

**7th International Workshop on
Multi-Carrier Systems and Solutions MC-SS 2009
Final Program
May 05-06, 2009, Herrsching, Germany**

Tuesday, May 05

8:00-13:00: Registration	
9:00-10:45: Opening, Session 1, Plenary, <i>MIMO</i> (Room A+B)	
11:10-12:30: Session 2, Plenary, <i>General I</i> (Room A+B)	
14:00-15:20: Session 3 <i>Channel Estimation</i> (Room A)	14:00-15:20: Session 4 <i>LTE</i> (Room B)
15:40-17:00: Session 5 <i>Channel Characterization & Estimation</i> (Room A)	15:40-17:00: Session 6 <i>PAPR</i> (Room B)
19:00: Dinner at Kaltenberg Castle	

Wednesday, May 06

9:00-10:40: Session 7 <i>Adaptive Transmission</i> (Room A)	9:00-10:40: Session 8 <i>Performance Evaluation</i> (Room B)
11:10-12:30: Session 9 <i>Modulation & Demodulation</i> (Room A)	11:10-12:30: Session 10 <i>Spectrum & Interference</i> (Room B)
14:00-15:20: Session 11, Plenary, <i>General II</i> (Room A+B)	

1st Day, Tuesday, May 05, 2009

8:00 – 13:00 Registration

9:00 – 9:05 Opening Remarks

9:05 – 10:45 Session 1 (Plenary)

Title: MIMO

Chairperson: Stefan Kaiser, DOCOMO Euro-Labs

- 1) **MIMO-OFDM with Doppler Compensating Antennas in Rapidly Fading Channels**
*P. Klenner, L. Reichardt, K.-D.Kammeyer, T. Zwick (University of Bremen, Germany).
(invited paper)*
- 2) **Resource Allocation Algorithms for Minimum Rates Scheduling in MIMO-OFDM Systems**
J.G. Klotz, F. Knabe, C. Huppert (Ulm University, Germany)
- 3) **Transmit Antenna and Code Selection for MIMO Systems with Linear Receivers**
I. Gutierrez, J.L. Pijoan (Ramon Llull University, Spain); F. Bader (Centre Tecnològic de Telecomunicacions de Catalunya - CTTC, Spain); A. Mourad (Samsung Electronics Research Institute, UK)
- 4) **Space-Time-Frequency Diversity in the Next Generation of Terrestrial Digital Video Broadcasting**
A. Dammann (German Aerospace Center (DLR), Germany)

10:45 – 11:10 Coffee Break

11:10 – 12:30 Session 2

Title: General-I

Chairperson: Witold Krzymien, University of Alberta

- 1) **Multicarrier Signals: A Natural Enabler for Cognitive Positioning Systems**
*M. Luise, F. Zanier (University of Pisa, Italy)
(invited paper)*
- 2) **Linearization of Transmitter and Receiver Nonlinearities in Optical OFDM Transmission**
H. Paul, K.-D. Kammeyer (University of Bremen, Germany)
- 3) **Multi-User OFDM Based on Braided Convolutional Codes**
*M. Lentmaier, M.B.S. Tavares, G. Fettweis (Dresden University of Technology, Germany),
K.Sh. Zigangirov (University of Notre Dame, USA)*

12:30 – 14:00 Lunch

14:00 – 15:20 Session 3 (Room A)

Title: Channel Estimation

Chairperson: Gordon Stüber, Georgia Institute of Technology

- 1) **Robust 2-D Channel Estimation for Staggered Pilot Grids in Multi-Carrier Systems: LTE Downlink as an Example**
M.D. Nisar, W. Utschick (Munich University of Technology, Germany), J. Forster (Nokia Siemens Networks, Germany)
- 2) **Block-IFDMA - Iterative Channel Estimation versus Estimation with Interpolation Filters**
A. Sohl, A. Klein (Technical University of Darmstadt, Germany)
- 3) **A Study on Channel Estimation Using EM Algorithm for Mobile WiMAX Systems**
M. Fujii, Y. Kawahara, Y. Watanabe (Utsunomiya University, Japan), M. Itami (Tokyo University of Science, Japan)

14:00 – 15:20 Session 4 (Room B)

Title: LTE

Chairperson: Khaled Fazel, Rhode & Schwarz GmbH & Co. KG

- 1) **Uplink Power Control Performance in UTRAN LTE Networks**
R. Muellner, C.F. Ball, K. Ivanov (Nokia Siemens Networks, Germany), J. Lienhart, P. Hric (Siemens AG, Austria)
- 2) **Improving UMTS LTE Performance by UEP in High Order Modulation**
H. Lueders, A. Minwegen, P. Vary (RWTH Aachen University, Germany)
- 3) **Performance Evaluation of a Low-Complexity LTE Base Station Receiver**
X. Zhao, A. Ibing (Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, Germany)

15:20 – 15:40 Coffee Break

15:40 – 17:00 Session 5 (Room A)

Title: Channel Characterization & Estimation

Chairperson: Stephan Sand, German Aerospace Center (DLR)

- 1) **A Technique for Correcting Residual Frequency Offset in OFDM Systems**
Y. M. Chung (Hansung University, Korea)
- 2) **A Joint Channel and Carrier Frequency Offset Estimation Based on Spread Pilot for Future Broadcasting Systems**
O.P. Pasquero, Y. Nasser, M. Crussière, J.-F. Hélarde (Institute of Electronics and Telecommunications of Rennes (IETR/INSA), France)
- 3) **Channel Characteristics of Different Floors for Joint Communications and Positioning**
W. Wang, T. Jost, Armin Dammann (German Aerospace Center (DLR), Germany)

15:40 – 17:00 Session 6 (Room B)

Title: PAPR

Chairperson: Marco Luise, University of Pisa

- 1) **On DT-CWT Based OFDM: PAPR Analysis**
M. Hussien, N. Kamel, V. Jeoti (University Technology PETRONAS, Malaysia)

- 2) **SOCP Approach for PAPR Reduction Using Tone Reservation for the Future DVB-T/H Standards**
I. M. Mahafeno, J.-F. H elard (Institute of Electronics and Telecommunications of Rennes (IETR/INSA), France), Y. Louet (Institute of Electronics and Telecommunications of Rennes (SUPELEC), France)

- 3) **Reduced-PAPR Code Allocation Strategy for MC-CDMA Transmissions**
F. Giannetti, V. Lottic, I. Stupia, N.A. D'Andrea (Universita di Pisa, Italy)

2nd Day, Wednesday, May 06, 2009

9:00 – 10:40 Session 7 (Room A)

Title: Adaptive Transmission

Chairperson: Karl-Dirk Kammeyer, University of Bremen

- 1) **Adaptive Multiuser OFDMA Systems with High Priority Users in the Presence of Imperfect CQI**
A. Kuehne, A. Klein (Technical University of Darmstadt, Germany)
- 2) **Adaptive BICM-OFDM Systems**
C. Bockelmann, D. Wuebben, K.-D. Kammeyer (University of Bremen, Germany)
- 3) **Power Allocation with Interference Constraint in Multicarrier Based Cognitive Radio Systems**
M. Shaat, F. Bader (Centre Tecnològic de Telecomunicacions de Catalunya - CTTC, Spain)
- 4) **Limited-Feedback Multiuser MIMO-OFDM Downlink with Spatial Multiplexing and Per-Chunk / Per-Antenna User Scheduling**
M. Eslami, W. Krzymien (University of Alberta / TRILabs, Canada)

9:00 – 10:40 Session 8 (Room B)

Title: Performance Evaluation

Chairperson: Fumiyuki Adachi, Tohoku University

- 1) **Simple Series Form Formula of BER Performance of M-ary QAM/OFDM Signals over Nonlinear Fading Channels**
Y. Goto, A. Yamakita, F. Maehara (Waseda University, Japan)
- 2) **A Novel Exponential Link Error Prediction Method for OFDM Systems**
I. Stupia, F. Giannetti, V. Lottici (University of Pisa, Italy), L. Vandendorpe (University of Louvain, Belgium)
- 3) **WiMAX Performance in the Airport Environment**
P. Pulini, S. Gligorevic (German Aerospace Center (DLR), Germany)
- 4) **Throughput Enhancement through Femto-Cell Deployment**
Z. Bharucha, H. Haas (The University of Edinburgh, UK), I. Cosovic, G. Auer (DoCoMo Euro-Labs, Germany)

10:40 – 11:10 Coffee Break

11:10 – 12:30 Session 9 (Room A)

Title: Modulation & Demodulation

Chairperson: Michael Lentmaier, Dresden University of Technology

- 1) **Phase Rotation/MC-CDMA for Uplink Transmission**
K. Adachi, M. Nakagawa (Keio University, Japan)

- 2) **Hierarchical Modulation in DVB-T/H Mobile TV Transmission**
T. Kratochvil (Brno University of Technology, Czech Republic)
- 3) **Efficient Compensation of Frequency Selective Tx and Rx IQ Imbalances in OFDM Systems**
D. Tandur, M. Moonen (Katholieke Universiteit Leuven, Belgium)

11:10 – 12:30 Session 10 (Room B)

Title: Spectrum & Interference

Chairperson: Filippo Giannetti, University of Pisa

- 1) **Dynamic Cross-Layer Spectrum Allocation for Multi-Band High-Rate UWB Systems**
A. Khalil, M. Crussière, J.-F. Hélard (Institute of Electronics and Telecommunications of Rennes (IETR/INSA), France)
- 2) **Egress Reduction for OFDM via Transmit Windowing - Framework and Comparison**
T. Magesacher (Lund University, Sweden)
- 3) **Interference Mitigation for the Future Aeronautical Communication System in the L-Band**
S. Brandes, M. Schnell (German Aerospace Center (DLR), Germany)

12:30 – 14:00 Lunch

14:00 – 15:20 Session 11

Title: General II

Chairperson: Armin Dammann, German Aerospace Center (DLR)

- 1) **Interference Aware Subcarrier and Power Allocation in OFDMA-Based Cognitive Radio Networks**
S.M. Almalfouh, G.L. Stueber (Georgia Institute of Technology, USA)
(invited paper)
- 2) **An Efficient ICA Based Approach to Multiuser Detection in MIMO OFDM Systems**
M. Khosravy, M.R. Alsharif (University of the Ryukyus, Japan), K. Yamashita (Osaka Prefecture University, Japan)
- 3) **Windowing in the Receiver for OFDM Systems in High-Mobility Scenarios**
E. Peiker, W.G. Teich, J. Lindner (University of Ulm, Germany)

15:20 – 15:30 Closing Remarks