

Sunday April 10th, 2005

09:00-12:30 **Tutorial 6: WiMAX - Wireless Metropolitan Area Networks**
Kantara *Dipl.-Ing. Christian P. Hoymann, RWTH Aachen University*
Prof. Dr.-Ing. B. Walke, RWTH Aachen University

12:30-14:00 Lunch

14:00-17:30 **Tutorial 8: Cross-layer Optimisation Using Beamforming, Adaptive Modulation, MUD and Dynamic Channel Allocation: 3G Systems and Beyond**
Kantara *Prof. Lajos Hanzo, Department of ECS, University of Southampton, UK*

13:00-17:30 **1 st Workshop on Wireless Vehicular Communications and Services for and Car Maintenance (W-CarsCare'05)**
Akamas

18:30 Social Event: Welcome Cocktail

Monday April 11th, 2005

09:45-10:30 **Opening Session**
Ballroom A **Welcome and Introduction to European Wireless 2005**
Bernhard Walke, EW Chairman
Dr. Christos Schizas, Vice-Rector of of International Affairs, Finance and Administration of the University of Cyprus
Vasos Vassiliou, Local Organizer; University of Cyprus

10:30-11:00 Coffee Break

11:00-12:30 **Keynotes**
Ballroom A **Chair:** Bernhard Walke, RWTH Aachen University, Germany

Nicos Timotheou, General Director of CYTA, Cyprus
(Title will be published soon)

Dr. Götz Brasche, Product Innovation Manager of European Microsoft Innovation Centre, Germany
"The Mobility Challenge: Information at your fingertips!"

Bernhard Walke, RWTH Aachen University, Germany
"Relay based Deployments for Future Wireless and Mobile Systems"

12:30-14:00 Lunch - Ballroom B/C

Monday April 11th, 2005

14:00-15:30 **Session A1: Signal Processing Techniques I**
Ballroom A Chair: Ernesto Zimmermann, Dresden University of Technology, Germany

The Turbo-Fountain and its Application to Reliable Wireless Broadcast, invited paper

Hrvoje Jenkac, Munich University of Technology, Germany
Joachim Hagenauer, Munich University of Technology, Germany
Timo Mayer, Munich University of Technology, Germany

Application of SQRD Algorithm for Efficient MIMO-OFDM Systems

Clemens Michalke, Dresden University of Technology, Germany
Hrshikesh Venkataraman, Indian Institute of Technology, Kanpur, India
V. Sinha, Indian Institute of Technology, Kanpur, India
Wolfgang Rave, Dresden University of Technology, Germany
Gerhard Fettweis, Dresden University of Technology, Germany

On the equivalence of rate $R = k/n$ non-systematic feed-forward convolutional codes and recursive systematic convolutional codes

Edgar Bolin, Siemens AG, Germany

Interfering users detection and interference cancellation in downlink CDMA

Sergio Benedetto, Politecnico di Torino, Italy
Guido Montorsi, Politecnico di Torino, Italy

A Novel Hybrid Diversity Receiver with Conditional Combining

Paraskevas Polydorou, Simon Fraser University, Canada
Paul Ho, Simon Fraser University, Canada

15:30-16:00 Coffee Break

16:00-17:30 **Session A2: Signal Processing Techniques II**
Ballroom A Chair: Sergio Benedetto, Politecnico di Torino, Italy

Forced Convergence Decoding of LDPC Codes - EXIT Chart Analysis and Combination with Node Complexity Reduction Techniques, invited paper

Ernesto Zimmermann, Dresden University of Technology, Germany
Wolfgang Rave, Dresden University of Technology, Germany
Gerhard Fettweis, Dresden University of Technology, Germany

Extension of Linear and Nonlinear Transmit Filters for Decentralized Receivers

Raphael Hunger, Munich University of Technology, Germany
Michael Joham, Munich University of Technology, Germany
Wolfgang Utschick, Munich University of Technology, Germany

Diversity Interference Cancellation for GSM/ EDGE using Reduced-Complexity Joint Detection

Patrick Nickel, University of Erlangen-Nuremberg, Germany
Wolfgang Gerstacker, University of Erlangen-Nuernberg, Germany

Throughput Performance of an Incremental Redundancy Scheme with Mapper Rearrangement

Boris Stender, University of Ulm, Germany
Martin Bossert, University of Ulm, Germany

Channel estimation and user-wise symbol detection for space-time coding system

Ejaz Khan, University college Dublin, Ireland

20:00 Social Event: Banquet Dinner

Tuesday April 12th, 2005

09:00-10:30 **Session A3: Signal Processing Techniques III**

Ballroom A Chair: *Marco Luise, University of Pisa, Italy*

Some Results on Joint Iterative Channel Equalization and Turbo Decoding for OFDM Systems, invited paper

Luca Giugno, University of Pisa, Italy

Vincenzo Lottici, University of Pisa, Italy

Marco Luise, University of Pisa, Italy

Cosimo Saccomando, University of Pisa, Italy

Limits of Phase Noise Suppression in OFDM

Denis Petrovic, Dresden University of Technology, Germany

Wolfgang Rave, Dresden University of Technology, Germany

Gerhard Fettweis, Dresden University of Technology, Germany

Iterative Detection Based on Widely Linear Processing and Real-Valued Symbol Alphabets

Guido Dietl, Munich University of Technology, Germany

Christian Mensing, Munich University of Technology, Germany

Wolfgang Utschick, Munich University of Technology, Germany

Rapid Prototyping of an Automated Test Harness for Forward Error Correcting Codes

Edward Brown, Institute for System Level Integration, United Kingdom

James Irvine, University of Strathclyde, United Kingdom

Bill Wilkie, Xilinx, Inc., United Kingdom

10:30-11:00

Coffee Break

11:00-12:30 **Session A4: Modulation and Coding I**

Ballroom A Chair: *Mario Huemer, University of Erlangen, Germany*

Comparison between Multi-Code Transmission and Multi-Level Modulation in the DS-CDMA Uplink

Oliver Praetor, Dresden Technical University, Germany

Andrew Lonnstrom, Dresden University of Technology, Germany

Gerhard Fettweis, Dresden University of Technology, Germany

Average Error Rates for Equal Gain Combining Schemes in Nakagami Fading Channels with Arbitrary Fading Parameters

Valentine Aalo, Florida Atlantic University, USA

Terawat Piboongunon, Florida Atlantic University, USA

George Efthymoglou, University of Piraeus, Greece

On Time-Varying Cyclic Delay Diversity

Gerd Richter, University of Ulm, Germany

Martin Bossert, University of Ulm, Germany

Elena Costa, Weckerle Martin, Siemens AG, Germany

Signaling Overhead for ASBA in an MC-CDMA System

Ying Zhang, Munich University of Technology, Germany

Elena Costa, Siemens AG, Germany

Matthias Lott, Siemens AG, Germany

12:30-14:00

Lunch - Ballroom B/C

Tuesday April 12th, 2005

14:00-15:30 **Panel: Towards Next Generation Networks - Are we prepared for this?**
Ballroom A **Invited Speakers:**

John Dunlop, University of Strathclyde, UK -
"Personal Wireless"

Henrik Berndt, NTTDoCoMo Eurolab, Germany
"Ubiquitous Networking Environment"

Stefan Mangold, Swisscom Innovation, Bern, Switzerland
"Spectrum Sharing of Mobile Systems"

Marco Luise, University of Pisa, Italy
"Smart Antennas - what can we expect?"

Werner Wiesbeck, University of Karlsruhe, Germany
"Radio Communication with reduced Signal Power"

Bernhard Walke, RWTH Aachen University, Germany
"Packet Relays: a Disruptive Technology for Future Systems"

15:30-16:00 Coffee Break

16:00-17:30 **Session A5: Modulation and Coding II**
Ballroom A *Chair: Simone Morosi, University of Firenze, Italy*

Blind IQ-Regeneration for Six-Port-Based Direct Conversion Receiver with Low Analog Complexity

Marko Mailand, Dresden University of Technology, Germany
Raik Richter, Dresden University of Technology, Germany

A Testbed for Assessment of Fountain Codes for Wireless Channels

Mohammed Usman, University of Strathclyde, United Kingdom
John Dunlop, University of Strathclyde, United Kingdom

A comparison of OFDM and non-linear SC/FDE signals: Non-linear amplification

Tufik Buzid, University of Erlangen, Germany
Mario Huemer, University of Erlangen-Nuremberg, Germany
Steffen Reinhardt, University of Erlangen, Germany

Two Proposed Blind Equalizers Using Different Constellation Matched Error Functions for QAM signals

Hebat-Allah Mourad, Cairo University, Egypt

20:00 Social Event: Cypriot Night

Wednesday April 13th, 2005

09:00-10:30 **Session A6: Smart Antennas, Adaptive Antennas, MIMO I**

Ballroom A Chair: Christian Hartmann, Munich University of Technology, Germany

Evaluation of MIMO Systems with Respect to Front-End Imperfections, invited paper

Christoph Degen, RWTH Aachen University, Germany

Olivier Koch, RWTH Aachen University, Germany

Wilhelm Keusgen, Fraunhofer-Institut für Nachrichtentechnik, Germany

Bernhard Rembold, RWTH Aachen University, Germany

Combining Multi-User Diversity with Eigenbeamforming in Correlated Channels

Mario Castaneda, Munich University of Technology, Germany

Michael Joham, Munich University of Technology, Germany

Michael Ivrlac, Munich University of Technology, Germany

Josef A. Nossek, Munich University of Technology, Germany

Polarization Diversity Performance of A Circular Patch Antenna For Wireless LANs Applications

Ali Khaleghi, SEM/DRE, France

Alain Azoulay, SUPELEC, France

Jean-Charles Bolomey, SUPELEC, France

Enhanced Eigenbeamforming for the 3GPP WCDMA FDD Downlink

Ralf Seeger, University of Bremen, Germany

Karl-Dirk Kammeyer, University of Bremen, Germany

Thomas Hindelang, Siemens AG, Germany

Wen Xu, Siemens AG, Germany

10:30-11:00

Coffee Break

11:00-12:30 **Session A7: Smart Antennas, Adaptive Antennas, MIMO II**

Ballroom A Chair: Andreas Mitschele, Ilmenau University of Technology, Germany

Multiuser MIMO Scheme for Enhanced 3GPP HSDPA

Sungjin Kim, Seoul National University, Republic of Korea

Hojin Kim, Samsung Advanced Institute of Technology, Republic of Korea

Kwang Bok Lee, Seoul National University, Republic of Korea

BER Performance of DS-CDMA MIMO Receivers in Nakagami-m Fading Multipath Channels with Nonidentical Fading Parameters

George Efthymoglou, University of Piraeus, Greece

Valentine Aalo, Florida Atlantic University, USA

Terawat Piboongunon, Florida Atlantic University, USA

Space time coding over MIMO channels equipped with nonlinear amplifiers

Mohamed Ibnkahla, Queen's University, Canada

A. I. Sulyman, Queen's University, Canada

Virtual Constellation Mapping: A Space-time Coding Technique from the Receiver's Point of View

Wen-Chung Liu, M300, SoC Technology Center, Industrial Technology Research, Taiwan

Gin-Kou Ma, SoC Technology Center, Industrial Technology Research Institute, Republic of China

Pseudo-snapshot Based on Forward-backward Cyclic Correlation Function for Narrow-band Signals

Liu Xuebin, South China University of Technology, P.R. China

Fei Ji, South China University of Technology, P.R. China

Gang Wei, South China University of Technology, P.R. China

12:30-14:00

Lunch - Fontana Restaurant

Wednesday April 13th, 2005

14:00-15:30 **Session A8: Smart Antennas, Adaptive Antennas, MIMO III**

Ballroom A Chair: Stavros Stavrou, Surrey University, United Kingdom

An Antenna-Carrier selection approach for Multi-Antenna Systems

*Mauro Biagi, University of Rome "La Sapienza", Italy
Cristian Pelizzoni, University of Rome "La Sapienza", Italy
Nicola Cordeschi, University of Rome "La Sapienza", Italy
Fabio Garzia, University of Rome "La Sapienza", Italy
Enzo Baccarelli, University of Rome "La Sapienza", Italy*

Multi-User MIMO Wireless CDMA System Employing Turbo Coding and Joint Detection through a Multipath Rayleigh Fading Channel

*Yasmine Famy, Cairo University, Egypt
Hebat-Allah Mourad, Cairo University, Egypt
Emad Al-Hussaini, Cairo University, Egypt*

A Table-driven AOA Estimation Algorithm for Switched-beam Antennas in Wireless Networks

*Jeongkeun Lee, Seoul National University, Republic of Korea
Dongkyun Kim, Kyungpook National University, Republic of Korea
C.K. Toh, University of London Queen Mary, United Kingdom
Taekyoung Kwon, Seoul National University, Republic of Korea
Yanghee Choi, Seoul National University, Republic of Korea*

Physical-statistical model for the land mobile-satellite channel applied to satellite/HAP-MIMO

*Peter King, University of Surrey, United Kingdom
Barry Evans, University of Surrey, Italy
Stavros Stavrou, University of Surrey, United Kingdom*

15:30-16:00

Coffee Break

16:00-17:30 **Closing Session - Best Paper Award - Ballroom A**

Monday April 11th, 2005

14:00-15:30 **Session B1: Wireless PAN/LAN I**

Kantara A/B Chair: Bernhard Walke, RWTH Aachen University, Germany

IEEE 802.15.3a Wireless Personal Area Networks - The MBOA Approach

Guido Hiertz, RWTH Aachen University, Germany

Yunpeng Zang, ComNets Aachen, Germany

Jörg Habertha, Philip Research, Germany

Hamza Sirin, Philips Research Aachen, Germany

New Algorithm for Distributed Frequency Assignments in IEEE 802.11

Eduard Garcia Villegas, Technical University of Catalonia, UPC Spain

Rafael Vidal Ferré, Technical University of Catalonia, UPC Spain

Josep Paradells Aspas, Technical University of Catalonia, UPC Spain

Improved Quality of Service Support for IEEE 802.11 DCF

Matthias Lott, Siemens AG, Germany

A Performance Comparison of QoS Approaches for Ad Hoc Networks: 802.11e versus Distributed Resource Allocation

Emma Carlson, Berlin Technical University, Germany

Christian Bettstetter, DoCoMo Euro-Labs, Germany

Christian Prehofer, DoCoMo Labs Europe, Germany

Adam Wolisz, Berlin Technical University, Germany

15:30-16:00

Coffee Break

16:00-17:30 **Session B2: Wireless PAN/LAN II**

Kantara A/B Chair: Enzo Mingozzi, University of Pisa, Italy

WTTP : A Scheduling Algorithm for Supporting QoS in IEEE 802.11e, invited paper

Claudio Cicconetti, University of Pisa, Italy

Luciano Lenzini, University of Pisa, Italy

Enzo Mingozzi, University of Pisa, Italy

Giovanni Stea, University of Pisa, Italy

Design and Evaluation of a new Handoff Protocol in IEEE 802.11 Networks

Erik Weiss, Aachen University, Germany

Arif Otyakmaz, RWTH Aachen University, Germany

Eva López, Chair of Communication Networks, Germany

Bangnan Xu, T-Systems, Germany

Throughput and Delay Performance of IEEE 802.11e Wireless LAN with Block Acknowledgements

Guido Hiertz, RWTH Aachen University, Germany

Lothar Stibor, Chair of Communication Networks, Aachen University, Germany

Erik Weiß, Chair of Communication Networks, Aachen University, Germany

Stefan Mangold, Swisscom Innovations, Switzerland

Jörg Habertha, Philips Research, Germany

Performance Comparison of Dual Queue and EDCA for VoIP over IEEE 802.11 WLAN

Jeonggyun Yu, Seoul National University, Republic of Korea

Sunghyun Choi, Seoul National University, Republic of Korea

20:00

Social Event: Banquet Dinner

Tuesday April 12th, 2005

09:00-10:30 **Session B3: Wireless Broadband I**

Kantara A/B Chair: Wolfgang Zirwas, Siemens, Germany

Reduction of Signaling Overhead in Beyond 3G MAC-Protocols using Frame Descriptor Tables

*Ole Klein, University of Aachen, Germany
Michael Einhaus, University of Aachen, Germany
Alexander Federlin, University of Aachen, Germany*

Deployment Considerations for Cellular Multihop Networks

*Wolfgang Zirwas, Siemens, Germany
Egon Schulz, University of Kaiserslautern, Germany
Tobias Weber, University of Kaiserslautern, Germany
Yin Liu, University of Kaiserslautern, Germany*

Delay and Throughput Analysis of a Fixed Relay Concept for Next Generation Wireless Systems

*Norbert Esseling, T-Mobile, Germany
Ralf Pabst, Aachen University, Germany
Bernhard Walke, Aachen University of Technology, Germany*

A Reconfigurable Multi-Mode Protocol Reference Model Facilitating Modes Convergence

*Lars Berlemann, RWTH Aachen University, Germany
Ralf Pabst, Aachen University, Germany
Marc Schinnenburg, RWTH Aachen University, Germany
Bernhard Walke, Aachen University of Technology, Germany*

An Architecture for Acquisition and Provision of Hotspot Coverage Information

*Stephan Lück, University of Stuttgart, Germany
Michael Scharf, University of Stuttgart, Germany
Jorge Gil, University of Stuttgart, Germany*

10:30-11:00

Coffee Break

11:00-12:30 **Session B4: Wireless Broadband II**

Kantara A/B Chair: John Gardiner, University of Bradford, UK

Intelligent Caching Strategies for Mobile Communication Networks

*Stephan Goebbels, Aachen University, Germany
Robertus Probokoesoemo, RWTH Aachen University, Germany*

Integration of Media Point System with the 3GPP IMS

*Ian Herwono, Aachen University, RWTH, Germany
Joachim Sachs, Ericsson Research, Germany
Ralf Keller, Ericsson Research, Germany*

Intelligent Multimedia Content Provision for Nomadic Users

*Chrisa Papagianni, National Technical University of Athens, Greece
Vagelis Kosmatos, National Technical University of Athens, Greece
Eugenia Nikolouzou, National Technical University of Athens, Greece
Iakovos Venieris, National Technical University of Athens, Greece*

Push-To-Video as a platform for NGN Services

*Niklas Blum, Fraunhofer Institute FOKUS, Germany
Thomas Magedanz, Fraunhofer Institute FOKUS, Germany*

SBWAN: Service Differentiation in Broadband Wireless Ad Hoc Networks

*Praveen Kumar, Satyam Computer Services Limited, India
Niranjan Dhanakoti, Satyam Computer Services Limited, India
Srividya Gopalan, Satyam Computer Service Limited, India
Sridhar Varadarajan, Satyam Computer Services Limited, India*

12:30-14:00

Lunch - Ballroom B/C

Tuesday April 12th, 2005

14:00-15:30 **Panel: Towards Next Generation Networks - Are we prepared for this?**
Ballroom A **Invited Speakers:**

John Dunlop, University of Strathclyde, UK -
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"Ubiquitous Networking Environment"

Stefan Mangold, Swisscom Innovation, Bern, Switzerland
"Spectrum Sharing of Mobile Systems"

Marco Luise, University of Pisa, Italy
"Smart Antennas - what can we expect?"

Werner Wiesbeck, University of Karlsruhe, Germany
"Radio Communication with reduced Signal Power"

Bernhard Walke, RWTH Aachen University, Germany
"Packet Relays: a Disruptive Technology for Future Systems"

15:30-16:00

Coffee Break

16:00-17:30 **Session B5: Vertical Handover**
Kantara A/B *Chair: Matthias Lott, Siemens AG, Germany*

Inter-System Handover and Coverage Detection for 3G/WLAN Cooperation, invited paper

Matthias Siebert, Aachen University of Technology, Germany

Daniel Bültmann, Aachen University, Germany

Matthias Lott, Siemens AG, Germany

Profiling for Mobility Context Management and Transport Service Provision in 4G Networks

Ivan Armuelles, DTI, Technical University of Madrid, Spain, Spain

Jorge Lopez de Vergara, Universidad Autónoma de Madrid, UAM, Spain

Tomas Robles Valladares, Technical University of Madrid, Spain

David Fernandez Cambronero, Technical University of Madrid, Spain

WLAN-3G Roaming With Dormant Mode Support

Behcet Sarikaya, University of Northern British Columbia, Canada

Providing Quality of Service in Fourth Generation Composite Radio Networks

Tibor Gyires, Illinois State University, USA

TCP Throughput Optimized Handover Decisions

Carsten Burmeister, Hamburg University of Technology, Germany

Ulrich Killat, Hamburg University of Technology, Germany

Jens Bachmann, Panasonic European Laboratories, Germany

20:00

Social Event: Cypriot Night

Wednesday April 13th, 2005

09:00-10:30 **Session B6: Wireless LAN and Applications**
Kantara A/B Chair: Josep Paradells, Universidad Politecnica de Catalunya, UPC, Spain

Modelling TCP flows over an 802.11 wireless LAN
Taka Sakurai, The University of Melbourne, Australia
Stephen Hanly, The University of Melbourne, Australia

Experimental Analysis of TCP and UDP Traffic Performance over Infra-structured 802.11b WLANs
Francesco Vacirca, University of Rome, "la Sapienza", Italy
Andrea De Vendictis, University of Rome "La Sapienza", Italy
Andrea Baiocchi, University of Rome "La Sapienza", Italy

Analysis of TCP Parallelization over Wireless Links
Qiang Fu, University of Queensland, Australia
Jadwiga Indulska, University of Queensland, Australia

Efficient Power Control for MC-CDMA based W-LANs
Georgios Orfanos, Technical University of Aachen, Germany
Jörg Habetha, Philip Research, Germany
Willi Butsch, Aachen University of Technology, Germany

A new Distributed Coordination Function Adapted to MC-CDMA based W-LANs
Georgios Orfanos, Technical University of Aachen, Germany
Jörg Habetha, Philip Research, Germany
Willi Butsch, Aachen University of Technology, Germany

10:30-11:00 Coffee Break

11:00-12:30 **Session B7: Routing in Ad-Hoc Networks I**
Kantara A/B Chair: Eli Winjum, UniK, Norway

Trust Metric Routing to Regulate Routing Cooperation in Mobile Wireless Ad Hoc Networks
Eli Winjum, UniK - University Graduate Center at Kjeller, Norway
Øivind Kure, Q2S, NTNU, Norway
Pal Spilling, UniK - University Graduate Center at Kjeller, Norway

An OLSR parameter based study of the performance of real ad-hoc network environments
Carles Gomez, Technical University of Catalonia, Spain
David Garcia, Technical University of Catalonia, Spain
Josep Paradells, Technical University of Catalonia, Spain

Predicting Network Topology for Autonomous Wireless Nodes
Henry Larkin, Bond University, Australia
Wu Zheng Da, Bond University, Australia, Austria
Warren Toomey, Bond University, Australia

Modeling of Multipath Multihop Routing in Ad Hoc Networks
Canfeng Chen, Beijing University of Posts and Telecommunications, P.R. China
Weiling Wu, Beijing University of Posts and Telecommunications, P.R. China

12:30-14:00 Lunch - Fontana Restaurant

Wednesday April 13th, 2005

14:00-15:30 **Session B8: Routing in Ad-Hoc Networks II**

Kantara A/B Chair: Hendrik Berndt, DoCoMo Eurolabs, Germany

Optimal Physical Carrier Sensing Range in Multirate Wireless Ad Hoc Networks: Analytical versus Realistic

*Frank Yong Li, UniK - University Graduate Center at Kjeller, Norway
Øivind Kure, Q2S, NTNU, Norway*

GAL - A Scalable Routing Protocol for Clustered Ad-Hoc Networks

*George Alexandris, Athens Information Technology, Greece
Gregory Yovanof, Athens Information Technology, Greece*

Securing OLSR Using Node Locations

*Daniele Raffo, INRIA, France
Cedric Adjih, INRIA, France
Paul Muhlethaler, INRIA, France
Thomas Clausen, Ecole Polytechnique, France*

paper will be presented at Session C8 Characterizing the duration and association patterns of wireless access in a campus

*Maria Papadopouli, University of North Carolina, USA
Haipeng Shen, University of North Carolina, USA
Manolis Spanakis, Department of Computer Science FORTH, Greece*

15:30-16:00

Coffee Break

16:00-17:30 **Closing Session - Best Paper Award - Ballroom A**

Monday April 11th, 2005

14:00-15:30 **Session C1: Location-based Services and Positioning**

Akamas A/B Chair: Vicente Casares-Giner, ETSI Telecomunicación. Universitat Politècnica de Valencia, Spain

The use of fractional memory in the hybrid movement–distance–based location update schemes with selective paging, invited paper

*Vicente Casares-Giner, Universitat Politècnica de Valencia, Spain
Pablo Garcia, Universitat Politècnica de Valencia, Spain
Vicent Pla, Universitat Politècnica de Valencia, Spain*

TDOA Positioning in Downlink versus Uplink of a W-CDMA Network

*Guillermo Breymann, Munich University of Technology, Germany
Markus Ali-Hackl, Siemens AG, Germany
Thomas Hindelang, Siemens AG, Germany
Wen Xu, Siemens AG, Germany*

Pilot correlation positioning method for urban UMTS networks

*Jakub Borkowski, Tampere University of Technology, Finland
Jukka Lempinen, Tampere University of Technology, Finland*

An improved path profiling algorithm for mobile positioning in UMTS

*Ralf Mosshammer, Infineon Technologies AG, Austria
Christian Drewes, Infineon Technologies, Germany
Mario Huemer, University of Erlangen-Nuremberg, Germany*

15:30-16:00

Coffee Break

16:00-17:30 **Session C2: UMTS New Releases**

Akamas A/B Chair: Davide Grillo, Alcatel, Italy

ITU-D Guidelines for Transitioning Towards IMT-2000 Systems in Developing Countries, invited paper

Davide Grillo, Alcatel, Italy

Adaptive Radio Resource Management Scheme for UMTS Packet Data

Christian Brosch, Ilmenau Technical University, Germany

Andreas Mitschele, Ilmenau Technical University, Germany

Connection Admission Control in UMTS with respect to Network Capacity and Quality of Service

Matthias Malkowski, Aachen University, Germany

Michael Schnick, RWTH Aachen University, Germany

Marc Schinnenburg, RWTH Aachen University, Germany

Michael Schmocker, Swisscom Mobile AG, Switzerland

Cancellation of Interference from Synchronization and Pilot Channels on High Speed Downlink Shared Channel in UMTS

Steffen Paul, Infineon AG, Germany

Klemens Freudenthaler, University of Applied Science Hagenberg, Austria

M. Huemer, University of Applied Science Hagenberg, Austria

A. Springer, Johannes Kepler University Linz, Austria

F. Kaltenberger, ARC Seibersdorf Research GmbH, Austria

C.F. Mecklenbräuker, ftw. Forschungszentrum Telekommunikation Vienna, Austria

Performance of TCP and HTTP Proxies in UMTS Networks

Marc Necker, University of Stuttgart, Germany

Michael Scharf, Universität Stuttgart, Germany

Andreas Weber, Alcatel, Germany

20:00

Social Event: Banquet Dinner

Tuesday April 12th, 2005

09:00-10:30 **Session C3: Analysis, Simulation, Measurements**

Akamas A/B Chair: Davide Grillo, Alcatel, Italy

Interface between Link and System Level Simulations for Downlink MC-CDMA Cellular Systems

Abdel-Majid Mourad, Mitsubishi Electric ITE-TCL, France

Arnaud Gueguen, Mitsubishi Electric ITE, France

Ramesh Pyndiah, ENST Bretagne, France

A Voronoi-Based Mobility Model for Urban Environments

Hans-Martin Zimmermann, Munich University of Technology, Germany

Ingo Gruber, Munich University of Technology, Germany

Christian Roman, Munich University of Technology, Germany

IEEE 802.11 Contention-Based Medium Access for Multiple Channels

Stefan Mangold, Swisscom Innovations, Switzerland

Jörg Habetha, Philip Research, Germany

An Analysis of Priority Based Packet Scheduling for Adaptive Wireless Streaming

Jan Kritzner, RWTH Aachen University, Germany

Markus Kampmann, Ericsson Research, Germany

Visualization and Performance Analysis Method for 4G Networks

Eero Wallenius, Nokia Oyj, Finland

Timo Hämäläinen, University of Jyväskylä, Finland

Olli Alanen, University of Jyväskylä, Finland

Henri Helanterä, Tampere Technical University, Finland

10:30-11:00

Coffee Break

11:00-12:30 **Session C4: Coexistence of Mobile Radio Networks**

Akamas A/B Chair: Stefan Mangold, Swisscom Innovations, Switzerland

Spectrum Agile Radio: A Society of Machines with Value-Oriented, invited paper

Stefan Mangold, Swisscom Innovations, Switzerland

Saishankar Nandagopalan, Philips Research, USA

Lars Berlemann, RWTH Aachen University, Germany

Reservation-based Spectrum Load Smoothing as Cognitive Medium Access for Spectrum Sharing Wireless Networks

Lars Berlemann, RWTH Aachen University, Germany

Guido Hiertz, RWTH Aachen University, Germany

Bernhard Walke, Aachen University of Technology, Germany

Dynamic Inter-operator Spectrum Sharing with Independent Radio Networks

Maran Kumar Pereirasamy, Siemens AG, Germany

Jijun Luo, Markus Dillinger, Siemens AG, Germany

Christian Hartmann, Munich University of Technology, Germany

Channel-Adaptive Schedulers with State-of-the-Art Channel Predictors

Ana Aguiar, Technical University Berlin, Germany

Adam Wolisz, Technical University of Berlin, Germany

Horst Lederer, Siemens AG, Germany

Holger Karl, University of Paderborn, Germany

Inter-Cell Scheduling in Wireless Data Networks

Thomas Bonald, France Telecom R&D, France

Sem Borst, CWI, The Netherlands

Alexandre Proutiere, France Telecom R&D, France

12:30-14:00

Lunch - Ballroom B/C

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"Smart Antennas - what can we expect?"

Werner Wiesbeck, University of Karlsruhe, Germany
"Radio Communication with reduced Signal Power"

Bernhard Walke, RWTH Aachen University, Germany
"Packet Relays: a Disruptive Technology for Future Systems"

15:30-16:00

Coffee Break

16:00-17:30 **Session C5: Security and Robustness in Wireless Networks**
Akamas A/B *Chair: John Dunlop, University of Strathclyde, United Kingdom*

Security Requirements for Mobile Service Provision via a Digital Marketplace, invited paper

Swee Goo, University of Strathclyde, United Kingdom
James Irvine, University of Strathclyde, United Kingdom
John Dunlop, University of Strathclyde, United Kingdom
Allan Tomlinson, Royal Holloway, University of London, United Kingdom
Scarlet Schwiderski-Grosche, Royal Holloway, University of London, United Kingdom

Cooperation Enforcement in Mobile Ad-hoc Networks with Centralized Supervision

Spyros Vassilaras, Athens Information Technology, Greece
Dimitrios Vogiatzis, Athens Information Technology, Greece
Gregory Yovanof, Athens Information Technology, Greece

ADOPT. A Distributed OCSP for Trust Establishment in MANETs

Giannis Marias, University of Athens, Greece
Konstantinos Papapanagiotou, University of Athens, Greece
Panagiotis Georgiadis, University of Athens, Greece

20:00

Social Event: Cypriot Night

Wednesday April 13th, 2005

09:00-10:30 **Session C6: QoS in Mobile Systems**

Akamas A/B Chair: Vasos Vassiliou, University of Cyprus

On the TCP Minimum Retransmission Timeout in a High-speed Cellular Network

Mats Folke, Luleå University of Technology, Sweden

Sara Landström, Luleå University of Technology, Sweden

Ulf Bodin, Luleå University of Technology, Sweden

Performance Evaluation of a QoS Adaptation Framework for Mobile Networks

Vasos Vassiliou, University of Cyprus

Revenue Optimisation and User Prioritisation using Call Admission Control Strategies in Multi-service 4G Cellular Wireless Networks

Ken Murray, Cork Institute of Technology, Ireland

Dirk Pesch, Cork Institute of Technology, Ireland

Bandwidth-Based Admission Control Using Joint Beamforming and Power Control methods for Multi-service CDMA Cellular Networks

Shenghao Mao, University of Newcastle upon Tyne, United Kingdom

E.G. Chester, University of Newcastle upon Tyne, United Kingdom

R.A. Carrasco, University of Newcastle upon Tyne, United Kingdom

CLAMP: Active queue management at wireless access points

Lachlan Andrew, University of Melbourne, Australia

Stephen Hanly, University of Melbourne, Australia

Rami Mukhtar, NED Australia

10:30-11:00

Coffee Break

11:00-12:30 **Session C7: High Altitude Platforms and Satellites**

Akamas A/B Chair: Sandro Scalise, DLR, Germany

Scanning Ka-band Vehicular Antennas for Satellite and High Altitude Platform Communications

John Thornton, University of York, United Kingdom

The effectiveness of link outage tolerance as a Fade Mitigation Technique

Candida Spillard, University of York, United Kingdom

Paul Mitchell, University of York, United Kingdom

David Grace, University of York, United Kingdom

Tim Tozer, University of York, United Kingdom

A Movable Boundary Approach for Serving Bursts on the Up/Down Link in a Low Earth Orbit Satellite Constellation

Rima Abi Fadel, Ecole Supérieure d'Ingénieurs de Beyrouth, Lebanon

Samir Tohme, University of Versailles, France

12:30-14:00

Lunch - Fontana Restaurant

Wednesday April 13th, 2005

14:00-15:30 **Session C8: Mobile/Wireless Networks Modelling and Simulation**
Akamas A/B Chair: Guido R. Hiertz, RWTH Aachen University, Germany

Traffic Performance Evaluation of Data Links in TETRA and TETRAPOL
Dirk Kuypers, Aachen University of Technology, Germany
Marc Schinnenburg, RWTH Aachen University, Germany

On the optimization of local and end-to-end forward error correction
Henrik Lundqvist, KTH, Royal Institute of Technology, Sweden
Gunnar Karlsson, KTH, Royal Institute of Technology, Sweden

Random Access in Overlapping Cells
Gam Nguyen, Naval Research Laboratory, USA
Jeffrey Wieselthier, Naval Research Laboratory, USA
Anthony Ephremides, University of Maryland at College Park, USA

Performance of the Throughput Enhanced Wireless in Local Loop Architecture Using Multi-dimensional Markov Chains
V. Mythili, Indian Institute of Technology Madras, India
B.S. Manoj, Indian Institute of Technology, India
Siva Ram Murthy, IIT Chennai, India

paper will be presented at Session C8 **Characterizing the duration and association patterns of wireless access in a campus**
Maria Papadopouli, University of North Carolina, USA
Haipeng Shen, University of North Carolina, USA
Manolis Spanakis, Department of Computer Science FORTH, Greece

15:30-16:00 Coffee Break

16:00-17:30 **Closing Session - Best Paper Award - Ballroom A**

Monday April 11th, 2005

14:00-15:30 **Session D1: Ultra-Wideband and Short-range Networks I**

Ahera A/B Chair: *Simone Morosi, University of Firenze, Italy*

Frequency Domain Multiuser Detectors for Ultra-Wideband Communications in Short-Range Systems, invited paper

Simone Morosi, University of Florence, Italy

Tiziano Bianchi, University of Florence, Italy

Noncoherent Maximum Likelihood Synchronization of Multi-Antenna UWB-IR faded Systems

Enzo Baccarelli, University of Rome "La Sapienza", Italy

Mauro Biagi, University of Rome "La Sapienza", Italy

Cristian Pelizzoni, University of Rome "La Sapienza", Italy

Nicola Cordeschi, University of Rome "La Sapienza", Italy

Fabio Garzia, University of Rome "La Sapienza", Italy

Configurable Ultra Low Noise Ultra Wideband Power Efficient VCOs

Ulrich Rohde, Synergy Microwave Corp., USA

Ajay Poddar, Synergy Microwave Corp, USA

UWB Fading Characteristics in a Typical Office Environment

Sharlene Thiagarajah, Telekom Research & Development Sdn. Bhd., Malaysia

Borhanuddin Mohd. Ali, Universiti Putra Malaysia

Sabira Khatun, Universiti Putra Malaysia

Mahamod Ismail, Universiti Kebangsaan Malaysia

15:30-16:00

Coffee Break

16:00-17:30 **Session D2: Ultra-Wideband and Short-range Networks II**

Chair: *Alain Sibille, ENSTA, France*

Diversity combining for enhanced multi-user throughput in pulse based UWB communications

Alain Sibille, ENSTA, France

Inter-Symbol Interference Reduction in UWB Communications by RAKE and Multiple Antenna Combining

Van Phuong Tran, ENSTA/UEI, France

Alain Sibille, ENSTA, France

A Low Complexity Algorithm for Sensor Localization

Mats Rydström, Chalmers University of Technology, Sweden

Andreu Urruela, UPC, Spain

Erik Ström, Chalmers University of Technology, Sweden

Arne Svensson, Chalmers University of Technology, Sweden

Using Stimulating Signal to Locate Sensor Clusters within Wireless Sensor Networks

Zhanyang Zhang, College of Staten Island/City University of New York, USA

William Gavin, College of Staten Island/City University of New York, USA

20:00

Social Event: Banquet Dinner

Tuesday April 12th, 2005

09:00-10:30 **Session D3: Radio Channel Modelling**
Ahera A/B Chair: Werner Wiesbeck, University of Karlsruhe, Germany

A Ray-Optical Channel Model for Vehicular Ad-Hoc Networks, invited paper

Juergen Maurer, University of Karlsruhe, Germany
Thomas Fuegen, University of Karlsruhe, Germany
Werner Wiesbeck, University of Karlsruhe, Germany

Effect of frequency selective surfaces on radio wave propagation in indoor environments

Farhan Chaudhry, University of Surrey, United Kingdom
Marios Raspopoulos, University of Surrey, United Kingdom
Stavros Stavrou, University of Surrey, United Kingdom

Investigation of Radio Transmission Losses Due to Periodic Building Structures

Ming Yang, University of Surrey, United Kingdom
Stavros Stavrou, University of Surrey, United Kingdom

A Wideband Channel Sounding Technique at Millimetre-Waves and Experiment in an Indoor 63.4-64.4GHz Picocell

Andreas Siamarou, INTERCOLLEGE, Cyprus

Parameters Computation of the Modified Loo Mobile Fading Channel

Amin Al-Ka'bi, The University of Queensland, Australia
John Homer, The University of Queensland, Australia

10:30-11:00 Coffee Break

11:00-12:30 **Session D4: Ad-Hoc Networks**
Ahera A/B Chair: George Karetsos, Center for Technological Research of Thessaly (CTRT), Greece

Classes of Nodes with Different Power Amplifiers and their Influence in Wireless Multi-hop Networks

Martin Kubisch, Berlin Technical University, Germany
Holger Karl, University of Paderborn, Germany
Adam Wolisz, Berlin Technical University, Germany

The Dynamical Updating Location Information Scheme (DULIS) - A Novel Routing Protocol for Mobile Ad hoc Networks

Xiaodong Wang, Simon Fraser University, Canada
Paraskevas Polydorou, Simon Fraser University, Canada

A Partitioned Power and Location Aware MAC Protocol for Mobile Ad Hoc Networks

Derek Corbett, University of Sydney, Australia
David Everitt, University of Sydney, Australia

A Design Framework for Wireless MANET QoS Gateway

Yasser Morgan, Carleton University, Canada
Thomas Kunz, Carleton University, Canada

12:30-14:00 Lunch - Ballroom B/C

Tuesday April 12th, 2005

14:00-15:30 **Panel: Towards Next Generation Networks - Are we prepared for this?**
Ballroom A **Invited Speakers:**

John Dunlop, University of Strathclyde, UK -
"Personal Wireless"

Henrik Berndt, NTTDoCoMo Eurolab, Germany
"Ubiquitous Networking Environment"

Stefan Mangold, Swisscom Innovation, Bern, Switzerland
"Spectrum Sharing of Mobile Systems"

Marco Luise, University of Pisa, Italy
"Smart Antennas - what can we expect?"

Werner Wiesbeck, University of Karlsruhe, Germany
"Radio Communication with reduced Signal Power"

Bernhard Walke, RWTH Aachen University, Germany
"Packet Relays: a Disruptive Technology for Future Systems"

15:30-16:00 Coffee Break

16:00-17:30 **Session D5: IP-based Mobile Systems**
Ahera A/B *Chair: Andreas Mitschele-Thiel, Ilmenau University of Technology, Germany*

I-MPLS: A Transparent Micro-Mobility-enabled MPLS Framework, invited paper

Rene Böringer, Ilmenau University of Technology, Germany
Ahmad Saeed, Ilmenau University of Technology, Germany
Ali Diab, Ilmenau University of Technology, Germany
Andreas Mitschele-Thiel, Ilmenau University of Technology, Germany
Matthias Schneider, Ilmenau University of Technology, Germany

Mobile Web Service based Middleware for Context-Aware Applications

Guido Gehlen, Aachen University of Technology, Germany
Georgios Mavromatis, Aachen University of Technology, Germany

Realization and Performance Analysis of a SOAP Server for Mobile Devices

Linh Pham, RWTH Aachen University, Germany
Guido Gehlen, Aachen University of Technology, Germany

Performance Improvement of Media Point Network using the Inter Access Point Protocol according to IEEE 802.11f

Ian Herwono, Aachen University, RWT, Germany
Joachim Sachs, Ericsson Research, Germany
Ralf Keller, Ericsson Research, Germany

Extension of Mobile IP for Fast Authentication and Low Latency Handoff

Ali Diab, Ilmenau University of Technology, Germany
Andreas-Mitschele-Thiel, Ilmenau University of Technology, Germany
René Böhringer, Ilmenau University of Technology, Germany

20:00 Social Event: Cypriot Night

Wednesday April 13th, 2005

09:00-10:30 **Session D6: Multicast / Broadcast**

Ballroom B Chair: Thorsten Lohmar, Ericsson, Germany

Evaluation of the File Repair Operations for Multicast/Broadcast Download Deliveries

Thorsten Lohmar, Ericsson GmbH, Germany

Magda Elisova, RWTH Aachen University, Germany

Power Control for Efficient Multicasting in IP-based 3G and beyond mobile networks

Neophytos Vlotomas, University of Cyprus

Josephina Antoniou, University of Cyprus

George Hadjipollas, University of Cyprus

Vasos Vassiliou, University of Cyprus

Andreas Pitsillides, University of Cyprus

The Mobile VCE Architecture for the Interworking of Mobile and Broadcast Networks

Paul Pangalos, Kings College London, United Kingdom

Kar Ann, University of Surrey, United Kingdom

Nima Sattari, King's College London, United Kingdom

Allan Tomlinson, Royal Holloway, University of London, United Kingdom

Robert Atkinson, University Of Strathclyde, Glasgow, Scotland, United Kingdom

Hamid Aghvami, King's College London, United Kingdom

Delay-Limited Capacity for Broadcast Channels

Carolin Huppert, University of Ulm, Germany

Martin Bossert, University of Ulm, Germany

Data Plane Performance Issues Concerning MBMS in UMTS Release 6

Pawel Matusz, Gdansk University of Technology, Poland

Jozef Wozniak, Gdansk University of Technology, Poland

10:30-11:00

Coffee Break

11:00-12:30 **Session D7: Mobile and Wireless Networks - General**

Ballroom B Chair: Joachim Sachs, Ericsson, Germany

A Hierarchical General Purpose Optimisation Framework for Wireless Networks

Qing Wei, DoCoMo Eurolabs, Germany

Shi Zhong, Toshiba Research Europe Ltd., United Kingdom

Martin Kappes, DoCoMo Euro-Labs, Germany

Tim Farnham, Toshiba Research Europe Ltd., United Kingdom

Christian Prehofer, DoCoMo Labs Europe, Germany

Enhanced Mobility Support for Real-time Multimedia Services Using Cross-layer Design

Zhaojun Li, University of Surrey, United Kingdom

Nadeem Akhtar, University of Surrey, United Kingdom

Rahim Tafazolli, University of Surrey, United Kingdom

The Next Generation of Mobile Localization Systems

Simone Frattasi, University of Aalborg, Denmark

Marco Monti, University of Rome, Italy

Daniele Teotino, University of Rome "Tor Vergata", Italy / Aalborg University, Denmark

Mirko Antonini, University of Rome "Tor Vergata", Italy / Aalborg University, Denmark

Marina Ruggieri, University of Roma Tor Vergata, Rome, Italy

Ramjee Prasad, Aalborg University, Denmark

IP-based Cellular Networks: an Analytical Comparative Study about the Delivery Cost of Paging and Location Signalling

Rafael Vidal Ferré, Universidad Politecnica de Catalunya UPC, Spain

Josep Paradells Aspas, Universidad Politecnica de Catalunya, UPC Spain

Modular Design for Optimal Cross-Layer Flow Control in CDMA Networks

Jennifer Price, University of California San Diego, USA

Tara Javidi, University of California San Diego, USA

12:30-14:00 Lunch - Fontana Restaurant

16:00-17:30 **Closing Session - Best Paper Award - *Ballroom A***