Germany)
- 11:30-11:50 **MIMO-Capacities for Broadband In-Room Quasi-Deterministic Line-Of-Sight Radio Channels Derived from Measurements**
Andreas Knopp, University of the Bundeswehr Munich, Institute for Communications Engineering (Germany); Mohamed Chouayakh, University of the Bundeswehr Munich, Institute for Communications Engineering (Germany); Berthold Lankl, University of the Bundeswehr Munich, Institute for Communications Engineering (Germany); Robert Schwarz, Munich University of the German Federal Armed Forces, Department of Electrical and Electronics Engineering (Germany); Berthold Lankl, Munich University of the German Federal Armed Forces, Department of Electrical and Electronics Engineering (Germany)
- 11:50-12:10 **Design of the Digital Block of a Hardware Simulator for MIMO Radio Channels**
Sylvie Picol, IETR / INSA de Rennes (France); Gheorghe Zaharia, IETR / INSA de Rennes (France); Dominique Houzet, IETR / INSA de Rennes (France); Ghâis El Zein, IETR / INSA de Rennes (France)
- 12:10-12:30 **MIMO Channel Measurements and Analysis with Prototype User Devices in a 2GHz Urban Cell**
Mythri Hunukumbure, University of Bristol (U.K.); Mark Beach, University of Bristol (U.K.)
- 12:30-12:50 **Wideband Directional Radio Propagation Channel Analysis inside an Arched Tunnel**
Gilbert Siy Ching, Tokyo Institute of Technology (Japan); Mir Ghoraiishi, Tokyo Institute of Technology (Japan); Navarat Lertsirisopon, Tokyo Institute of Technology (Japan); Jun-ichi Takada, Tokyo Institute of Technology (Japan); Tetsuro Imai, NTT DoCoMo Inc. (Japan); Itoji Sameda, Japan Highway Public Corporation (Japan); Hironori Sakamoto, Highway Telecom Engineering Co., Ltd (Japan)

Session: T12 - OFDM Techniques I

Time: Tue 12 Sept 14:00-15:40

Place: Conference room 26

Chair: Markku Renfors, Tampere University of Technology (Finland)

- 14:00-14:20 **Adaptive Beamforming and Modulation for OFDM in Co-working WLANs with ACK Eigen-steering**
Wibowo Hardjawana, The University of Sydney (Australia); Branka Vucetic, The University of Sydney (Australia); Abbas Jamalipour, The University of Sydney (Australia)
- 14:20-14:40 **Effects of Time Synchronization on OFDM Systems over Time-varying Channels**
Alessio Filippi, Philips Research (Netherlands); Sri Andari Husen, Philips Research (Netherlands); Paul van Voorthuisen, Philips Research (Netherlands)
- 14:40-15:00 **Dynamic Subcarrier Reuse with Rate Guaranty in a Downlink Multicell OFDMA System**
Carle Lengoumbi, Telecom-Paris (France); Philippe Godlewski, Telecom-Paris (France); Philippe Martins, Telecom-Paris (France)
- 15:00-15:20 **Joint Adaptation of Code Length and Modulation Formats in OFDM Systems**
Peter Trifonov, Saint-Petersburg State Polytechnic University (Russia); Elena Costa, Siemens AG (Germany); Egon Schulz, Siemens AG (Germany)
- 15:20-15:40 **Resource Allocation in Multicell OFDM Systems based on Noncooperative Game**
Lan Wang, Siemens Ltd. China (China); Yisheng Xue, Siemens Ltd. China; Egon Schulz, Siemens AG



Session: T13 - MIMO Capacity

Time: Tue 12 Sept 16:20-17:20

Place: Conference room 26

Chair: Simone Morosi, CNIT - University of Firenze (Italy)

16:20-16:40

Optimized Serially-Concatenated LDGM and Alamouti codes for approaching MIMO capacity

Miguel González-López, Universidad de A Coruña (Spain); Francisco-J. Vázquez-Araújo, Universidad de A Coruña (Spain); Luis Castedo, Universidad de A Coruña (Spain); Javier Garcia-Frias, University of Delaware (USA)

16:40-17:00

Weighted Sum MSE Minimization for MIMO Broadcast Channel

Marian Codreanu, Centre for Wireless Communications, University of Oulu (Finland); Antti Tolli, Centre for Wireless Communications, University of Oulu (Finland); Markku Juntti, Centre for Wireless Communications, University of Oulu (Finland); Matti Latva-aho, Centre for Wireless Communications, University of Oulu (Finland)

17:00-17:20

Capacity Evaluation of Various Multiuser MIMO Schemes in Downlink Cellular Environments

Jingon Joung, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Eun Yong Kim, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Sung Hoon Lim, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Yong-Up Jang, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Won-Yong Shin, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Sae-Young Chung, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Joohwan Chun, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea); Yong H. Lee, Korea Advanced Institute of Science and Technology (KAIST) (Republic of Korea)

Session: T14 - Channel Estimation

Time: Wed 13 Sept 11:10-12:30

Place: Conference room 26

Chair: Hans-Jurgen Zepernick, Blekinge Institute of Technology (Sweden)

- 11:10-11:30 **Adaptive Subspace Iterative Information Measure Directed Synchronization in MIMO Channel**
Jan Sykora, Czech Technical University in Prague (Czech Republic); Jan Vcelak, Czech Technical University in Prague (Czech Republic)
- 11:30-11:50 **Iterative Channel Estimation for Orthogonal STBC MC-CDMA Systems over Realistic High-mobility MIMO Channels**
Fabrice Portier, IETR / INSA (France); Stephan Sand, DLR (German Aerospace Center) (Germany); Jean-Francois Helard, IETR / INSA (France)
- 11:50-12:10 **An Enhanced DFT-based Channel Estimation Using Virtual Interpolation with Guard Bands Prediction for OFDM**
Jeong-Wook Seo, Korea Electronics Technology Institute (Korea); Jung-Wook Wee, Korea Electronics Technology Institute (Korea); Won-Gi Jeon, Korea Electronics Technology Institute (Korea); Jong-Ho Paik, Korea Electronics Technology Institute (Korea); Dong-Ku Kim, Yonsei University (Korea)
- 12:10-12:30 **Iterative Channel Estimation for multiuser OFDM Systems in The Presence of Power Amplifier Nonlinearities**
Fernando Gregorio, Helsinki University of Technology (Finland); Stefan Werner, Helsinki University of Technology (Finland); Juan Cousseau, Universidad Nacional del Sur (Argentina); Timo Laakso, Helsinki University of Technology (Finland)



Session: T15 - Channel Modeling II

Time: Wed 13 Sept 14:00-15:40

Place: Conference room 26

Chair: Juha Ylitalo, Centre for Wireless Communications, University of Oulu (Finland)

14:00-14:20 **Space-Time Correlated MIMO Mobile-to-Mobile Channels**

Alenka Zajic, Georgia Institute of Technology (USA); Gordon Stuber, Georgia Institute of Technology (USA)

14:20-14:40 **A Statistical Analysis of Indoor Multipath Fading for a Narrowband Wireless Body Area Network**

Simon Cotton, The Queen's University of Belfast (UK); William Scanlon, The Queen's University of Belfast (UK)

14:40-15:00 **A Simplified Approach to Applying the 3GPP Spatial Channel Model**

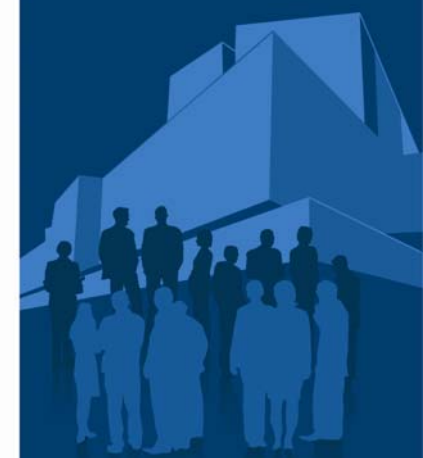
Henrik Asplund, Ericsson (Sweden); Jonas Medbo, Ericsson (Sweden); Bo Göransson, Ericsson (Sweden); Jonas Karlsson, Ericsson (Sweden); Johan Sköld, Ericsson (Sweden)

15:00-15:20 **Weak NLOS Signal Measurement Using Millimetre Wave Nulling Interferometry**

Aziz Benlarbi-Delai, University of Lille IEMN-CNRS 8520 (France); Michael Bocquet, University of Lille IEMN-CNRS 8520 (France); Christophe Loyez, University of Lille IEMN-CNRS 8520 (France)

15:20-15:40 **Performance Analysis of Partially Coherent Frequency Selective Channels with Doppler Shift**

Mahmoud Smadi, The Hashemite University (Jordan)



Session: TI6 - Simulation and Modelling

Time: Wed 13 Sept 16:20-18:00

Place: Conference room 26

Chair: Peter Jung , Fraunhofer German-Sino Lab for Mobile Communications - MCI (Germany)

16:20-16:40

ANN Prediction Models for Outdoor Environment

Ileana Popescu, National Technical University of Athens (Greece); Dimitris Nikitopoulos, National Technical University of Athens (Greece); Ioan Naornita, Politehnica University of Timisoara (Romania); Philip Constantinou, National Technical University of Athens (Greece)

16:40-17:00

PHY Level Modelling for Network Simulations: Strategies, Approximations and Costs

Gianni Pasolini, IEIT-CNR/University of Bologna (Italy); Alessandro Bazzi, IEIT-CNR/University of Bologna (Italy)

17:00-17:20

MIMO Link Modeling for System Level Simulations

Jelena Mirkovic, ComNets, RWTH Aachen University (Germany); Georgios Orfanos, ComNets, RWTH Aachen University (Germany); Hans-Jürgen Reuerman, Philips Research Laboratories Aachen (Germany)

17:20-17:40

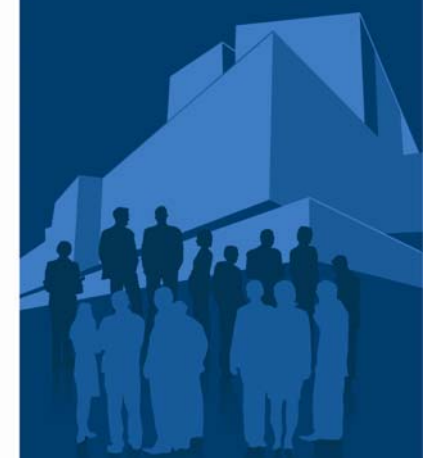
Burst Channel with Interference

Olli Piirainen, Nokia Networks (Finland)

17:40-18:00

Performance of Kronecker MIMO Radio Channel Model in Urban Microcells

Abdulla A. Abouda, Helsinki University of Technology (Finland); Hassan M. El-Sallabi, Helsinki University of Technology (Finland); Lasse Vuokko, Helsinki University of Technology (Finland); Sven G. Häggman, Helsinki University of Technology (Finland)



Session: T17 - OFDM Techniques II

Time: Thu 14 Sept 8:30-10:10

Place: Conference room 26

Chair: Nenad Vecelinovic, Elektrobit Ltd (Finland)

- 8:30- 8:50 **Different OFDM Link Level Performance under the Presence of Co-Channel Interference and Noise**
Carsten Ball, SIEMENS AG (Germany); Eduard Humburg, SIEMENS AG (Germany); Franz Treml, SIEMENS AG (Germany)
- 8:50-9:10 **Achievable Data Rate of Wideband OFDM with Data-Aided Channel Estimation**
Niels Hadaschik, Institute for Integrated Signal Processing Systems, RWTH Aachen University (Germany); Gerd Ascheid, Institute for Integrated Signal Processing Systems, RWTH Aachen University (Germany); Heinrich Meyr, Institute for Integrated Signal Processing Systems, RWTH Aachen University (Germany)
- 9:10-9:30 **Variable Guard Interval Orthogonal Frequency Division Multiplexing in Dynamic Channel Condition**
Suvra Das, Aalborg University, TCS (Denmark)
- 9:30-9:50 **OFDM Power Ratio Reduction using Invertible Clipping**
Salvatore Ragusa, FranceTelecom R&D, Meylan (France); Jacques Palicot, IETR/Supelec Rennes (France); Christian Lereau, FranceTelecom R&D, Meylan (France)
- 9:50-10:10 **Low-Complexity OFDM System with High Mobility using DAPSK Schemes**
Nico Toender, Hamburg University of Technology (Germany); Sebastian Georgi, Hamburg University of Technology (Germany); Hermann Rohling, Hamburg University of Technology (Germany)



Session: TI8 - Channel Modeling III

Time: Thu 14 Sept 10:50-12:30

Place: Conference room 26

Chair: Joergen Bach Andersen, Aalborg University (Denmark)

- 10:50-11:10 **Full Channel Correlation Matrix of a Time-Variant Wideband Spatial Channel Model**
Hui Xiao, THE DEPARTMENT OF ELECTRONICS, THE UNIVERSITY OF YORK (United Kingdom); Alister Burr, THE DEPARTMENT OF ELECTRONICS, THE UNIVERSITY OF YORK (United Kingdom)
- 11:10-11:30 **Statistics of the Ricean K-Factor at 5.2 GHz in an Urban Macro-Cell Scenario**
Lars Thiele, Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut (Germany); Michael Peter, Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut (Germany); Volker Jungnickel, Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut (Germany)
- 11:30-11:50 **Angle of Arrival Extended S-V Model for the 60 GHz Wireless Desktop Channel**
Chang Liu, Department of Electrical and Electronic Engineering, University of Melbourne (Australia); Efstratios Skafidas, National ICT Australia (Australia); Tony Pollock, National ICT Australia (Australia); Rob Evans, National ICT Australia (Australia)
- 11:50-12:10 **Empirical Characteristic Function Based Estimation of Multiple Scattering Channel Parameters**
Jari Salo, Helsinki University of Technology (Finland); Jan Eriksson, Helsinki University of Technology (Finland); Visa Koivunen, Helsinki University of Technology (Finland); Pertti Vainikainen, Helsinki University of Technology (Finland)
- 12:10-12:30 **Impact of People Movement on Received Signal in Fixed Indoor Radio Communications**
Abdur Rahim, Communication Laboratory (Germany); Sven Zeisberg, Communication Laboratory (Germany); Llanos Fernandez, Communication Laboratory (Germany); Adolf Finger, Head of the Communication Theory Laboratory (Germany)



Session: T19 - Channel Modeling IV

Time: Thu 14 Sept 13:40-15:20

Place: Conference room 26

Chair: Pertti Vainikainen, Helsinki University of Technology (Finland)

- 13:40-14:00 **Impact of the Change of the Propagation Coefficient at the Break Point on Fixed Channel Assignment for GSM Networks**
Teun M.J. van Berkel, Eindhoven University of Technology (The Netherlands); Raul Chavez-Santiago, Ben-Gurion University of the Negev (Israel); Vladimir Lyandres, Ben-Gurion University of the Negev (Israel); Matti H.A.J. Herben, Eindhoven University of Technology (The Netherlands)
- 14:00-14:20 **Wideband Analysis of Coupled Reverberation Chambers for Testing MIMO Systems**
Olivier Delangre, Université Libre de Bruxelles (Belgium); Philippe De Doncker, Université Libre de Bruxelles (Belgium); Martine Lienard, Université des sciences et technologies de Lille (France); Pierre Degauque, Université des sciences et technologies de Lille (France)
- 14:20-14:40 **Modeling of Line-of-Sight 2x2 MIMO channels: Spherical versus Plane Waves**
Frode Bøhagen, Nera (Norway); Pål Orten, Nera (Norway); Geir E. Øien, NTNU (Norway)
- 14:40-15:00 **Indoor, Rural and Suburban Channel Models and Parameters for B3G Link and System Level Simulations**
Xiongwen Zhao, Elektrobit Testing Ltd. (Finland); Pekka Kyösti, Elektrobit Testing Ltd. (Finland); Lassi Hentilä, Elektrobit Testing Ltd. (Finland); Tommi Jämsä, Elektrobit Testing Ltd. (Finland); Juha Meinilä, Elektrobit Testing Ltd. (Finland); Daniela Laselva, Elektrobit Testing Ltd. (Finland); Jukka-Pekka Nuutinen, Elektrobit Testing Ltd. (Finland)
- 15:00-15:20 **Geometric Run Length Packet Channel Models Applied in DVB-H Simulations**
Jussi Henrikki Poikonen, Graduate School in Electronics, Telecommunications and Automation (GETA) (Finland)

Session: T110 - Frequency Synchronization

Time: Thu 14 Sept 16:00-17:20

Place: Conference room 26

Chair: Jari Linatti, Center for Wireless Communications, University of Oulu (Finland)

- 16:00-16:20 **A Frequency Offset Recovery Algorithm for Crystal-less Transmitters**
Emanuele Lopelli, Eindhoven University of Technology, MsM Group (Netherlands); Johan van der Tang, ItoM and University of Twente (Netherlands); Arthur van Roermund, Eindhoven University of Technology, MsM Group (Netherlands)
- 16:20-16:40 **Blind Frequency Estimation for Short 16 QAM Radio Burst**
Michel Terré, CNAM (France); Luc Féty, CNAM (France); Nicolas Paul, CNAM (France)
- 16:40-17:00 **A Novel Blind Integer CFO Estimator for OFDM Systems**
Hai Lin, Osaka Prefecture University (Japan); H.M.S.B. Senevirathna, Osaka Prefecture University (Japan); Katsumi Yamashita, Osaka Prefecture University (Japan)
- 17:00-17:20 **Low-complexity CFO Compensation for Uplink OFDMA Systems**
Chao-Yuan Hsu, Department of Communication Engineering, National Chiao Tung University (Taiwan); Wen-Rong Wu, Department of Communication Engineering, National Chiao Tung University (Taiwan)



Session: TJI - MIMO Techniques

Time: Wed 13 Sept 11:10-12:50

The Capacity Evaluation of WLAN MIMO System with Multi-Element Antennas and Maximal Ratio Combining

Pawel Kulakowski, AGH - University of Science and Technology (Poland); Wieslaw Ludwin, AGH - University of Science and Technology (Poland)

Experimental Performance Results of Adaptive Antenna Array System at Base and Mobile Stations in Mobile Environment

Kenta Okino, Yokohama R&D Center, Kyocera Corporation (Japan); Chiharu Yamazaki, Yokohama R&D Center, Kyocera Corporation (Japan); Masanori Kato, Yokohama R&D Center, Kyocera Corporation (Japan); Fangwei Tong, Yokohama R&D Center, Kyocera Corporation (Japan); Tohru Sunaga, Yokohama R&D Center, Kyocera Corporation (Japan); Shigeru Kimura, Yokohama R&D Center, Kyocera Corporation (Japan)

Low Complexity Unitary Differential Space-Time Modulation with Spherical Code

Chau Yuen, Institute for Infocomm Research (Singapore); Yong Liang Guan, Nanyang Technological University (Singapore); Tjeng Thiang Tjhung, Institute for Infocomm Research (Singapore)

Multiple-QR-Decomposition Assisted Group Detection for Reduced-Complexity-and-Latency MIMO-OFDM Receivers

Ryota Kimura, National Institute of Information and Communications Technology / Graduate School of Global Information and Telecommunication Studies, Waseda University (Japan); Ryuhei Funada, National Institute of Information and Communications Technology (Japan); Hiroshi Harada, National Institute of Information and Communications Technology (Japan); Shigeru Shimamoto, Graduate School of Global Information and Telecommunication Studies, Waseda University (Japan)

A Novel Automatic Cluster Tracking Algorithm

Nicolai Czink, Forschungszentrum Telekommunikation Wien (Austria); Giovanni Del Galdo, Communications Research Lab, University of Ilmenau (Germany); Christoph Mecklenbräuker, Forschungszentrum Telekommunikation Wien (Austria)

Hybrid MIMO Transceiver Scheme with Antenna Allocation and Partial CSI at Transmitter Side

Walter Freitas, Nokia Technology Institute (Brazil); Francisco Cavalcanti, Wireless Telecom Research Group (Brazil); Renato Lopes, Communications Department, State University of Campinas (Brazil)

Layer Error Characteristics of Lattice-Reduction Aided V-BLAST Detectors

Tien Duc Nguyen, The University of Electro-Communications (Japan); Xuan Nam Tran, The University of Electro-Communications (Japan); Tadashi Fujino, The University of Electro-Communications (Japan)

A Design method of Single Carrier Spatio-Temporal MIMO Systems with Reduced Computational Cost

Tetsuki Taniguchi, The University of Electro-Communications (Japan); Nordin Bin Ramli, The University of Electro-Communications (Japan); Yoshio Karasawa, The University of Electro-Communications (Japan)

Research on Modified Structure of Turbo-BLAST System

Rui Wang, Beijing University of Posts and Telecommunications (China)

Adaptive Beam Selection Techniques for Opportunistic Beamforming

Jose Vicario, CTTC (Spain); Roberto Bosisio, Politecnico di Milano (Italy); Umberto Spagnolini, Politecnico di Milano (Italy); Carles Anton-Haro, CTTC (Spain)

Adaptive Beamforming and Spatial Multiplexing of Unicast and Multicast Services

Yuri Silva, Darmstadt University of Technology (Germany); Anja Klein, Darmstadt University of Technology (Germany)

A Broadband Wireless MIMO-OFDM Demonstrator. Design and Measurement Results

Lluís M. Ventura, Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) (Spain); Xavier Nieto, Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) (Spain); Jean-Philippe Grégoire, Agilent Technologies SA/NV (Belgium); Wouter De Win, Agilent Technologies SA/NV (Belgium); Nico Lugal, Agilent Technologies SA/NV (Belgium)

Outage Probability Analysis of a Multi-user MIMO Wireless Communication System with Space-Time Block Coding

Batu Krishna Chalise, University Duisburg-Essen, Department of Communication Systems (Germany); Andreas Czulwik, University Duisburg-Essen, Department of Communication Systems (Germany)

Performance of Downlink Spatial-Multiplexing in Urban Macrocellular Multi-User MIMO Scenarios

Thomas Fügen, Universität Karlsruhe (TH), Institut für Höchstfrequenztechnik und Elektronik (Germany); Malgorzata Porebska, Universität Karlsruhe (TH), Institut für Höchstfrequenztechnik und Elektronik (Germany); Werner Wiesbeck, Universität Karlsruhe (TH), Institut für Höchstfrequenztechnik und Elektronik (Germany)

2-D Unitary ESPRIT Based Joint AOA and AOD Estimation for MIMO System

Honglei Miao, Elektrobit Ltd. (Finland); Markku Juntti, Centre for Wireless Communication (Finland); Kegen Yu, CSIRO (Australia)

Spatial Correlation and Eigenvalue Statistics Investigation of Wideband MIMO Channel Measurements

Attaphongse Taparugssanagorn, Centre for Wireless Communications (Finland); Tommi Jamsa, Elektrobit Testing Ltd, Oulu (Finland); Juha Ylitalo, Centre for Wireless Communications (Finland)

Session: TJ2 - Multicarrier CDMA

Time: Wed 13 Sept 14:00-15:40

Performance Analysis for PAPR Reduction by Stochastic HNN With Soft Decision Feedback

Haiming Wang, Nokia (China Research Center) (China); Wujie Hu, Beijing University of Post and Telecommunication (China)

Partitioned-SLM Scheme with Low Complexity for PAPR Reduction of OFDM Signals

Suckchell Yang, School of Electronic Engineering, Soongsil University (Korea, South); Yoan Shin, School of Electronic Engineering, Soongsil University (Korea, South)

Walsh Hadamard Transform precoded MB-OFDM: An Improved High Data Rate Ultrawideband System

Brian Gaffney, UCD, Dublin (Ireland); Anthony Fagan, UCD, Dublin (Ireland)

A Genetic Algorithm-Assisted Semi-Adaptive MMSE Multi-User Detection for MC-CDMA Mobile Communication Systems

Claudio Sacchi, University of Trento - DIT (Italy); Leandro D'Orazio, University of Trento - DIT (Italy); Massimo Donelli, University of Trento - DIT (Italy); Riccardo Fedrizzi, University of Trento - DIT (Italy); Francesco De Natale, University of Trento - DIT (Italy)

Impact of Carrier Phase Jitter on OFDMA Systems

Eric Simon, France Telecom (France); Rodolphe Legouable, France Telecom (France); Maryline Héland (France)

Peak-to-average Power Ratio of Single Carrier FDMA Signals with Pulse Shaping

Hyung Myung, Polytechnic University (USA); Junsung Lim, Polytechnic University (USA); David Goodman, Polytechnic University (USA)

Performance Analysis of Oversaturated Collaboratively Coded Group Orthogonal CDMA in AWGN Channel

Jarkko Paavola, Turku Centre for Computer Science (TUUS) (FINLAND)

MC-CDMA Based Architecture for the downlink of Infrastructure WLANs

Carlos Adrian Gutierrez Diaz de Leon, Universidad Politecnica de Cataluña (Spain); Jaime Sanchez Garcia, CICESE Research Center (Mexico); Margarita Cabrera Bean, Universidad Politecnica de Cataluña (Spain); Luis Alberto Gutierrez Diaz de Leon, Universidad de Guadalajara (Mexico)

Transmit Diversity Schemes for MIMO-OFDM Based Wireless LAN Systems

Yan Wu, Institute for Infocomm Research (Singapore); Sumei Sun, Institute for Infocomm Research (Singapore); Yuan Li, Institute for Infocomm Research (Singapore); Yingchang Liang, Institute for Infocomm Research (Singapore)

Detection of DS-SS Signals over Fading Channels without Prior Knowledge of Spreading Sequence by Measuring of Signal Nongaussianity

Siavash Ghavami, Iran University of Science and Technology (Iran); Bahman Abolhassani, Iran University of Science and Technology (Iran)

Research on Threshold Adjustment Algorithm in Adaptive Modulation and Coding

Chen Fan, Beijing University of Posts and Telecommunications (China)

Subcarrier Phase Hopping MIMO-OFDM Transmission Employing Enhanced Selected Mapping for PAPR Reduction

Satoshi Suyama, Tokyo Institute of Technology (Japan); Naoji Nomura, Tokyo Institute of Technology (Japan); Hiroshi Suzuki, Tokyo Institute of Technology (Japan); Kazuhiko Fukawa, Tokyo Institute of Technology (Japan)

Analysis of Packet Compensation Protocols with MCS/CDMA for Local Broadcasting Services

Kouichirou Hashiura, Ibaraki University (Japan); Hiromasa Habuchi, Ibaraki University (Japan)

Low Complexity Detections for Downlink MIMO MC-CDMA Systems

Yusung Lee, Information and Communications University (Korea, South); Hyuncheol Park, Information and Communications University (Korea, South)

Adaptive Provision of CSI Feedback in OFDMA Systems

Megumi Kaneko, Aalborg University (Denmark); Petar Popovski, Aalborg University (Denmark); Hiroyuki Yomo, Aalborg University (Denmark)

A Cluster-based MC-CDMA System for Up-link Transmission

Goupil Alban, DéCom/CRéSTIC (FRANCE); Colas Maxime, DéCom/CRéSTIC (FRANCE); Gelle Guillaume, DéCom/CRéSTIC (FRANCE)

Reuse Distance for an OFDMA-Based Cellular System

Romeo Giuliano, University of Rome Tor Vergata, RadioLabs (Italy); Pierpaolo Loreti, University of Rome Tor Vergata (Italy); Franco Mazzenga, University of Rome Tor Vergata (Italy); Cristiano Monti, University of Rome Tor Vergata (Italy)

A Simple Adaptive Beamforming Algorithm for CDMA Wireless Communication Systems

Farhad Tavassoli, Iran university of science and technology (Iran); Bahman Abolhassani, Iran university of science and technology (Iran); Homayoon Oraizi, Iran university of science and technology (Iran)

Efficient Spreading Code Allocation Strategy for a Downlink MC-CDMA System in a Time Varying Frequency Selective Channel

Elghazi Hassan, TELECOM LILLE1 (France); Garnier Christelle, TELECOM LILLE1 (France); Delignon Yves, TELECOM LILLE1 (France)

Impulse Symbol Based Channel Estimation in OFDM Systems

Namseok Chang, Information and Communications University (Korea, South); Joonhyuk Kang, Information and Communications University (Korea, South)

Session: TJ3 - Receiver Algorithms

Time: Wed 13 Sept 16:20-18:00

MIMO-OFDM based Evolution Schemes for DPC-OF/TDMA

Ming Lei, National Institute of Information and Communications Technology (NICT) (Japan); Hiroshi Harada, National Institute of Information and Communications Technology (NICT) (Japan)

Multuser Detection in MIMO DS-CDMA Systems over Slow-Fading Channels

Mohamed Aljerjawi, Concordia University (Canada); Walaa Hamouda, Concordia University (Canada)

Iterative Decoding with Blind Channel Estimation in a SIMO FIR Channel

Manjeet Singh, Institute for Incomm Research (Singapore); KY Sam, Institute for Incomm Research (Singapore)

List Sphere Decoding Combined with Linear Detection-based Iterative Soft Interference Cancellation via EXIT Chart

Xinglin Wang, Beijing University of Posts and Telecommunications (China); Kai Niu, Beijing University of Posts and Telecommunications (China); Zhiqiang He, Beijing University of Posts and Telecommunications (China); Weiling Wu, Beijing University of Posts and Telecommunications (China); Xin Zhang, Beijing University of Posts and Telecommunications (China)

Capacity Improvement with Interference Cancellation in the WCDMA Enhanced Uplink

Carmela Cozzo, Ericsson Research (USA); Y.-P. Eric Wang, Ericsson Research (USA)

Performance Analysis of Different Reed-Solomon Erasure Decoding Strategies at the DVB-H Link Layer

Tero Jokela, University of Turku (Finland); Jarkko Paavola, University of Turku (Finland); Heidi Himmanen, University of Turku (Finland); Valery Ipatov, University of Turku (Finland)

Single Carrier Block Transmission without Guard Interval

Kazunori Hayashi, Kyoto University (Japan); Hideaki Sakai, Kyoto University (Japan)

Interference Suppression for Measured Radio Channel Data at 2.45 GHz

Johanna Vartiainen, Centre for Wireless Communications (Finland); Mikko Alatossava, Centre for Wireless Communications (Finland); Janne Lehtomäki, Centre for Wireless Communications (Finland); Harri Saarnisaari, Centre for Wireless Communications (Finland)

Synthesis of Multisequences Having Unknown Elements in the Middle with Decoding Applications

Jianwen Zhang, Electrical and Computer Engineering, National University of Singapore (Singapore); Marc Armand, Electrical and Computer Engineering, National University of Singapore (Singapore)

Pulse Shaping Schemes for Cyclostationarity-Exploiting Partially Coordinated Spectrum Sharing

Anass Benjebbour, NTT DoCoMo, Inc. (Japan); Takahiro Asai, NTT DoCoMo, Inc. (Japan); Hitoshi Yoshino, NTT DoCoMo, Inc. (Japan)

Algorithms of Linear Prediction for Non-Stationary Rayleigh Channel

Arkadiusz Trojanowski, Institute of Radioelectronics (Poland); Jacek Wojciechowski, Institute of Radioelectronics (Poland)

A High Performance Frequency Offset Estimator for OFDM Systems Based on a Special Preamble

Yun Wu, Department of Electric Engineering (China); Hanwen Luo, Department of Electric Engineering (China); Ming Ding, Department of Electric Engineering (China); Renmao Liu, Shanghai Sharp Advanced R&D Centre (China)

Asynchronous Multiuser Performance Analysis of Differential Frequency Hopping System

Zhi Chen, University of Electronic Science and Technology of China (China)

Selection Diversity for Bluetooth in the Presence of IEEE802.11g Interference

Barbara Masini, WiLab, IEIT-BO/CNR, University of Bologna (Italy); Davide Dardari, WiLab, IEIT-BO/CNR, University of Bologna (Italy); Andrea Conti, WiLab, ENDIF, University of Ferrara (Italy); Gianni Pasolini, WiLab, IEIT-BO/CNR, University of Bologna (Italy)

An Enhanced MAP-DFE Multiuser Detection Technique for Uplink MC-CDMA Systems

Yi Yuan, France Telecom, division R&D/RESA/MNA (France)

Single Carrier Modulation with Frequency Domain Equalization for Intensity Modulated-Direct Detection Channels with Intersymbol Interference

Chia-chen Hsieh, Graduate Institute of Communication Engineering, Department of Electrical Engineering, NTU (Taiwan); Da-shan Shiu, Graduate Institute of Communication Engineering, Department of Electrical Engineering, NTU (Taiwan)

Enhanced UMTS Cellular Planning for Multiple Traffic Classes in Offices Scenarios

Orlando Cabral, IT-DEM/University of Beira Interior (Portugal); G. Hadjipollas, University of Cyprus (Cyprus); M. Stylianou, University of Cyprus (Cyprus); J. Antoniou, University of Cyprus (Cyprus); V. Vassiliou, University of Cyprus (Cyprus); A. Pitsillides, University of Cyprus (Cyprus); Fernando J. Velez, IT-DEM/University of Beira Interior (Portugal)

Capacity of DS-CDMA versus TH-PPM for Multi-User Ultra-Wideband Systems

Mohammed Abdel-Hafez, United Arab Emirates University (United Arab Emirates); Fatih Alagöz, Bogazici University (Turkey)

The Performance of Soft Macrodiversity Based on Maximal-Ratio Combining in Uncorrelated Rician Fading

Philippe Leroux, Université Laval (Canada); Sébastien Roy, Université Laval (Canada); Jean-Yves Chouinard, Université Laval (Canada)

Session: TJ4 - Other Air-Interference Techniques

Time: Thu 14 Sept 08:30-11:10

Throughput Improvement via Smart Antenna and Link Adaptation Scheme for IEEE 802.11A Systems

Rong-Terng Juang, Institute of Computer and Communication, National Taipei University of Technology (Taiwan); Hsin-Piao Lin, Institute of Computer and Communication, National Taipei University of Technology (Taiwan); Ding-Bing Lin, Institute of Computer and Communication, National Taipei University of Technology (Taiwan)

A Low Power Transmitter for Phase-Shift Keying Modulation Schemes

Jaewon Lee, Korea Advanced Institute of Science and Technology (KAIST) (South Korea); Seonghwan Cho, Korea Advanced Institute of Science and Technology (KAIST) (South Korea)

The Design and Decoding Schemes for Shortened Turbo Product Codes

Changlong Xu, Institute for Infocomm Research (Singapore); Ying-Chang Liang, Institute for Infocomm Research (Singapore); Wing Seng Leon, Institute for Infocomm Research (Singapore)

Distributed Space-Time Coding with Ultra-Wideband Systems

Chadi Abou-Rjeily, CEA-LETI (France); Norbert Daniele, CEA-LETI (France); Jean-Claude Belfiore, ENST-Paris (France)

A Power Control Method for Channel Non-Reciprocity Compensation in Hybrid Duplexing

Hiroyuki Yomo, CTIF, Aalborg University (Denmark); Ragnar V. Reynisson, CTIF, Aalborg University (Denmark)

An AM-STC(Adaptive Modulation & Space-Time Coding) scheme for future MIMO systems

Chunlin Yan, DoCoMo Beijing Communications Laboratories Co., Ltd (china); Zhan Zhang, DoCoMo Beijing Communications Laboratories Co., Ltd (china); Hidetoshi Kayama, DoCoMo Beijing Communications Laboratories Co., Ltd (china)

Open Wireless Software Radio on Common PC

Kan Zheng, France Telecom R&D center(Beijing) (China)

Implementation of 324Mbit/sec WLAN Equipment

Hiroshi Oguma, Tohoku university (Japan); Hiroyuki Nakase, Tohoku university (Japan); Suguru Kameda, Tohoku university (Japan); Kazuo Tsubouchi, Tohoku university (Japan); Mari Ochiai, Mitsubishi Electric Corporation (Japan); Yukimasa Nagai, Mitsubishi Electric Corporation (Japan); Akinori Fujimura, Mitsubishi Electric Corporation (Japan); Yoji Isota, Mitsubishi Electric Corporation (Japan); Fumio Ishizu, Mitsubishi Electric Corporation (Japan)

Higher Order Impulsive Signals for UWB Communications

Simone Morosi, University of Firenze (Italy); Dania Marabissi, University of Firenze (Italy); Jocelyn Fiorina, SUPELEC (France)

A Low-Complexity Synchronization Scheme for OFDM Systems

Chao Wei, Nokia (China) Research Center (China)

Energy-Efficient and MUI-Free Synchronization for UWB based WSNs

Ruoju Liu, Beijing University of Posts and Telecommunications (China); Jianhua Zhang, Beijing University of Posts and Telecommunications (China); Lei Jiang, Beijing University of Posts and Telecommunications (China); Miao Pan, Beijing University of Posts and Telecommunications (China); Xinying Gao, Beijing University of Posts and Telecommunications (China); Ping Zhang, Beijing University of Posts and Telecommunications (China)

Comparative Studies of MB-OFDM and DS-UWB with Co-existing Systems in AWGN Channel

Harri Viittala, University of Oulu/ Centre for Wireless Communications (Finland); Matti Hämäläinen, University of Oulu/ Centre for Wireless Communications (Finland); Jari Linatti, University of Oulu/ Centre for Wireless Communications (Finland)

Analysis of Consecutive Idle Time Slots in Mobile Networks

Carlos M. Ramírez Casañas, Technical University of Catalonia (Spain); Josep Paradells Aspas, Technical University of Catalonia (Spain); Sònia P. Mansilla, Technical University of Catalonia (Spain)

OFDM-UWB Physical Layer Emulation for Event-based MAC Simulation

Sebastian Max, Chair of Communication Networks, Faculty 6, RWTH Aachen University (Germany); Yunpeng Zang, Chair of Communication Networks, Faculty 6, RWTH Aachen University (Germany); Hans-Jürgen Reuerman, Philips Research Aachen (Germany)

Performance Analysis of Diversity Techniques for Multihop Cooperative Networks with Adaptive Transmission

Bao Thi Ngoc Pham, Tokyo Institute of Technology (Japan); Hidekazu Murata, Tokyo Institute of Technology (Japan); Kiyomichi Araki, Tokyo Institute of Technology (Japan)

Bit and Packet Error Rates for Ad hoc Networks Based on IR-UWB Signals Up Converted to 60 GHz

Hamza El Ghannudi, IEMN DHS-CSAM (France); Laurent Clavier, GET INT ENIC (France); Adel Bendjaballah, IEMN DHS-CSAM (France); Paul Alain Rolland, IEMN DHS-CSAM (France)

Ultra Wideband Communication System as Sensor Technology for 3D Mapping

Viktoria Pammer, Graz University of Technology (Austria); Klaus Witrals, Graz University of Technology (Austria)

On the Range Performance of Decode-and-Forward Relays in IEEE 802.11 WLANs

Azadeh Etefagh, ETH Zurich (Switzerland); Marc Kuhn, ETH Zurich (Switzerland); Ingmar Hammerström, ETH Zurich (Switzerland); Armin Wittneben, ETH Zurich (Switzerland)

Adaptive Modulation Technique for cooperative diversity in Wireless Fading Channels

Ehsan Yazdian, Sharif University of Technology (Iran); Mohammad Reza Pakravan, Sharif University of Technology (Iran)

PER Analysis and Performance Evaluation of DS-SS UWB Networks

Floriano De Rango, University of Calabria (Italy); Peppino Fazio, University of Calabria (Italy); Fiore Veltri, University of Calabria (Italy); Salvatore Marano, University of Calabria (Italy)

Session: TJS - Radio Resource Management

Time: Thu 14 Sept 10:50-12:30

Study on Network Selection for Next-Generation Heterogeneous Wireless Networks

Huiling Jia, Institute of Information and Communication Engineering, Zhejiang University (China); Zhaoyang Zhang, Institute of Information and Communication Engineering, Zhejiang University (China); Peng Cheng, Institute of Information and Communication Engineering, Zhejiang University (China); Hsiao-Hwa Chen, Institute of Communications Engineering, National Sun Yat-Sen University (Taiwan); Shiju Li, Institute of Information and Communication Engineering, Zhejiang University (China)

QoS-based Vertical Handoff Decision Algorithm in Heterogeneous Systems

Dongyeon Lee, Information and Communications University (Korea); Younghan Han, Information and Communications University (Korea); Jinyup Hwang, Information and Communications University (Korea)

A Channel-State Aware Scheduling Mechanism for Wireless Local Area Networks

Xinyun Zhou, Institute of Software, Chinese Academy of Science (China); Jianwei Niu, Beihang University (China); Limin Sun, Institute of Software, Chinese Academy of Science (China); Lingzhi Sheng, Institute of Software, Chinese Academy of Science (China)

A New Framework for Proportional Fair Scheduling and Its Application to the Downlink of CDMA Wireless Networks

Jaehwi Shin, Korea Telecom (Korea, South); Younghan Han, Information and Communications University (Korea, South); Youngwoo Lee, Korea Telecom (Korea, South)

Access Selection with Anticipatory Vertical Handover for Multi-Access Networks

Vicente A. de Sousa Jr., Federal University of Ceara (Brazil); R. A. de O. Neto, Federal University of Ceara (Brazil); F. de S. Chaves, Federal University of Ceara (Brazil); L. S. Cardoso, Federal University of Ceara (Brazil); F. R. P. Cavalcanti, Federal University of Ceara (Brazil)

MAP Multiplexing in IEEE 802.16 Mobile Multi-hop Relay

Haruki Izumikawa, KDDI R&D Laboratories Inc. (Japan); Kenji Saito, KDDI R&D Laboratories Inc. (Japan); Naoki Fuke, KDDI R&D Laboratories Inc. (Japan); Tetsuro Ueda, KDDI R&D Laboratories Inc. (Japan); Keizo Sugiyama, KDDI R&D Laboratories Inc. (Japan)

The Effects of Antenna Orientation Errors on UMTS Network Performance

Esmael Dinan, Bechtel Telecommunications (USA); Aleksey Kurochkin, Bechtel Telecommunications (USA)

A Novel Wireless Modulation Technique for Inter-Standard Communications

Abdel Bekkaoui, University of Twente (Netherlands); Jaap Haartsen, University of Twente (University of Twente)

An Algorithm for UMTS Padding Optimization

Eduardo Vale, Universidade Federal Fluminense (Brazil); João Célio Barros Brandão, Pontifícia Universidade Católica do Rio de Janeiro (Brazil); Marco Grivet, Pontifícia Universidade Católica do Rio de Janeiro (Brazil)

The Modified Proportional Fair Scheduler

Kinda Khawam, GET/ENST - Telecom Paris (France)

Effect of Introducing Predictive CIR on Throughput Performance in HSDPA Networks

Yan Zhang, Dept. of computer science and electronics, Kyushu Institute of Technology (Japan); Masato Uchida, Network design research center, Kyushu Institute of Technology (Japan); Masato Tsuru, Network design research center, Kyushu Institute of Technology (Japan); Yuji Oie, Network design research center, Kyushu Institute of Technology (Japan)

On Deploying Repeaters in CDMA Systems for Traffic Hot-Spots: An Analytical Characterization

Ferran Adelantado, Universitat Politècnica de Catalunya (Spain); Oriol Sallent, Universitat Politècnica de Catalunya (Spain); Jordi Pérez-Romero, Universitat Politècnica de Catalunya (Spain)

Aggressive Sub-channel Allocation Algorithm for Efficient Dynamic Channel Allocation in Multi-user OFDMA System

SangJun Ko, The Graduate School of Information Technology & Telecommunications, Inha University (Korea, South); Joo Heo, The Graduate School of Information Technology & Telecommunications, Inha University (Korea, South); KyungHi Chang, The Graduate School of Information Technology & Telecommunications, Inha University (Korea, South)

Performance Evaluation of Novel DSA Scheme that Combines Polling Method with Random Access Method

Yoshitaka Shimizu, NTT Network Innovation Laboratories, NTT Corporation (Japan); Fusao Nuno, NTT Network Innovation Laboratories, NTT Corporation (Japan)

Hybrid CAC for MBMS-Enabled 3G UMTS Networks

Michael Neophytou, Department of Computer Science, University of Cyprus (Cyprus); Andreas Pitsillides, Department of Computer Science, University of Cyprus (Cyprus)

A Throughput Analysis for Opportunistic Beamforming with Quantized Feedback

Jose Vicario, CTTC (Spain); Roberto Bosisio, Politecnico di Milano (Italy); Umberto Spagnolini, Politecnico di Milano (Italy); Carles Anton-Haro, CTTC (Italy)

Analysis of the Percentage of Outage for Multimedia Services in Cellular Networks

Tallal Elshabrawy, German University in Cairo (Egypt); Tho Le-Ngoc, McGill University (Canada)

QoS-Aware Dynamic Admission Control Schemes for Wireless Systems

Claudia Quevedo-Lodi, CETUC - PUC/Rio (Brazil); J. Roberto de Marca, CETUC - PUC/Rio (Brazil)

Energy Efficient Transmit Power Control for HDR WPAN

Mauro De Sanctis, University of Rome "Tor Vergata" (Italy); Ernestina Cianca, University of Rome "Tor Vergata" (Italy); Marina Ruggieri, University of Rome "Tor Vergata" (Italy)

Session: TJ6 - Systems and Regulation

Time: Thu 14 Sept 13:40-15:20

On the Second Order Statistics of Generalized Gamma Process

Serguei Primak, Dept. of ECE, The University of Western Ontario, London (Canada); Valeri Kontorovich, CINVESTAV, Mexico (Mexico)

On the Performance of a New Antenna Selection Algorithm Based on Orthogonal Components

Peng Lan, Shandong University (China)

Comparison of Correlation-based and Ray-based Radio MIMO Channel Models

Veli-Matti Kolmonen, Helsinki University of Technology (Finland); Jean-Philippe Kermoal, Nokia Research Center (Finland); Pertti Vainikainen, Helsinki University of Technology (Finland)

Integrating Inter-Vehicle Communication with Roadside Wireless Access Points to Provide a Lower-cost Message Broadcasting Service on Highways

Shie-Yuan Wang, National Chiao Tung University, Taiwan (Taiwan)

Cyclic Odd Bit Inversion Code Mapping and Modulation Scheme for IEEE 802.15.4b 915MHz Wireless Personal Area Networks

Manjeet Singh, Institute for Incomm Research (Singapore); Zhongding Lei, Institute for Incomm Research (Singapore); Francois Chin, Institute for Incomm Research (Singapore); YS Kwok, Institute for Incomm Research (Singapore)

Performance of Cellular DS-CDMA Systems Using Distributed Antennas

Lie-Liang Yang, University of Southampton (United Kingdom); Wei Fang, University of Southampton (United Kingdom)

802.11N: Performance Results of Reverse Direction Data Flow

Dmitry Akhmetov, Intel Corporation (Russia)

Multi-band Ad-hoc Cognitive Radio for Reducing Inter System Interference

Takeo Fujii, The University of Electro-Communications (Japan); Yukihiro Kamiya, Tokyo University of Agriculture and Technology (Japan); Yasuo Suzuki, Tokyo University of Agriculture and Technology (Japan)

Experimental Small Scale Fading Results for Mobile Channels over the Sea

Konstantinos Maliatsos, National Technical University of Athens (Greece); Panagiotis Loulis, National Technical University of Athens (Greece); Michail Chronopoulos, National Technical University of Athens (Greece); Philip Constantinou, National Technical University of Athens (Greece); Panagiotis Dallas, Intracom S.A. (Greece); Michail Ikononou, Intracom S.A. (Greece)

Measurement of 3GHz-band Radio Propagation in Macro Cellular Environments

Ryuhei Funada, National Institute of Information and Communications Technology (Japan); Hirohi Harada, National Institute of Information and Communications Technology (Japan); Masao Otani, National Institute of Information and Communications Technology (Japan)

Unlicensed Operation of IEEE 802.16: Coexistence with 802.11(a) in Shared Frequency Bands

Lars Berlemann, Chair of Communication Networks, Faculty 6, RWTH Aachen University (Germany); Christian Hoymann, Chair of Communication Networks, Faculty 6, RWTH Aachen University (Germany); Guido R. Hiertz, Chair of Communication Networks, Faculty 6, RWTH Aachen University (Germany); Bernhard H. Walke, Chair of Communication Networks, Faculty 6, RWTH Aachen University (Germany)

Novel Radio Channel Models for Evaluation of DVB-H Broadcast Systems

Hanne Parviainen, Elektrobit Testing Ltd. (Finland); Pekka Kyösti, Elektrobit Testing Ltd. (Finland); Xiongwen Zhao, Elektrobit Testing Ltd. (Finland); Heidi Himmanen, Turku Centre for Computer Science, University of Turku (Finland); Pekka H.K. Talmola, Nokia Group (Finland); Jukka Rinne, Tampere University of Technology (Finland)

Performance Analysis of Broadband Wireless Access Systems with Antenna Selection

Ernest Kurniawan, Nanyang Technological University (Singapore); A. S. Madhukumar, Nanyang Technological University (Singapore); Chin Francois, Institute for Infocomm Research (Singapore)

A Pseudo-geometrical Channel Model for Dense Urban Line-of-Sight Street Microcell

Mir Ghorashi, Tokyo Institute of Technology (Japan); Jun-ichi Takada, Tokyo Institute of Technology (Japan); Tetsuro Imai, NTT DoCoMo Inc. (Japan)

Modeling and Analysis of Dynamic Spectrum Allocation of Two Wireless Communication Systems

Yao-Liang Chung, Institute of Communication Engineering, National Taiwan University (Taiwan); Zsehong Tsai, Institute of Communication Engineering, National Taiwan University (Taiwan)

Coverage Costs of One Amplify-and-Forward Relaying in Outdoors Urban Environment

Bogdan Timus, Wireless@KTH, Royal Institute of Technology (Sweden)

Session: TJ7 - Wireless Networks, Applications and Services

Time: Thu 14 Sept 16:00-17:40

A Prediction-based Smoothing Scheme for Real-time Video Transmission in 3G CDMA Systems

Liu Bingzhang, Beijing University of Posts and Telecommunications (China); Qin Jie, Beijing University of Posts and Telecommunications (China); Zhang Xin, Beijing University of Posts and Telecommunications (China); Yang Dacheng, Beijing University of Posts and Telecommunications (China)

A Standalone OCR System for Mobile Cameraphones

Mikael Laine, Department of Information Technology, University of Turku and Turku Centre for Computer Science (TUUS) (Finland); Olli S. Nevalainen, Department of Information Technology, University of Turku and Turku Centre for Computer Science (TUUS) (Finland)

Indoor Human Detection Systems using VHF-FM and UHF-TV Broadcasting Waves

Masahiro Nishi, Hiroshima City University (Japan); Shigeru Takahashi, Hiroshima City University (Japan); Teruaki Yoshida, Hiroshima City University (Japan)

Grassroots Group Communication inside Peer-to-peer Mobile Communities

Olli Rantapaska, Nokia Research Center (Finland); Esko Kokkonen, Nokia Research Center (Finland); Jari P Kinnunen, Nokia Research Center (Finland)

A Novel Network Architecture for 3G Evolution

Zizhou Wang, Center for Wireless Communications, Beijing University of Posts and Telecommunications (China); Chen Fan, Center for Wireless Communications, Beijing University of Posts and Telecommunications (China); Yafeng Wang, Center for Wireless Communications, Beijing University of Posts and Telecommunications (China); Dacheng Yang, Center for Wireless Communications, Beijing University of Posts and Telecommunications (China)

A Simple and Effective Delay Distribution Analysis for IEEE 802.11

Paschalis Raptis, TEI Thessaloniki - Dept. of Informatics (Greece); Albert Banchs, Universidad Carlos III de Madrid (Spain); Konstantinos Paparrizos, University of Macedonia (Greece); Konstantinos Paparrizos, University of Macedonia (Greece); Periklis Chatzimisios, TEI Thessaloniki - Dept. of Informatics (Greece)

Data Correction Method using Ideal WLAN Model in positioning system

Seigo Ito, Nagoya University (Japan); Nobuo Kawaguchi, Nagoya University (Japan)

Cooperative Networking in Heterogeneous Infrastructure Multihop Mobile Networks

Masato Yamada, Kyoto University (Japan); Ryoichi Shinkuma, Kyoto University (Japan); Tatsuro Takahashi, Kyoto University (Japan)

Performance Evaluation of a Cooperative Scheme for Wireless Networks

Jesús Alonso-Zárate, Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) (SPAIN); Jesús Gómez, Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) (SPAIN); Christos Verikoukis, Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) (SPAIN); Luis Alonso, Dep. Signal Theory and Communications, Universitat Politècnica de Catalunya (UPC) (SPAIN); Ana Pérez-Neira, Dep. Signal Theory and Communications, Universitat Politècnica de Catalunya (UPC) (SPAIN)

A Link-Directionality-Based Dual Channel MAC Protocol with a Power Exchange Algorithm for IEEE 802.11 Ad-Hoc Networks

Ping Chung Ng, Department of Engineering Science, University of Oxford (U.K.); David J. Edwards, Department of Engineering Science, University of Oxford (U.K.); Soung Chang Liew, Dept. of Information Engineering, The Chinese University of Hong Kong (Hong Kong)

A Leakage-Resilient and Forward-Secure Authenticated Key Exchange Protocol for Private Personal Area Networks

SeongHan Shin, RCIS, AIST (Japan); Mohamed Imine, CTIF, Aalborg University (Denmark); Hanane Fathi, RCIS, AIST (Japan); Kazukuni Kobara, RCIS, AIST (Japan); Neeli R. Prasad, CTIF, Aalborg University (Denmark); Hideki Imai, RCIS, AIST (Japan)

Real-Time WLAN Monitoring in a 4G Multiplatform Environment

Dimitris Nikitopoulos, National Technical University of Athens (Greece); Angelos Trakos, National Technical University of Athens (Greece); Ileana Popescu, National Technical University of Athens (Greece); Konstantina Xenou, National Technical University of Athens (Greece)

Throughput Evaluation of CSMA Assuming Carrier Detection Probability in Wireless Ad Hoc Networks

Masahiro Fujii, Kyoto University (Japan); Takashi Shimizu, Kyoto University (Japan); Koji Yamamoto, Kyoto University (Japan); Susumu Yoshida, Kyoto University (Japan)

Bringing Galileo into LBS Market - the AGILE Project

Josef Ringert, TeleConsult Austria GmbH (Austria); Elmar Wasle, TeleConsult Austria GmbH (Austria); John Hanley, LogicaCMG (UK); Monica Schettino, ERTICO (Belgium); Stefano Scarda, Galileo Joint Undertaking (Belgium)

Coalition-based Peering for Flexible Connectivity

Manish Lad, University College London (UK); Saleem Bhatti, University of St Andrews (UK); Steve Hailes, University College London (UK); Peter Kirstein, University College London (UK)

Reducing Processing Time for Real-Time Mobile Hosted Location Based Services

Paul Gilbertson, Dept. Communication Systems, Lancaster University (UK); Reuben Edwards, Dept. Communication Systems, Lancaster University (UK); Paul Coulton, Dept. Communication Systems, Lancaster University (UK)

Fuego: Experiences with Mobile Data Communication and Synchronization

Sasu Tarkoma, Helsinki Institute for Information Technology (Finland); Jaakko Kangasharju, Helsinki Institute for Information Technology (Finland); Tancred Lindholm, Helsinki Institute for Information Technology (Finland); Kimmo Raatikainen, Helsinki Institute for Information Technology (Finland)

WSN API: Application Programming Interface for Wireless Sensor Networks

Jari K Juntunen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Mauri Kuorilehto, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Mikko Kohvakka, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Ville A Kaseva, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Marko Hännikäinen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland); Timo D Hämäläinen, Tampere University of Technology / Institute of Digital and Computer Systems (Finland)

Real-time Video Stream Aggregation in Wireless Mesh Network

Anand Kashyap, NEC Labs (USA); Vishnu Navda, NEC Labs (USA); Samrat Ganguly, NEC Labs (USA); Rauf Izmailov, NEC Labs (USA)