

Wednesday April 24, 2019

**Industry Talks (10:15 - 11:45)**

	Title	Presenter
	NI mmWave hybrid beamforming testbed reference architecture	National Instruments
	Circuit-EM co-simulation for matching networks and reconfigurable antennas	Markus Laudien, ANSYS

**Poster Session 1 (12:15 - 14:00), Session Chair: Norbert Görtz**

Paper number	Title	Authors
1570517815	Overhead Reduction of NR type II CSI for NR Release 16	Rana Ahmed, Filippo Tosato, Marco Maso
1570516170	Computationally Efficient Limited Feedback for Codebook-Based FD-MIMO Precoding	Mariam Mussbah, Stefan Pratschner, Stefan Schwarz, Markus Rupp
1570516256	Time Shifting - Effective Reporting of Channel State Information in mobile Radio Systems	Wolfgang Zirwas
1570516055	Energy Efficiency Analysis of Scheduling in M2M Communication Over Rayleigh Fading Channels	Moses Torkudzor, Stefan Schwarz, Martin Müller, Markus Rupp, Jamal-deen Abdulai
1570512559	Power Allocation for NOMA with CSI Uncertainties and Imperfect Successive Interference Cancellation	Yasser Naguib
1570516281	A Fair Comparison Between Spatial Modulation and Antenna Selection in Massive MIMO Systems	Bernhard Gäde, Ali Beryhi, Saba Asaad, Ralf Müller
1570516221	Coordinated Jamming: A Privacy Preserving Method for C-RAN with Untrusted Radios	Omid Taghizadeh, Tianyu Yang, Rudolf Mathar

**Demo Session (14:00 - 18:00)**

	Title	Presenters
	28 GHz 5G NR mmWave demo	National Instruments
	Circuit-EM co-simulation for matching networks and reconfigurable antennas	Markus Laudien, ANSYS
	Wideband Solution Platform – 4 GHz bandwidth digitizer with gap-free streaming and hours of recording for 5G	x.test, Keysight
	OpenAirInterface 5G new radio demonstration	Florian Kaltenberger, Eurecom France
	Real-time 60 GHz testbed for RF impairments compensation	Roman Marsalek, Martin Pospisil, TU Brno
	Software demonstration for millimeter-wave railway communications	Ke Guan, Beijing Jiaotong University
	The Vienna cellular communication simulators	Stefan Pratschner, Martin Müller, Bashar Tahir, TU Wien

**Session 1 (14:10 - 15:30): Detection and Receivers, Session Chair: Andrea M. Tonello**

Paper number	Title	Authors
1570516122	Constrained Tensor Decompositions for Semi-blind MIMO Detection	Liana Khamidullina, Yao Cheng, Martin Haardt
1570518406	Efficient Initialization of Iterative Linear Massive MIMO Uplink Detectors by Binary Jacobi Synthesis	Pascal Seidel, Daniel Gregorek, Steffen Paul, Jochen Rust
1570514082	Approximate Message Passing for Joint Activity Detection and Decoding in Non-orthogonal CDMA	Stefan Birgmeier, Norbert Görtz
1570516252	Closed-form performance analysis of linear MIMO receivers in general fading scenarios	Giuseppa Alfano, Mario Kieburg, Gernot Akemann, Giuseppe Caire

**Session 2 (16:30 - 17:50): Localization and Direction Estimation, Session Chair: Martin Haardt**

Paper number	Title	Authors
1570513055	Cooperative Localization by Set-theoretic Estimation	Jochen Fink, Daniel Schäufole, Martin Kasparick, Renato L. G. Cavalcante, Slawomir Stanczak
1570513032	DoA Estimation in Multipath Channels for Packet Transmission Communication Systems	Daniele Inserra, Andrea M Tonello, Wen Guangjun
1570515991	Multi-Node RSS-based Localization with the Aid of Compressed Sensing: An I1-localization Approach	Ehsan Zandi, Rudolf Mathar
1570515962	LTE Uplink TOA Opportunistic Measurement Based on DM-RS	Alessandro Pin, Roberto Rinaldo, Andrea M Tonello, Chris Marshall, Alessandro Bion, Marco Driusso

Thursday April 25, 2019

**Keynote 1 (09:00 - 10:00)**

	Title	Speaker
	A Tensor Perspective on Large-Scale MIMO Array Processing	Prof. André L. F. de Almeida

**Session 3 (10:30 - 11:50): Modeling and Experimentation, Session Chair: Luis Castedo**

Paper number	Title	Authors
1570517883	Conducted Beamforming Testing in the Millimeter Wave Spectrum	Joachim Wehinger, Andre Janßen, Guillaume Monghal, Svante Widell
1570512500	Hybrid Ray Tracing Method for Millimeter Wave Propagation Simulation in Large Indoor Scenarios	Han Niu, Diego Dupleich, Robert Müller, Sergii Skoblikov, Christian Schneider, Giovanni Del Galdo, Reiner S. Thomä
1570515762	Experimental Evaluation of the Influence of Fast Movement on Virtual Antenna Arrays	Daniel Schützenhöfer, Erich Zöchmann, Martin Lerch, Stefan Pratschner, Herbert Groll, Sebastian Caban, Markus Rupp
1570512863	Properties of Measured Massive MIMO Channels using Different Antenna Geometries	Maximilian Arnold, Stephan ten Brink

**Poster Session 2 (12:00 - 13:45), Session Chair: Christoph F. Mecklenbräuer**

Paper number	Title	Authors
1570515935	Investigation of Wraparound Techniques for the Simulation of Wireless Cellular Networks	Agnes Fastenbauer, Martin Müller, Markus Rupp
1570516189	Random Graph Modeling of Foliage Influence on Millimeter-wave Propagation Channels	Lin Yang, Xuefeng Yin, Jose Rodríguez-Piñeiro, Nanxin Wang, Yu Ziming
1570515356	How Wireless Dumb Devices Could Attain High Data Rates Thanks to Smart Massive MIMO Networks	Dinh-Thuy Phan-Huy, Stefan Wesemann, Philippe Sehier
1570521076	The OpenAirInterface 5G New Radio Implementation: Current Status and Roadmap	Florian Kaltenberger, Guy De Souza, Raymond Knopp, Hongzhi Wang
1570516009	On Delay Diversity in OQAM/FBMC Based Transmission Schemes	Wenfeng Liu, Stefan Schwarz, Da Chen, Markus Rupp, Tao Jiang
1570515767	Parallel Data Reduction Method for an Industrial Massive MIMO Detector using "Tall Skinny QR" Decomposition	Daniel Gregorek, Pascal Seidel, Jochen Rust, Steffen Paul
1570516192	Assessment and comparison of multicarrier waveforms under nonlinear condition	Kiril Kirev, Stefan Schwarz

**Keynote 2 (13:45 - 14:45)**

	Title	Speaker
	Spatial Signal Processing in Satellite Communications: Massive MIMO in mmWave?	Prof. Ana Isabel Pérez-Neira

**Session 4 (14:50 - 16:10): Channel Estimation, Session Chair: Roman Marsalek**

Paper number	Title	Authors
1570512855	Oversampling based Channel Estimation for 1-bit Large-Scale Multiple-antenna Systems	Zhichao Shao, Lukas T N Landau, Rodrigo de Lamare
1570512982	Maximum Likelihood Channel Estimation for Millimeter-Wave MIMO Systems with Hybrid Beamforming	Fazal-E- Asim, Josef A. Nossek, Felix Antreich, Charles Casimiro Cavalcante, Andre de Almeida
1570515505	Evaluation of Neural-Network-Based Channel Estimators Using Measurement Data	Christoph Hellings, Aymen Dehmani, Stefan Wesemann, Michael Koller, Wolfgang Utschick
1570516209	Low-Complexity Millimeter Wave CSI Estimation in MIMO-OFDM Hybrid Beamforming Systems	Khaled Ardah, Andre de Almeida, Martin Haardt

**Session 5 (16:40 - 18:00): Hybrid and Massive MIMO, Session Chair: Wolfgang Utschick**

Paper number	Title	Authors
1570516211	Investigation of Hybrid-MIMO Configurations for Office Docking in the 60 GHz Band	Felix Fellhauer, Stephan ten Brink, Nabil Loghin
1570515716	Practical Hybrid Beamforming Schemes in Massive MIMO 5G NR Systems	Xiaoguang Zhao, Elena Lukashova, Florian Kaltenberger, Sebastian Wagner
1570516147	Beam Allocation based on Spatial Compatibility for Hybrid Beamforming C-RAN Networks	Laszlon Costa, Yuri C. B. Silva, Francisco Rafael Marques Lima, Anja Klein
1570516262	TDD and FDD Massive MIMO: Channel Coherence and Operation Region	Xiaojie Wang, Maximilian Arnold, Stephan ten Brink

Friday April 26, 2019

**Keynote 3 (09:00 - 10:00)**

	Title	Speaker
	Ultra-reliable and Low-latency Communication: Research Challenges and The Road Ahead	Ass. Prof. Mehdi Bennis

**Session 6 (10:30 - 11:50): Coding and Multicarrier Modulation, Session Chair: Robert F.H. Fischer**

Paper number	Title	Authors
1570512632	Binary Multilevel Coding over Eisenstein Integers for MIMO Broadcast Transmission	Sebastian Stern, Daniel Rohweder, Juergen Freudenberger, Robert F.H. Fischer
1570515982	Location-guided Precoded OFDM for Asynchronous Uplink Access	Saeed Afrasiabi-Gorgani, Gerhard Wunder
1570515907	On PAPR in Single-Carrier Massive MIMO Systems	Hela Jedda, Josef A. Nossek
1570515892	Energy Efficient Full Duplex Massive MIMO Multi-carrier Bidirectional Communication with Hardware Impairments	Vimal Radhakrishnan, Omid Taghizadeh, Rudolf Mathar

**Poster Session 3 (12:00 - 13:45), Session Chair: Markus Rupp**

Paper number	Title	Authors
1570512657	Multi-Step Knowledge-Aided Iterative MUSIC for Direction Finding using Nested Arrays	Silvio Bernardes Pinto, Rodrigo de Lamare
1570513867	Wideband Triple-Mode Patch Antenna Array for Millimeter-Wave Applications	Jia-Tian Weng, Qing-Xin Chu, Yi-Ting Chen, Rui Wu
1570516277	Blind Adaptive Array by Constant Modulus with Variable Step Size for Multi-beam Massive MIMO	Kentaro Nishimori, Kazuki Maruta, Takefumi Hiraguri
1570517924	Multi-Target Signal Estimation with Sensor Networks under Imperfect CSI	Vimal Radhakrishnan, Ehsan Zandi, Omid Taghizadeh, Rudolf Mathar
1570513895	Optimization Of Distributed Quantizers Using An Alternating Information Bottleneck Approach	Steffen Steiner, Volker Kuehn
1570515899	Comparison of Two Baseline AoA Estimation Methods in a EM Lens Assisted MAA System	Sarmad Ahmed Shaikh, Andrea M Tonello

**Session 7 (13:50 - 15:30): Beamforming and Precoding, Session Chair: Josef A. Nossek**

Paper number	Title	Authors
1570513079	1-Bit Precoding in Massive MU-MISO-OFDM Downlink with Linear Programming	Ferhad Askerbeyli, Hela Jedda, Josef A. Nossek
1570516031	Multibeam Transceiver with 4D Arrays Based on Single-Pole Multiple-Throw Switches	Roberto Maneiro-Catoira, Marc Bernice Angoue Avele, Julio Bregains, Jose A. Garcia-Naya, Luis Castedo
1570513083	Multi User Beam Selection Using Sequential Competition Test	Mostafa Khalili, Wolfgang Rave, Gerhard Fettweis
1570513080	The Elimination Game or: Beam Selection based on M-ary Sequential Competition & Elimination	Wolfgang Rave, Mostafa Khalili
1570512826	Discrete One-Bit Precoding for Massive MIMO	Benedikt Fesl, Hela Jedda, Josef A. Nossek