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PIMRC 2005 is organised by:



Programme

The 16th Annual IEEE International Symposium on Personal Indoor and Mobile Radio Communications



www.pimrc2005.org

ICC Berlin, Germany
September 11-14, 2005



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WELCOME MESSAGE

The PIMRC symposia are unique in that they have always been able to attract researchers to submit contributions from quite different areas, namely physical layer, networking & protocols and application layer research. This nicely leads to having up to nine sessions in parallel, each devoted to a thematic area, mostly orthogonal to the other ones.

This edition of PIMRC in Berlin sets at the turning point for at least two crucial aspects related to mobile and personal communications. On one hand, the start of the commercial data service of UMTS/IMT-2000 throughout Europe makes it possible to exploit the research and engineering work invested into high-speed mobile multimedia data services. On the other hand, despite the promises of more feature rich, highly interactive and high bit-rate multi-media services for the end-users and increased revenues for the operators, the research community has perceived the limitations of these systems in terms of user throughput and cost of operation and usage and consequently has started to work towards 3GPP Long Term Evolution standardisation. Moreover, research is focussing "Beyond Third Generation (B3G)" systems that outside Europe are being called 4G systems. B3G/4G systems are now being researched following the general guidelines and rough specifications developed by the Wireless World Research Forum and other fora. The respective work has been started in Europe in January 2004 as part of "Integrated Projects" funded in Framework Programme 6 of the European Union and, in the other regions of the world, funded from similar programmes. Exiting developments in the mobile domain start to become visible and first shadows of these are being presented at PIMRC 2005.

We would like to thank everybody having contributed to the success of the symposium!

First, our thanks go to the submitted paper's authors, reaching this year the number of 890 submissions. Out of these we compiled 475 oral presentations and 70 Posters.

Second, our thanks go to the invited paper authors, panellists, session organizers, keynote and plenary session speakers and session chairs who have accepted to be present and make PIMRC 2005 a success.

Third, our thanks go to the members of the Technical Programme Committee and the numerous reviewers, whose expertise and diligent work have substantially contributed to compile a very attractive conference programme. We have managed to peer review each submitted paper by one TPC member and two other experts, in addition, with a total of three reviews per paper. 1184 persons have contributed to the review process, performing 2604 reviews in total.

Our thanks go also to all the people involved in the organisation of PIMRC 2005, namely logistics and secretariat, the Invited Paper Chairs Raj Ganesh, Sastri Kota and Kaveh Pahlavan, the Tutorial Chairs Carmelita Görg, Gerhard Fettweis and Martin Haardt, the Panel Chair Jorge Perreira and the people giving the local technical support of the sessions here in Berlin. Besides the VDE Conference Secretariat, especially, Tim Irnich (backed-up by Lars Berlemann), both from ComNets RWTH Aachen University, are worth mentioning for their steady and immense support to make this event happen. They took the biggest load in organizing the paper review process and answering the avalanche of emails related to submission and review of papers, and assisting in setting-up the final programme. Many thanks to both of them!

All the people mentioned above have been very dedicated and worked very hard towards the success of the symposium. And they did it as volunteers.

Nevertheless, the final word on the success of PIMRC 2005 depends on the intensity of interchange of ideas taking place during the symposium days.

We had invited the PIMRC 2005 delegates to make use of a new offering, namely to mark those PIMRC 2005 papers on a list, provided to each delegate, that they are most interested in, to be emailed to them ahead of the symposium. Our intention was to contribute by this to stipulate lively discussions during the sessions that we expect to be more substantial when the questions asked are backed by a printed copy of the paper discussed. You have made extensive use of this offering. We sincerely hope that this will result in substantive discussions of the papers presented.

The TPC members of 16th PIMRC 2005 which we were able to attract to support us, are listed in the "committees" section.

As usual on Sunday, Sept. 11, 2005, a number of Tutorials are offered for subscription, out of 21 proposals that the Tutorial Chairs had to select from.

My sincere hope is that you will find PIMRC 2005 worth attending and that you will find the city of Berlin and the environment rewarding.

Bernhard Walke, RWTH Aachen University, Germany (Speaker)

Klaus David, University of Kassel, Germany

Martin Haardt, Ilmenau University of Technology, Germany

Petri Mähönen, RWTH Aachen University, Germany

PIMRC 2005 Co-Chairs

GENERAL INFORMATION

PIMRC 2005 WEBSITE

www.pimrc2005.de

PIMRC 2005 CONFERENCE VENUE

ICC International Congress Center
Messedamm 22
14055 Berlin
Germany

Phone: +49-(0)30-3038-3000
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e-mail: central@messe-berlin.de
Homepage : www.messe-berlin.de

PIMRC 2005 SECRETARIAT

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Ms. Hatice Altintas
Stresemannallee 15
60596 Frankfurt
Germany

Phone: +49-(0)69-63 08-477
Fax: +49-(0)69-96 31-5213
E-mail: vde-conferences@vde.com
Homepage: www.vde.com

ON-SITE COUNTER - OFFICE HOURS

The registration counter is located in the Foyer of the ICC.
Phone: +49-(0)30- 3038-82001
Fax: +49-(0)30- 3038-82002
E-mail: vde-conferences@vde.com

The registration desk on site will be open as follows:
Sunday, Sep 11 08.00 h - 18.00 h
Monday, Sep 12 08.00 h - 18.00 h
Tuesday, Sep 13 08.00 h - 18.00 h
Wednesday, Sep 14 08.00 h - 17.00 h

CONFERENCE REGISTRATION ON-SITE

To register for PIMRC 2005 please fill in the registration form layed out at the registration desk. Full cash payment or credit card information must accompany all registrations in order to be accepted.

REGISTRATION FEES

Full Member (VDE, EUREL, IEEE)*	<input type="checkbox"/> EUR 750,-
Non-member	<input type="checkbox"/> EUR 925,-
Student** (IEEE Member / VDE Member)	<input type="checkbox"/> EUR 250,-
IEEE Life Member*, VDE Pensionär*	<input type="checkbox"/> EUR 250,-
Half Day Tutorial	<input type="checkbox"/> EUR 350,-
Additional Conference CD ROM	<input type="checkbox"/> EUR 30,-
Accompanying Person	<input type="checkbox"/> EUR 90,-

- * Participants applying for the membership fee must present their membership card at the registration counter.
- ** A student's certification form has to be endorsed by a supervisor or head of department and the student card must be presented at the registration counter.
- Presenting authors, co-authors, committee members and session chairs are not exempted from paying registration fees.

Regular Conference Registration and Student Registration

Include admission to all plenary and technical sessions and coffee-breaks, one CD-ROM with the conference papers, the conference welcome reception on Monday, September 12 at the ICC and the conference dinner on Tuesday, September 13, at the Hotel Radisson SAS.

Accompanying Persons

Accompanying persons may register only in conjunction with a full delegate. The fee for accompanying persons includes admission to PIMRC conference welcome reception on Monday, September 12 at the ICC and the conference dinner on Tuesday, September 13 at Hotel Radisson SAS.

PAYMENT

Payment for registration must be made in Euro. The conference fee has to be fully paid in advance.

The **following methods** of payment are accepted:

- By **credit card authorisation** as per registration form. The 16 (15) digit card number, expiry date, security No. (last 3 digits on rear side of credit card/last 4 digits AMEX) and holder's name must be indicated on the registration form. Signature of the card holder is mandatory.
- **Cash payment on-site** in EURO (€)

PROCEEDINGS

All papers accepted for presentation at the conference are published on a CD-ROM. The CD-ROM will be provided on-site to all registered delegates attending the conference. Additional CD-ROM's will be on sale during the conference (upon availability) at Euro 30,--.

PAPER PRINTING SERVICE

An express printing service will be available on-site to allow for print outs of conference papers. Orders may be left at the service counter and will be processed between the breaks. The first 5 papers are complimentary, additional papers will be charged by 50 cents (€) per paper.

BUSINESS CENTER

On the main Foyer at the ICC a business center is on service daily from 9:00 to 16:00 h. Phone, Fax, E-Mail, Copies, Internet Access, Printing Services are available at moderate rates.

INTERNET - WLAN

WLAN access will be provided in the ICC. Access codes and tickets are available at the registration counter.

HOTEL RESERVATION / Official Travel Agency

Hotel accommodation throughout Berlin may be booked through the official travel agency CTI Compass Tours, which is present at the registration counter on-site during the office hours.

CTI Compass Tours
Schicklerstraße 5-7
10179 Berlin / Germany
Tel. +49-(0)30-201-0969
Fax +49-(0)30-204-4022
e-mail: berlin@compasstours.de
Homepage: www.compasstours.de

Hotels are also available on the official website of Berlin at www.berlin.de/english/accomodation/index.html

HOTEL BOOKING CONDITIONS

Change of reservation and cancellation

Please make your reservations, changes and cancellations directly with CTI Compass Tours or your chosen hotel.

Payment

All payments related to accommodation have to be made directly on departure in the hotel. In any case a credit card is required for guaranteed booking, otherwise no booking confirmation will be returned.

MESSAGES

Messages for delegates may be sent to the registration counter on-site:

Phone: +49-(0)30-3038-82001
Fax: +49-(0)30-3038-82002
or by e-mail: vde-conferences@vde.com

All messages received will be displayed on a message board near the registration counter.

TRANSPORT

● By air:

Berlin Airports (Tegel, Tempelhof and Schönefeld) allow direct access from all major national and international airports. Taxi from the airports to the ICC from the various airports to the city takes about 15 minutes (Tegel), 30 minutes (Tempelhof) or 60 Minutes (Schönefeld). Next airport to the conference site is Tegel.

● By train:

From Frankfurt ≈ 5 hours	From Munich ≈ 6 hours
From Hamburg ≈ 2 hours	From Stuttgart ≈ 6 hours

For more information on the transport network system of Berlin please see www.bvg.de

● Access by Car:

Autobahn (Highway) A 100/115/E51 exit "Dreieck Funkturm"

PARKING

The daily parking fee is 7,50 Euro in the garage below the ICC.

SOCIAL PROGRAMME

● The Welcome Reception on Monday, September 12, 18:00 h will be held at the ICC.

● On Tuesday, September 13, 19:00 h a Conference Dinner will be held at the "Hotel Radisson SAS"

A shuttle bus service to the Hotel Radisson SAS and back to the ICC will be organised. Busses are leaving from the ICC main entrance at 18:15 h.

Attendance to these events is included in the full conference fee. Additional tickets for accompanying persons for the social program can be purchased at 90,- EURO at the registration desk.

The recommended dress for all PIMRC 2005 social events is business casual.

DESTINATION BERLIN

A selection of touristic and Cultural highlights in Berlin are listed and described in the leaflet inserted in the conference satchel. For individual hints please contact the travel agency CTI at the registration counter.

Albert Einstein Year 2005

In the year 1905 Albert Einstein published five scientific works which were to fundamentally alter the conception of the world in physics: The special theory of relativity revolutionized our idea of space and time, and $E=mc^2$ became the best known equation in physics.

On the occasion of the 100th anniversary of Einstein's "Miracle Year 1905", the UNESCO declared the year 2005 the "World Year of Physics", during which worldwide actions are to draw attention to the importance of physics.

The Federal Republic of Germany, too, is marking the Einstein Year 2005 with numerous scientific and artistic programs. An overview of all activities taking place during your stay in Berlin and more detailed information on the Einstein Year can be found at www.einsteinjahr.de

A special exhibition of Einstein's life and historic **artefacts** are displayed in the historic "Kronprinzenpalais" at the Boulevard "Unter den Linden".

WEATHER

Moderate temperatures may be expected in September. But occasional rain is not uncommon during this period. Therefore a jacket or sweater and an umbrella is recommended especially for the evenings.

INSURANCE

The organisers may not be held responsible for any injury to participants or damage, theft and loss of personal belongings. Participants should therefore make their own insurance arrangements.

SHOPPING

Most shops are located in the area around the Friedrichstraße (Eastern part of Berlin) and Kurfürstendamm (Western part of Berlin). The elegant boulevards invite to shop and stroll through their boutiques and noble warehouses. You will find exquisite shops as well on the legendary avenue "Unter den Linden". Usually, shops are open from Monday to Saturday 9.00 h - 20:00 h. Shops are generally closed on Sunday.

CURRENCY

The official currency in Germany is the Euro (€). Usual credit cards (Mastercard, American Express, VISA) are accepted in hotels, department stores and restaurants. Currently (September 2005) the exchange rate is approx. 1 Euro \approx 1,25 US \$.

ELECTRICITY/ PHONE PATCH

Power supply is 230 V AC, 50 Hz. Participants intending to use the internet are kindly asked to have connectors available for the mains and Texas or TAE 6 (German phone standard) to connect the phone grid on analogue basis. Digital access (ISDN) may be available on request.

Connectors are available at most international airports or department stores. Most hotels have TAE 6 plug ins in the rooms or business centre.

EMERGENCY SERVICES

Police	call 110
Ambulance / Fire Brigade	call 112

LUNCH SERVICES AND RESTAURANTS AROUND ICC

Small lunches and sandwiches are available for purchase from the booth in the foyer of ICC.

Restaurants around the ICC Berlin:

Romiosini am ICC (just over the railway bridge)
Greek Restaurant (approx. 5 min walk)
Neue Kantstr. 17, 14057 Berlin, Tel. 30 10 55 06

La Pergola (just over the railway bridge)
Pizzeria (approx. 6 min walk)
Neue Kantstr. 19, 14057 Berlin, Tel. 321 24 30

Asado am ICC (in front of ICC, through the passerelle)
Argentinian Steakhaus (approx. 5 min walk)
Messedamm 10, 14057 Berlin, Tel. 301 60 38

Panda (in front of ICC, through the passerelle)
Chinese Restaurant (approx. 5 min walk)
Messedamm 10, 14057 Berlin, Tel. 30 16 033

Bistro - Bredow
Internat.Kitchen (approx.10-12 min walk)

Kaiserdamm 80/81, 14057 Berlin, Tel. 30 39 54 60

SON DO - Chinese Restaurant
Vegetarian (approx.10-12 min walk)
Kaiserdamm 32, 14057 Berlin, Tel. 302 49 55

Döner Imbiss (across the railway bridge)
Near the ICC

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Martin Haardt, Ilmenau University of Technology, Germany
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Hans-Juergen Zepernick, Blekinge Institute of Technology, Sweden
Wolfgang Zirwas, Siemens, Germany
Michele Zorzi, University of Padova, Italy

TUTORIALS

Salon Koch **Sunday, September 11**

09:00-12:30 **Tutorial 4:** MIMO Communications Part I - Basics and Applications to (B)3G Systems
Markku Juntti, University of Oulu, Finland
Juha Ylitalo, University of Oulu, Finland

Salon Koch **Sunday, September 11**

14:00-17:30 **Tutorial 5:** MIMO Communications Part II - Iterative Signal Detection Techniques and their Related Issues for Single- and Multi-carrier MIMO Systems
Tad Matsumoto, University of Oulu, Finland
Zexian Li, University of Oulu, Finland

Salon Langenbeck **Sunday, September 11**

09:00-12:30 **Tutorial 6:** Analysis, Performance Evaluation and Future Potentials of WirelessMAN IEEE 802.16
Christian P. Hoymann, RWTH Aachen University
Bernhard Walke, RWTH Aachen University, Germany

Salon Langenbeck **Sunday, September 11**

14:00-17:30 **Tutorial 7:** QoS and Radio Resource Management in Beyond 3G Systems
Oriol Sallent, Universitat Politècnica de Catalunya, Spain

PANEL OVERVIEW

Saal 7 **Monday, September 12**

11:00-12:30 **Panel 1:** Convergence of Mobile and Broadcast
16:00-17:30 **Panel 2:** UWB - What next?

Saal 7 **Tuesday, September 13**

11:00-12:30 **Panel 3:** From Reconfigurability to Cognitive Networks - towards Dynamic Spectrum Management
16:00-17:30 **Panel 4:** Vision 2020 - Long-Term Perspectives (open-ended)

Saal 7 **Wednesday, September 14**

11:00-12:30 **Panel 5:** From Sensor Networks to Smart Dust
14:00-15:30 **Panel 6:** Ad hoc Networks and their evolution

The detailed panel programme can be consulted under Track J

PLENARY SESSIONS

Saal 3 **Monday, September 12**

09:00-10:30 **PL01: Opening Plenary**
Session Chair: Bernhard Walke (RWTH Aachen University, Germany)

Opening PIMRC 2005
Bernhard Walke (RWTH Aachen University, Germany)

Keynote:
Michael Walker (R&D Director, Vodafone Group, United Kingdom)

Keynote:
The Evolution of Wireless Systems: What is Important!
Edward G. Tiedemann, Jr. (Senior VP Engineering, Qualcomm Inc., USA)

10:30-11:00 **Coffee Break**

11:00-17:30 **Tracks A to K**

Saal 3 **Tuesday, September 13**

09:00-10:30 **PL02: Physical Layer**
Session Chair: Martin Haardt (Ilmenau University of Technology, Germany)

Effective Capacity of Advanced Wireless Cellular Networks (INVITED PAPER)
Savo Glisic (University of Oulu, Finland)

Diversity Coding with Interference Avoidance (INVITED PAPER)*
Arogyaswami Paulraj (Stanford University, USA)
* This presentation is sponsored by IST-ACE (Antenna Center of Excellence)

Smart Antenna Techniques and Their Application to Wireless Ad Hoc Networks (INVITED PAPER)*

Jack Winters (Chief Scientist, Motia Inc., USA)

* This presentation is sponsored by IST-ACE (Antenna Center of Excellence)

10:30-11:00 **Coffee Break**

11:30-17:30 **Tracks A to K**

Saal 7 **Tuesday, 13 September**

09:00 - 10:30 **PL03: Higher Layers**

Session Chair:

Quality of Service Concept Evolution for Future Telecommunication Scenarios (INVITED PAPER)

Antonio Iera (University "Mediterranea" of Reggio Calabria, Italy)

Operating System Issues in Future End-User Systems (INVITED PAPER)

Kimmo Raatikainen (University of Helsinki, Finland)

Spectrum requirement calculation for 4G systems

Bernhard Walke (RWTH Aachen University, Germany)

10:30-11:00 **Coffee Break**

REGULAR SESSIONS

Track A

Salon Koch

11:00-12:30

Monday, September 12

A01 - MIMO I

Session Chair: Werner Mohr (Siemens AG, Germany)

Optimum Power Control for a Multi-User MIMO System with Beamforming (A01-01)

Batu Krishna Chalise (University Duisburg-Essen, Germany)

Andreas Czylwik (University Duisburg-Essen, Germany)

Differential Quasi-orthogonal Space-Time Block Codes with Full Transmit Diversity (A01-02)

Lingyang Song (University of York, United Kingdom)

Alister Burr (University of York, United Kingdom)

Linear Spreading Space-Time Block Codes: System Model and Optimization Criterion (A01-03)

Michael Samuel (University of California in Los Angeles, USA)

Christian Pietsch (University of Ulm, Germany)

Juergen Lindner (University of Ulm, Germany)

Constellation Expansion Free Quasi-Orthogonal Space-Time Block Codes on Square Lattice Constellations with Full Diversity and High Coding Gains (A01-04)

Ming-Yang Chen (National Taiwan University, Taiwan, R.O.C., Taiwan)

Soo-Chang Pei (National Taiwan University, Taiwan)

Hsuan-Jung Su (National Taiwan University, Taiwan)

Dynamic Allocation of OVSF Codes to Access Terminals with an Adaptive Antenna Array (A01-05)

Adnan Kavak (Kocaeli University, Turkey)

Mustafa Karakoc (Kocaeli University, Turkey)

Joseph Cleveland (Samsung

Telecommunications America, USA)

H. Engin Demiray (Kocaeli University, Turkey)

12:30-14:00

Lunch Break

Salon Koch
14:00-15:30

Monday, September 12

A02 - MIMO II

Session Chair: Angeliki Alexiou (Bell Labs, Lucent Technologies, United Kingdom)

Receive signal processing for space-time coded transmissions in the presence of channel estimation errors (A02-01)

*Shawki Abdelkader (University of Ulm, Germany)
Christian Pietsch (University of Ulm, Germany)
Juergen Lindner (University of Ulm, Germany)*

On the use of Reed-Solomon codes in Space-Time Coding (A02-02)

*Massinissa Lalam (ENST Bretagne, France)
Karine Amis (ENST Bretagne, Brest, France)
Dominique Leroux (ENST Bretagne, France)*

Joint Timing Epoch Tracking and Channel Estimation for Alamouti Space-Time Coding in Rayleigh Fading MIMO Channels (A02-03)

*Pawel Dmochowski (Queen's University, Canada)
Peter McLane (Queen's University, Canada)*

Performance Improvement for MIMO Communication Systems Employing Per Transmit Antenna Differential Encoding (PADE) (A02-04)

Hiroshi Kubo (Mitsubishi Electric Corporation, Japan)

Orthogonal Space-Time-Multipath and Space-Time-Doppler Block Coding for Arbitrary Number of Transmit-Antennae (A02-05)

Seyed Alireza Razavi (University of Birjand, Iran)

15:30-16:00

Coffee Break

Salon Koch
16:00-17:30

Monday, September 12

A03 - MIMO III

Session Chair: Angeliki Alexiou (Bell Labs, Lucent Technologies, United Kingdom)

Cooperative Decoding and Channel Estimation for Superimposed Space-Time Interleaved Coded Signals (A03-01)

*Antoine Berthet (Ecole Supérieure d'Electricité (SUPELEC), France)
Raphael Visoz (France Telecom R&D, Issy-Les-Moulineaux, France)
Mithridad Pourmir (Ecole Supérieure d'Electricité, France)*

Independent Component Analysis Applied To Multiple Antenna Space-Time Systems (A03-02)

*Hongji Xu (Telecommunications Technological Center of Catalonia, Spain)
Ju Liu (Shandong University, China)
Ana I. Pérez-Neira (Polytechnic University of Catalonia, Spain)
Miguel Angel Lagunas (Telecommunications Technological Center of Catalonia, Spain)*

Efficient Successive Interference Cancellation Algorithms for the Double Space-Time Transmit Diversity System (A03-03)

*Hyounkuk Kim (Information and Communications University, Korea)
Jongsub Cha (Information and Communications University, Korea)
Hyuncheol Park (Information and Communication University, Korea)*

Optimal Constellations Design for Trellis Coded Unitary Space-Time Modulation (A03-04)

*Yi Wu (Hong Kong University of Science and Technology, Hongkong)
Vincent Lau (the Hong Kong University of Science and Technology, Hongkong)*

A Full Diversity, Full Rate 4-Antenna Alamouti Code (A03-05)

*Wei Bai (Beijing Samsung Telecom R&D Center, China)
Jingxing Fu (Tsinghua University and Samsung Communication Institute, China)
Younghak Kim (Telecom R&D Center, Samsung Electronics Co., LTD, Korea)*

18:00

Welcome Reception at the ICC

Salon Koch
11:00-12:30

Tuesday, 13 September

A04 - MIMO IV

Session Chair: Hermann Rohling (Technical University Hamburg-Harburg, Germany)

Comparison of Distributed and Co-located Antenna Diversity Schemes for the Coverage Improvement of VoWLAN Systems (A04-01)

*Azadeh Etefagh (ETH Zurich, Switzerland)
Marc Kuhn (ETHZ, Switzerland)
Barry Cheetham (University of Manchester, United Kingdom)
Armin Wittneben (ETH, Switzerland)*

WLAN Downlink Throughput Enhancement in Conference Rooms Using a Multi-Antenna Access Point (A04-02)

Dennis Morgan (Bell Labs, Lucent Technologies, USA)

IEEE 802.11 Performance Enhancement by MIMO Spatial Multiplexing (A04-03)

Young-June Choi (Seoul National University, Korea)

Neung-Hyung Lee (Seoul National University, Korea)

Saewoong Bahk (Seoul National University, Korea)

A Class of Four-Group Quasi-Orthogonal Space-Time Block Code Achieving Full Rate and Full Diversity for Any Number of Antennas (A04-04)

Chau Yuen (Nanyang Technological University, Singapore)

Yong Guan (Nanyang Technological University, Singapore)

Tjeng Thiang Tjhung (Institute for Infocomm Research, Singapore)

Comparison of the smart antenna architectures for OFDM-WLAN systems in a rich multipath environment based on a spatio-temporal channel model (A04-05)

Reza Alihemmati (Iran Telecommunication Research Center, Iran)

Amir Ahmad Shishegar (Iran Telecommunication Research Center, Iran)

Nasrin Hojjat (University of Tehran, Iran)

Gholamreza Dadashzadeh (Iran Telecommunication Research Center, Iran)

Baktash Boghrati (University of Tehran, Iran)

Amirshahed Mehrtash (University of Tehran, Iran)

12:30-14:00

Lunch Break

Salon Koch

14:00-15:30

Tuesday, September 13

A05 - MIMO V

Session Chair: Hiroshi Kubo (Mitsubishi Electric Corporation, Japan)

General Structure of the Causal and Stable Inverses of MIMO Systems with ISI (A05-01)

Holger Boche (Heinrich-Hertz-Institut für Nachrichtentechnik Berlin GmbH, Germany)

Volker Pohl (Technical University Berlin, Germany)

Minimum Mean Square Error Vector Precoding (A05-02)

David Schmidt (Munich University of Technology, Germany)

Michael Joham (Technische Universität München, Germany)

Wolfgang Utschick (Technische Universität München, Germany)

Convexity Analysis of the Feasible MSE Region of Sum-Power Constrained Multiuser MIMO Systems (A05-03)

Shuying Shi (Fraunhofer German-Sino Lab for Mobile Communications MCI, Germany)

Martin Schubert (Fraunhofer German-Sino Lab for Mobile Communications MCI, Germany)

Frequency Domain Blind Equalization for MIMO Systems (A05-04)

Hai Huyen Dam (Western Australian Telecommunications Research Institute, Australia)

Sven Nordholm (Western Australian Telecommunications Research Institute, Australia)

Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden)

Performance of the Alamouti scheme with imperfect transmit antenna selection (A05-05)

Zhuo Chen (University of Sydney, Australia)

Branka Vucetic (The University of Sydney, Australia)

Jinhong Yuan (University of New South Wales, Australia)

15:30-16:00

Coffee Break

Salon Koch

16:00-17:30

Tuesday, September 13

A06 - MIMO VI

Session Chair: Holger Claussen (Lucent Technologies, United Kingdom) (t.b.c)

Implementation of a Smart Antenna Multiuser Algorithm on a DSP-Based Wireless MIMO Test-Bed (A06-01)

Xi Zhang (Royal Institute of Technology, Sweden)

Patrick Svedman (Royal Institute of Technology, Sweden)

Henrik (KTH, Sweden)

Per Zetterberg (KTH, Sweden)

Single Carrier Frequency Domain Equalization on a Real-Time DSP-Based MIMO Test-Bed (A06-02)

Andrew Logothetis (Ericsson, Sweden)
Afif Osseiran (Ericsson Research, Sweden)
Per Zetterberg (KTH, Sweden)

Robust Tomlinson-Harashima Precoding (A06-03)

Frank Dietrich (Munich University of Technology, Germany)
Wolfgang Utschick (Technische Universität München, Germany)

Interchannel Interference Avoidance in MIMO Transmission by Exploiting Spatial Information (A06-04)

Raed Mesleh (International University Bremen, Germany)
Harald Haas (International University of Bremen, Germany)
Yeonwoo Lee (i-Networking Lab., Korea)
Sangboh Yun (Samsung Advanced Institute of Technology, Korea)

Nonzero mean Gaussian MIMO channel capacity (A06-05)

Ejaz Khan (University college Dublin, Ireland)

19:00-22:30 **Conference Dinner at the Hotel Radisson SAS**

Salon Koch **Wednesday, September 14**
09:00-10:30 **A07 - MIMO VII**

Session Chair: Anja Klein (TU Darmstadt, Germany)

Outer Iterative Parallel Interference Cancellation Detection for Space-Frequency Block Coded OFDM systems over Frequency Selective Fading Channels (A07-01)

Yu Zhang (University of York, United Kingdom)
Alister Burr (University of York, United Kingdom)

Scheduling for Multiuser MIMO Downlink with Linear Processing (A07-02)

Antti Tolli (University of Oulu, Finland)
Markku Juntti (University of Oulu, Finland)

Fundamental Simulated Performance of Downlink Fixed Wireless Networks with Multiple Antennas (A07-03)

Howard Huang (Bell Labs, USA)
Reinaldo Valenzuela (Lucent Technologies, USA)

Optimal transmit strategies for QSTBC in MIMO Ricean Channels with Linear Detection (A07-04)

Aydin Sezgin (Fraunhofer Institute for Telecommunications, HHI, Germany)
Eduard Jorswieck (Fraunhofer Institut for Telecommunications, Heinrich-Hertz-Institut, Germany)
Elena Costa (Siemens AG, Germany)

Optimal Power Allocation and Design of Pilot Symbols for Frequency-Selective Correlated MIMO Channel Estimation (A07-05)

Honglei Miao (University of Oulu, Finland)
Markku Juntti (University of Oulu, Finland)

10:30-11:00

Coffee Break

Salon Koch
11:00-12:30

Wednesday, September 14
A08 - MIMO-OFDM I

Session Chair: Hiroyuki Atarashi, (NTT Docomo, Japan)

A two-step modeling approach for the influence of radio-system impairments in multicarrier MIMO systems (A08-01)

Tim Schenk (Eindhoven University of Technology, The Netherlands)
Xiao-Jiao Tao (Sony Ericsson Mobile Communications AB, Sweden)
Peter Smulders (Eindhoven University of Technology, The Netherlands)
Erik Fledderus (Eindhoven University of Technology, The Netherlands)

An Effective IQ Imbalance Compensation Scheme for MIMO-OFDM Communication System (A08-02)

Hiroyuki Kamata (Tokyo Institute of Technology, Japan)
Kei Sakaguchi (Tokyo Institute of Technology, Japan)
Kiyomichi Araki (Tokyo Institute of Technology, Japan)

A Comparative Study of QRD-M Detection and Sphere Decoding for MIMO-OFDM Systems (A08-03)

Yongmei Dai (Lehigh University, USA)
Sumei Sun (Institute for Infocomm Research, Singapore)
Zhongding Lei (Institute for Infocomm Research, Singapore)

Semi-blind Joint Estimation for Frequency Offset and Channel in Multi-user MIMO-OFDM (A08-04)

Yonghong Zeng (Institute for Infocomm Research, Singapore)

Rahim Leyman (Institute for Infocomm Research, Singapore)

Tung Sang Ng (University of Hong Kong, Hongkong)

A Concatenated ML Decoder for SFBC-OFDM Systems in Frequency Selective Fading Channels (A08-05)

Mingqi Li (Shanghai Research Center for Wireless Communications(SHRCWC) China)

12:30-14:00 **Lunch Break**

Salon Koch
14:00-15:30

Wednesday, September 14

A09 - MIMO-OFDM II

Session Chair: Chandra Athaudage (University of Melbourne, Australia)

On the value of spatial diversity for the synchronisation in MIMO-OFDM systems (A09-01)

Malte Schellmann (Fraunhofer Institute for Telecommunications, Germany)

Volker Jungnickel (Fraunhofer Institute for Telecommunications, Germany)

C. Helmolt (Fraunhofer Institute for Telecommunications, Germany)

Interpolation Techniques for MIMO OFDM with Interference Cancellation (A09-02)

Jean-François Frigon (École Polytechnique de Montréal, Canada)

Babak Daneshhrad (University of California, Los Angeles, USA)

An Approximated Gaussian Analysis and Results on the Capacity Distribution for MIMO-OFDM (A09-03)

Himal Suraweera (Monash University, Australia)

Jaunty Ho (Monash University, Australia)

Thirukkumaran Sivahumaran (Monash University, Australia)

Jean Armstrong (Monash University, Australia)

A MIMO-OFDM based Wireless Access Scheme Supporting Data Transmission beyond 1 Gbps (A09-04)

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

Iterative Receivers for Pre-transformed MIMO-OFDM Systems (A09-05)

Yan Wu (Institute for Infocomm Research, Singapore)

Chin Keong Ho (Eindhoven University of Technology, The Netherlands)

Sumei Sun (Institute for Infocomm Research, Singapore)

Zhongding Lei (Institute for Infocomm Research, Singapore)

15:30-16:00 **Coffee Break**

Salon Koch
16:00-17:30

Wednesday, September 14

A10 - MIMO-OFDM III

Session Chair: Martin Döttling (Siemens Mobile Phones, Germany)

Adaptive Trellis and Bit-Interleaved Coded Modulation for Ordered MIMO-OFDM Channels (A10-02)

Yuan Li (Institute for Infocomm Research, Singapore)

Ying Chang Liang (Institute for Infocomm Research, Singapore)

Sumei Sun (Institute for Infocomm Research, Singapore)

Rui Zhang (University of Stanford, USA)

Sum-Rate Maximizing Decomposition Approaches for Multiuser MIMO-OFDM (A10-01)

Pedro Tejera (Munich University of Technology, Germany)

Wolfgang Utschick (Technische Universität München, Germany)

Gerhard Bauch (DoCoMo Euro-Labs, Germany)

Josef A. Nossek (Munich University of Technology, Germany)

Reduced Complexity Blind Layered Space-Time Equalization for MIMO OFDM Systems (A10-03)

Luciano Sarperi (University of Liverpool, United Kingdom)

Xu Zhu (University of Liverpool, United Kingdom)

Asoke Nandi (University of Liverpool, United Kingdom)

A Tracking Approach for Precoded MIMO-OFDM Systems with Low Data Rate CSI Feedback (A10-04)

HUA ZHANG (Skyworks Solutions Inc., USA)

Geoffrey Li (Georgia Tech, USA)

Victor Stolpman (Nokia Research Center, USA)

Nico Van Waes (nokia research center, USA)

Measurements on area coverage of 5GHz band MIMO-OFDM system in residential home environment (A10-05)

Dung Dao Nguyen (Tokyo Institute of Technology, Japan)

Chua Hai Yeow Yugene (Tokyo Institute of Technology, Japan)

Kei Sakaguchi (Tokyo Institute of Technology, Japan)

Kiyomichi Araki (Tokyo Institute of Technology, Japan)

Iwai Hiroshi (Matsushita Electric Industrial Co., Ltd, Japan)

Sakata Tsutomu (Matsushita Electric Industrial Co., Ltd, Japan)

17:30

End of the conference

Track B

**Salon
Langenbeck
11:00-12:30**

Monday, September 12

B01 - MC-CDMA I

Session Chair: Georgios Orfanos (RWTH Aachen University, Germany)

Multuser Channel Estimation and Tracking for MC-CDMA Uplink Transmissions (B01-01)

Luca Sanguinetti (University of Pisa, Italy)

Michele Morelli (University of Pisa, Italy)

On the Error Performance of Sectorized Cellular Systems for MC-CDMA and OFDMA (B01-02)

Simon Plass (German Aerospace Center (DLR), Germany)

Armin Dammann (German Aerospace Center (DLR), Germany)

Turbo Multiuser Detection for LDPC Coded MC-CDMA Systems (B01-03)

Zhanyun Duan (Tampere University of Technology, Finland)

Mikko Valkama (Tampere University of Technology, Finland)

Markku Renfors (Tampere University of Technology, Finland)

A Study on Symbol and Sub-Carrier Mapping Techniques for MC-CDMA based on LDPC Code with Progressively Increased Column-Weight (B01-04)

Noriaki Miyazaki (KDDI R&D Laboratories, Inc., Japan)

Chen Zheng (KDDI R&D Laboratories Inc., Japan)

Toshinori Suzuki (KDDI, Japan)

Hideyuki Shinonaga (KDDI Labs, Japan)

Multicarrier CDMA Multiuser Detection Algorithm Based on Belief Propagation (B01-05)

Pangan Ting (Tsing Hua University, Taiwan)

Chao-Kai Wen (Industrial Technology Research Institute, Taiwan)

Jung-Chieh Chen (National Tsing Hua University, Taiwan)

Jen-Yuan Hsu (Industrial Technology Research Institute, Taiwan)

Wei-Ping Chuang (Industrial Technology Research Institute, Taiwan)

12:30-14:00

Lunch Break

**Salon
Langenbeck
14:00-15:30**

Monday, September 12

B02 - MC-CDMA II

Session Chair: Ed Tiedemann (Qualcomm, USA)

Performance of MMSE Detection in Cellular MC-CDMA with Layered Space-Frequency Coding (B02-01)

Jouko Leinonen (University of Oulu, Centre for Wireless Communications (CWC), Finland)

Markku Juntti (University of Oulu, Finland)

Zexian Li (University of Oulu, Finland)

A Class of Multi-Carrier CDMA Access Methods for Wide-Bandwidth Wireless Channels (B02-02)

Diakoumis Gerakoulis (General Dynamics - Advanced Information Systems, USA)
George Efthymoglou (University of Piraeus, Greece)

Filippos Koravos (University of Thessaly, Greece)
Leandros Tassioulas (University of Thessaly, Greece)

Peak-to-Average Power Ratio Reduction Method Suitable for MC-CDMA System Downlink (B02-03)

Masato Saito (Nara Institute of Science and Technology, Japan)

Akihiro Okuda (Nara Institute of Science and Technology, Japan)

Minoru Okada (Nara Institute of Science and Technology, Japan)

Heiichi Yamamoto (Nara Institute of Science and Technology, Japan)

Uplink Pre-Equalization Using MMSE Prediction for TDD/MC-CDMA Systems (B02-04)

Yoshikazu Takei (Tokyo University of Science, Japan)

Tomoaki Ohtsuki (Tokyo University of Science, Japan)

STBC Site Diversity using Layered Code Assignment for Multicarrier CDMA in Multi-cell System (B02-05)

Takeo Fujii (Tokyo University of Agriculture and Technology, Japan)

Yukihiro Kamiya (Tokyo University of Agriculture and Technology, Japan)

Yasuo Suzuki (Tokyo University of Agriculture and Technology, Japan)

15:30-16:00

Coffee Break

**Salon
Langenbeck
16:00-17:30**

Monday, September 12

B03 - WCDMA Networks I

Session Chair: Matthew Baker (Philips, United Kingdom)

Impact of Angular Spread on Higher Order Sectorization in WCDMA Systems (B03-01)

Afif Osseiran (Ericsson Research, Sweden)
Andrew Logothetis (Ericsson, Sweden)

Low complexity space-time MMSE equalization in WCDMA systems (B03-02)

Maarit Melvasalo (Helsinki University of Technology, Finland)

Pekka Jänis (Helsinki University of Technology, Finland)

Visa Koivunen (HUT, Finland)

Time Diversity in WCDMA FDD Downlink for Multimedia Broadcast/Multicast Services (B03-03)

Atta Quddus (University of Surrey, United Kingdom)

Rahim Tafazolli (University of Surrey, United Kingdom)

Berry Evans (University of Surrey, United Kingdom)

An Enhanced SMLR algorithm for multipath channel estimation in downlink WCDMA (B03-04)

Lahouari FATHI (France Telecom R&D, France)

Genevieve Jourdain (Laboratoire des Images et des Signaux, France)

Marylin Arndt (FT R&D, France)

Crest Factor Reduction in Multi-carrier WCDMA (B03-05)

Navid Lashkarian (Xilinx Inc., USA)

Helen Tarn (Xilinx Inc., USA)

Chris Dick (Xilinx Inc., USA)

18:00

Welcome Reception at the ICC

**Salon
Langenbeck
11:00-12:30**

Tuesday, September 13

B04 - WCDMA Networks II

Session Chair: Jamshid Khun-Jush (Qualcomm, Germany)

Analytic Study of TCP performance over a Soft Rate Switching WCDMA Bearer (B04-01)

Arne Simonsson (Ericsson Research, Sweden)

Janne Peisa (Oy LM Ericsson Ab, Finland)

Jonas Pettersson (Ericsson Research, Sweden)

Performance of a WCDMA FDD Cellular Multihop Network (B04-02)

Robert Karlsson (ZTE Wistron Telecom AB, Sweden)

Huseyin Aniktar (RF Integrated Circuits and Systems, Denmark)

Jan Mikkelsen (Aalborg University, Denmark)

Torben Larsen (Aalborg University, Denmark)

On Managing Dynamic Traffic Hotspots in WCDMA Networks (B04-03)

Juan Sanchez-Gonzalez (Universitat Politecnica de Catalunya (UPC) ES)
Oriol Sallent (Universitat Politecnica de Catalunya (UPC) ES)
Jordi Perez-Romero (Universitat Politècnica de Catalunya, Spain)
Ramon Agusti (Universitat Politecnica de Catalunya (UPC) ES)

Adaptive Time-sharing Based Grouping Code Assignment in Mobile WCDMA Networks (B04-04)

Ben-Jye Chang (Chaoyang University of Technology, Taiwan)
Min-Xiou Chen (National Chung Cheng University, Taiwan)
Ren-Hung Hwang (National Chung-Cheng University, Taiwan)
Kun-Chan Tsai (National Chung-Cheng Univ., Taiwan)

Field Experiment Results of User Throughput Performance in WCDMA HSDPA (B04-05)

Yosuke Iizuka (NTT DoCoMo, Inc., Japan)

12:30-14:00 **Lunch Break**

**Salon
Langenbeck
14:00-15:30**

Tuesday, September 13

B05 - OFDMA Systems

Session Chair: Gerd Ascheid (Qualcomm, Germany)

Power and subcarrier allocation algorithms for OFDMA systems (B05-01)

Natalia Ermolova (HUT, Finland)
Boris Makarevitch (Helsinki University of Technology, Finland)

Design Considerations and Physical Layer Performance Results For a 4G OFDMA System Employing Dynamic Subcarrier Allocation (B05-02)

Angela Doufexi (University of Bristol, United Kingdom)
Simon Armour (University of Bristol, United Kingdom)

A performance analysis of coded frequency-hopped OFDMA with pilot-assisted channel estimation (B05-03)

Kostas Stamatiou (University of California, San Diego, USA)
John G. Proakis (Center for Wireless Communications, ECE Dept., UCSD, USA)

On the Design of Downlink Multi-user Multi-antenna OFDMA Systems with Imperfect CSIT (B05-04)

Rui Wang (HKUST, Honkong)
Vincent Lau (the Hong Kong University of Science and Technology, Honkong)

Equalization for OFDMA Systems Exploiting Unused Subchannels (B05-05)

Jaekwon Kim (Samsung Advanced Institute of Technology, Korea)
Ye Hoon Lee (Samsung Advanced Institute of Technology, Korea)
Cheolwoo You (Samsung Advanced Institute of Technology, Korea)
Dong Ho Kim (Samsung Advanced Institute of Technology, Korea)

15:30-16:00 **Coffee Break**

**Salon
Langenbeck
16:00-17:30**

Tuesday, September 13

B06 - SDMA

Session Chair: Martin Haardt (Ilmenau University of Technology, Germany)

Adaptive subcarrier allocation for increasing the capacity of multiuser spatial multiplexing based OFDM systems (B06-01)

Xiao Xiao (HuaZhong University of Science and Technology, China)
Zhenping Hu (Huazhong University of Science and Technology, China)
Guangxi Zhu (Huazhong University of Science and Technology, Taiwan)

Forward Link Beamforming Performances of FDD-SDMA Packet Cellular Testbed System (B06-02)

Yoshiaki Amano (KDDI Corporation, Japan)

Joint Transmission for Space Time Block Coded TD-SDMA (B06-03)

Norharyati Harum (Keio University, Japan)

Downlink SDMA for HiperMAN communications: the Obele algorithm (B06-04)

Nicolas Cassiau (CEA-Grenoble, France)

Downlink SDMA for IEEE 802.11a/g: A Means for Improving Legacy Mobile Throughput Using a Multi-Antenna Access Point (B06-05)

Alex Kuzminskiy (Bell Laboratories, Lucent Technologies, United Kingdom)

Hamid Reza Karimi (Bell Labs, Lucent Technologies, United Kingdom)

Dennis Morgan (Bell Laboratories, Lucent Technologies, USA)

Const. C. Papadias (Bell Labs of Lucent Tech., USA)

Dan Avidor (Bell Labs, Lucent Technologies, USA)

Jonathan Ling (Bell Labs, Lucent Technologies, USA)

19:00-22:30 **Conference Dinner at the Hotel Radisson SAS**

Salon
Langenbeck
09:00-10:30

Wednesday, September 14

B07 - CDMA I

Session Chair: Valery Ipatov (University of Turku, Finland)

Cyclic-Prefix CDMA System with Chip Based Equalisation and Interference Cancellation (B07-01)

Yushan Li (University of Edinburgh, United Kingdom)

Steve McLaughlin (University of Edinburgh, United Kingdom)

David Cruickshank (University of Edinburgh, United Kingdom)

Sensitivity of MC-CDMA Systems to phase noise : a large system analysis (B07-02)

Dehos Cedric (CEA, France)

Mathieu Des Noes (CEA / LETI, France)

Dominique Morche (CEA Leti, France)

A novel V-BLAST Detector for W-CDMA Signals with Frequency Selective Fading (B07-03)

Mário Silva (Institute for Telecommunications, Portugal)

Rui Dinis (IST - Technical University of Lisbon, Portugal)

Américo Correia (ADETTI, Portugal)

Peak-to-Average Power Ratio Reduction in CDMA Systems Using Constellation

Extension (B07-04)

Florence Nadal (Ecole Supérieure d'Electricité (SUPELEC), France)

Serdar Sezginer (Supelec, France)

Hikmet Sari (Ecole Supérieure d'Electricité (SUPELEC), France)

Selective Parallel Interference Cancellation for Uplink Cyclic-prefix CDMA (B07-05)

Kan Zheng (Beijing University of

Posts&Telecommunications, China)

10:30-11:00

Coffee Break

Salon

Langenbeck
11:00-12:30

Wednesday, September 14

B08 - CDMA II

Session Chair: Raj Ganesh (Qualcomm, India)

CDMA and IDMA: Iterative Multiuser Detections for Near-Far Asynchronous Communications (B08-01)

Katsutoshi Kusume (DoCoMo Communications Laboratories Europe GmbH, Germany)

Gerhard Bauch (DoCoMo Euro-Labs, Germany)

SINR estimation of OFDM-CDMA systems with constant timing offset: a large system analysis (B08-02)

Youssef Nasser (Commissariat à l'Energie Atomique, France)

Mathieu Des Noes (CEA / LETI, France)

Laurent Ros (Laboratoire des Images et des Signaux, France)

Genevieve Jourdain (Laboratoire des Images et des Signaux, France)

Comparison of Multiuser Detection Techniques for Asynchronous Multirate DS-CDMA Systems (B08-03)

Bin Yang (Carleton University, Canada)

Florence Danilo-Lemoine (Carleton University, Canada)

Multiuser Detection with Branch-and-Bound-Based Algorithm Using User Grouping for Synchronous CDMA (B08-04)

Yusuke Takano (Chiba University, Japan)

Hiroo Sekiya (Chiba University, Japan)

Jianming Lu (Chiba University, Japan)

Takashi Yahagi (Chiba University, Japan)

Pre-Rake System Applied with Frequency Domain Equalization in Multi-Code TDD-CDMA (B08-05)

JunHwan Lee (Keio University, Japan)

Masao Nakagawa (Keio University, Japan)

12:30-14:00 **Lunch Break**

Salon
Langenbeck

Wednesday, September 14

14:00-15:30

B09 - UWB Systems I

Session Chair: Rui Zhao (RWTH Aachen University, Germany)

Optimal Resource Allocation for UWB Wireless Ad Hoc Networks (B09-01)

Chuanyun Zou (Cornell University, USA)

Zygmunt Haas (Cornell University, USA)

Trade-off between repetition factor and frame length in Time-Hopping Impulse Radio Ultra Wide Band (B09-02)

Jocelyn Fiorina (Ecole Supérieure d'Electricité, France)

Walid Hachem (Supélec, France)

Space-Frequency Coded Cooperative Scheme among Distributed Nodes in Cognitive UWB Radio (B09-03)

Xiaofei Zhou (Create-Net, Italy)

Honggang Zhang (Create-Net, Italy)

Imrich Chlamtac (Create-Net, Italy)

A Frequency Domain Multiuser Detection Strategy for Ultra-Wideband Short-Range Communications (B09-04)

Simone Morosi (University of Florence, Italy)

Tiziano Bianchi (University of Florence, Italy)

Timing synchronization and frequency offset estimation for Ultra-Wideband (UWB) Multi-Band OFDM systems (B09-05)

Chin Wee Yak (National University of Singapore, Singapore)

Zhongding Lei (Institute for Infocomm Research, Singapore)

Suttinan Chattong (Institute for Infocomm Research, Singapore)

Tjeng Thiang Tjhung (Institute for Infocomm Research, Singapore)

15:30-16:00 **Coffee Break**

Salon
Langenbeck
16:00-17:30

Wednesday, September 14

B10 - UWB Systems II

Session Chair: Makoto Miyake (Mitsubishi Electric Cop., Japan)

Performance of UWB Sensor Networks based on Aloha Multiple Access (B10-01)

Romeo Giuliano (Università di Roma Tor Vergata, RadioLabs, Italy)

Franco Mazzenga (Università di Roma Tor Vergata, Italy)

Indoor Geolocation Distance Error Modeling using UWB Channel Measurements(B10-02)

Bardia Alavi (Worcester Polytechnic Institute, USA)

Kaveh Pahlavan (Worcester Polytechnic Institute, USA)

Nayef Alsindi (Worcester Polytechnic Institute, USA)

Xinrong Li (University of North Texas, USA)

Capacity Region of a Multi-Code DS-UWB System with Rayleigh Monocycles Supporting Variable Bit Rate Multiclass Services (B10-03)

Tung Chong Wong (Institute for Infocomm Research, Singapore)

Jon Mark (University of Waterloo, Canada)

Kee Chaing Chua (National University of Singapore, Singapore)

Coded Modulation in UWB Communications (B10-04)

Yafei Tian (Beihang University, China)

Chenyang Yang (Beihang University, China)

Ranging performance of UWB radio in multi-path and multiuser environments (B10-05)

Joonyong Lee (Handong University, Korea)

Sungyul Yoo (Handong University, Korea)

17:30

End of the conference

Salon
Sauerbruch
11:00-12:30

Monday, September 12

C01 - Channel Modelling I

*Session Chair: Hans-Jürgen Zepernick
(Blekinge Institute of Technology, Sweden)*

Two bounce Geometric Model for SIR evaluation in Ad-Hoc Networks using directional antennas (C01-01)

*Michael Mavrommatis (Athens Information Technology, Greece)
Antonis Kalis (AIT - Athens Information Technology, Greece)
Michael Carras (Athens Information Technology, Greece)*

Issues of the Simulation of Wireless Channels with Exponential Decay Power Delay Profiles (C01-02)

*Carlos Gutiérrez Díaz de León (Universidad Politécnica de Cataluña, Spain)
Margarita Cabrera (Technical University of Catalonia, Spain)*

Efficient modelling of channel maps with correlated shadow fading in mobile radio systems (C01-03)

Holger Claussen (Lucent Technologies, United Kingdom)

Noncoherent Reception of Constant Envelope OFDM in Flat Fading Channels (C01-04)

*Steven Thompson (University of California, San Diego, USA)
John Proakis (Northeastern University, USA)
James Zeidler (Univ. of California, San Diego, USA)*

On Parameter Estimation of Ricean Fading MIMO Channel: Correlated Signals and Spatial Scattering (Paper ID K01-05)

Bamrung Tau Sieskul (Chulalongkorn University, Thailand)

12:30-14:00 **Lunch Break**

Salon
Sauerbruch
14:00-15:30

Monday, September 12

C02 - Channel Modelling II

Session Chair: open

A Rice Fading MIMO Multicarrier Channel Model (C02-01)

*Esa Kunnari (University of Oulu, Finland)
Jari Linatti (University of Oulu, Finland)*

One-bit Time Reversal for WLAN Applications (C02-02)

*Persefoni Kyritsi (Stanford University, USA)
George Papanicolaou (Dept of Mathematics, Stanford University, DZ)*

Statistical Distribution of Eigenvalues of Correlation Matrices in i.i.d MIMO Channels under Rayleigh Fading (C02-03)

*Tetsuki Taniguchi (University of Electro-Communications, Japan)
Shen Sha (The University of Electro-Communications, China)
Yoshio Karasawa (University of Electro-Communications, Japan)*

Adaptive Modulation and Combining for Bandwidth Efficient Communication over Fading Channels (C02-04)

*Noureddine Hamdi (INSAT, Tunisia)
Mohamed-Slim Alouini (University of Minnesota, USA)*

Capacity of Time-Varying Rayleigh Fading MIMO Channels (C02-05)

*Yifei Zhao (Tsinghua University, China)
Ming Zhao (National Lab for Information Science and Technology Department of Electronic Engineering, Tsinghua U, China)
Limin Xiao (Tsinghua University, China)
Jing Wang (EE, Tsinghua University, China)*

15:30-16:00 **Coffee Break**

Salon
Sauerbruch
16:00-17:30

Monday, September 12

C03 - Channel Modelling III

Session Chair: Thomas Fuegen (IHE, University of Karlsruhe, Germany)

Semi-blind stochastic maximum likelihood for frequency selective MIMO channels (C03-01)

Lamia Berriche (*Ecole nationale supérieure des télécommunications, France*)
Karim Abed-Meraim (*Dept TSI, Télécom Paris, France*)

Towards the development of a hardware simulator for MIMO radio channels (C03-02)

Sylvie PICOL (*IETR - INSA de Rennes, France*)
Gheorghe Zaharia (*IETR-INSA de Rennes, France*)
Ghais El Zein (*IETR-INSA Rennes, France*)

A MIMO mobile-to-mobile channel model: part II - the simulation model (C03-03)

Bjørn Olav Hogstad (*Agder University College, Norway*)
Matthias Paetzold (*Agder University College, Norway*)
Neji Youssef (*Ecole supérieure des communications de Tunis, Tunisia*)
Dongwoo Kim (*Hanyang University, Korea*)

Impact of Antenna Array Geometry on MIMO Channel Eigenvalues (C03-04)

Abdulla Abouda (*Helsinki University of Technology, Finland*)
Hassan El-Sallabi (*Helsinki University of Technology, Finland*)
Gustav Haggman (*Helsinki University of technology, Finland*)

A MIMO Mobile-to-Mobile Channel Model: Part I - The Reference Model (C03-05)

Matthias Paetzold (*Agder University College, Norway*)

18:00

Welcome Reception at the ICC

Salon
Sauerbruch
11:00-12:30

Tuesday, September 13

C04 - Channel & Propagation Modelling I

Session Chair: Luis Correja (*IST-Technical University of Lisbon, Portugal*)

Indoor Channel Measurements and Analysis in the Frequency Bands 2GHz and 60GHz (C04-01)

H. Yang (*Eindhoven University of Technology, The Netherlands*)
Peter Smulders (*Eindhoven University of Technology, The Netherlands*)
Matti Herben (*Eindhoven University of Technology, The Netherlands*)

A Novel Wideband Space-Time Channel Measurement Method at 60 GHz (C04-02)

Moon-Soon Choi (*Heinrich-Hertz-Institut, Germany*)

Determination of Permittivity of Building Materials through WLAN Measurements at 2.4GHz (C04-03)

Jaouhar Jemai (*Technische Universität Braunschweig, Germany*)
Thomas Kuerner (*Braunschweig Technical University, Germany*)
Alexandre Varone (*Ecole d'Ingénieurs et d'Architectes de Fribourg, Switzerland*)
Jean-Frédéric Wagen (*University, Switzerland*)

Millimeter Wave Propagation Measurements and Characterization in an Indoor Environment for Wireless 4G Systems (C04-04)

Nektarios Moraitis (*National Technical University of Athens, Greece*)

Statistical Characteristics of 60 GHz Wideband Indoor Propagation Channel (C04-05)

Moon-Soon Choi (*Heinrich-Hertz-Institut, Germany*)

12:30-14:00

Lunch Break

Salon
Sauerbruch
14:00-15:30

Tuesday, September 13

C05 - Channel & Propagation Modelling II

Session Chair: open

Angular Spread Estimation for Slightly Distributed Scatterers using the Generalized Array Manifold Model (C05-01)

Xuefeng Yin (*Aalborg University, Denmark*)
Bernard Fleury (*Aalborg University, DK - 9220 Aalborg, Denmark*)
Troels Pedersen (*Aalborg University, Denmark*)
Jukka-Pekka Nuutinen (*Elektrobit Ltd, Finland*)

Performance of MIMO Systems Employing Co-located Orthogonally Polarized Antennas in Micro-cellular Environments (C05-02)

Matthews Mtumbuka (*University of Oxford, United Kingdom*)
David Edwards (*University of Oxford, United Kingdom*)

A Large-Sample Approximate Maximum Likelihood for Localizing A Spatially Distributed Source (C05-03)

Bamrung Tau Sieskul (Chulalongkorn University, Thailand)

HSDPA Link Performance with Multi-Antenna Diversity (C05-04)

Elena Virtej (Nokia Research Center, Finland)

Stochastic Maximum Likelihood Estimation of Angle- and Delay-Domain Propagation Parameters (C05-05)

Cassio Ribeiro (Helsinki University of Technology, Finland)

Andreas Richter (Helsinki University of Technology, Finland)

Visa Koivunen (Helsinki University of Technology, Finland)

15:30-16:00 **Coffee Break**

Salon
Sauerbruch
16:00-17:30

Tuesday, September 13

C06 - Channel Estimation

Session Chair: Umberto Spagnolini (Politecnico di Milano, Italy)

Efficient Implementation of Robust OFDM Channel Estimation (C06-01)

Gunther Auer (DoCoMo Euro-Labs, Germany)

Bit Error Probability of STBC--OFDM System over Correlated MIMO Channels with Channel Estimation Errors (C06-02)

Honglei Miao (University of Oulu, Finland)

Markku Juntti (University of Oulu, Finland)

Positioning and Channel Estimation Errors and their Impact on a Smart Antenna System in an Indoor WLAN (C06-03)

Karim Nasr (University of Manchester, United Kingdom)

A Channel Estimation Technique for Dynamic Parameter Controlled - OF/TDMA Systems (C06-04)

Kazunari Yokomakura (Osaka University, Japan)

Seiichi Sampei (Osaka University, Japan)

Hiroshi HARADA (National Institute of Information & Communications Technology, Japan)

Norihiko Morinaga (Hiroshima International University, Japan)

Performance Analysis of Channel Coding Schemes with Blind Channel Estimation (C06-05)

Manjeet Rikhranj (Institute for Infocomm Research, Singapore)

Yuen Sam Kwok (Institute for Infocomm Research, Singapore)

19:00-22:30

Conference Dinner at the Hotel Radisson SAS

Salon
Sauerbruch
09:00-10:30

Wednesday, September 14

C07 - Indoor Radio Propagation

Session Chair: open

Empirical Models and Parameters for Rural and Indoor Wideband Radio Channels at 2.45 and 5.25 GHz (C07-01)

Daniela Laselva (Elektrobit Ltd., Finland)

Xiongwen Zhao (Elektrobit Ltd., Finland)

Juha Meinilä (Elektrobit Testing, Finland)

Tommi Jamsa (Elektrobit Ltd., Finland)

Jukka-Pekka Nuutinen (Elektrobit Ltd., Finland)

Pekka Kyösti (Elektrobit Ltd., Finland)

Deterministic Propagation Model for the Planning of Hybrid Urban and Indoor Scenarios (C07-02)

Gerd Woelfle (AWE Communications, Germany)

Rene Wahl (AWE Communications, Germany)

Philipp Wertz (University of Stuttgart, Germany)

Pascal Wildbolz (AWE Communications, Germany)

Cluster Angular Spreads in a MIMO Indoor Propagation Environment (C07-03)

Nicolai Czink (Vienna University of Technology, Austria)

Ernst Bonek (Vienna University of Technology, Austria)

Xuefeng Yin (Aalborg University, Denmark)

Bernard Fleury (Aalborg University, Denmark)

Diversity Techniques With Dipole Antennas In Indoor Multipath Propagation (C07-04)

Ali Khaleghi (Electromagnetics Department, France)

Alain Azoulay (SUPELEC, France)

Jean-Charles Bolomey (SUPELEC, France)

Average Signal Level Prediction in an Indoor WLAN Using a Wall Imperfection Model (C07-05)

Karim Nasr (University of Manchester, United Kingdom)

OFDM Blind Parameter Identification in Cognitive Radios (C08-05)

*Hiroyuki Ishii (NEC Corporation, Japan)
Gregory Wornell (Massachusetts Institute of Technology, USA)*

10:30-11:00 **Coffee Break**

12:30-14:00 **Lunch Break**

**Salon
Sauerbruch
11:00-12:30**

Wednesday, September 14

C08 - Software Radio

Session Chair: Uma Jha (Qualcomm, USA)

Object Oriented HW functions Accelerate Communication, Computing, and Multimedia Convergence (INVITED PAPER) (C08-01)

Uma Jha (Qualcomm, USA)

Computing Resource Management for SDR Platforms (C08-02)

Vuk Marojevic (Polytechnic University of Catalonia, Spain)

Xavier Reves (Universitat Politecnica de Catalunya, Spain)

Antoni Gelonch (Polytechnic University of Catalonia, Spain)

On the Concept of a Multi-Mode Agile Receive Digital-Front-End for Cellular Terminals (C08-03)

Gernot Hueber (Johannes-Kepler University, Austria)

Linus Maurer (DICE GmbH, Austria)

Georg Strasser (University of Linz, Austria)

Rainer Stuhlberger (Institute for Communications and Information Engineering, Linz Austria, Austria)

Richard Hagelauer (Institute for Integrated Circuits, University Linz, Austria)

Reconfigurable Implementation Issues of a Detection Scheme for DS-CDMA High Data Rate Connections (C08-04)

Ioannis Krikidis (Ecole Nationale Supérieure des Telecommunications, France)

Jean Luck Danger (Ecole Nationale Supérieure des Telecommunications, France)

Lirida Naviner (Ecole Nationale Supérieure des Telecommunications, France)

**Salon
Sauerbruch
14:00-15:30**

Wednesday, September 14

C09 - Digital Audio & Video Broadcasting

Session Chair: Frank Fitzek (Aalborg University, Denmark)

On the Impact of Efficient Power Allocation in Pilot Based Channel Estimation Techniques for Multicarrier Systems (C09-01)

Emad Alsusa (Manchester University, United Kingdom)

Mohammed Baidas (University of Manchester, United Kingdom)

Yeonwoo Lee (i-Networking Lab, Korea)

EXIT Chart Analysis of Turbo DeCodulation (C09-02)

Thorsten Clevorn (RWTH Aachen University, Germany)

Johannes Brauers (RWTH Aachen University, Germany)

Marc Adrat (Aachen University, Germany)

Peter Vary (RWTH Aachen University, Germany)

Scalability of DVB-H Development on Existing Wireless Infrastructure (C09-03)

Aurelian Bria (Royal Institute of Technology Stockholm, Sweden)

David Gomez-Barquero (Polytechnic University of Valencia, Spain)

Estimation of Wiener Phase Noise by the Autocorrelation of the ICI Weighting Function in OFDM Systems (C09-05)

Yi-Ching Liao (National Taiwan University, Taiwan)

Kwang-Cheng Chen (National Taiwan University, Taiwan)

15:30-16:00 **Coffee Break**

Salon
Sauerbruch
16:00-17:30

Wednesday, September 14

C10 - OFDM Systems

Session Chair: Michael Einhaus (RWTH Aachen University, Germany)

Sensitivity of FFT-Equalized Zero-Padded OFDM Systems to Time and Frequency Synchronization Errors (C10-01)

Chandra Athaudage (University of Melbourne, Australia)

DAPSK Schemes for low Complexity OFDM Systems (C10-02)

Nico Toender (Technical University of Hamburg-Harburg, Germany)
Hermann Rohling (Technical University Hamburg-Harburg, Germany)

Synchronization in OFDM-based WLAN with Transmit and Receive Diversities (C10-03)

Ting-Jung Liang (Dresden University of Technology, Germany)
Xin Li (Vodafone Chair Mobile Communications, TU Dresden, Germany)
Ralf Irmer (Dresden University of Technology, Germany)
Gerhard Fettweis (Technische Universitaet Dresden, Germany)

An Improved DCT-Based OFDM Data Transmission Scheme (C10-04)

Peng Tan (University of Alberta, Canada)
Norman Beaulieu (University of Alberta, Canada)

Effects of the Cyclic Prefix on OFDM Systems over Time-Varying Channels (C10-05)

Lan Yang (Southeast University, China, Taiwan)

17:30 **End of the conference**

Track D - Special Sessions

Saal 9
11:00-12:30

Monday, September 12

D01 - Special Session on Reconfigurable Wireless Systems

Session Chair: Ashish Pandharipande (Samsung, Korea)

Capacity Enhancement via Multi-Mode Adaptation in Spatially Correlated MIMO Channels (D07-01)

Antonio Forenza (University of Texas, USA)
Matthew McKay (University of Sydney, Australia)
Ashish Pandharipande (Samsung Advanced Institute of Technology, Korea)
Robert Heath (The University of Texas at Austin, USA)
Iain Collings (University of Sydney, Australia)

Physical Layer Design Issues Unique to Cognitive Radio Systems (D07-02)

Danijela Cabric (University of California, Berkeley, USA)
Robert Brodersen (University of California at Berkeley, USA)

A Platform for Exploring Reconfigurability in Distributed and Disaggregated Wireless Networks (D07-03)

Linda Doyle (Trinity College Dublin, Ireland)

A Flexible Protocol Stack for Multi-Mode Convergence in a Relay-based Radio Network Architecture (D07-04)

Lars Berlemann (RWTH Aachen University, Germany)
Ralf Pabst (Aachen University, Germany)
Marc Schinnenburg (RWTH Aachen University, Germany)
Bernhard Walke (RWTH Aachen University, Germany)

An Ultra-Wide Band Umbilical Cord for Cognitive Radio Systems (D07-05)

Christophe Moy (Supelec, France)

12:30-14:00 **Lunch Break**

Saal 9
14:00-15:30

Monday, September 12

D02 - Special Session on Embedded Networks

Session Chair: Stephen Hailes (University College London, United Kingdom)

A summary of the complex behaviour from simple power conserving protocols (INVITED PAPER) (D02-01)

Adam Greenhalgh (University College London, United Kingdom)
Stephen Hailes (University College London, United Kingdom)

Developing Embedded Networked Products using the Simics Full-System Simulator (D02-02)

Jakob Engblom (Virtutech AB, Sweden)
David Kagedal (Virtutech AB, Sweden)
Andreas Moestedt (,)
Johan Runeson (Virtutech AB, Sweden)

Privacy Requirements for Embedded Sensor Devices (D02-03)

Thomas Scheffler (University of Potsdam, Germany)
Bettina Schnor (University of Potsdam, Germany)

Adaptive media switching for future vehicle-to-vehicle communication (D02-04)

Takayuki Warabino (KDDI R&D Laboratories, Japan)
Kenji Saito (KDDI R&D labs., Japan)
Keizo Sugiyama (KDDI R&D labs., Japan)
Hideyuki Shinonaga (KDDI Labs, Japan)
Tomohiro Nishida (NiCT, Japan)

Ultra Low Energy Wireless Temperature Sensor Network Implementation (D02-05)

Mikko Kohvakka (Tampere University of Technology, Finland)
Marko Hännikäinen (Tampere University of Technology, Finland)
Timo Hämäläinen (Tampere University of Technology, Finland)

15:30-16:00 **Coffee Break**

Saal 9 **Monday, September 12**
16:00-17:30 **D03 - Special Session on Wireless Middleware**

Session Chair: Cecilia Mascolo (University College London, United Kingdom)

The RUNES Middleware: A Reconfigurable Component-based Approach to Networked Embedded Systems (INVITED PAPER) D03-01)

Paolo Costa (Politecnico di Milano, Italy)
Geoff Coulson (Lancaster University, United Kingdom)
Cecilia Mascolo (University College London, United Kingdom)
Gian Pietro Picco (Politecnico di Milano, Italy)
Stefanos Zachariadis (University College London, United Kingdom)

Signal Strength based Service Discovery (S3D) in Mobile Ad Hoc Networks (D03-02)

Jinshan Liu (INRIA, France)
Valerie Issarny (INRIA, France)

Building resource aware middleware services over MANET for rescue and emergency applications (D03-03)

Ovidiu-Valentin Drugan (University of Oslo, Norway)
Thomas Plagemann (University of Oslo, Norway)
Ellen Munthe-Kaas (University of Oslo, Norway)

A Middleware for Task Allocation in Wireless Sensor Networks (D03-04)

Mauri Kuorilehto (Tampere University of Technology, Finland)
Marko Hännikäinen (Tampere University of Technology, Finland)
Timo Hämäläinen (Tampere University of Technology, Finland)

Contextual Information Processing for System-Unaware Communications (D03-05)

Masugi Inoue (National Institute of Information and Communications Technology, Japan)
Mikio Hasegawa (National Institute of Information and Communications Technology, Japan)
Hiroyuki Morikawa (The University of Tokyo/ National Institute of Information and Communications Technology, Japan)

18:00 **Welcome Reception at the ICC**

Saal 9 **Tuesday, September 13**
11:00-12:30 **D04 - Special Session on Cross-layer MIMO Designs (ACE/NEWCOM)**

Session Chair: Carles Anton (CTTC, Spain)

Fair scheduling and orthogonal linear precoding/decoding in broadcast MIMO systems (INVITED PAPER) (D04-01)

Oswaldo Simeone (Politecnico di Milano, Italy)
Umberto Spagnolini (Politecnico di Milano, Italy)
Giuseppe Primolevo (Politecnico di Milano, Italy)
Roberto Bosisio (Politecnico di Milano, Italy)

QoS-based multiuser scheduling in MIMO systems (D04-02)

Atilio Gameiro (Telecommunications Institute/Aveiro University, Portugal)
Angeliki Alexiou (Bell Labs, Lucent Technologies, United Kingdom)

Beamforming and Bit-loading Strategies for Multi-User SDMA with Admission Control (D04-03)

Mats Bengtsson (Royal Institute of Technology, Sweden)
Diego Bartolome (Gedas Iberia, Spain)
Jose Lopez (CTTC, Spain)
Carles Anton-Haro (Telecommunications Technological Center of Catalonia (CTTC) ES)

Cross-Layer Optimization for a Multi-User MIMO Audio Transmission (D04-04)

Marko Hennhoefer (Ilmenau University of Technology, Germany)
Martin Haardt (Ilmenau University of Technology, Germany)

Resource Allocation in Wideband Wireless Systems (D04-05)

Marc Realp (CTTC, Spain)
Raymond Knopp (Institut Eurecom, France)
Ana I. Pérez-Neira (Polytechnic University of Catalonia, Spain)

12:30-14:00 **Lunch Break**

Saal 9 **Tuesday, September 13**

14:00-15:30 **D05 - Special Session on Air Interfaces for B3G (IST-WINNER Project)**

Session Chair: Werner Mohr (Siemens AG, Germany)

The WINNER (Wireless World Initiative New Radio) Project - Development of a Radio Interface for Systems beyond 3G (INVITED PAPER) (D05-01)

Werner Mohr (Siemens AG, Germany)

A Novel Fast HPA Predistorter for High PAPR Signals (D05-02)

Krzysztof Wesolowski (Poznan University of Technology, PL)

Wideband radio propagation characteristics at 5.3 GHz in suburban environments (D05-03)

Terhi Rautiainen (Nokia, Finland)
Kimmo Kalliola (Nokia Research Center, Finland)
Juha Juntunen (Nokia, Finland)

A Multi-User Spatial Domain Link Adaptation Concept for Beyond 3G Systems (D05-04)

Martin Doettling (Siemens Mobile Phones, Germany)
David Astély (Ericsson, Sweden)
Magnus Olsson (Ericsson Research, Sweden)

An Allocation Strategy to Avoid Crossed-Slot Interference in Time Division Duplex (D05-05)

David Thomas (Roke Manor Research Ltd, United Kingdom)
Elena Costa (Siemens AG, Germany)

15:30-16:00 **Coffee Break**

Saal 9 **Tuesday, September 13**

16:00-17:30 **D06 - Special Session on Broadband Wireless Internet**

Session Chair: Siamäk Naghian (Nokia Corp., Finland)

A simple approach to HSDPA dimensioning (D06-01)

Paolo Zanier (Nokia Networks, Finland)

Performance Analysis of Temporary Removal Scheduling applied to mobile WiMax Scenarios in Tight Frequency Reuse (D06-02)

Carsten Ball (Siemens AG, Germany)
Franz Tremel (Siemens AG, Germany)
Anja Klein (TU Darmstadt, Germany)
Xavier Gaube (Technical University of Darmstadt, Germany)

WCDMA Enhanced Uplink: HSUPA link level performance study (D06-03)

Massimo Bertinelli (Nokia Research Center, Finland)
Esa Malkamaki (Nokia Research Center, Finland)

IEEE 802.16e System Performance: Analysis and Simulations (D06-04)

Fan Wang (Motorola, Inc., USA)
Amitava Ghosh (Motorola, Inc., USA)
Robert Love (Motorola, USA)
Kenneth Stewart (Motorola, USA)
Rapeepat Ratasuk (Motorola Inc., USA)
Raja Bachu (Motorola, USA)

Interference Averaging and Avoidance in the Downlink of an OFDMA System (D06-05)

Michael Einhaus (RWTH Aachen University, Germany)

19:00-22:30 **Conference Dinner at the Hotel Radisson SAS**

Saal 9 **Wednesday, September 14**

09:00-10:30 **D07 - Special Session on IEEE 802.15 WPAN Activities**

Session Chair: Chia Chin Chong (Samsung, Korea)

UWB-DCSK Communication Systems for Low Rate WPAN Applications (INVITED PAPER) (D01-01)

Su Khiong Yong (Samsung Advanced Institute of Technology, Korea)
Chia-Chin Chong (Samsung Advanced Institute of Technology, Korea)
Seong-Soo Lee (Samsung Advanced Institute of Technology, Korea)

A Statistical Based UWB Multipath Channel Model for the Indoor Environments WPAN Applications (D01-02)

Chia-Chin Chong (Samsung Advanced Institute of Technology, Korea)
Su Khiong Yong (Samsung Advanced Institute of Technology, Korea)

Beamforming for Interference Mitigation in TH Impulse Radio UWB Systems (D01-03)

Matteo Sabattini (University of California, San Diego, USA)
Elias Masry (,)
Laurence Milstein (University of California, USA)

A Primary Adaptation of the W-CHAMB Protocol for Gigabit WPANs (D01-04)

Rui Zhao (RWTH Aachen University, Germany)

Virtual Personal Overlay Networks (D01-05)

Wajdi Louati (Institut national des télécommunications, France)
Djamal Zeglache (INT, France)

10:30-11:00 **Coffee Break**

Saal 9
11:00-12:30

Wednesday, September 14
D08 - Special Session on Ambient Networks

Session Chair: Andreas Schieder (Ericsson Deutschland GmbH, Germany)

Ambient Networks: Bridging Heterogeneous Network Domains (INVITED PAPER) (D08-01)

Bengt Ahlgren (SICS, Sweden)
Lars Eggert (NEC Europe Ltd. Network Laboratories, Germany)
Borje Ohlmann (Ericsson, Sweden)
Andreas Schieder (Ericsson Deutschland GmbH, Germany)

Multi-radio resource management for Ambient Networks (D08-02)

Fredrik Berggren (KTH, Royal Institute of Technology, Sweden)
Aurelian Bria (KTH, Sweden)
Leonardo Badia (University of Ferrara, Italy)
Ingo Karla (Alcatel, Germany)
Remco Litjens (KPN Research, The Netherlands)
Per Magnusson (Ericsson Reserach, Sweden)

Dynamic and Automatic Interworking between Personal Area Networks using Composition (D08-03)

Rui Campos (INESC Porto, Portugal)
Carlos Pinho (INESC Porto, Portugal)
Manuel Ricardo (INESC Porto, Portugal)
José Ruela (INESC Porto, Portugal)
Petteri Pöyhönen (Nokia Research, Finland)
Cornelia Kappler (Siemens AG, Germany)

Media Aware Overlay Routing in Ambient Networks (D08-04)

José Rey (Panasonic R&D Center Germany GmbH, Germany)
Bertrand Mathieu (France Telecom R&D, France)
David Lozano Llanos (Telefónica I+D, Spain)
Stephen Herborn (University of New South Wales, Australia)
Kamal Ahmed (Netherlands Organisation for Applied Scientific Research, The Netherlands)
Stefan Schmid (NEC Europe Ltd., Germany)

Stability-based Multi-hop Clustering Protocol (D08-05)

Jari Tenhunen (VTT Technical Research Centre of Finland, Finland)
Ville Typpö (VTT Technical Research Centre of Finland, Finland)
Marko Jurvansuu (VTT Electronics, Finland)

12:30-14:00 **Lunch Break**

Saal 9

14:00-15:30

Wednesday, September 14

D09 - Special Session on Beyond 3G research in China

Session Chair: Xiao-Hu You (Southeastern University, China)

Group OFDM Technique for beyond 3G (D09-01)

Shidong Zhou (Tsinghua University, Taiwan)

Group Cell FuTURE B3G TDD System (D09-02)

Xiaofeng Tao (WTI-BUPT, China)

Jin Xu (Beijing University of Posts and Telecommunications, China)

Xiaodong Xu (Beijing University of Posts and Telecommunications, China)

Chao Tang (Beijing University of Posts and Telecommunications, China)

Ping Zhang (Wireless Technology Innovation Lab, Beijing University of Posts and Telecommunications, China)

Generalized Multi-carrier Transmission Technique for Beyond 3G Mobile Communications (D09-03)

Xiqi Gao (National Mobile Communication Research Lab., Southeast University, China)

Xiaohu You (National Mobile communication Research Lab., Southeast University, China)

Bin Jiang (National Mobile Communication Research Lab., Southeast University, China)

Zhiwen Pan (Southeast University, China)

Xiangyang Wang (Southeast University, China)

The ByTENS: An open software platform for beyond 3G air interface performance evaluation* (D09-04)

Pinyi Ren (Xi'an Jiaotong University, China)

Shihua Zhu (Xi'an Jiaotong University, China)

A Novel Turbo MIMO-OFDM System Via Sequential Monte Carlo (D09-05)

Peng Liang (Beijing Univ. of Posts and Telecomm., China)

15:30-16:00 **Coffee Break**

Saal 9

16:00-17:30

Wednesday, September 14

D10 - Special Session on Cross Layer Optimization and Intelligent RRM

Session Chair: Michele Zorzi (University of Padova, Italy)

Spectrum Sharing Through Beacons (D10-01)

Anthony Hulbert (Roke Manor Research, United Kingdom)

A Cross-Layer On-Demand Routing Protocol for Delay-Sensitive Applications (D10-02)

Lamia Romdhani (Institut Eurecom, France)
Christian Bonnet (Institut Eurecom, France)

Cross-Layer Issues and Forward Error Correction for Wireless Video Broadcast (D10-03)

Thomas Stockhammer (Munich University of Technology, Germany)

Hrvoje Jenkac (Munich University of Technology, Germany)

Wen Xu (Siemens AG, Germany)

A Dynamic Spectrum Allocation between Network Operators with Priority-based Sharing and Negotiation (D10-04)

Hoon Kim (Samsung Advanced Institute of Technology, Korea)

IEEE 802.11k: Improving Confidence in Radio Resource Measurements (D10-05)

Stefan Mangold (Swisscom Innovations, Switzerland)

Lars Berlemann (RWTH Aachen University, Germany)

17:30

End of the conference

Track E

Salon Virchow

11:00-12:30

Monday, September 12

E01 - Coding & Modulation I

Session Chair: Gunter Auer (DoCoMo Eurolabs, Germany)

Dual Antenna LMMSE Equalization using Bad Urban Channel Data in HSDPA Multicode Transmission (E01-01)

Jari Mattila (Nokia Research Center, Finland)
Vuokko Vuorinen (Nokia Research Center, Finland)

Multilevel coded QAM for MMSE Turbo equalization - Convergence in Real Fields (E01-02)

Kimmo Kansanen (University of Oulu, Finland)
Christian Schneider (Technische Universität Ilmenau, Germany)
Tadashi Matsumoto (CWC - Oulu, Finland)
Reiner Thomae (University of Ilmenau, Germany)

A new blind adaptive MMSE equalizer for MIMO systems (E01-03)

Ibrahim Kacha (Ecole Nationale Supérieure des Télécommunications, France)
Karim Abed-Meraim (Dept TSI, Télécom Paris, France)
Adel Belouchrani (Ecole Nationale Polytechnique, France)

Low-Complexity MMSE Turbo Equalization with Successive Interference Cancellation for MIMO-ISI Channels (E01-04)

Tarik Ait Idir (Institut National des Postes et Télécommunications, MA)
Samir Saoudi (ENST-Bretagne, France)

Rate, Sub-Carrier, and Power Allocations for Multi-Carrier CDMA with LMMSE Multiuser Detections (E01-05)

Po-Wei Fu (National Taiwan University, Taiwan)
Kwang-Cheng Chen (National Taiwan University, Taiwan)

12:30-14:00 **Lunch Break**

Salon Virchow **Monday, September 12**

14:00-15:30 **E02 - Coding & Modulation II**

Session Chair: Gerd Ascheid (Qualcomm, Germany)

Least Squares Adaptive Algorithms Suitable for Multiplierless LMMSE Detection in 3rd Generation Mobile Systems (E02-01)

Charan Litchfield (University Of Kent At Canterbury, United Kingdom)

An Error Bound for Space-Time MMSE Multiuser Detection in Coded CDMA Systems over Fading Channels (E02-02)

Walaa Hamouda (Concordia University, Canada)

Performance Comparison of MMSE-SIC and MMSE-ML Multiuser Detectors in a STBC-OFDM System (E02-03)

Nam Tran (University of Electro-Communications, Tokyo, Japan, Japan)
Anh Tuan Le (The University of Electro-Communications, Japan)
Tadashi Fujino (The University of Electro-Communications, Japan)

Low Complexity Power Control Approach Based on MMSE Detection for V-BLAST (E02-04)

Kun Zhao (PCN&SS Lab, University of Science and Technology of China, China)
Ling Qiu (PCN&SS Lab, University of Science and Technology of China, Taiwan)
Jinkang Zhu (University of Science and Technology of China, China)
Yanhua Si (PCN&SS Lab, University of Science and Technology of China, China)

MMSE Power Allocation for Image and Video Transmission over Wireless Channels (E02-05)

Akram Bin Sediq (American University of Sharjah, United Arab Emirates)
Mohamed El-Tarhuni (American University of Sharjah, United Arab Emirates)

15:30-16:00 **Coffee Break**

Salon Virchow **Monday, September 12**

16:00-17:30 **E03 - Coding & Modulation III**

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

Coding Limits for Short Range Wireless Infrared Transmission (E03-01)

Mike Wolf (Ilmenau University of Technology, Germany)
Martin Haardt (Ilmenau University of Technology, Germany)

BPSK Modulation with Unequal Power Allocation Considering A Priori Knowledge (E03-02)

Thomas Brüggem (RWTH Aachen University, Germany)
Marc Adrat (Aachen University, Germany)
Peter Vary (RWTH Aachen University, Germany)

Architectural Considerations for Rate-flexible Trellis Processing Blocks (E03-03)

Matthias Kamuf (Lund University, Sweden)
John B. Anderson (University of Lund, Sweden)
Viktor Öwall (Lund University, Sweden)

Spreading Ensembles with Improved Correlation Properties for Multiple Access (E03-04)

Victor Barinov (MIET - Technical University, Russia)
Vitaliy Kuznetsov (MIET-TU, Russia)
Michael Lebedev (MIET-TU, Russia)

Improved Upper Bound for Erasure Recovery in Binary Product Codes (E03-05)

Jacek Ilow (Dalhousie University, Canada)
Ali Al-Shaikhi (King Fahd University of Petroleum and Minerals, Saudi Arabia)

18:00 **Welcome Reception at the ICC**

Salon Virchow Tuesday, September 13
11:00-12:30 **E04 - Coding & Modulation IV**

Session Chair: Kwang Cheng Chen (NTU, Taiwan)

Performance of 4-D Trellis-Coded Modulation in the Presence of Polarization Multiplexing (E04-01)

Yu Deng (University of York, United Kingdom)
Alister Burr (University of York, United Kingdom)
George White (University of York, United Kingdom)

Non-Unique Differential Turbo Matrix Modulation (E04-02)

Gerhard Bauch (DoCoMo Euro-Labs, Germany)
Prasanna Sethuraman (DoCoMo Euro-Labs, Germany)
Frank Schreckenbach (Munich University of Technology, Germany)

Design of Adaptive Modulation in MIMO Systems Using Outdated CSI (E04-03)

Zhendong Zhou (The University of Sydney, Australia)
Branka Vucetic (The University of Sydney, Australia)
Zhuo Chen (University of Sydney, Australia)
Yonghui Li (University of Sydney, Australia)

Layered Space-Frequency Bit-Interleaved Coded Modulation for MIMO Systems (E04-04)

Matthew McKay (University of Sydney, Australia)
Iain Collings (University of Sydney, Australia)

Adaptive Modulation for V-BLAST Systems with Power Constraints (E04-05)

Yang Song (Beijing University of Posts and Telecommunications, China)
Zhen Liu (Beijing University of Posts and Telecommunications, China)
Dacheng Yang (Beijing University of Posts and Telecommunications, China)

12:30-14:00 **Lunch Break**

Salon Virchow Tuesday, September 13
14:00-15:30 **E05 - Coding & Modulation V**

Session Chair: Emad Alsusa (Manchester University, United Kingdom)

New error prediction techniques for turbo-coded OFDM systems and impact on adaptive modulation and coding (E05-01)

Emilio Strinati (Motorola Labs, St Aubin, France, France)
Sebastian Simoens (Motorola Labs, France)
Joseph Boutros (ENST university, France)

M-QAM OFDM system performance in the presence of nonlinear and frequency offset effects (E05-02)

Natalia Ermolova (HUT, Finland)

Adaptive Subcarrier Block Modulation with Differentially Modulated Pilot Symbol Assistance for Downlink OFDM Using Uplink Delay Spread (E05-03)

Chang-Jun Ahn (National Institute of Information and Communications Technology (NICT), Japan)

An Efficient Greedy Loading Algorithm for Adaptive Modulation in OFDM Systems (E05-04)

Liu Kaiming (Beijing University of Posts and Telecommunications, China)
Feifei Yin (Beijing University of Posts and Telecommunications, China)
Wenbo Wang (Beijing University of Posts and Telecommunications, China)
Yuanan Liu (Beijing Univ. of Posts and Telecom, China)

Power-efficient M-QAM Signal Constellations to Reduce the PMEPR in OFDM (E05-05)

Mojtaba Vaezi (Iran Telecommunication Research Center (ITRC) DZ)
Alireza Mirzaee (Iran Telecommunication Research Center, Iran)
S. Mostafa Safavi (Iran Telecommunication Research Center, Iran)

Space Diversity Schemes for STBC-Based MIMO Systems and Pre-FDE SIMO Systems (E06-05)

Xu Xin (Institute of Communications Engineering, PLAUST, China)
Yueming Cai (Nanjing Institute of Communications Engineering, China)
Youyun Xu (Shanghai Jiaotong University, China)

15:30-16:00 **Coffee Break**

19:00-22:30 **Conference Dinner at the Hotel Radisson SAS**

Salon Virchow Tuesday, September 13

16:00-17:30 **E06 - Space Time Processing**

Session Chair: Hermann Rohling (Technical University Hamburg-Harburg, Germany)

Predictive Decision feedback equalization for Space Time Block codes with orthogonality in frequency domain (E06-01)

Karine Amis (ENST Bretagne, Brest, France)
Dominique Leroux (ENST Bretagne, France)

Linear Precoding for STBC to Account for Antenna Correlation in Next Generation Broadband Systems (E06-02)

Abdelkader Medles (Bell Labs, United Kingdom)
Angeliki Alexiou (Bell Labs, United Kingdom)

Differential Space-Time Modulation for Transmissions over Unknown FIR Channels (E06-03)

Jacek Ilow (Dalhousie University, Canada)
Zhan Zhang (Dalhousie University, Canada)

Generalized Williamson and Wallis-Whiteman Constructions for Improved Square Order-8 CO STBCs (E06-04)

Le Chung Tran (University of Wollongong, Australia)
Tadeusz A. Wysocki (School of Electrical, Computer and Telecommunications Engineering, University of Wollongong, Northfi, Australia)
Alfred Mertins (Signal Processing Group, Institute of Physics, University of Oldenburg, Germany)
Jennifer Seberry (University of Wollongong, Australia)
Sarah Spence Adams (Assistant Professor, USA)

Salon Virchow Wednesday, September 14

09:00-10:30 **E07 - Multiplexing I**

Session Chair: Martin Haardt (Ilmenau University of Technology, Germany)

An Iterative Method for Code Acquisition Using DOA Estimation and Beamforming (E07-01)

Henri Puska (University of Oulu, Finland)
Harri Saarnisaari (Centre for Wireless Communications, Finland)
Jari Linatti (University of Oulu, Finland)

Analysis of Carrier Frequency Offset in Alamouti Space-Time-Frequency Coded OFDM Systems (E07-02)

Himal Suraweera (Monash University, Australia)
Jean Armstrong (Monash University, Australia)

An Intercell Interference Cancellation Method for OFDM-Based Cellular Systems Using a Virtual Smart Antenna (E07-03)

Kyung Won Park (Korea Electronics Technology Institute, Korea)
Kyu In Lee (University of Chung-Ang, Korea)
Jae Young Ahn (Electronics and Telecommunication Research Institute, Korea)
Yong Soo Cho (Chung-Ang University,)

The optimum algorithm determining the maximum weighted sum rate in MIMO MAC (E07-04)

Hua Zhou (Beijing University of Posts and Telecommunications, China)

Improved V-BLAST Receiver for Uplink CDM-OFDMA (E07-05)

Kan Zheng (Beijing University of Posts & Telecommunications, China)
Hui Zhao (Beijing University of Posts and Telecommunications, China)
Wenbo Wang (Beijing University of Posts and Telecommunications, China)
Lei Lei (Beijing University of Posts & Telecommunications, China)

10:30-11:00 **Coffee Break**

Salon Virchow **Wednesday, September 14**

11:00-12:30 **E08 - Multiplexing II**

Session Chair: Martin Haardt (Ilmenau University of Technology, Germany)

Analytical BER of an asynchronous DS-CDMA system in the 60 GHz channel (E08-01)

Okouyi Rodrigue (ENIC Telecom Lille, France)
Clavier Laurent (ENIC Telecom Lille, France)

A new approach for channel equalization without guard interval using polyphase matrices (E08-02)

Juliane Klier (Fraunhofer-Gesellschaft, Germany)
Gerald Shuller (Fraunhofer Institute for Digital Media Technology, Germany)
Marko Hennhoefer (Ilmenau University of Technology, Germany)
Martin Haardt (Ilmenau University of Technology, Germany)

Overlap and Save Frequency Domain DFE for Throughput Efficient Single Carrier Transmission (E08-03)

Stefano Tomasin (University of Padova, Italy)

Performance Analysis of Different Spreading Factors in Various Channel Conditions with Channel Estimation for Uplink Wcdma (E08-04)

Tarannum Reyaz (University of York, United Kingdom)
Alister Burr (University of York, United Kingdom)

Cyclic Spectral Analysis of Frequency Hopping Signals (E08-05)

Desimir Vucic (Military Technical Institute, Serbia and Montenegro)

12:30-14:00 **Lunch Break**

Salon Virchow **Wednesday, September 14**

14:00-15:30 **E09 - Multiplexing III**

Session Chair: Wolfgang Zirwas (Siemens AG, Germany)

Interleaved Frequency Division Multiple Access (IFDMA) as a Promising Candidate for Future Mobile Radio Systems (E09-01)

Tobias Frank (Darmstadt University of Technology, Germany)
Anja Klein (TU Darmstadt, Germany)
Elena Costa (Siemens AG, Germany)
Egon Schulz (Siemens AG, Germany)

Low Complexity Equalization with and without Decision Feedback and its Application to IFDMA (E09-02)

Tobias Frank (Darmstadt University of Technology, Germany)
Anja Klein (TU Darmstadt, Germany)
Elena Costa (Siemens AG, Germany)
Egon Schulz (Siemens AG, Germany)

Transmitter precoding based on partial equalization for downlink TDD MC-CDMA systems (E09-03)

S.J Yi (University of Newcastle, United Kingdom)
Charalampos Tsimenidis (University of Newcastle Upon Tyne, United Kingdom)
Bayan Sharif (University of Newcastle Upon Tyne, United Kingdom)

Decision Directed Scheme for IQ Imbalance Compensation on OFCDM Direct Conversion Receiver (E09-04)

Tadaaki Yuba (Keio University, Japan)
Yukitoshi Sanada (Keio University, Japan)

A Low-Complexity ICI Cancellation Scheme in Frequency Domain for OFDM in Time-varying Multipath Channels (E09-05)

Hongmei Wang (Tsinghua University, China)

15:30-16:00 **Coffee Break**

Session Chair: Raj Ganesh (Qualcomm, India)

The FLO (TM) Physical Layer, an Optimized Multicast Solution for Terrestrial Mobile Multimedia (INVITED PAPER) (E10-01)

Kent Walker (Qualcomm Inc., USA)

Fuyun Ling (Qualcomm Inc., USA)

Rob Chandhok (Qualcomm Inc., USA)

Rajiv Vijayan (Qualcomm Inc., USA)

WCDMA HSDPA Network Performance with Receive Diversity and LMMSE Chip Equalization (E10-02)

Janne Kurjenniemi (University of Jyväskylä, Finland)

Timo Nihtilä (University of Jyväskylä, Finland)

Marko Lampinen (Nokia, Finland)

Tapani Ristaniemi (Tampere University of Technology, Finland)

Reconfigurable Wideband VCOs (E10-03)

Ajay Poddar (Synergy Microwave Corporation, USA)

Ulrich Rohde (Synergy Microwave Corp., USA)

On the Performance Evaluation of Threshold-Based GSC in Equally Correlated Nakagami Fading (E10-04)

Kyung Bae (Virginia Tech, USA)

Jong-Han Kim (Virginia Tech., USA)

The Ridged Circular Disk Microstrip Antenna Element Excited by a microstrip Transmission Line Proximity Method (E10-05)

Alireza Mallahzadeh (Islamic Azad Universty of Bushehr, Iran)

Mohamad Khajehpour (Iran Telecommunication Research Center, Iran)

End of the conference

Session Chair: Rolf Kraemer (IHP Microelectronics, Germany)

Energy Optimized Beacon Transmission Rate in a Wireless Sensor Network (F01-01)

Mikko Kohvakka (Tampere University of Technology, Finland)

Marko Hännikäinen (Tampere University of Technology, Finland)

Timo Hämäläinen (Tampere University of Technology, Finland)

Track-Based Hybrid Service Discovery in Mobile Ad-hoc Networks (F01-02)

Zhuoqun Li (University of Plymouth, United Kingdom)

Lingfen Sun (University of Plymouth, United Kingdom)

Emmanuel Ifeachor (University of Plymouth, United Kingdom)

Energy consumption and trade-offs on Wireless Sensor Networks (F01-03)

George Bravos (University of Piraeus, Greece)

Athanasios Kanatas (University of Piraeus, Greece)

Handling Asymmetry in Gain in Directional Antenna Equipped Ad Hoc Networks (F01-04)

Gentian Jakllari (University of California, Riverside, USA)

Ioannis Broustis (University of California, Riverside, USA)

Thanasis Korakis (University of Thessaly, Greece)

Srikanth Krishnamurthy (University of California, Riverside, USA)

Leandros Tassioulas (University of Thessaly, USA)

A Game Theoretic Approach to Energy Efficient Cooperative Cache Maintenance in MANETs (F01-05)

Yu-Kwong Kwok (University of Hong Kong, Honkong)

Saal 4
14:00-15:30

Monday, September 12
F02 - Ad-hoc & Sensor Networks II

*Session Chair: Jean-Pierre Ebert (IHP
Microelectronics, Germany)*

**Architectures for Heterogeneous Wireless
Sensor Networks (INVITED PAPER) (F02-01)**
Arjan Duresi (Louisiana State University, USA)

**DCA A Distributed Channel Allocation Scheme
for Wireless Sensor Networks (F02-02)**

*Kaushik Chowdhury (University of Cincinnati,
USA)*
Pritam Chanda (University of Cincinnati, USA)
Dharma Agrawal (University of Cincinnati, USA)
Qing-An Zeng (University of Cincinnati, USA)

**Network Emulation in the SAM Simulator
(F02-03)**

*Alessandra Giovanardi (University of Ferrara,
Italy)*
Gianluca Mazzini (University of Ferrara, Italy)
Riccardo Veronesi (University of Ferrara, Italy)

**Leader Election in a Personal Distributed
Environment (F02-04)**

*David Pearce (University of Strathclyde, United
Kingdom)*
*John Dunlop (University of Strathclyde, United
Kingdom)*
*Robert Atkinson (University of Strathclyde,
United Kingdom)*

**Modeling Synchronous Wakeup Patterns in
Wireless Sensor Networks: Server Vacation
Model Analysis (F02-05)**

*Ka Ming Lau (The Chinese University of Hong
Kong, Honkong)*
*On Ching Yue (The Chinese University of Hong
Kong, Honkong)*

15:30-16:00 **Coffee Break**

Saal 4
16:00-17:30

Monday, September 12
F03 - Ad-hoc & Sensor Networks III

*Session Chair: Susumu Yoshida (Graduate
School of Informatics, Kyoto University, Japan)*

**Challenges in the Verification of Mobile Ad-
hoc Networking Systems (INVITED PAPER)
(F03-01)**

Rich Folio (Harris Corp., USA)
J. Bibb Cain (Harris Corp., USA)
Sastri Kota (Harris Corp., USA)

**Connectivity in Multi-radio, Multi-channel
Heterogeneous Ad Hoc Networks (F03-02)**

Dave Cavalcanti (University of Cincinnati, USA)
Dharma Agrawal (University of Cincinnati, USA)
Hrishikesh Gossain (Motorola, Inc., USA)

**Evaluating performance of real ad-hoc net-
works using AODV with hello message
mechanism for maintaining local connectivity
(F03-03)**

Carles Gomez (University of catalonia, Spain)
Marisa Catalan (University of Catalonia, Spain)
*Xavier Mantecon (Technical University of
Catalonia, Spain)*
*Josep Paradells (Universidad Politecnica de
Catalunya (UPC), Spain)*

**Packet Multiplexing Transmission Technique
in Wireless Ad-hoc Networks (F03-04)**

Shoukei Kobayashi (NTT, Japan)
Masayoshi Nakayama (NTT, Japan)
Masahiro Umehira (NTT, Japan)

**On Choosing an Appropriate Path Repair
Design for Vehicle-Formed Mobile Ad Hoc
Networks on Highways (F03-05)**

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

18:00

Welcome Reception at the ICC

Saal 4
11:00-12:30

Tuesday, September 13
F04 -Ad-hoc & Sensor Networks IV

*Session Chair: Rolf Kraemer (IHP
Microelectronics, Germany)*

**Challenges in utilizing Aggregate Logical
Sensor Units for Wireless Sensory
Information Networks (INVITED PAPER)
(F04-01)**

Anup Kumar (University Of Louisville, USA)
P.S. Dhekne (Mod Lab, BARC, India)
Dharma Agrawal (University of Cincinnati, USA)

A Low Complexity Directional Scheme for Mobile Ad Hoc Networks (F04-02)

Feng Xu (Heinz Nixdorf Institute, University of Paderborn, Germany)
Matthias Gruenewald (Heinz Nixdorf Institute, University of Paderborn, Germany)
Ulrich Rückert (Heinz Nixdorf Institute and Dep. of Electrical Engineering, University of Paderborn, Germany)

On the Implications of Layered SpaceTime Multiuser Detection on the Design of MAC Protocols for Ad Hoc Networks (F04-03)

Paolo Casari (University of Padova, Italy)
Marco Levorato (University of Ferrara, Italy)
Michele Zorzi (Università degli Studi di Padova, Italy)

A Two-Channel Medium Access Control Protocol for Mobile Ad Hoc Networks using Directional Antennas (F04-04)

Yuxin Pan (Concordia University, Canada)
Walaa Hamouda (Concordia University, Canada)

Inter-Destination Synchronization Quality in a Multicast Mobile Ad Hoc Network (F04-05)

Toshiro Nunome (Nagoya Institute of Technology, Japan)
Shuji Tasaka (Nagoya Institute of Technology, Japan)

12:30-14:00 **Lunch Break**

Saal 4 **Tuesday, September 13**
14:00-15:30 **F05 - MAC Protocols for Ad-Hoc networks**

Session Chair: Ralf Lehnert (Technical University of Dresden, Germany)

DBSMA: A MAC Protocol for Multi-hop Ad-hoc Networks with Directional Antennas (INVITED PAPER) (F05-01)

Aditya Karnik, Catherine Rosenberg (University of Waterloo, Canada)
Sunil Kulkarni (Purdue University, USA)

Interference Aware Adaptive MAC Protocol for MC-CDMA Adhoc Wireless LANs (F05-02)

Georgios Orfanos (RWTH Aachen University, Germany)
Bernhard Walke (RWTH Aachen University, Germany)
Willem Jansen (Aachen University, Germany)
Hans-Jürgen Reuerman (Philips Research Aachen, Germany)

Energy efficient forwarding strategies for wireless sensor networks in presence of fading and power control (F05-03)

Riccardo Veronesi (University of Ferrara, Italy)
Mirko Dal Pozzo (University of Ferrara, Italy)
Velio Tralli (University of Ferrara - Italy, Italy)
Alessandra Giovanardi (University of Ferrara, Italy)

DEMAC: An Adaptive Power Control MAC Protocol for Ad-Hoc Networks (F05-04)

Ping Ding (Santa Clara University, USA)
JoAnne Holliday (Santa Clara University, USA)
Aslihan Celik (Santa Clara University, USA)

A MAC Protocol Supporting Cooperative Diversity for Distributed Wireless Ad Hoc Networks (F05-05)

Xin Wang (BeiHang University, China)
Chenyang Yang (Beihang University, China)

15:30-16:00 **Coffee Break**

Saal 4 **Tuesday, September 13**
16:00-17:30 **F06 - Routing in Ad-hoc Networks**

Session Chair: Andrzej Duda (IMAG, France)

Density-independent, Scalable Ad Hoc Network Route Discovery (INVITED PAPER) (F06-01)

Zygmunt Haas (Cornell University, USA)
Rimon Barr (Cornell University, DZ)

An Enhanced Optimized Link State Routing with Delayed Event Driven Link State Updating (F06-02)

Yaoda Liu (Center for TeleInfrastructure, Denmark)
Hans-Peter Schwefel (Aalborg University, Denmark)

A New Routing Mechanism for Integrating Cellular Networks, WLAN Hot Spots and MANETS (F06-03)

Dave Cavalcanti (University of Cincinnati, USA)
Anup Kumar (University Of Louisville, USA)
Dharma Agrawal (University of Cincinnati, USA)

Cache Lookups in Wireless Ad-Hoc Routing using Bloom Filters (F06-04)

Evangelos Papapetrou (University of Ioannina, Greece)

Evaggelia Pitoura (University of Ioannina, Greece)

Kostas Lillis (University of Ioannina, Greece)

Split multi-path routing protocol with load balancing policy to improve TCP performance in mobile ad hoc networks (F06-05)

Takeshi Murakami (Keio University, Japan)

Masaki Bandai (Shizuoka University, Japan)

Iwao Sasase (Keio University, Japan)

19:00-22:00 **Conference Dinner at the Hotel Radisson SAS**

Saal 4 **Wednesday, September 14**

09:00-10:30 **F07 - IEEE 802.11 WLANs I**

Session Chair: Andreas Mitschele (Technical University of Ilmenau, Germany)

Enhanced schemes for L2 handover in IEEE 802.11 networks and their evaluations (F07-01)

Julien Montavont (University of Louis Pasteur - LSIIT (UMR7005), France)

Nicolas Montavont (National Institute of Standards and Technology, USA)

Thomas Noel (Louis Pasteur University, Strasbourg, France)

Impact of Capture and Varying Transmit Power Levels on Saturation Throughput in IEEE 802.11 (F07-02)

Ivan Vukovic (Motorola, Inc., USA)

Nattavut Smavatkul (Samart COMTECH Co.,Ltd., Thailand)

Transmit Power Control Algorithms in IEEE 802.11h Based Networks (F07-03)

Andreas Könsgen (University of Bremen, Germany)

Zakir Hossain (University of Bremen, Germany)

Carmelita Görg (University of Bremen, Germany)

Short-term traffic forecasting in a campus-wide wireless network (F07-04)

Maria Papadopouli (University of North Carolina at Chapel Hill, USA)

Haipeng Shen (University of North Carolina at Chapel Hill, USA)

Elias Raftopoulos (Department of Computer Science, University of Crete, Greece)

Manolis Ploumidis (Department of Computer Science, University of Crete, Greece)

Felix Hernandez-Campos (University of North Carolina at Chapel Hill, USA)

Joint Fragment Size and Transmission Rate Optimization for Request-to-Send/Clear-to-Send Mechanism of IEEE 802.11b Distributed Coordination Function (F07-05)

Alexandre Garmonov (Kodofon, Russia)

Seok Ho Cheon (SAMSUNG Electronics Co., LTD., Korea)

Do Hyon Yim (SAMSUNG Electronics Co., LTD., Korea)

Ki Tae Han (SAMSUNG Electronics Co., LTD., Korea)

Yun Sang Park (SAMSUNG Electronics Co., LTD., Korea)

Andrew Savinkov (Kodofon, Russia)

10:30-11:00 **Coffee Break**

Saal 4 **Wednesday, September 14**

11:00-12:30 **F08 - IEEE 802.11 WLANs II**

Session Chair: Jamshid Khun-Jush (Qualcomm, Germany)

Implementation of a distributed dynamic channel assignment mechanism for IEEE 802.11 Networks (F08-01)

Eduard Garcia Villegas, Rafael Vidal (Technical University of Catalonia (UPC), Spain)

Josep Paradells (UPC, Spain)

Performance Enhancement of WLAN IEEE 802.11 for Asymmetric Traffic (F08-02)

Elena Lopez-Aguilera, Jordi Casademont

Josep Cotrina, Alfonso Rojas (Technological University of Catalonia (UPC), Spain)

Diversity Techniques for Interference Mitigation between IEEE 802.11 WLANs and Bluetooth (F08-03)

Premkumar Karumbu (Satyam Computer Services Ltd., India)

S. H. Srinivasan (Satyam Computer Services Limited, India)

An Admission Control Heuristic for IEEE 802.11e WLANs (F08-04)

Bechir Hamdaoui (University of Wisconsin - Madison, USA)

Moncef Elaoud (Telcordia Technologies, USA)

Parmesh Ramanathan (University of Wisconsin at Madison, USA)

Compressed Block Ack, an efficient selective repeat mechanism for IEEE802.11n (F08-05)

Tetsu Nakajima (Corporate R&D Center, Toshiba Corporation, Japan)

Yoriko Utsunomiya (Toshiba Corporation, Japan)

Yasuyuki Nishibayashi (Corporate R&D Center, Toshiba Corp., Japan)

Tomoya Tandai (Toshiba Corporation, Japan)

Tomoko Adachi (Toshiba, Japan)

Masahiro Takagi (Corporate R&D Center, Toshiba Corp., Japan)

12:30-14:00 **Lunch Break**

Saal 4 **Wednesday, September 14**

14:00-15:30 **F09 - Wireless Network Protocols**

Session Chair: Andreas Mitschele (Technical University Ilmenau, Germany)

Random Access for Multiple Destinations with Physical Layer Considerations (INVITED PAPER) (F09-01)

Anthony Ephremides (University of Maryland at College Park, USA)

Gam Nguyen (Naval Research Laboratory, USA)

Jeffrey Wieselthier (Naval Research Laboratory, USA)

Real-Time Handoff in Solar/Battery Powered ESS Mesh Networks (F09-02)

Shervan Fashandi (McMaster University,)

Terence D. Todd (McMaster University, Canada)

Collision Detection for CSMA in Wireless Networks with Multipacket Reception (F09-03)

Douglas Chan (Cornell University, USA)

Toby Berger (Cornell University, USA)

Random Access and Channel Allocation Scheme for HIPERLAN/2 System (F09-04)

Andrzej Stelter (Poznan University of Technology, PL)

Clustered-loss Retransmission Protocol over Wireless TCP (F09-05)

Fanglei Sun (The University of Hong Kong, Taiwan)

Victor Li (University of Hong Kong, China)

Liew Soung Chang (Chinese University of Hong Kong, Honkong)

15:30-16:00

Coffee Break

Saal 4

16:00-17:30

Wednesday, September 14

F10 - Wireless Communication

Session Chair: Klaus David (University of Kassel, Germany)

On the Channel Outage Probability of Multi-User Time Diversity Systems (H06-01)

Benno Zerlin (Munich University of Technology, Germany)

Johannes Brehmer (Munich University of Technology, Germany)

Josef A. Nossek (Munich University of Technology, Germany)

Performance of Uplink SS-MC-MA Systems with Frequency Hopping and Channel Estimation Based on Spread Pilots (H06-02)

Nadine Chapalain (Mitsubishi ITE, France)

David Mottier (Mitsubishi Electric ITE-TCL, France)

Damien Castelain (Mitsubishi Electric ITE, France)

Filter Design Considerations for Acquisition of BOC-modulated Galileo Signals (H06-03)

Adina Burian, Elena Simona Lohan,

Markku Renfors (Tampere University of Technology, Finland)

Extended Transfer Bound Error Analysis in the Presence of Channel Random Nuisance Parameter (H06-04)

Jan Vcelak (Czech Technical University in Prague, Czech Republic)

Jan Sykora (Czech Technical University in Prague, Czech Republic)

Queueing behaviors of a Type-II Hybrid ARQ in a TDMA system over a Non-stationary channel (H06-05)

Jun Bae Seo (Electronics and Telecommunication Research Institute, Korea)

Seung-Que Lee (ETRI, Korea)

Nam-Hoon Park (ETRI, Korea)

Hyoung Woo Lee (Korea University, Korea)

Choong-Ho Cho (University of Korea, Korea)

17:30

End of the conference

Track G

Saal 5

11:00-12:30

Monday, September 12

G01 - IP-based Wireless Networks I

Session Chair: Andreas Schieder, (Ericsson Deutschland GmbH, Germany)

Applicability of UDP-Lite for Voice over IP in UMTS Networks (G01-01)

Frank Mertz (RWTH Aachen University, Germany)

Ulrich Engelke (RWTH Aachen University, Germany)

Peter Vary (RWTH Aachen University, Germany)

Herve Taddei (Siemens AG ICM MP, Germany)

Imre Varga (Siemens AG MP, Germany)

ROHC for Multicast Distribution Services (G01-02)

Elizabeth Martinez (ENST-Bretagne, France)

Ana Minaburo (Enst-Bretagne.fr, France)

Laurent Toutain (ENST-Bretagne, France)

Optimum Number of RLC Retransmissions for Best TCP Performance in UTRAN (G01-03)

Olivier De Mey (The University of Namur (FUNDP), Belgium)

Laurent Schumacher (FUNDP - The University of Namur, Belgium)

Xavier Dubois (FUNDP, Belgium)

Smarter Route Optimization (G01-04)

Daniel Wong (Telcordia Technologies, USA)

Enhancing Fast Recovery Algorithm using Loss Recovery for NewReno TCP (G01-05)

Motoharu Miyake (NTT DoCoMo, Japan)

Hiroshi Inamura (NTT DoCoMo, Japan)

12:30-14:00

Lunch Break

Saal 5

14:00-15:30

Monday, September 12

G02 - IP-based Wireless Networks II

Session Chair: Bangnan Xu (T-Systems, Technologiezentrum, Germany)

VoIP call over WLAN with Bluetooth headset multiradio interoperability solutions (G02-01)

Arto Palin (Nokia Research Center, Finland)

Mauri Honkanen (Nokia Research Center, Finland)

A SIP based approach for inter-network operations of wireless positioning systems (G02-02)

Thanh Son Le (University of Leeds, United Kingdom)

Online Packet Loss Rate Estimation (G02-03)

Dan He (University of Surrey, United Kingdom)

Nadeem Akhtar (University of Surrey, United Kingdom)

Louise Burness (BT Group, United Kingdom)

Philip Eardley (BT Group, United Kingdom)

Rahim Tafazolli (University of Surrey, United Kingdom)

On the Performance of Enhanced Hierarchical Mobile IPv6 (G02-04)

Dmitry Sivchenko (T-Systems, Germany)

Bangnan Xu (T-Systems, Technologiezentrum, Germany)

Veselin Rakocevic (City University, United Kingdom)

Joachim Habermann (University of Applied Sciences Giessen-Friedberg, Germany)

IP Onetime-Password Authentication Scheme over Insecure Data Channel (Paper ID K06-05)

Miao Ma (Institute for Infocomm Research (I2R), Singapore)

15:30-16:00

Coffee Break

Saal 5
16:00-17:30

Monday, September 12

G03 - Wireless Broadband Networks

Session Chair: Bangnan Xu (T-Systems, Technologiezentrum, Germany)

Distributed Intercellular Interference Management in 4th Generation TDMA TDD Cellular Mobile Wireless Communications (G03-01)

Peter Omiyi (International University Bremen, Germany)

Harald Haas (International Univeristy of Bremen, Germany)

VIP: Virtual Interface Prototype for Mobile Communication (G03-02)

Kaouthar Sethom (INT-GET, France)

Hossam Afifi (INRIA, France)

Guy Pujolle (paris6, France)

Performance Analysis of the Random Access in IEEE 802.16 (G03-03)

Alexey Vinel (St.-Petersburg State University of Aerospace Instrumentation, Russia)

Ying Zhang (Technische Universität München(TUM), Germany)

Matthias Lott (Siemens AG, Germany)

Andrey Tiurlikov (State University of Aerospace Instrumentation, Russia)

Improving Mobility in WirelessMAN (G03-04)

Alexander Lozhkin (Fujitsu Laboratories, LTD., Japan)

Proposed Relay Method with P-MP Structure of IEEE802.16-2004 (G03-05)

Shoji Kaneko (KDDI R&D Laboratories Inc., Japan)

Kenji Saito (KDDI R&D labs., Japan)

Haruki Izumikawa (KDDI Labs, Japan)

Takashi Matsunaka (KDDI R&D Laboratories Inc., Japan)

Keizo Sugiyama (KDDI R&D labs., Japan)

Hideyuki Shinonaga (KDDI Labs, Japan)

18:00

Welcome Reception at the ICC

Saal 5
11:00-12:30

Tuesday, September 13

G04 - Relaying & Multi-hop

Session Chair: Bernhard Walke (RWTH Aachen University, Germany)

On the Radio Resource Allocation in Enhanced Uplink UTRA-FDD with Fixed Relay Stations (G04-01)

Yajian Liu (University of Surrey, United Kingdom)

Reza Hoshyar (University of Surrey, United Kingdom)

Xinjie Yang (University of Surrey, United Kingdom)

Rahim Tafazolli (University of Surrey, United Kingdom)

Power saving approaches in 2-hop relaying cellular networks (G04-02)

Ansuya Negi (Portland State University, USA)

Suresh Singh (Portland State University, USA)

Performance Comparison of Multihop Relaying and Rate Adaptation in Cellular Communication Systems (G04-03)

Atsushi Kusuda (Kyoto University, Japan)

Koji Yamamoto (Kyoto University, Japan)

Susumu Yoshida (Graduate School of Informatics, Kyoto University, Japan)

A MIMO System with Relay Terminals for Reliable Wireless Control (G04-04)

Ryosuk Uchida (Nagoya University, Japan)

Hiraku Okada (Nagoya University, Japan)

Takaya Yamazato (Nagoya University, Japan)

Masaaki Katayama (Nagoya University, Japan)

Two-Stage Random-Access for Multihop Systems (G04-05)

Yoichiro Mizuno (Keio University, Japan)

Ryo Hasegawa (Keio University, Japan)

Riaz Esmailzadeh (Keio University, Japan)

Masao Nakagawa (Keio University, Japan)

12:30-14:00

Lunch Break

Saal 5
14:00-15:30

Tuesday, September 13

G05 - 3G Networks

Session Chair: Matthew Baker (Philips, United Kingdom)

Inter-System Cell Reselection Parameter Optimization (G05-01)

Andrea Garavaglia (Qualcomm Germany, Germany)
Christopher Brunner (QUALCOMM INC., USA)
Dino Flore (Qualcomm Inc., USA)
Ming Yang (Qualcomm, USA)
Francesco Pica (Qualcomm Germany, Germany)

Performance of Parity-Based Loss Recovery for Reliable Multicast in Third-Generation Mobile Networks (G05-02)

Robert Rummler (King's College London, United Kingdom)
Hamid Aghvami (King's College London, United Kingdom)

Simulating Soft Handover and Power Control for Enhanced UMTS (G05-03)

Vasos Vassiliou (University of Cyprus, Cyprus)
Josephina Antoniou (University of Cyprus, Cyprus)

Effects of user distributions on CDMA system performance (G05-04)

Premvir Jain (International University Bremen, Germany)
Harald Haas (International Univeristy of Bremen, Germany)

A Framework for Enterprise SLA in W-CDMA Networks (G05-05)

Yasuhiko Matsunaga (NEC Corporation, Japan)
Takashi Ono (NEC Corporation, Japan)
Hiroto Sugahara (NEC Corporation, Japan)
Yoshinori Watanabe (NEC, Japan)
Masahiro Motoyoshi (NEC Corporation, Japan)

15:30-16:00 **Coffee Break**

Saal 5
16:00-17:30

Tuesday, September 13

G06 - IMT-2000 and beyond

Session Chair: Kimmo Raatikainen (University of Helsinki, Finland)

Bit Error Rate Estimation in UMTS in the Absence of an Amplitude Reference (G06-01)

Matthew Baker (Philips, United Kingdom)
Tim Mouldsley (Philips, United Kingdom)

Unified Signalling Using SIP in a B3G System (G06-02)

Georgios Lioudakis (National Technical University of Athens, Greece)
Vaggelis Nikas (National Technical University of Athens, Greece)
Christoph Pollak (Siemens AG, Austria)
Richard Wisenocker (Siemens AG, Austria)
Nikos Dellas (National Technical University of Athens, Greece)
Iakovos Venieris (National Technical University of Athens, Greece)

Performance of UMTS Code Sharing Algorithms in the Presence of Mixed Web, Email and FTP Traffic (G06-03)

Doru Calin (Bell Labs, Lucent Technologies, USA)
Santosh Abraham (Qualcomm Inc, USA)

On the Convergence of Multi-Step Power Control Algorithm for Cellular Systems (G06-04)

Young-Long Chen (National Chung Cheng University, Taiwan)
Chih-Peng Li (National Sun Yat-Sen University, Taiwan)
Jyu-Wei Wang (Taichung Healthcare and Management University, Taiwan)
Jyh-Horng Wen (National Chung Cheng University, Taiwan)

New High-Rate STBC with Good Dispersion Property (G06-05)

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

19:00-22:30 **Conference Dinner at the Hotel Radisson SAS**

Saal 5
09:00-10:30

Wednesday, September 14

G07 - HSDPA Performance

Session Chair: Makoto Miyake (Mitsubishi Electric Cop., Japan)

Open-loop MIMO Extensions for HSDPA with Practical Constraints (G07-01)

*Marko Lampinen (Nokia, Finland)
Ville Haikola (Nokia Mobile Phones, Finland)*

Concept and Optimization of an Effective Packet Scheduling Algorithm for Multimedia Traffic over HSDPA (G07-02)

*Assen Golaup (King's College, University of London, United Kingdom)
Oliver Holland (King's College London, United Kingdom)
Hamid Aghvami (King's College London, United Kingdom)*

Optimal HSDPA Multi-cell Power Allocation in a Moving Hotspot Scenario (G07-03)

Roger Abou-Jaoude (Siemens Com, Germany)

On the Impact of Flow Control in HSDPA Systems (G07-04)

*Marc Necker (University of Stuttgart, Germany)
Andreas Weber (Alcatel, Germany)*

Analytical Comparison of Three Packet Scheduling Schemes under a per User Minimum Throughput Assurance Requirement in HSDPA (G07-05)

*Youngik Seo (Korea Advanced Institute of Science and Technology, Korea)
Dan Keun Sung (Korea Advanced Institute of Science and Technology, Korea)*

10:30-11:00 **Coffee Break**

Saal 5
11:00-12:30

Wednesday, September 14

G08 - GERAN

Session Chair: Peter Stuckmann (European Commission, Belgium)

Extended Erlang-B law for performance evaluation of radio resources sharing in GSM/(E)GPRS Networks (G08-01)

*Bruno Baynat (Université Pierre et Marie Curie-LIP6, France)
Khaled Boussetta (L2TI, France)
Pierre Eisenmann (Nortel Networks, France)
Slim Trabelsi (Institut EURECOM, France)*

On Designing a Burst-Sensitive RED Queue at GPRS Links in a Heterogeneous Mobile Environment (G08-02)

*Ji Zhang (University of York, United Kingdom)
David Pearce (University of York, United Kingdom)*

Iterative Decoding for GERAN MBMS (G08-03)

*Wen Xu (Siemens AG, Germany)
Tiago Gasiba (Siemens AG, Germany)
Thomas Stockhammer (Munich University of Technology, Germany)
Hrvoje Jenkac (Munich University of Technology, Germany)
Günther Liebl (Munich University of Technology, Germany)*

Full-rate speech quality on half-rate channels - performance comparison of GMSK and 8-PSK modulated AMR-NB codec modes in GERAN mobile radio networks (G08-04)

*Robert Muellner (Siemens AG, Germany)
Carsten Ball (Siemens AG, Germany)
Koljo Ivanov (Siemens AG, Germany)
Hubert Winkler (Siemens, Austria)
Kurt Kremnitzer (Siemens AG, Austria)
Rene Perl (Siemens AG, Austria)*

Breaking through AMR voice capacity limits due to dropped calls by control channel improvements in GERAN networks (G08-05)

*Koljo Ivanov (Siemens AG, Germany)
Carsten Ball (Siemens AG, Germany)
Robert Muellner (Siemens AG, Germany)
Hubert Winkler (Siemens, Austria)
Rene Perl (Siemens AG, Austria)
Kurt Kremnitzer (Siemens AG, Austria)*

12:30-14:00 **Lunch Break**

Saal 5
14:00-15:30

Wednesday, September 14

G09 - Vertical Handover

Session Chair: Peter Stuckmann (European Commission, Belgium)

Performance Analysis for Hybrid Wireless Networks (G09-01)

*Hrishikesh Venkataraman (International University Bremen (IUB) DE)
Harald Haas (International University of Bremen, Germany)
Steve McLaughlin (University of Edinburgh, U K)
Yeonwoo Lee (i-Networking Lab., Korea)
Sangboh Yun (Samsung Advanced Institute of Technology, Korea)*

Using Link Layer Information for Improving Vertical Handovers (G09-02)

Jani Puttonen (University of Jyväskylä, Finland)
Gabor Fekete (University of Jyväskylä, Finland)
Jukka Mäkelä (University of Jyväskylä, Finland)
Timo Hämäläinen (University of Jyväskylä, Finland)
Jorma Narikka (Jyväskylä Polytechnic, Finland)

Implementation of fast handovers and additional authentication in GSM / UMTS for high-speed users (G09-03)

Kira Kastell (Technische Universität Darmstadt, Germany)
Rolf Jakoby (Institute of Microwave Engineering, Technical University of Darmstadt, Germany)

Integration of Media Point System in UMTS to Provide Session Handover for SIP-based Multimedia Services (G09-04)

Ian Herwono (Aachen University (RWTH) DE)
Joachim Sachs (Ericsson Research, Aachen, Germany, Germany)
Ralf Keller (Ericsson Research, Germany)

Soft Handoff Prioritizing Algorithm for Downlink Call Admission Control of Next-Generation Cellular CDMA Networks (G09-05)

Jin Yuan Sun (Ryerson University, Canada)
Lian Zhao (Ryerson University, Canada)
Alagan Anpalagan (Ryerson University, Canada)

15:30-16:00

Coffee Break

Saal 5

16:00-17:30

Wednesday, September 14

G10 - Wireless Networks

Session Chair: Jean-Pierre Ebert
(IHP Microelectronics, Germany)

UMTS and WLAN integration: Architectural Solution and Performance (G10-01)

Gianni Pasolini (IEIT-BO/CNR, University of Bologna, Italy)
Oreste Andrisano (University of Bologna, Italy)
Alessandro Bazzi (IEIT-BO/CNR, University of Bologna, Italy)
Claudio Gambetti (IEIT-BO/CNR, Italy)
Marco Diolaiti (IEIT-BO/CNR, Italy)

A comparative measurement study of the workload of wireless access points in campus networks (G10-02)

Felix Hernandez-Campos (University of North Carolina at Chapel Hill, USA)
Maria Papadopouli (University of North Carolina at Chapel Hill, USA)

Service Multiplexing over a TDMA Air Interface using the FLO Concept (G10-03)

Glenn Platt (University of Newcastle, Australia)
Jamil Khan (University of Newcastle, Australia)

A Broadcast Control MAC Strategy for Wireless LAN (G10-04)

Haiping Liu (The Chinese University of Hong Kong, Honkong)
Jianming Liu (the Chinese University of Hong Kong, China)
Tony Tong Lee (The Chinese University of Hong Kong, Honkong)

TARP:A Traffic-Aware Restructuring Protocol for Bluetooth Radio Networks (G10-05)

Chih-Yung Chang (Tamkang University, Taiwan)
Chang Chao-Tsun (National Central University, Taiwan)
Shih-Chieh Lee (Tamkang University, Taiwan)
Chih-Hsiung Tseng (National Cheng-Kung University, Taiwan)

17:30

End of the Conference

Track H

Raum 42

11:00-12:30

Monday, September 12

H01 - Advances in QoS Concepts

Session Chair: Hendrik Berndt
(DoCoMo EuroLabs, Germany)

On Congestion Control for Interactive Real-time Applications in Dynamic Heterogeneous 4G Networks (H01-01)

Filipe Abrantes (INESC Porto, Portugal)
Manuel Ricardo (INESC Porto, Portugal)

Conflict detection and resolution in QoS policy based management (H01-02)

Hassine Moun gla (University of Paris 13, France)
Francine Krief (Labri laboratory, France)

Effect of monitor size on user-level QoS of audio-video transmission over IP networks in ubiquitous environments (H01-03)

Yoshihiro Ito (Nagoya Institute of Technology, Japan)

Shuji Tasaka (Nagoya Institute of Technology, Japan)

Multi-QoS Scheduling Algorithm For Class Fairness in High Speed Downlink Packet Access (H01-04)

Junsu Kim (Korea Advanced Institute of Science and Technology, Korea)

Sung Ho Moon (Korea Advanced Institute of Science and Technology, Korea)

Dan Keun Sung (Korea Advanced Institute of Science and Technology, Korea)

Opportunistic Scheduling for utility maximization under QoS constraints (H01-05)

Neung-Hyung Lee (Seoul National University, Korea)

Jin-Ghoo Choi (Seoul National University, Korea)

Saewoong Bahk (Seoul National University, Korea)

12:30-14:00 **Lunch Break**

Raum 42 **Monday, September 12**

14:00-15:30 **H02 - Quality of Service**

Session Chair: Ivan Vukovic (Motorola, Inc., USA)

Quality of Service in Internet MANETs (INVITED PAPER) (H02-01)

Nirmala Shenoy (Rochester Institute of Technology, USA)

Information Model for the Specification of QoS Agreements among Ambient Networks (H02-02)

Paulo Mendes (DoCoMo Eurolabs, Germany)

Jorge Andres-Colas (Telefonica I+D, Spain)

Carlos Pinho (INESC Porto, Portugal)

Robust Header Compression in 4G Networks with QoS Support (H02-03)

Pedro Fortuna (University of Porto - School of Engineering, Portugal)

Gustavo Carneiro (INESC Porto, Portugal)

Manuel Ricardo (INESC Porto, Portugal)

QoS-aware path selection in a B3G system (H02-04)

Nima Nafisi (King's College London, United Kingdom)

A QoS Scheme for Digital Home Applications in IEEE 802.11e Wireless LANs (H02-05)

Ping-Chi Wang (National Chiao Tung University, Taiwan)

Kuo Chen Wang (National Chiao Tung University, Taiwan)

Lung-Sheng Lee (National Chiao Tung University, Taiwan)

15:30-16:00 **Coffee Break**

Raum 42 **Monday, September 12**

16:00-17:30 **H03 - Radio Resource Management I**

Session Chair: Hendrik Berndt (DoCoMo EuroLabs, Germany)

Auction Driven Dynamic Spectrum Allocation: Optimal Bidding, Pricing and Service Priorities for Multi-rate, Multi-Class CDMA (H03-01)

Virgilio Rodriguez (University of Surrey, United Kingdom)

Klaus Moessner (University of Surrey, United Kingdom)

Rahim Tafazolli (University of Surrey, United Kingdom)

Dynamic Resource Allocation in Wireless Ad-Hoc Networks based on QS-CDMA (H03-02)

Angela Feistel (TU Berlin, Germany)

Slawomir Stanczak (Fraunhofer German-Sino Lab for Mobile Comm., Germany)

Connection Admission Control Issues for a CDMA Return Link in the Aeronautical Broadband Communication System (H03-03)

Paolo Dini (University of Rome "La Sapienza", Italy)

Filippo Maria Signoretti (University of Rome "La Sapienza", Italy)

Roberto Cusani (University of Rome, Italy)

Downlink P_Ower Allocation with Pricing in CDMA (H03-04)

S. Anand (Samsung India Software Operations (SISO) IN)
A. Chockalingam (Indian Institute of Science, India)

Dynamic Spectrum Allocation Using Arrival Rate Ratio in CDMA Networks (H03-05)

Jinyeol Roh (Information and Communications University, Korea)
Jongnam Kim (Information and Communications University, Korea)
Youngnam Han (Information and Communication University, Korea)

18:00

Welcome Reception at the ICC

Raum 42

11:00-12:30

Tuesday, September 13

H04 - Radio Resource Management II

Session Chair: Harald Haas (International Univeristy of Bremen, Germany)

Load Balancing for Centralized Wireless Networks (H04-01)

Hong Bong Kim (Technical University of Berlin, Germany)
Adam Wolisz (Technical University of Berlin, Germany)

A Homotopy Method for Call Admission Control Employing Different User and Service Classes (H04-02)

Armin Dekorsy (Lucent, Germany)
Joerg Fliege (University of Birmingham, United Kingdom)

Interference Mitigation in TDD Fixed - Broadband Wireless Access using Channel Assignment and Antenna Arrays (H04-03)

Konstantinos Ntagkounakis (University of Newcastle upon Tyne, United Kingdom)
Panagiotis Dallas (INTRACOS S.A., Greece)
Bayan Sharif (University of Newcastle Upon Tyne, United Kingdom)

Scheduling Study in HSDPA System (H04-04)

Mohamad Assaad (INT, France)
Djamal Zeghlache (INT, France)

A Cutting Plane Optimization Algorithm for Intra-cell Link Adaptation Problem (H04-05)

Mansoor Isvand Yousefi (Sharif University of Technology, Iran)
Alireza Babaei (Iran University of Science and Technology, Iran)
Bahman Abolhassani (Iran University of Science and Technology, Iran)
Naser Sadati (Sharif university, Iran)

12:30-14:00

Lunch Break

Raum 42

14:00-15:30

Tuesday, September 13

H05 - Multiple Access

Session Chair: Elena Costa (Siemens AG, Germany)

Frequency Band Sharing in CDMA-Based Micro/Macro-Cellular Systems (H05-01)

Seyed Ali Ghorashi (King's College London, United Kingdom)
Fatin Said (King's College London, United Kingdom)
Mischa Dohler (Kings College London, United Kingdom)
Ben Allen (King's College London, United Kingdom)
Hamid Aghvami (King's College London, United Kingdom)

Scheduler and Resource Allocation of Enhanced Uplink for 3GPP W-CDMA (H05-02)

Weimin Xiao (Motorola, Inc., USA)
Rapeepat Ratasuk (Motorola Inc., USA)
Amitava Ghosh (Motorola, Inc., USA)
Robert Love (Motorola, USA)

Performance Evaluation of OFCDM and MC-DS-CDMA for the Forward Link in Next Generation Mobile Communication Systems (H05-03)

Akram Awad (University of Leeds, United Kingdom)
Timothy O'Farrell (University of Leeds, United Kingdom)

Transmit Side Information Assisted User Cooperation for Multiple-Antenna Wireless Networks (H05-04)

Ernest Lo (The Hong Kong University of Science & Technology, Honkong)
Khaled Letaief (HKUST, Honkong)

Performance Evaluation of Dynamic Parameter Controlled OF/TDMA Based on PR-DSMA (H05-05)

Hidekazu GOMI (Chuo University, Japan)
Hiroshi HARADA (National Institute of Information & Communications Technology, Japan)
Shoji Shinoda (Chuo University, Japan)

15:30-16:00 **Coffee Break**

Raum 42 **Tuesday, September 13**

16:00-17:30 **H06 - Traffic Engineering in WLANs**

Session Chair: Ralf Lehnert (TU Dresden, Germany)

Multihop IEEE 802.11b WLAN performance for VoIP (F10-01)

Timo Vanhatupa (Tampere University of Technology, Finland)
Marko Hännikäinen (Tampere University of Technology, Finland)
Timo Hämäläinen (Tampere University of Technology, Finland)

Performance of a Token Bucket traffic shaper on a real IEEE 802.11 test-bed (F10-02)

David Perez (Universitat Politecnica de Catalunya, Spain)
Jose Valenzuela (Universitat Politecnica de Catalunya, Spain)

Performance Evaluation of H.264 Video Streaming over Inter-Vehicular 802.11 Ad Hoc Networks (F10-03)

Paolo Buccioli (Politecnico di Torino, Italy)
Enrico Masala (Politecnico di Torino, Italy)
Nobuo Kawaguchi (Information Technology Center, Nagoya University, Japan)
Kazuya Takeda (Nagoya University, Japan)
Juan Carlos De Martin (IEIIT-CNR, Italy)

An Adaptive Queue Management Mechanism for Improving TCP Fairness in the Infrastructure WLAN (F10-04)

Xiaolin Chang (Hong Kong University of Science and Technology, Honkong)
Xiaoyang LIN (HKUST, Honkong)
Jogesh K. Muppala (Dept. of Computer Science, HKUST, Honkong)

Throughput and Fairness Improvement in 802.11b Multi-rate WLANs (F10-05)

Liang Zhang (Tianjin University, China)
Yantai Shu (Tianjin University, China)
Oliver Yang (University of Ottawa, Canada)

19:00-22:30

Conference Dinner at the Hotel Radisson SAS

Raum 42
09:00-10:30

Wednesday, September 14

H07 - Cognitive Radio & Reconfigurability

Session Chair: Stefan Mangold (Swisscom Innovations, Switzerland)

Spectrum Load Smoothing for Cognitive Medium Access in Open Spectrum (H07-01)

Lars Berlemann (RWTH Aachen University, Germany)
Stefan Mangold (Swisscom Innovations, Switzerland)
Guido Hiertz (RWTH Aachen University, Germany)
Bernhard Walke (Aachen University of Technology, Germany)

A generic Framework for Context Aware and adaptation behaviour of Reconfigurable systems (H07-02)

Eiman Bushra (Siemens AG, Germany)

Planning reconfigurable network segments: motivation, benefits for operators and manufacturers, and strategies (H07-03)

George Dimitrakopoulos (University of Piraeus, Greece)
Didier Bourse (Motorola, France)
Karim El-Khazen (Motorola Labs, France)
Panagiotis Demestichas (University of Piraeus, Greece)
Aggelos Saatsakis (University of Piraeus, Greece)

Negotiation and Selection of Equipment Reconfigurations in Beyond 3G Systems (H07-04)

Vera Stavroulaki (University of Piraeus, Greece)

Extended DCA Paradigm for Distributed Licensed Open Spectrum Coordination (H07-05)

David Grandblaise (Motorola Labs, France)
Klaus Moessner (University of Surrey, United Kingdom)
Guillaume Vivier (Motorola Labs, France)
Rahim Tafazolli (University of Surrey, United Kingdom)

10:30-11:00 **Coffee Break**

Raum 42 **Wednesday, September 14**

11:00-12:30 **H08 - Security & Privacy**

Session Chair: Lars Berlemann (RWTH Aachen University, Germany)

Temporal Post-Processing of Position Estimates Exploiting Markoff Models (H08-01)

Tobias Weber, Michael Meurer (University of Kaiserslautern, Germany)

New Third-Party AAA Architecture and Diameter Application for 4GWW (H08-02)

Fintan McEvoy, Ivan Ganchev, Mairtin O'Droma (University of Limerick, Ireland)

Authentication in Very Large Ad Hoc Networks using Randomized Groups (H08-03)

Yong Lee (Cornell University, USA)
Zygmunt Haas (Cornell University, USA)

An Efficient Certified E-Mail Scheme Suitable for Wireless Mobile Environments (H08-04)

Guilin Wang (Institute for Infocomm Research, Singapore)

A New Secure Session Resume Protocol Using IV Count for Wireless Networks (H08-05)

Kihong Kim (National Security Research Institute, Korea)
Jinkeun Hong (Cheonan University, Korea)
Yongick Jung (National Security Research Institute, Korea)
Sangyi Yi (National Security Research Institute, Korea)

12:30-14:00 **Lunch Break**

Raum 42
14:00-15:30

Wednesday, September 14
H09 - Applications & Services

Session Chair: Kimmo Raatikainen (University of Helsinki, Finland)

UPnP extension for wide-area service discovery using the INS/Twine Framework (H09-01)

Wassef Louati (INT - GET, France)
Marc Girod-Genet (INT - GET, France)
Djamal Zeghlache (INT, France)

Using Client-Server applications in Proximity networking (H09-02)

Mika Saaranen (Nokia Corporation, Finland)

Context Sensitive User Profiling for Customised Service Provision in Mobile Environments (H09-03)

Spyros Panagiotakis (University of Athens, Greece)
Maria Koutsopoulou (University of Athens, Greece)
Nancy Alonistioti (University of Athens, Greece)
Stelios Thomopoulos (Inst. of Informatics & Telecommunications, NCSR "Demokritos", Greece)

Service Provisioning with Ad-Hoc Deployed High-Speed Access Points in Urban Environments (H09-04)

Johan Hultell (Royal Institute of Technology, Sweden)
Pietro Lungaro (Royal Institute of Technology (KTH), Sweden)
Jens Zander (Royal Inst Tech, Stockholm, Sweden)

Bluetooth Real-Time Mobile Auctions (H09-05)

Francisco Castano (Universidad de Vigo, Spain)
Felipe Gil-Castiñeira (Universidad de Vigo, Spain)

15:30-16:00 **Coffee Break**

Raum 42 **Wednesday, September 14**

16:00-17:30 **H10 - Positioning & Location Based Services**

Session Chair: Christian Wietfeld (University of Dortmund, Germany)

A Seamless Tracking Solution for Indoor and Outdoor Position Location (INVITED PAPER) (H10-01)

Kesh Bakhru (Cubic Defense Systems Applications, USA)

Performance Evaluation of Accurate Trigger Generation for Vertical Handover (H10-02)

Daniel Bültmann (Aachen University, Germany)
Matthias Siebert (RWTH Aachen University, Germany)
Matthias Lott (Siemens AG, Germany)

Indoor localization with probability density functions based on Bluetooth (H10-03)

Kai Wendlandt (DLR Oberpfaffenhofen, Germany)
Patrick Robertson (Institute of Communications and Navigation, Germany)
Marcus Berbig (UniBw München, Germany)

Location of Mobile Terminals with Quantized Measurements (H10-04)

Michael McGuire (University of Victoria, Canada)

An Analytical Random Direction-Based Method in User Mobility Modeling for Wireless Networks (H10-05)

AmirReza Momen (Iran Telecommunication Research Center (ITRC), Iran)
Alireza Mirzaee (Iran Telecommunication Research Center, Iran)

17:30

End of the conference

An Empirical Model for the Inter-Cell Interference in a CDMA Uplink (I01-02)

Stefan Ataman (Ecole Superieure d'Electricite, France)
Armelle Wautier (Supelec. Radio Dpt., France)

Common Radio Resource Management: Functional Models and Implementation Requirements (I01-03)

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

Efficient resource reservation scheme with optimal channel requests classification in cellular systems (I01-04)

Ines Ben Hamida (university of Paris-Sud, Orsay, France)
Lila Boukhatem (LRI Laboratory, France)
Mazen Neifer (Supaero, France)
Sami Touati (CEA, France)

Peripheral-state Sense Multiple Access / Interference Control (PSMA/IC) for Distributed Radio Resource Management (I01-05)

Hiromasa Fujii (NTT DoCoMo, Inc., Japan)
Takatoshi Sugiyama (NTT DoCoMo, Japan)
Hitoshi Yoshino (NTT DoCoMo, Inc., Japan)

12:30-14:00

Lunch Break

Track I

Raum 43

11:00-12:30

Monday, September 12

I01 - Advanced Radio Resource Management

Session Chair: Stefan Mangold (Swisscom Innovations, Switzerland)

Spectrum Efficiency Evaluation for different Wireless Technologies based on Traffic Modeling (I01-01)

Carsten Ball (Siemens AG, Germany)
Eduard Humburg (Siemens AG, Germany)
Kolio Ivanov (Siemens AG, Germany)

Raum 43

14:00-15:30

Monday, September 12

I02 - Capacity Planning and Dimensioning

Session Chair: Andreas Timm-Giel (University of Bremen, Germany)

Dimensioning of an Enhanced 4G/B3G Infrastructure (INVITED PAPER) (I02-01)

Abbas Jamalipour (University of Sydney, Australia)
Vinod Mirchandani (The University of Sydney, Australia)
M. Rubaiyat Kibria (The University of Sydney, Australia)

Topology and Capacity Planning for Wireless Heterogeneous Networks in Aircraft Cabins (I02-02)

Cristina Parraga Niebla (German Aerospace Center (DLR), Germany)

Measurement based Call Admission Control Strategies in Infrastructured IEEE802.11 WLANs (I02-03)

Gianni Pasolini (IEIIT-BO/CNR, University of Bologna, Italy)

Alessandro Bazzi (IEIIT-BO/CNR, University of Bologna, Italy)

Marco Diolaiti (IEIIT-BO/CNR, Italy)

On the Code and Soft Capacity of the UMTS FDD Downlink and the Capacity Increase by using a Secondary Scrambling Code (I02-04)

Dirk Staehle (University of Wuerzburg, Germany)

Proposal of 5/25-GHz Dual Band OFDM-Based Wireless LAN for High-Capacity Broadband Communications (I02-05)

Ichihiko Toyoda (NTT, Japan)

Fusao Nuno (NTT, Japan)

Yoshitaka Shimizu (NTT, Japan)

Masahiro Umehira (NTT, Japan)

15:30-16:00 **Coffee Break**

Raum 43

16:00-17:30

Monday, September 12

I03 - Mobility Management

Session Chair: Vasos Vassilou (University of Cyprus, Cyprus)

Survey and Classification of Transport Layer Mobility Management Schemes (INVITED PAPER) (I03-01)

Mohammed Atiquzzaman (University of Oklahoma, USA)

Abu Ahmed Reaz (University of Oklahoma, USA)

A Novel Simulation Approach for Mobility Models in an Inhomogeneous Area (I03-02)

Iana Siomina (Linkoping University, Sweden)

Analysis of the influence of multiservice users mobility on UMTS-FDD performance (I03-03)

Carlos Rodrigues (IST - Technical University of Lisbon, Portugal)

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

Performance Analysis of Micro Mobile MPLS for Future Wireless Networks (I03-04)

Rami Langar (Telecom Paris, France)

Samir Tohme (University of Versailles, France)

Nizar Bouabdallah (Alcatel Research & Innovation and University of Paris6, France)

Guy Pujolle (University of Paris 6, France)

Fast Seamless Handover Scheme and Cost Performance Optimization for Ping-Pong Type of Movement (I03-05)

Yang Zongkai (Huazhong University of Science and Technology, China)

Yuming Wang (Huazhong University of Science and Technology, China)

Zhao Dasheng (Huazhong University of Science and Technology, China)

Jianhua He (Huazhong University of Science and Technology, China)

Xiaoming Fu (University of Goettingen, Germany)

18:00

Welcome Reception at the ICC

Raum 43

11:00-12:30

Tuesday, September 13

I04 - Cross-layer Designs & Scheduling

Session Chair: Sastri Kota (Harris Corp., USA)

A channel aware scheduling algorithm for HSDPA system (I04-01)

Giorgio Manfredi (Siemens, Italy)

Pierfrancesco Annesi (Siemens Mobile Communication, Italy)

Umberto Spagnolini (Politecnico di Milano, Italy)

Throughput and Delay Performance Comparison for Single-Carrier and Multicarrier Networks with Multiuser Diversity (I04-02)

Guocong Song (Georgia Institute of Technology, USA)

Geoffrey Li (Georgia Tech, USA)

Packet Scheduling Algorithm to Improve Throughput and Fairness in SDM System Using Adaptive Antenna Array (I04-03)

Naoki Yoshimochi (Keio University, Japan)

Yoshiaki Ofuji (NTT DoCoMo Inc., Japan)

Sadayuki Abeta (NTT DoCoMo Inc., Japan)

Riaz Esmailzadeh (Keio University, Japan)

Iwao Sasase (Keio University, Japan)

An Adaptive Packet Scheduling Algorithm in OFDM Systems with Smart Antennas (I04-04)

Zhifeng Diao (Univ. Hong Kong, Honkong)

Multiple Reject ARQ-Based Cross-Layer Error Control Scheme (I04-05)

Hung-Yi Chen (BenQ Corporation, Taiwan)

Jin-Fu Chang (National Chi Nan University, Taiwan)

12:30-14:00 **Lunch Break**

Raum 43

14:00-15:30

Tuesday, September 13

I05 - MIMO Systems & Cross Layer Designs

Session Chair: Umberto Spagnolini (Politecnico di Milano, Italy)

Random beamforming for spatial multiplexing in downlink multiuser MIMO systems (I05-01)

Diego Piazza (Politecnico di Milano, Italy)

Umberto Spagnolini (Politecnico di Milano, Italy)

A Cutoff Rate based Cross-Layer Metric for MIMO-HARQ Processing (I05-02)

Armin Dekorsy (Lucent, Germany)

Physical Layer Characterization of a Multi-User MISO System by Efficient Outage Probabilities (I05-03)

Christian Guthy (NWS, Technical University of Munich, Germany)

Johannes Brehmer (Munich University of Technology, Germany)

Wolfgang Utschick (Technische Universität München, Germany)

Hybrid Smart Antennas for OFDM Systems – A Cross-layer Approach (I05-04)

Hu Honglin (Siemens AG Communications, Future Radio, Germany)

Kai Guo (University of Science and Technology of China, China)

Weckerle Martin (Siemens, Germany)

Efficient Link Layer Transmission Strategy for MIMO Wireless Systems (I05-05)

Wessam Ajib, Jean-François Frigon, David Haccoun (Ecole Polytechnique de Montréal, Canada)

15:30-16:00

Coffee Break

Raum 43

16:00-17:30

Tuesday, September 13

I06 - Capacity Optimization

Session Chair: Luis Correja (IST-Technical University of Lisbon, Portugal)

UMTS Data Capacity Improvements Employing Dynamic RRC Timeouts (I06-01)

Andreas Mitschele (University, Germany)

Florian Liers (TU Ilmenau, Germany)

Effective Capacity of Imperfect Adaptive Wireless Communication Systems (I06-02)

Ulrico Celentano (University of Oulu, Finland)

Savo Glisic (University of Oulu, Finland)

The Impact of Transmit Diversity on the Erlang Capacity of Reverse Link DS/CDMA System (I06-03)

Jong-Han Kim (Virginia Tech., USA)

Kyung Bae (Virginia Tech, USA)

Annamalai Annamalai (Virginia Tech., USA)

Jeffrey Reed (Virginia Tech, USA)

A Novel Transport Agent for Wireless Routers to Improve TCP and UDP Performance over Wireless Links (I06-04)

Kaveh Ghaboosi (Sharif University of Technology, Iran)

Babak H. Khalaj (Sharif University of Technology, Iran)

Chebyshev Antenna Arrays for WCDMA Downlink Capacity Enhancement (I06-05)

Elias Yaacoub (American University of Beirut, Lebanon)

Rouba El Kaissi (American University of Beirut, Lebanon)

Zaher Dawy (American University of Beirut, Lebanon)

19:00-22:30

Conference Dinner at the Hotel Radisson SAS

Raum 43
09:00-10:30

Wednesday, September 14
I07 - Mobile Multimedia

Session Chair: Christian Wietfeld (University of Dortmund, Germany)

On VoIP Session setup delay using SIP over correlated fading channels (I07-01)

Hanane Fathi (Aalborg University, Denmark)

Shyam Chakraborty (Helsinki University of Technology, Finland)

Ramjee Prasad (Aalborg University, Denmark)

A Joint PRMA and Packet Scheduling MAC Protocol for Multimedia CDMA Cellular Networks (I07-02)

Feng Shu (University of Melbourne, Australia)

Taka Sakurai (University of Melbourne, Australia)

Moshe Zukerman (University of Melbourne, Australia)

Mansoor Shafi (Telecom New Zealand, New Zealand)

Performance Evaluation of Power Saving Strategies for DVB-H Services using adaptive MPE-FEC Decoding (I07-03)

Edith De Diego Balaguer (Aalborg University, Denmark)

Frank H.P. Fitzek (Aalborg University, Denmark)

Ole Olsen (Aalborg University, Denmark)

Morten Gade (Freescale, Denmark)

Group-based Ad-hoc Network for video Communications (I07-04)

Hamid Gharavi (NIST, USA)

Another double tier to avoid local congestion (I07-05)

Takahiko Yamada (Ritsumeikan University, Japan)

10:30-11:00 **Coffee Break**

Raum 43
11:00-12:30

Wednesday, September 14
I08 - Satellite Networks & HAPs

Session Chair: Sastri Kota (Harris Corp. US)

An Integrated HAP-Satellite Communications System for DVB-RCS Service Provisioning (I08-01)

Antonio Iera (University "Mediterranea" of Reggio Calabria, Italy)

Antonella Molinaro (University of Calabria, Italy)

Salvatore Pulitanò (University "Mediterranea" of Reggio Calabria, Italy)

Time Division Duplex for Satellite Communications (I08-02)

Anthony Hulbert (Roke Manor Research, United Kingdom)

An HAP-UMTS integrated system supporting efficient admission control scheme for mixed traffic sources (I08-03)

Pasquale Pace (University of Calabria, Italy)

Domenico Pace (University of Calabria, Italy)

Salvatore Marano (University of Calabria, Italy)

High Quality Audio Services Over a L-Band Satellite Link using COFDM with Soft-Decision (I08-04)

Pasquale Falconio (University of Rome, Italy)

On-Frequency Gap-Filler using Adaptive Tracking Null Controller for Next Generation Mobile Satellite Communication Systems (I08-05)

Tomihiko Yoshida (NTT Network Innovation Laboratories, NTT Corporation, Japan)

Kiyoshi Kobayashi (NTT Network Innovation Laboratories, NTT Corporation, Japan)

Kohei Ohata (NTT Network Innovation Laboratories, NTT Corporation, Japan)

Masazuni Ueba (This paper proposes and evaluates a forward link multiple access scheme for a next generation broadband, Japan)

12:30-14:00 **Lunch Break**

Raum 43
14:00-15:30

Wednesday, September 14
I09 - Intelligent Wireless Network Solutions

Session Chair: Djamel Zeghlache (INT, France)

Framework for platforms in ubiquitous computing systems (I09-01)

Bjoern Wuest (University of Kassel, Germany)
Olaf Drögehrn (University of Kassel, Germany)
Klaus David (University of Kassel, Germany)

Multimodal user interfaces for context-aware mobile applications (I09-02)

Ralf Kernchen (University of Surrey, United Kingdom)
Peter Boda (Nokia, Finland)
Klaus Moessner (University of Surrey, United Kingdom)
Bernd Mrohs (Fraunhofer FOKUS, Germany)
Mathieu Boussard (Alcatel R&I, France)
Giovanni Giuliani (HP Italy, Italy)

Interworking between the Multimedia Messaging Service (MMS) and the 3G IP Multimedia Subsystem (IMS) Instant Messaging Service (I09-03)

Miguel Gómez (Agora Systems, S.A., Spain)
Jose Luis Megias (Agora Systems, S.A., Spain)
Carlos Bueno (Agora Systems, S.A., Spain)
Carmen Brocal (Agora Systems, S.A., Spain)

Efficient Multimedia Content Delivery over Cooperative 3G and Broadcasting Networks (I09-04)

Luan Huang (University of Surrey, United Kingdom)
Karann Chew (British Telecom, United Kingdom)
Rahim Tafazolli (University of Surrey, United Kingdom)

Video Rate Control for Streaming and Local Recording Optimized for Mobile Devices (Paper ID K06-01)

Mehdi Rezaei (Tampere University of Technology (TUT), Finland)

15:30-16:00 **Coffee Break**

Raum 43
16:00-17:30

Wednesday, September 14
I10 - Future Wireless Networks

Session Chair: Tim Irrnich (RWTH Aachen University, Germany)

Fixed Mobile Convergence: Network architecture, Services, Terminals, and Traffic Management (INVITED PAPER) (I10-01)

Deepak Kataria (Agere Systems, USA)
Dimitris Logothetis (Ericsson, Greece)

Enhancing Resilience for High Availability IP-based Signaling Transport (I10-02)

René Rembarz (Ericsson GmbH, Eurolab, Germany)
Stephan Baucke (Ericsson Research, Aachen, Germany, Germany)
Petri Mähönen (Aachen University, RWTH, Institute of Wireless Networks, Germany)

Link Performance Models for System Level Simulations of Broadband Radio Access Systems (I10-03)

Karsten Brueninghaus (Siemens AG, Germany)
David Astély (Ericsson, Sweden)
Thomas Sälzer (France Telecom, France)
Samuli Visuri (Helsinki University of Technology, Finland)
Angeliki Alexiou (Bell Labs, Lucent Technologies, United Kingdom)
Stephan Karger (Siemens AG, Germany)

On Evaluation of A Novel Method for Adaptive Management of Heterogeneous Wireless Networks in Mobile Client-Server Communications (I10-04)

Jun-Zhao Sun (University of Oulu, Finland)
Jukka Riekkı (Department of Electrical and Information Engineering, University of Oulu, Finland)
Marko Jurmu (University of Oulu, Finland)
Jaakko Sauvola (University of Oulu, Finland)

A Novel Adaptive Type-II HARQ Scheme for OFDM Systems (I10-05)

Jinxia Cheng (Tsinghua University, China)
Shidong Zhou (Tsinghua University, China)
Yan Yao (Tsinghua University, China)

17:30

End of the conference

Saal 7 **Monday, 12 September****11:00 - 12:30 PA01: Convergence of Mobile and Broadcast**

Session Chair: Dr. Jorge Pereira (European Commission, Belgium)

A co-operative DVB-H Mobile-Broadcast Scenario for Germany

Dr. Alfred Baier (Director Future Technologies, Vodafone D2, Germany)

Broadcasting and Multicasting over Enhanced UMTS Mobile Broadcast Networks

Franz-Josef Banet (Alcatel, Germany)

FLO Technology-based Terrestrial Mobile Multimedia Multicast

*Kamil Grajski (Qualcomm, USA)
Ralf Tönjes (FH-Osnabrück, Germany)*

Convergence of Digital Industries: broadcasting and DVB-H

Mikko Uusitalo (Nokia Research Center, Finland)

12:30-14:00 Lunch Break**Saal 7** **Monday, September 12****14:00-15:30 J02 - Antennas for UMTS**

Session Chair: Ralf Pabst (RWTH Aachen University, Germany)

Application of Linear Solvers to UMTS Network Optimization without and with Smart Antennas (J02-01)

*Rafal Zdunek (Wroclaw University of Technology, Poland)
Maciej Nawrocki, Mischa Dohler,
Hamid Aghvami (King's College London, United Kingdom)*

On Cost Function Analysis for Antenna Optimisation in UMTS Networks (J02-02)

*Maciej Nawrocki, Mischa Dohler,
Hamid Aghvami (King's College London, United Kingdom)*

Investigation of Diversity and Beamforming Techniques for UMTS High Speed Downlink Packet Access (J02-03)

*Yejian Chen (University of Stuttgart, Germany)
Joachim Speidel (University of Stuttgart, Germany)
Cornelis Hoek (Alcatel, Germany)
Stefan Russ (Alcatel Research & Innovation, Germany)*

Analysis of Propagation Models for UMTS Ultra High Sites in Urban Areas (J02-04)

*Andreas Hecker (Technische Universität Braunschweig, Germany)
Thomas Kürner (Technische Universität Braunschweig, Germany)*

Implementation of a Setup Module for a Plug-And-Play UMTS Smart Antenna (J02-05)

*Laura Garcia-Garcia (Polytechnic University of Madrid, Spain)
Clara Palau (Universidad Politecnica de Madrid, Spain)
Carlos Gomez (Universidad Politecnica de Madrid, Spain)
Leandro Haro y Ariet (Universidad Politecnica de Madrid, Spain)*

15:30-16:00 Coffee Break**Saal 7** **Monday, 12 September****16:00 - 17:30 PA02 : UWB - What next?**

Session Chair: Dr. Jorge Pereira (European Commission, Belgium)

N.N.

Veselin Brankovic (TES Electronic Solutions, Germany)

N.N.

TBD, (CSEM, Switzerland)

N.N.

Ian Oppermann (Nokia, Finland)

N.N.

Shigenobu Sasaki (Niigata University, Japan)

18:00**Welcome Reception at the ICC**

Saal 7
11:00 - 12:30 **Tuesday, 13 September**
PA03: From Reconfigurability to Cognitive Networks - towards Dynamic Spectrum Management

Session Chair: Dr. Jorge Pereira (European Commission, Belgium)

N.N.

Paul Bender, BNetzA (ex-RegTP) Germany - TBC

N.N.

Didier Bourse (Motorola, France)

N.N.

Petri Mähönen (RWTH Aachen, Germany)

N.N.

Mike Markus (Markus Spectrum Solutions, USA)

12:30-14:00 **Lunch Break**

Saal 7
14:00-15:30 **Tuesday, September 13**
J05 - Antenna & RF Subsystems

Session Chair: open

Dirty RF: A New Paradigm (INVITED PAPER) (J05-01)

Gerhard Fettweis (Technische Universität Dresden, Germany)

Michael Löhning (Signalion GmbH, Germany)

Denis Petrovic (Dresden University of Technology, Germany)

Marcus Windisch (Technische Universität Dresden, Germany)

Peter Zillmann (Dresden University of Technology, Germany)

Wolfgang Rave (Dresden University of Technology, Germany)

Polarization Diversity Analysis of Dual-Polarized Log.-Per. Planar Antennas (J05-02)

Oliver Klomp (University of Hannover, Germany)

Oliver Schmitz (University of Hannover, Germany)

Hermann Eul (University of Hannover, Germany)

Performance of Compensation Algorithms for Direct-Conversion Receivers under Finite Wordlength Constraints (J05-03)

Rolf Weber (Hella KGaA, Germany)

Markus Jordan (RWTH Aachen, Germany)

Niels Christoffers (Fraunhofer IMS, Germany)

Christian Müller (Fraunhofer IMS, Germany)

Bedrich Hosticka (Fraunhofer IMS, Germany)

Channel Capacity of Multi-antenna Communication Systems with Closely Spaced Antenna Elements (J05-04)

Snezana Krusevac (The University of New South Wales, Australia)

Predrag Rapajic (The University of New South Wales, Australia)

Rodney Kennedy (Australian National University, Australia)

Performance Analysis of Selective Space-time Coding and Selection Diversity under Perfect and Imperfect CSI (J05-05)

Ya-Han Pan (Nanjing Telecommunications Technology Institute, China)

Sonia Aissa (University of Quebec, INRS-EMT, Canada)

15:30-16:00 **Coffee Break**

Saal 7
16:00 - 17:30 **Tuesday, 13 September**
PA04 : Vision 2020 - Long-Term Perspectives

Session Chair: Dr. Jorge Pereira (European Commission, Belgium)

Spontaneous assistance of daily life through mobile phones

Michel Banâtre (INRIA/IRISA, France)

KC Chen (NTU, Taiwan)

Wireless Future: Only missing bits and pieces or another big thrust?

Prof. Gerhard Fettweis (Philips

Semiconductors/TU Dresden, Germany)

19:00-22:30 **Conference Dinner at the Hotel Radisson SAS**

09:00-10:30 **Wednesday, September 14**
J07 - RF Technologies

Session Chair: open

HSDPA System Performance of Optical Fiber Distributed Antenna Systems in an Office Environment (J07-01)

Zekeriya Uykan (NOKIA Research Center, Finland)

Klaus Hugl (Nokia, Finland)

Variable Guard Interval for OFDM based WLANs (J07-02)

Suvra Das (Aalborg University, Denmark)

Frank H.P. Fitzek (Aalborg University, Denmark)

Ramjee Prasad (Center for TeleInfrastruktur (CTIF) Aalborg University, Denmark, Denmark)

A Performance Improvement and Error Floor Avoidance Technique for Belief Propagation Decoding of LDPC Codes (J07-03)

Enver Cavus (University of California Los Angeles, USA)

Babak Daneshrad (University of California, Los Angeles, USA)

Influence of Sampling Jitter on Discrete Time Receiver (J07-04)

Mamiko Inamori (Keio University, Japan)

Anas Muhamad Bostamam (Keio University, Japan)

Yukitoshi Sanada (Keio University, Japan)

A Detection Method for An OFDM Signal Distorted by IQ Imbalance (J07-05)

Kyung Won Park (Korea Electronics Technology Institute, Korea)

Yong Soo Cho (Chung-Ang University,)

10:30-11:00 **Coffee Break**

Saal 7 **Wednesday, 14 September**
11:00 - 12:30 **PA05 : From Sensor Networks to Smart Dust**

Session Chair: Dr. Jorge Pereira (European Commission, Belgium)

N.N.

Hendrik Berndt (DoCoMo EuroLabs, Germany)

Sensor Networks: Distributed Decision

José M Fonseca de Moura (CMU, USA)

e-Sense: trends and challenges of WSNs

Laurent Herault (CEA/LETI, France)

Impact of mobility on the performance of WSNs

Chiara Petrioli (Università di Roma "La Sapienza", Italy)

WSNs from the networking perspective: What is so different about them?

Adam Wolisz (TU Berlin, Germany)

12:30-14:00 **Lunch Break**

Saal 7 **Wednesday, 14 September**
14:00 - 15:30 **PA06 : Ad hoc Networks and their evolution**

Session Chair: Dr. Jorge Pereira (European Commission, Belgium)

N.N.

Peter Karlsson (TeliaSonera, Sweden)

N.N.

C K Toh (Univ. of London Queen Mary, United Kingdom)

N.N.

Uma Jha (Qualcomm, USA)

N.N.

Kwang-Cheng Chen (NTU, Taiwan)

15:30-16:00 **Coffee Break**

Saal 7 **Wednesday, September 14**
16:00-17:30 **J10 - B3G Receiver Design**

Session Chair: Hiroyuki Atarashi (NTT Docomo, Japan)

An Hybrid PIC Based Receiver Using Code Estimation for HSDPA Multiuser Interference Cancellation (J10-01)

Ahmed Saadani (France Telecom R&D, France)

Jean-Marie Chaufray (France Telecom, France)

A Combined GNSS/UMTS Receiver Architecture for User Equipment Positioning (J10-02)

Guenter Heinrichs (IfEN GmbH, Germany)

SIC-VBLAST receiver for coded uplink MIMO MC-CDMA systems (J10-03)

Nevio Benvenuto (University of Padova, Italy)
Paola Bisaglia (University of Padova, Italy)
Gianbattista Carnevale (University of Padova, Italy)
Davide Bornancin (University of Padova, Italy, Italy)

An Low Complexity Adaptive Iterative Receiver for Layered Space-time Coding CDMA Systems (J10-04)

Chakree Teekapakvisit (University of Sydney, Australia)

Receiver Design for OFDM-CDMA Systems with Multiplexed STBC (J10-05)

Kan Zheng (Beijing University of Posts&Telecommunications, China)

17.30 **End of the Conference**

Track K - Poster Sessions

Foyer **Monday, September 12**
11:00 - 12:30 **K01 - Poster session on MIMO**

Accelerated Subspace Tracking Scheme and Its Applications to Multiuser Systems (K01-01)

Shohei Kikuchi (Keio University, Japan)

Transmit Antenna Selection with Power and Rate Allocation for Generalized Distributed Wireless Communication Systems (K01-02)

Shuangfeng Han (Tsinghua University, DZ)
Shidong Zhou (Tsinghua University, Taiwan)
Jing Wang (EE, Tsinghua University, China)
Woogoo Park (ETRI of Korea, Korea)

Iterative Interference Cancellation Algorithms for the V-BLAST system (K01-03)

Hyoungkuk Kim (Information and Communications University, Korea)
Hyuncheol Park (Information and Communication University, Korea)

Near optimal list MIMO detection (K01-04)

Zhongding Lei (Institute for Infocomm Research, Singapore)
Yongmei Dai (Lehigh University, USA)
Sumei Sun (Institute for Infocomm Research, Singapore)

A Novel Receiver Aided Beamforming Technique (K01-06)

Senhua Huang (PCN and SS Lab, University of Science and Technology of China, China)
Ling Qiu (PCN&SS Lab, University of Science and Technology of China, Taiwan)

Closed-loop Precoding Based on Code Distance Allocation for Transmit Correlated Spatial Multiplexing MIMO Systems (K01-07)

Shi Feng (Southeast University, P.R.China, China)
Haifeng Wang (Nokia Mobile Phones, Finland)
Chen Ming (National Mobile Communications Research Lab, Southeast University, Nan Jing, Taiwan)
ShiXin Cheng (University of Southeast, China)

Decorrelation and Power Allocation Based Precoding for Transmit Correlated V-BLAST Systems (K01-08)

Shi Feng (Southeast University, P.R.China, China)
Haifeng Wang (Nokia Mobile Phones, Finland)
Chen Ming (National Mobile Communications Research Lab, Southeast University, Nan Jing, Taiwan)
ShiXin Cheng (University of Southeast, China)

Space-Time Trellis Codes with Linear Precoding for Transmit Beamforming (K01-09)

Yonghui Li (University of Sydney, Australia)

Novel Transmit Antenna Selection Algorithm for V-BLAST System (K01-10)

Jian Liu (Huazhong University of Science and Technology, China)
Lee Li (Huazhong University of Science and Technology, China)

Multipath Direction Finding with Frequency Allocation Subspace Smoothing for an OFDM Wireless Communication System (K01-11)

Shiann-Shiun Jeng (National Dong Hwa University, Taiwan)
Chen-Wan Tsung (National Dong Hwa University, Taiwan)

Blind Estimation of Residual Timing Error in OFDM Receivers: A Non-Data-Aided Maximum-Likelihood Approach (K02-01)

Chandra Athaudage (University of Melbourne, Australia)

Dharmika Jayalath (Australian National University, Australia)

Enhanced Channel Estimation for Comb-type Pilot-aided OFDM systems with Residual Timing Offset (K02-02)

Jihyung Kim (University of Yonsei, Korea)

Analysis of the Design of the Optimum Pilot Pattern Using Different Bi-dimensional Interpolation Filters (K02-03)

Faouzi Carlos Bader (Centre Tecnològic de Telecomunicacions de Catalunya-CTTC, Spain)

An Iterative Detection of Precoded OFDM under Frequency Selective Fading Channels (K02-04)

Sayaka Tamura (Tokyo University of Science, Japan)

Masahiro Fujii (Tokyo University of Science, Japan)

Makoto Itami (Tokyo University of Science, Japan)

Kohji Itoh (Tokyo University of Science, Japan)

Switched-Based Reduced Feedback OFDM Multi-user Opportunistic Scheduling (K02-05)

Mohamed-Slim Alouini (University of Minnesota, USA)

OVSF Code Allocation and Two-stage Combining Method to reduce Inter-code Interference in OFCDM System (K02-06)

Kazuhiko Hasegawa (Keio University, Japan)

Ryuichirou Shimura (Keio University, Japan)

Tsutomu Ohno (Keio University, Japan)

Naoki Yoshimochi (Keio University, Japan)

Iwao Sasase (Keio University, Japan)

Low Complexity Channel Estimation Scheme for OFDM Systems With the Aid of Dynamic Pilots (K02-07)

Chia-Horng Liu (Chunghwa Telecom Co. Ltd., Taiwan)

Iterative Receivers for Space-Frequency Block-Coded OFDM Systems with Error Propagation Suppression (K02-08)

Ya Jing (Southeast University, China)

Xiaodong Xu (University of South East, Taiwan)

Chen Ming (National Mobile Communications Research Lab, Southeast University, Nan Jing, Taiwan)

ShiXin Cheng (University of Southeast, China)

Haifeng Wang (Nokia Mobile Phones, Finland)

Trellis factor search PTS for PAPR reduction in OFDM (K02-09)

Bingyang Wu (Southeast University, Taiwan)

Space-Time Joint Detection in TD-SCDMA System with Antenna Array (K02-10)

Hyekyung Jwa (ETRI, Korea)

Kyunng Park (ETRI, Korea)

Young-Hoon Kim (Electronics and

Telecommunications Research Institute, Korea)

Seung Chan Bang (ETRI, Korea)

Application of Particle Swarm Optimization Algorithm to Multiuser Detection in CDMA (K02-11)

Hassan Elmorra (KFUPM, Saudi Arabia)

Asrar Sheikh (King Fahd Univ. of Petroleum and Minerals, Saudi Arabia)

Azzedine Zerguine (KFUPM, Saudi Arabia)

Signature-interleaved DS CDMA: controlling odd correlation peaks (K02-12)

Alexey Dudkov (University of Turku, Finland)

Valery Ipatov (University of Turku, Finland)

OFDM and CDMA Coexistence (K02-13)

G. V. V. Sharma (Satyam Computer Services Limited, India)

S. H. Srinivasan (Satyam Computer Services Limited, India)

A DSSS-OFDM-CDMA-FDMA Indoor Geolocation System (K02-14)

Ilir Progri (Cal Poly Pomona, USA)

Foyer
11:00-12:30

Tuesday, September 13
K03 - Poster session on Coding & Modulation

A Simple Moment Based Approximation to Pairwise Error Probability for Memoryless Fading Channels (K03-01)

Nirmal Kambo (*Eastern Mediterranean University, Turkey*)
Syed Ali (*Eastern Mediterranean University, Turkey*)
Erhan Ince (*Eastern Mediterranean Univ., Turkey*)

A Low-Latency Decoder for Punctured/Shortened Reed-Solomon Codes (K03-02)

Shin-Lin Shieh (*Industrial Technology Research Institute, Taiwan*)
Shuenn-Gi Lee (*Industrial Technology Research Institute, Taiwan*)
Sheen Wern-Ho (*Chiao Tung Univ Taiwan, Taiwan*)

Effects of noisy feedback on the performance of HARQ Schemes over multipath block fading channels for DS-SSS (K03-03)

M. Wissem EL BAHRI (*Ecole supérieure des communication de Tunis, Tunisia*)
Hatem Boujemaa (*Ecole Supérieure des Communications, Tunisia*)
Mohamed Siala (*Sup'Com, Tunisia*)

Modified 128-QAM Constellation Schemes Allowing Low-Complexity Non-Data-Aided Carrier Recovery (K03-03)

Hsin-An Hou (*ITRI, Taiwan*)

SNR-independent Maximum Doppler Frequency Estimators with Bandwidth Adjustment Technique (K03-04)

Hyunky Yu (*Yonsei Univ., Korea*)
Goo-hyun Park (*University of Yonsei, Korea*)
Myeon-gyun Cho (*Yonsei University, Korea*)
Daesik Hong (*Yonsei Univ., Korea*)

An Improved SUD Architecture Based on Data-aided Channel Estimation (K03-05)

Yajuan Luo (*STMicroelectronics, Beijing, China*)
Kyung Sup Kwak (*Inha University, Korea*)

Construction of Irregular Low-Density Parity-Check Codes Based on Vector Matrix (K03-06)

Dan Xie (*University of Electronic Science and Technology of China, China*)

Iterative Demodulation for DVB-S2 (K03-07)

Thorsten Clevorn (*RWTH Aachen University, Germany*)
Frank Oldewurtel (*RWTH Aachen University, Germany*)
Susanne Godtmann (*RWTH Aachen University, Germany*)
Peter Vary (*RWTH Aachen University, Germany*)

A SCTP Based OAM System of 3G Cellular Network (K03-08)

Qiang Guo (*Shanghai Jiaotong University, China*)
Jie Zhu (*Shanghai Jiaotong University, China*)
Haibin Zhang (*Shanghai Jiaotong University, China*)

A Digital Intermediate Frequency Demodulator for $\pi/4$ DQPSK based on Hard Limiter (K03-09)

Changqing Xu (*OKI Techno Centre (S) Pte Ltd, Singapore*)

A novel Decorrelating MUD for the downlink of UMTS considering a RAKE in the Receiver (K03-10)

Mário Silva (*Institute for Telecommunications, Portugal*)
Américo Correia (*ADETTI, Portugal*)
Rui Dinis (*IST - Technical University of Lisbon, Portugal*)

Foyer
14:00-15:30

Tuesday, September 13
K04 - Poster session on Physical Layer

Successive Multi-user Detector with Ordering for Signals having Different Symbol Rates (K04-01)

Koji Maeda (*NTT DoCoMo, Inc., Japan*)
Takahiro Asai (*NTT DoCoMo, Japan*)
Hitoshi Yoshino (*NTT DoCoMo, Inc., Japan*)

Choice of Sampling frequency for Bandpass-sampling Receiver (K04-02)

Xuecheng Qian (*Philips, China*)

Experimental Investigation of Undersampling for Adjacent Channel Interference Cancellation Scheme (K04-03)

Anas Muhamad Bostamam (*Keio University, Japan*)
Yukitoshi Sanada (*Keio University, Japan*)

Impact of Ultra Wide Band (UWB) on Digital Audio Broadcasting (DAB) and Digital Television (DTV) Systems (K04-04)

Bazil Ahmed (Technical University of Madrid, ETSI de Telecom., Spain)

SAR Evaluation of 2-element Array Antennas for Mobile Handsets

*Qiang Chen (Tohoku University, Japan)
Yosunori Komukai (Panasonic Mobile Communications Sendai R&D Lab. Co., Ltd., Japan)
Kunio Sawaya (Tohoku University, Japan)*

Performance Analysis of Different Basis in Multicarrier Modulation System over Time-Variant Channels (K04-05)

Yupeng Jia (Shandong University, China)

BER performance comparison of the continuous time, discrete time and decorrelating discrete time Rake receivers (K04-06)

*Hatem Boujemaa (Ecole Supérieure des Communications, Tunisia)
Mohamed Siala (Sup'Com, Tunisia)*

On Second Order Statistics of the Satellite-to-Indoor Channel Based on Field Measurements (K04-07)

*Abdelmonaem Lakhzouri (Tampere University of Technology, Finland)
Elena Simona Lohan (Tampere University of Technology, Finland)
Ilkka Saastamoinen (u-Nav Microelectronics, Finland)
Markku Renfors (Tampere University of Technology, Finland)*

A Novel Error Concealment Method for Images Using Watermarking in Satellite Networks (K04-08)

*Gurkan Gur (Bogazici University, Turkey)
Fatih Alagoz (Bogazici University, Turkey)
Mohammed Abdel-Hafez (United Arab Emirates University, United Arab Emirates)*

Rate-Compatible Puncturing for Low-Density Parity-Check Codes with Dual-Diagonal Parity Structure (K04-09)

*Eoi Young Choi (Samsung electronics, Korea)
Seung-Bum Suh (Samsung electronics, Korea)
Jaehong Kim (Georgia Institute of Technology, USA)*

A New Serial Interference Cancellation Algorithm Based On Joint Multiple Timeslots Processing (K04-10)

Jinfan Zhang (Tsinghua University, China)

Comparison of One- and Two-dimensional Slow Fading Models in Mobile Radio System Simulations (K04-11)

*Christian Osterkorn (University of Applied Sciences of Hagenberg, Austria)
Gerald Ostermayer (University of Applied Sciences, Hagenberg, Austria)
Mario Huemer (University of Erlangen-Nuremberg, Germany)*

Macro-diversity versus micro-diversity system capacity with realistic receiver RFFE model (K04-12)

Ilhem Ouachani (Laboratoire des signaux et systèmes, France)

Capacity of the MIMO Broadcast Channel Under Realistic Propagation Conditions (K04-13)

*Thomas Fuegen (IHE, University of Karlsruhe, Germany)
Christiane Kuhnert (IHE, University of Karlsruhe, Germany)
Werner Wiesbeck (University of Karlsruhe, Germany)*

Foyer
11:00-12:30

Wednesday, September 14

K05 - Poster session on Wireless Networks

A Dynamic CBWFQ Scheme for Service Differentiation in WLANs (K05-01)

*George Stamatakis (University of Crete, Greece)
Vasilios Siris (Institute of Computer Science, FORTH / University of Crete, Greece)*

Hardware/Software Codesign of TDMA MAC applied to IEEE 802.16 Subscriber Station (K05-02)

*Nak Woon Sung (Electronics and Telecommunications Research Institute, Korea)
Nam-Hoon Park (ETRI, Korea)*

GSA: An Architecture for Optimising Gateway Selection in Dynamic Routing Groups (K05-03)

Michael Eyrich (Technische Universität Berlin, Germany)

Mikko Majanen (VTT Technical Research Centre of Finland, Finland)

Eranga Perera (National ICT Australia, Australia)

Ralf Tönjes (Ericsson GmbH, Germany)

Roksana Boreli (National ICT Australia, Australia)

Tim Leinmüller (DaimlerChrysler AG Research and Technology, Germany)

Network Selection Decision in Wireless Heterogeneous Networks

Olga Ormond (University College Dublin, Ireland)

John Murphy (University College Dublin, Ireland)

Philip Perry (University College Dublin, Ireland)

Accuracy and timing aspects of location information based on signal-strength measurements in Bluetooth (K05-04)

João Figueiras (University of Aalborg, Denmark)

Hans-Peter Schwefel (Aalborg University, Denmark)

Istvan Kovacs (Aalborg University, Denmark)

Provably Secure Public Key Management Protocols for Self-organized Ad Hoc Networks (K05-05)

Huafei Zhu (Institute for Infocomm Research, Singapore)

Feng Bao (Institute for Infocomm Research, Singapore)

Provably Secure Anonymous Identification Protocols for Ad-hoc Access Structures (K05-06)

Huafei Zhu (Institute for Infocomm Research, Singapore)

Tieyan Li (Institute for Infocomm Research, Singapore)

A Novel Approach for Improving Wireless Sensor Network Lifetime (K05-07)

Moez Esseghir (University of Paris 6, France)

Nizar Bouabdallah (Alcatel Research & Innovation and University of Paris6, France)

Guy Pujolle (University of Paris 6, France)

Practical Distributed Turbo Coding Through Soft Information Relaying (K05-08)

Yonghui Li (the university of sydney, Australia)

Determinist Contention Window Algorithm (K05-09)

Adlen Ksentini (University of Cergy-Pontoise, France)

Abdelhamid Nafaa (University of Versailles, France)

Abdelhak Gueroui (University of Versailles, France)

Mohamed NAIMI (University of Cergy-Pontoise, France)

Novel code selecting/spacing ALOHA system (K05-10)

Fumie Ono (Tokyo University of Science, Japan)

Hiromasa Habuchi (Ibaraki University, Japan)

Tsuyoshi Arai (Okayama Prefectural University, Japan)

Foyer
14:00-15:30

Wednesday, September 14

K06 - Poster session on Wireless Networks & RRM

Indoor positioning using spatial power spectrum (K06-02)

Kamran Sayrafian (NIST, USA)

Dominik Kaspar (ETHZ, Switzerland)

Application-Level and User-Level QoS Assessment of Audio-Video Transmission with EDCA of IEEE 802.11e (K06-04)

Takahiro Suzuki (Nihon Fukushi University, Japan)

Kenta Yamada (Graduate School of Engineering, Nagoya Institute of Technology, Japan)

Masami Kato (Digital Systems Development Center BU, SANYO Electric Co., Ltd., Japan)

Shuji Tasaka (Nagoya Institute of Technology, Japan)

Shuji Tasaka (Nagoya Institute of Technology, Japan)

**An Adaptive MAC Protocol for MC-CDMA
Adhoc Wireless LANs (K06-06)**

*Georgios Orfanos (RWTH Aachen University,
Germany)*

*Bernhard Walke (Aachen University of
Technology, Germany)*

*Hans-Jürgen Reuerman (Philips Research
Aachen, Germany)*

Willi Butsch (Aachen University, Germany)

**A Power-Controlled MAC Supporting Service
Differentiation in Mobile Ad Hoc Networks
(K06-07)**

*Wenjian Shao, Dongxu Shen, Daiqin Yang,
Victor Li (University of Hong Kong, China)*

**A Joint Feedback Reduction Scheme Using
Delta Modulation for Dynamic Channel
Allocation in OFDMA Systems (K06-08)**

*Myeon-gyun Cho,,Woohyun Seo,
Daesik Hong (Yonsei University, Korea)*

**A New Approach for Finding Optimal Base
Stations Configuration for CDMA Systems
Jointly with Uplink and Downlink Constraints
(K06-09)**

*Yupinto Ngadiman, (National University of
Singapore, Singapore)*

*Yong Huat Chew, Boon Sain Yeo (Institute for
Infocomm Research, Singapore)*

**Effects of Location Management Signaling
Load on the Forward Link Throughput of
UMTS-FDD Systems (K06-10)**

*Daoyang Lin, Boon Sain Yeo, Yong Huat Chew,
Yuen Sam Kwok (Institute for Infocomm
Research, Singapore)*

**Integrated Middleware Framework for
Service Mediation and Value-Added Service
Provisioning in 3G/B3G Networks (K06-11)**

*Dipanjan Chakraborty, Suraj Jaiswal,
Amit Nanavati (IBM India Research Lab, India)*

**Handoff Latency Improvement using
Multicasting Schemes in Heterogeneous
Networks (K06-12)**

*Mahmud Hossain, Ahmed Elhakeem,
Walaa Hamouda (Concordia University, Canada)*