Prague / Czech Republic | 26–30 March 2012 6th EUROPEAN CONFERENCE ON ANTENNAS AND PROPAGATION

Wednesday, March 28

09:00–12:40 Room I

CA17: Small Antennas

Chairs: Richard W. Ziolkowski (University of Arizona, USA), Cyril Luxey (University of Nice Sophia-Antipolis, France)

09:00 Modal Source Reconstruction Based on Radiated Far-Field for Antenna Design
Eugen Safin (University of Kiel, Germany); Robert Martens (University of Kiel, Germany); Dirk Manteuffel (University of Kiel, Germany)

09:20 On the Modal Resonant Properties of Microstrip Antennas
Pavel Hazdra (Czech Technical University in Prague, Czech Republic); Miloslav Capek (Czech Technical University in Prague, Czech Republic); Jan Eichler (CTU in Prague, FEE, Czech Republic); Tomas Korinek (Czech Technical University in Prague, Czech Republic); Milos Mazanek (Czech Technical University in Prague, Czech Republic)

09:40 Multi-functional, Electrically Small, Near Field Resonant Parasitic Antennas and Their Applications
Richard W. Ziolkowski (University of Arizona, USA)

10:00 A Moderate Gain Extremely Short HF Monopole Antenna
Jungsuek Oh (University of Michigan, USA); Kamal Sarabandi (University of Michigan, USA)

10:20 Miniaturized and High Performance Circularly Polarized Terminal Antennas
Max James Ammann (Dublin Institute of Technology, Ireland); Xiu Long Bao (Dublin Institute of Technology, Ireland); Adam Narbudowicz (Dublin Institute of Technology, Ireland)

10:40 Coffee Break

11:00 Mutual Coupling Between Orthogonal Electrically Small Dipole Antennas
Steven R Best (The MITRE Corporation, USA)

11:20 A Novel Multi-Band Antenna Design with Matching Network for Use in Mobile Terminals
Aykut Cihangir (University of Nice Sophia Antipolis, France); Fabien Ferrero (University of Nice, France); Cyril Luxey (University of Nice Sophia-Antipolis, France); Gilles Jacquemod (University of Nice, France)

11:40 Q Limits for Arbitrary Shape Antennas Using Characteristic Modes
Jeffrey Chalas (The Ohio State University & ElectroScience Lab, USA); Kubilay Sertel (The Ohio State University, USA); John L. Volakis (Ohio State University, USA)

12:00 C-shaped, E-shaped and U-slotted Patch Antennas: Size, Bandwidth and Cross-Polarization Characterizations
Shubhendu Bhardwaj (UCLA, USA); Yahya Rahmat-Samii (University of California Los Angeles (UCLA), USA)

12:20 Wireless Strain and Crack Sensing Using a Folded Patch Antenna
Xiaohua Yi (Georgia Institute of Technology, USA); Chunhee Cho (Georgia Institute of Technology, USA); Chia-Hung Fang (Georgia Institute of Technology, USA); James Cooper (Georgia Institute of Technology, USA); Vasileios Lakafosis (Georgia Institute of Technology, USA); Rushi Vyas (Georgia Institute of Technology, USA); Yang Wang (Georgia Institute of Technology, USA); Roberto Leon (Georgia Institute of Technology, USA); Manos M. Tentzeris (Georgia Institute of Technology, USA)

09:00–12:40 Room II

CA11: Transformation Electromagnetics in Antenna Engineering

Chairs: Douglas H Werner (Pennsylvania State University, USA), Yang Hao (Queen Mary, University of London, United Kingdom)

09:00 Experimental Characterization of Electromagnetic Cloaking Structures with Bistatic Measurements at X-band
Pekka Alitalo (Aalto University, Finland); Ali Culhaoglu (German Aerospace Center (DLR), Germany); Andrey Osipov (German Aerospace Center (DLR), Germany); Stefan Thurner (German Aerospace Center (DLR), Germany); Erich Kemptner (German Aerospace Center (DLR), Germany); Sergei Tretyakov (Aalto University, Finland)

09:20 Time-Domain Simulations of Selected Cloaking Structures
Pekka Alitalo (Aalto University, Finland); Antti Karilainen (Aalto University, Finland)

09:40 Designing Horn Antennas Based on Variable Metasurface Concept
Marko Bosiljevac (University of Zagreb, Croatia); Zvonimir Sipus (University of Zagreb, Croatia); Massimiliano Casaletti (University of Siena, Italy); Francesco Caminita (University of Siena, Italy); Stefano Maci (University of Siena, Italy)

10:00 Flat Collimating Lenses Based on Quasi-conformal Transformation Electromagnetics
Qi Wu (The Pennsylvania State University, USA); Jeremiah P Turpin (The Pennsylvania State University, USA); Douglas H Werner (Pennsylvania State University, USA); Pingjuan Werner (Pennsylvania State University, USA); Wenxuan Tang (Queen Mary, University of London, United Kingdom); Yang Hao (Queen Mary, University of London, United Kingdom)

09:00–12:40 Club A

P01-2: Mobile Propagation Channel Measurements and Modelling II

Chairs: Thomas Kürner (Technische Universität Braunschweig, Germany, Fernando Pérez-Fontán (University of Vigo, Spain

09:00 Performance of Prediction Models in Suburban/Rural Residential Areas at 860, 2300 and 3500 MHz
Johannes Baumgarten (Technische Universität Braunschweig, Germany); Kin Lien Chee (Technische Universität Braunschweig, Germany); Andreas Hecker (Technische Universität Braunschweig, Germany); Thomas Kürner (Technische Universität Braunschweig, Germany); Michael Braun (LS Telcom, Germany); Peter Zahn (LS Telcom AG, Germany)

09:20 De-Correlation Distance of the Large Scale Parameters in an Urban Macro Cell Scenario
Annika Böttcher (RWTH Aachen University, Germany); Peter Vary (RWTH Aachen University, Germany); Christian Schneider (Ilmenau University of Technology, Germany); Reiner S. Thomä (Ilmenau University of Technology, Germany)

09:40 Channel Capacity in Mobile Broadband Heterogenous Networks Based Femto Cells
Evgeny Tsalolikhin (University of Massachusetts, Dartmouth, USA); Igal Bilik (University of Massachusetts, USA); Nathan Blaunstein (Ben-Gurion University of the Negev, Beer-Sheva, Israel); Yakov Babich (Ben-Gurion University of the Negev, Beer-Sheva, Israel)

10:00 An Effective Indicator for NLOS, nLOS, LOS Propagation Channels Conditions
Antonio Sorrentino (Università Parthenope, Italy); Ferdinando Nunziata (Università Parthenope, Italy); Giuseppe Ferrara (Università Parthenope, Italy); Maurizio Migliaccio (Universita' Napoli Parthenope, Italy)

10:20 Low Complexity MIMO for WiMedia UWB
Vit Sipal (University of Oxford, United Kingdom); David Edwards (University of Oxford, United Kingdom); Ben Allen (University of Bedfordshire, United Kingdom)

10:20 Flat Transformation Optics Graded-Index (TO-GRIN) Lenses
Qi Wu (The Pennsylvania State University, USA); Jeremiah P Turpin (The Pennsylvania State University, USA); Xiande Wang (The Pennsylvania State University, USA); Douglas H Werner (Pennsylvania State University, USA); Alexej Pogrebnyakov (The Pennsylvania State University, USA); Andrew Swisher (The Pennsylvania State University, USA); Theresa S Mayer (The Pennsylvania State University, USA)

10:40 Coffee Break

11:00 Two-Dimensional Metamaterial Designs for Line-Source Radiation From a Virtual Location
Do-Hoon Kwon (University of Massachusetts Amherst, USA); Caglar Emiroglu (University of Massachusetts Amherst, USA)

11:20 Application of Coordinate Transformation for Novel Antenna Design Techniques
Paul-henri Tichit (Institut d'Electronique Fondamentale - Université Paris-Sud, France); Shah Nawaz Burokur (Institut d'Electronique Fondamentale - Université Paris-Sud, France); Xinying Wu (University of Paris Sud, France); André de Lustrac (Institut d'Electronique Fondamentale - Université Paris-Sud, France)

11:40 Experimental Demonstration of Carpet Cloak Realized with BaTiO3-loaded Polyurethane Foam
Di Bao (Queen Mary, University of London, United Kingdom); Khalid Rajab (Queen Mary University of London, United Kingdom); Wenxuan Tang (Queen Mary, University of London, United Kingdom); Yang Hao (Queen Mary, University of London, United Kingdom)

12:00 Field Transformation - an Alternative Paradigm for Designing a Class of Low-profile Antennas
Raj Mittra (Penn State University, USA)

12:20 Using Transformation Optics to Design Optical Devices
Simon Horsley (University of St Andrews, United Kingdom)

09:00–12:40 Club B

P05: Propagation for Fixed Satellite Services

Chairs: Frank S. Marzano (Sapienza University of Rome, Italy), Armando C Rocha (University of Aveiro & Institute of Telecommunications, Portugal)

09:00 Analysis of Empirical Rain Attenuation Models for Satellite Communications at Q to W Band Frequencies
George Brost (Air Force Research Lab, USA); William Cook (AFRL, USA)

09:20 Rainfall Rate as a Mixed Weibull Model
Erasmus Miranda (Catholic University of Petropolis, Brazil); Luiz A R da Silva Mello (PUC/RIO & Inmetro, Brazil); Marlene S Pontes (Pontifical Catholic University of Rio de Janeiro, Brazil); Marco Antonio Grivet Mattoso Maia (Pontifical Catholic University of Rio de Janeiro, Brazil)

09:40 On the Inverse Gaussian Modeling of Rainfall Rate and Slant Path and Terrestrial Links Rain Attenuation
Charilaos Kourogiorgas (National Technical University of Athens, Greece); Athanasios D. Panagopoulos (National Technical University of Athens, Greece)

10:00 Design and Characterization of the Q-band AlphaSat Receiving Station in Rome
Frank S. Marzano (Sapienza University of Rome, Italy); Pasquale Salemme (Sapienza University of Rome, Italy); Elio Restuccia (ISCOM, Italy); Fernando Consalvi (FUB, Italy)

10:20 Modeling the Frequency Dependence of the Effective Path Length Adjustment
George Brost (Air Force Research Lab, USA)

10:40 Coffee Break

11:00 Cloud Attenuation on Satellite Links in the Ka/V- Band and the Effect of Changes in the Effective Cloud Temperature
Tareq Alawadi (Cranfield University & CTS-PAAET, United Kingdom); Al Savvaris (Lecturer, United Kingdom)

10:40 Coffee Break

11:00 Data Analysis and Modeling Method for Indoor Human Body-Shadowing MIMO Channels
Kentaro Saito (NTT DoCoMo, Inc., Japan); Koshiro Kitao (NTT DoCoMo, Japan); Tetsuro Imai (NTT DOCOMO, Inc., Japan); Yoshiki Okano (NTT DOCOMO, Inc., Japan); Shunji Miura (NTT DOCOMO, Inc., Japan)

11:20 Direction of Arrival Estimation Using Canonical and Crystallographic Volumetric Element Configurations
Zhenchun Xia (Texas A&M University, USA); Gregory Huff (Texas A&M University, USA); Jean-Francois Chamberland (Texas A&M University, USA); Henry D Pfister (Texas A&M University, USA); Raktim Bhattacharya (Texas A&M University, USA)

11:40 Outdoor-to-Indoor Propagation - Accurate Measuring and Modelling of Indoor Environments at 900 and 1800 MHz
Dennis M. Rose (Technische Universität Braunschweig, Germany); Thomas Kürner (Technische Universität Braunschweig, Germany)

12:00 A Novel Method for Radio Propagation Simulation Based on Automatic 3D Environment Reconstruction
Danping He (Universidad Politécnica de Madrid, Spain); Guixuan Liang (Universidad Politécnica de Madrid, Spain); Jorge Portilla (Universidad Politécnica de Madrid, Spain); Teresa Riesgo (Universidad Politécnica de Madrid, Spain)

12:20 Explicit Scheme for Indoor Propagation Modeling Based on the Hybrid Parabolic-Integral Equation Method
Apostolos Sounas (Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland); Traianos Yioultsis (Aristotle University of Thessaloniki, Greece)

11:20 A Methodology to Generate Cloud Attenution Fields From NWP Products
Lorenzo Luini (Politecnico di Milano, Italy); Carlo Capsoni (Politecnico di Milano, Italy)

11:40 Effect of Non-Ideal Components on the Performance of a Reconfigurable on-Board Antenna for Broadcasting Applications
Laura Resteghini (Politecnico di Milano, Italy); Carlo Capsoni (Politecnico di Milano, Italy); Roberto Nebuloni (Ieiit - Cnr, Italy); Piero Gabellini (Space Engineering S.p.a., Italy); Fabio Maggio (Space Engineering, Italy); Antonio Martellucci (European Space Agency, The Netherlands); Peter Rinous (European Space Agency (ESTEC), The Netherlands)

12:00 Xpd at Ka-Band From an Extended Earth-Satellite Propagation Campaign
Armando C Rocha (University of Aveiro & Institute of Telecommunications, Portugal)

12:20 Statistical Risk Associated with Tropospheric Propagation Models and Measurements
Nicolas Jeannin (ONERA, France); Xavier Boulanger (CNES-ONERA & Cooperation CNES-ONERA, France); Laurent Castanet (ONERA, France); Frederic Lacoste (CNES, France)

09:00–12:40 Club C

Joint CA12, 22-1: Compressive Sensing in Electromagnetics and Non-uniform Array Antennas I

Chairs: Andrea Massa (University of Trento, Italy), Giacomo Oliveri (University of Trento & ELEDIA Research Center, Italy)

09:00 BCS-Based Formulations for Antenna Arrays Synthesis
Giacomo Oliveri (University of Trento & ELEDIA Research Center, Italy); Matteo Carlin (University of Trento, Italy); Andrea Massa (University of Trento, Italy)

09:20 On the Exploitation of the A-priori Information Through the Bayesian Compressive Sensing for Microwave Imaging
Giacomo Oliveri (University of Trento & ELEDIA Research Center, Italy); Lorenzo Poli (University of Trento, Italy); Andrea Massa (University of Trento, Italy)

09:40 Phase-Transition Behavior in Array Diagnosis Using Sparse Recovery Techniques
Marco Donald Migliore (University of Cassino, Italy); Daniele Pinchera (University of Cassino & University of Naples, Federico II, Italy)

10:00 A Bayesian Compressive Sensing Strategy for Direction-of-Arrival Estimation
Matteo Carlin (University of Trento, Italy); Paolo Rocca (University of Trento, Italy)

10:20 Experimental Verification of 2D Sparse Electromagnetic Imaging
Marija Nikolic (University of Belgrade, Serbia); Antonije Djordjevic (University of Belgrade, Serbia); Arye Nehorai (Washington University in St. Louis, USA)

10:40 Coffee Break

11:00 Sparse Arrays with the Minimum Number of Elements: Recent Advances
Giancarlo Prisco (SELEX Sistemi Integrati, Italy); Michele D'Urso (SELEX Sistemi Integrati, Italy)

11:20 Mutual Coupling in Non-uniform Array Antennas - an Effective Recipe
Ioan E. Lager (Delft University of Technology, The Netherlands); Massimiliano Simeoni (Delft University of Technology, The Netherlands); Cristian Coman (NATO Consultation, Command and Control Agency - NC3A, The Netherlands)

11:40 Pareto-Based Optimization of Difference Patterns in Monopulse Non-Uniform Subarrays
Giacomo Oliveri (University of Trento & ELEDIA Research Center, Italy); Francisco Ares-Pena (University of Santiago de Compostela, Spain)

12:00 GA-based Adaptive Thinning Strategy for Pattern Nulling in Linear Arrays
Paolo Rocca (University of Trento, Italy); Lorenzo Poli (University of Trento, Italy); Giacomo Oliveri (University of Trento & ELEDIA Research Center, Italy); Andrea Massa (University of Trento, Italy)

12:20 Exploiting Rotational Symmetry for Ultra-Wideband Planar Array Design
Douglas H Werner (Pennsylvania State University, USA); Micah Gregory (The Pennsylvania State University, USA); Pingjuan Werner (Pennsylvania State University, USA)

09:00–12:40 Club D

CM06: Portable Wireless Device Testing (AMTA Convened Session)

Chairs: Manuel Sierra-Castañer (Technical University of Madrid, Spain), Vince Rodriguez (ETS Lindgren & AMTA Board of Directors, USA)

09:00 Versatile Emulation of Antenna Correlation Coefficient as MIMO OTA Figure of Merit Using Mode-Stirred Reverberation Chambers
Paul Hallbjörner (SP Technical Research Institute of Sweden, Sweden); Juan Diego Sánchez-Heredia (Universidad Politécnica de Cartagena, Spain); Antonio Martínez-González (Universidad de Cartagena, Spain); Adoración Marín-Soler (EMITE Ing., Spain); David A Sánchez-Hernández (Universidad Politécnica de Cartagena, Spain)

09:20 MIMO LTE OTA Measurements in Reverberation Chamber: Rich Isotropic Reference Environment Makes Agreement with Theoretical System Model
Per-Simon Kildal (Chalmers University of Technology, Sweden); Charlie Orlenius (Bluetest AB, Sweden); Ulf Carlberg (SP Technical Research Institute of Sweden, Sweden)

09:40 MIMO 2X2 Reference Antennas Concept
Istvan Szini (MOTOROLA Mobility, USA); Gert Pedersen (Aalborg University, Denmark); Alessandro Scannavini (SATIMO, Italy); Lars Jacob Foged (SATIMO, Italy)

10:00 On Appropriate Probe Configurations for Practical MIMO Over-the-air Testing of Wireless Devices
Tommi Laitinen (Aalto University School of Electrical Engineering, Finland); Pekka Kyösti (Elektrobit, Finland)

10:20 Input Impedance Measurements of Cell Phone Antennas Using Backscattering Modulation
Beatriz Monsalve (Universitat Politècnica Catalunya, Spain)

10:40 Coffee Break

09:00–10:40 Club E

M11-1: Cellular and Automotive Application Measurements I

Chairs: Thomas F. Eibert (Technische Universität München, Germany), Per-Simon Kildal (Chalmers University of Technology, Sweden)

09:00 Demonstrating the Use of the IEEE 802.11P Car-to-Car Communication Standard for Automotive Radar
Lars Reichardt (Karlsruhe Institute of Technology, Germany); Christian Sturm (Karlsruhe Institute of Technology (KIT), Germany); Frank Grünhaupt (Karlsruhe Institute of Technology (KIT), Germany); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

09:20 Gain Measurement of Base Station Antenna Using Short Reference Antenna
Ryo Yamaguchi (NTT DOCOMO, INC., Japan); Kazuhiro Komiya (NTT DOCOMO, INC., Japan)

09:40 Experimental Investigation of Radiating Current Distribution and Measurement Cable Interaction on Wireless Devices
Lars Jacob Foged (SATIMO, Italy); Lucia Scialacqua (SATIMO, Italy); Alessandro Scannavini (SATIMO, Italy); Francesco Saccardi (SATIMO, Italy); Javier Leonardo Araque Quijano (Universidad Nacional de Colombia & Politecnico di Torino, Colombia); Giuseppe Vecchi (Politecnico di Torino, Italy)

10:00 Enhanced Investigations on Effective Isotropic Radiated Power Emissions of Impulse Radio Devices
Arndt T. Ott (Technische Universität München, Germany); Christoph J. Eisner (Technische Universität München, Germany); Thomas F. Eibert (Technische Universität München, Germany)

10:20 Calibration Procedure for 2-D MIMO Over-The-Air Multi-Probe Test System
Dristy Parveg (Aalto University School of Electrical Enginnering, Finland); Tommi Laitinen (Aalto University School of Electrical Engineering, Finland); Afroza Khatun (Aalto University School of Electrical Engineering, Finland); Veli-Matti Kolmonen (Aalto University & School of Electrical Engineering, Finland); Pertti Vainikainen (Aalto University, Finland)

11:00 MIMO Testing – From Concept to Reality
Li Xiao (CATR of MIIT, P.R. China); Yuanan Liu (Beijing University of Posts and Telecom, P.R. China); Xudong An (CATR of MIIT, P.R. China); Lin Guo (CATR of MIIT, P.R. China); Hongwei Kong (Agilent, P.R. China); Ya Jing (Agilent Technologies, P.R. China); Xu Zhao (Agilent, P.R. China)

11:20 3D Passive RFID Tag Over-The-Air Measurement
Hans Adel (Fraunhofer Institute for Integrated Circuits IIS, Germany); Jan E. Bauer (Fraunhofer Institut Integrierte Schaltungen IIS, Germany); Christoph Grabowski (Fraunhofer IIS, Germany)

11:40 Pre-Compliant and Affordable Over-The-Air Measurements on Wireless Devices
Martin Wiles (ETS-Lindgren, United Kingdom); Christopher Wehrmann (Research-in-Motion, Germany)

12:00 User Influence Over LTE Band XII Handset Performance
Juan Diego Sánchez-Heredia (Universidad Politécnica de Cartagena, Spain); Adoración Marín-Soler (EMITE Ing., Spain); Paul Hallbjörner (SP Technical Research Institute of Sweden, Sweden); Antonio Martínez-González (Universidad de Cartagena, Spain); David A Sánchez-Hernández (Universidad Politécnica de Cartagena, Spain)

12:20 Capacity Characterization of Eleven Antenna in Different Configurations for MIMO Applications Using Reverberation Chamber
Xiaoming Chen (Chalmers University of Technology, Sweden); Per-Simon Kildal (Chalmers University of Technology, Sweden); Jian Yang (Chalmers University of Technology, Sweden); Jan Carlsson (SP Technical Research Institute of Sweden, Sweden)

09:00–12:40 Club H

A04-2: Array Antennas Incl. Reflect Arrays II

Chairs: Zbynek Raida (Brno University of Technology, Czech Republic), Guillermo C Vietti (Politecnico di Torino, Italy)

09:00 Study of Artificial Neural Network Capabilities for the Analysis and Design of Shaped-Beam Reflectarrays
Pedro Robustillo (Universidad Politécnica de Madrid, Spain); Juan Zapata (Universidad Politécnica de Madrid, Spain); Jose A. Encinar (Universidad Politécnica de Madrid, Spain); Manuel Arrebola (Universidad de Oviedo, Spain)

09:20 An Investigation of Reflectarray Operation Using Its Component Current Contributions
E'qab Almajali (University of Ottawa, Canada); Derek McNamara (University of Ottawa, Canada); Jafar Shaker (Communications Research Centre, Canada); Mohamed Reza Chaharmir (Communications Research Centre, Canada)

09:40 Efficiency Measurement of 1-D Connected Array Using the Improved Wheeler Cap Method
Adrian T. Sutinjo (University of Calgary & Curtin Institute of Radio Astronomy, Canada); Leonid Belostotski (University of Calgary, Canada); Ronald Johnston (University of Calgary, Canada); Michal Okoniewski (University of Calgary, Canada)

10:00 Complete Full-Wave Analysis of a S-band Reflectarray Demonstrator with Square Ring Resonators
Guillermo C Vietti (Politecnico di Torino, Italy); Paola Pirinoli (Politecnico di Torino, Italy); Mario Orefice (Politecnico di Torino, Italy); Marco Mussetta (Politecnico di Milano & Politecnico di Torino, Italy)

10:20 Reducing the Number of Elements in Linear Arrays Using Biogeography-based Optimization
Sotirios Goudos (Aristotle University of Thessaloniki, Greece); Konstantinos Baltzis (Radiocommunications Laboratory, Greece); Katherine Siakavara (Aristotle University, Greece); Theo Samaras (Aristotle University of Thessaloniki, Greece); Elias Vafiadis (Aristotle University of Thessaloniki, Iceland); John Sahalos (Aristotle University of Thessaloniki, GR, Thessaloniki & University of Nicosia, CY, Nicosia, Greece)

10:40 Coffee Break

11:00 Design and Analysis of Printed Reflectarrays with Irregularly Positioned Array Elements
Min Zhou (TICRA & Technical University of Denmark, Denmark); Stig Sørensen (TICRA, Denmark); Peter Meincke (TICRA, Denmark); Erik Jørgensen (TICRA, Denmark); Oleksiy S. Kim (Technical University of Denmark, Denmark); Olav Breinbjerg (Technical University of Denmark, Denmark); Giovanni Toso (European Space Agency, The Netherlands)

11:20 An Experimental Two Element Array Configured for Directional Antenna Modulation
HongZhe Shi (The University of Sheffield, United Kingdom); Alan Tennant (University of Sheffield, United Kingdom)

11:40 Antenna Array Radiation Pattern Modeling Which Includes Mutual Coupling and Diffraction Effects
Mariusz Zamłyński (Wrocław University of Technology, Poland); Piotr Słobodzian (Wroclaw University of Technology, Poland)

12:00 Analytical Formulas for the Directivity of General Antenna Arrays
Emmanuel H. Van Lil (Katholieke Universiteit Leuven, Belgium); Jan-willem De Bleser (Katholieke Universiteit Leuven, Belgium); Antoine Van de Capelle (Katholieke Universiteit Leuven, Belgium)

12:20 Antenna Array with Wide Angle Scanning Properties
Nurul Hazlina Noordin (University of Edinburgh, United Kingdom); Nakul Haridas (The University of Edinburgh, United Kingdom); Ahmed O. El-Rayis (The University of Edinburgh, United Kingdom); Ahmet T. Erdogan (The University of Edinburgh, United Kingdom); Tughrul Arslan (The University of Edinburgh, United Kingdom)

12:40 One-bit Phased Array with Wide Scan and Linear Polarization Control for Mobile Satellite Applications
Maria Carolina Viganó (JAST SA, Switzerland); Daniel Llorens del Río (JAST, Switzerland); Frédéric Bongard (JAST SA, Switzerland); José Padilla (JAST SA, Switzerland); Stefano Vaccaro (JAST SA, Switzerland)

09:00–12:40 Room III

CA19: UWB/mm-Wave MIMO Radar-Systems and Applications

Chairs: Reiner S. Thomä (Ilmenau University of Technology, Germany), Alexis Paolo Garcia Ariza (Ilmenau University of Technology & Institute of Information Technology, Germany)

09:00 A Novel Transform for Ultra-Wideband Multi-Static Imaging Radar
Takuya Sakamoto (Kyoto University, Japan); Toru Sato (Kyoto University, Japan)

09:20 UWB Localization of Moving Targets in Shadowed Regions
Rudolf Zetik (Technical University Ilmenau, Germany); Matthias Röding (TU Ilmenau, Germany); Reiner S. Thomä (Ilmenau University of Technology, Germany)

09:40 Polarimetric Ultrawideband MIMO Radar for Security Check Points: Detecting and Classifying Suspects Carrying Wires
Alexis Paolo Garcia Ariza (Ilmenau University of Technology & Institute of Information Technology, Germany); Reiner S. Thomä (Ilmenau University of Technology, Germany)

10:00 Aspects of Antenna Array Configuration for UWB Breast Imaging
Marko Helbig (Ilmenau Technical University, Germany); Martin Kmec (Ilmenau Technical University, Germany); Jürgen Sachs (Ilmenau Technical University, Germany); Christiane Geyer (University Hospital Jena, Germany); Ingrid Hilger (University Hospital Jena, Germany); Gabrielle Rimkus (University Hospital Jena, Germany)

10:20 Short-range MIMO Radar System Considerations
Ulrich Prechtel (EADS Innovation Works, Germany); Vivekanandan Meenakshisundaram (EADS Innovation Works, Germany); Bernhard Schoenlinner (EADS Innovation Works, Germany); Volker Ziegler (EADS Innovation Works, Germany); Heinz-Peter Feldle (CASSIDIAN, Germany); Askold Meusling (EADS Defence Electronics, Germany)

10:40 Coffee Break

11:00 Motion Compensation and Efficient Array Design for TDMA FMCW MIMO Radar Systems
Christian M. Schmid (Johannes Kepler University Linz & Christian Doppler Laboratory for Integrated Radarsensors, Austria); Reinhard Feger (Johannes Kepler University Linz, Austria); Clemens Pfeffer (Johannes Kepler University Linz, Austria); Andreas Stelzer (Johannes Kepler University of Linz, Austria)

11:20 Multi-Channel MMW-systems for Short Range Applications
Sebastian Bertl (Technische Universität München, Germany); Andreas Kirschner (Technische Universität München, Germany); Johanna Gütlein (Technische Universität München, Germany); Juergen B Detlefsen (Technische Universitaet Muenchen & Fachgebiet HFS, Germany)

11:40 Illumination of Humans in Active Millimeter-Wave Multistatic Imaging
Sherif Sayed Ahmed (Rohde & Schwarz GmbH & Co. KG, Germany); Lorenz-Peter Schmidt (University of Erlangen-Nuremberg, Germany)

12:00 IR-UWB-CMOS Circuits for Breast Cancer Detection
Takamaro Kikkawa (Hiroshima University, Japan)

09:00–12:40 Room IV

CA20: Microwaves in Medical Diagnostics and Treatment

Chairs: Andreas Fhager (Chalmers University of Technology, Sweden), Ian Craddock (University of Bristol, United Kingdom)

09:00 Assessment of Inversion Strategies for Microwave Imaging of Weak Magnetic Scatterers Embedded Into a Biological Environment
Rosa Scapaticci (CNR-National Research Council of Italy, Italy); Lorenzo Crocco (CNR - National Research Council, Italy); Ovidio Mario Bucci (University of Naples, Italy); Ilaria Catapano (CNR - National Research Council of Italy, Italy)

09:20 Time-Domain Microwave Breast Screening System: Testing with Advanced Realistic Breast Phantoms
Emily Porter (McGill Universtiy, Canada); Adam Santorelli (McGill University, Canada); Dady Coulibaly (McGill University, Canada); Mark Coates (McGill University, Canada); Milica Popović (McGill University, Canada)

09:40 3D Microwave Bone Imaging
Paul M Meaney (Dartmouth College, USA); Douglas Goodwin (Dartmouth-Hitchcock Medical Center, USA); Amir Golnabi (Dartmouth College, USA); Matthew Pallone (Dartmouth College, USA); Shireen Geimer (Dartmouth College, USA); Keith D. Paulsen (Dartmouth College, USA)

10:00 A Skin Response Estimation and Suppression Technique for Radar-Based Microwave Breast Imaging Applications
Batoul Maklad (University of Calgary, Canada); Charlotte Curtis (University of Calgary, Canada); Elise Fear (University of Calgary, Canada); Geoffrey G. Messier (University of Calgary, Canada)

10:20 Utilization of Multiple Frequencies in 3D Nonlinear Microwave Imaging
Peter Jensen (Technical University of Denmark, Denmark); Tonny Rubæk (Chalmers University of Technology, Sweden); Johan Jacob Mohr (Technical University of Denmark, Denmark)

11:00–12:40 Club E

IS-1: Industrial Session I

Chairs: Lars Jacob Foged (SATIMO, Italy), Marta Martínez-Vázquez (IMST GmbH, Germany)

10:40 Coffee Break

11:00 UWB Brain Differential Imaging Capabilities
Marta Guardiola (Universitat Politècnica de Catalunya (UPC), Spain); Luis Jofre (UPC, Spain); Santiago Capdevila (Universitat Politècnica de Catalunya, Spain); Jordi Romeu (Universitat Politècnica de Catalunya, Spain)

11:20 Microwave Tomographic Spectroscopy for an Assessment of Tissue Oxygenation
Serguei Semenov (Keele University, United Kingdom); James Kellam (Carolinas Medical Center, USA); Thomas Williams (Carolinas Medical Center, USA); Michael Quinn (Carolinas Medical Center, USA); Brian Nicholson (Carolinas Medical Center, USA); Sundaramoorthy Thirunavukkarasu (Keele University, United Kingdom)

11:40 A Central-Node Based Coarse Reconstruction Mesh Applied to Time-Domain Inverse Scattering
Tommy Henriksson (University of Bristol, United Kingdom); David Gibbins (University of Bristol, United Kingdom); Ian Craddock (University of Bristol, United Kingdom); Mantalena Sarafianou (University of Bristol, United Kingdom)

12:00 Clinical Hyperthermia by Microwaves; Controlling and Improving Quality Through Treatment Planning
Gerard C. van Rhoon (Erasmus MC Daniel den Hoed Cancer Center, The Netherlands); Maarten Paulides (Erasmus MC Daniel den Hoed Cancer Center, The Netherlands); Tomas Drizdal (Erasmus MC Daniel den Hoed Cancer Center, The Netherlands); Esra Neufeld (IT'IS Foundation, ETH Zurich, Switzerland); Peter Levendag (Erasmus MC - Daniel den Hoed Cancer Center, The Netherlands)

12:20 Stroke Detection and Diagnosis with a Microwave Helmet
Andreas Fhager (Chalmers University of Technology, Sweden); Mikael Persson (Chalmers University of Technology, Sweden)

11:00 Design and Measurement of Automotive Antennas for C2C Applications
Michele Gallo (Calearo Antenne SpA & Politecnico di Bari, Italy); Simona Bruni (Calearo Antenne SpA, Italy); Daniel Zamberlan (Calearo Antenne S.p.A., Italy)

11:20 A Self-Contained Adaptive Antenna Tuner for Mobile Phones
Kevin Boyle (EPCOS, United Kingdom); Erwin Spits (EPCOS, The Netherlands); Maurice de Jongh (Epcos, The Netherlands); Shunya Sato (EPCOS, The Netherlands); Theo Bakker (EPCOS, The Netherlands); Andre van Bezooijen (EPCOS, The Netherlands)

11:40 Integrated Multifunction Antenna for Mobile Terrestrial and Satellite Communications
Johnson J. H. Wang (Wang Electro-Opto Corporation, USA); David Triplett (Wang Electro-Opto Corporation, USA); Steve Workman (Wang Electro-Opto Corporation, USA)

12:00 Effective Combined Detection and Suppression of Multiple Interference Sources Using Planar Phased Arrays
Marta Martínez-Vázquez (IMST GmbH, Germany); Stephan Korthoff (IMST, Germany); Markus Krengel (IMST GmbH, Germany); Oliver Litschke (IMST GmbH, Germany); Bahram Sanadgol (IMST GmbH, Germany)

12:20 Compact Antenna for Microsatellite Using Folded Shorted Patches and an Integrated Feeding Network
Symon K Podilchak (Queen's University & Royal Military College of Canada, Canada); Mathieu Caillet (Royal Military College of Canada, Canada); Yahia Antar (Royal Military College of Canada, Canada); Lucia Chu (COM DEV, Canada)

14:00–16:20 Poster Hall

POST2: Poster Session 2 – Antennas, Propagation, Measurement

Chairs: Hynek Bartik (Czech Technical University in Prague, Czech Republic), Patrice Brachat (France Telecom, France), Lajos Nagy (Budapest University of Technology and Economics, Hungary), Stanislav Zvanovec (Czech Technical University in Prague, Czech Republic)

ANTENNAS

1) **A Tunable Dual-Band Dual-Element MIMO Antenna System with Compact Size**
Mohammad S. Sharawi (King Fahd University of Petroleum and Minerals, Saudi Arabia); Mohammad Jan (King Fahd University of Petroleum and Minerals, Saudi Arabia); Daniel Aloi (Oakland University, USA)

2) **A Feed Network for the Selective Excitation of Specific Characteristic Modes on Small Terminals**
Robert Martens (University of Kiel, Germany); Dirk Manteuffel (University of Kiel, Germany)

3) **Novel, Compact, Flat-Plate Antenna for 2.4/5.2/5.8-GHz WLAN Operation**
Saou-Wen Su (Lite-On Technology Corp., Taiwan); F. S. Chang (Military Academy, Taiwan)

4) **Broadband Elliptic Tapered Slot Antenna**
Rajesh Meena (Indian Institute of Technology Kanpur, India); A. r. Harish (Indian Institute of Technology Kanpur, India)

5) **Pulsed-Field Wireless Interconnects in Digital Integrated Circuits - A Time-Domain Signal Transfer and Electromagnetic Emission Analysis**
Ioan E. Lager (Delft University of Technology, The Netherlands); Adrianus T De Hoop (Delft University of Technology, The Netherlands); Takamaro Kikkawa (Hiroshima University, Japan)

6) **Multi-Trap CPW-Fed Wide Slot Antenna for UWB Applications**
Michele D'Amico (Politecnico di Milano, Italy); Fabio Mirko Fasolo (Politecnico di Milano, Italy)

7) **Multiband Printed Monopole Antenna with Defected Ground Plane for GPS/WLAN/WIMAX Applications**
Masoumeh Darvish (Shahed University, Iran); Hamid Reza Hassani (Shahed University, Iran)

8) **Quad Band CPW-Fed Monopole Antenna for MIMO Applications**
Masoumeh Darvish (Shahed University, Iran); Hamid Reza Hassani (Shahed University, Iran)

9) **Quad-Band Antenna for Mobile Communication**
Ahmad Elsayed Ahmad (INSA, IETR, Rennes, France); Jean-marie Floch (IETR, France); Guillaume Lerideau (IETR, France)

10) **Using the Concept of Obtainable Efficiency Bandwidth to Study Tunable Matching Circuits**
Jussi Rahola (Optenni Ltd, Finland); Risto Valkonen (Aalto University, Finland)

11) **Design and Analysis of Single Carrier Base Station Cooperation System Under Frequency Selective Channel**
Tetsuki Taniguchi (University of Electro-Communications, Japan); Yoshio Karasawa (The University of Electro-Communications, Japan); Nobuo Nakajima (The University of Electro-Communications, Japan)

12) **Performance of a Side-mounted PIFA in Cluttered Environment for GPS Operation**
Masood Ur Rehman (Queen Mary University of London, United Kingdom); Xiaodong Chen (Queen Mary, University of London, United Kingdom); Clive Parini (QMUL, United Kingdom); Zhinong Ying (Sony Ericsson Mobile, Sweden)

13) **Design of a Printed Wide Band Log-Periodic Antenna Dipole Array with a New Feeding Technique**
Giovanni Andrea Casula (Università di Cagliari, Italy); Paolo Maxia (University of Cagliari, Italy); Giorgio Montisci (University of Cagliari, Italy)

14) **Electrically Coupled Multi-band Antenna with Reactance Loading**
Jong-Ho Jung (Yonsei University, Korea); Ki Joon Kim (Yonsei University, Korea); YoungJoong Yoon (yonsei university in Korea, Korea); Byoung-Nam Kim (ACE Technology Corporation, Korea); Jin-Yang Kim (ACE Technology Corporation, Korea)

15) **Reducing the Interaction Between User and Mobile Terminal Antenna Based on Antenna Shielding**
Janne Ilvonen (Aalto University School of Electrical Engineering, Finland); Risto Valkonen (Aalto University, Finland); Jari P Holopainen (Aalto University School of Electrical Engineering, Finland); Outi Kivekäs (Helsinki University of Technology, Finland); Pertti Vainikainen (Aalto University, Finland)

16) **MIMO LTE Antenna Design for Laptops Based on Theory of Characteristic Modes**
Aleksander Krewski (RheinMain University of Applied Sciences, Germany); Werner Schroeder (RheinMain University of Applied Sciences, Germany); Klaus Solbach (UDE, Germany)

17) **Compact Array of Monopoles with a Slotted Ground Plane for MIMO Systems**
David Puente-García (Universidad Politécnica de Madrid, Spain)

18) **Impact of Antenna Patterns and Orientations in Heterogeneous LTE-Advanced Networks**
Zuhanis Mansor (University of Bristol & 92 Queensdown Garden, United Kingdom)

19) **Compact Dual Band Sinusoidal Annular-Slot Antenna**
Alireza Shahrouzkhah (Shahed University, Iran); Hamid Reza Hassani (Shahed University, Iran); Bahman Rahmati (Shahed University, Iran)

20) **Inverted-L Antennas Array in a Wireless USB Dongle for MIMO Application**
Qi Luo (INESC Porto / FEUP, University of Porto, Portugal); Chris Quigley (Taoglas Limited, Ireland); Jose Pereira (IT Aveiro/ University of Aveiro, Portugal); Henrique M Salgado (University of Porto & INESC Porto, Portugal)

21) **Performance Comparison of a Symmetrical Folded Dipole Antenna for Mobile Terminals and Its Metal Bezel Extension**
Marko Tapani Sonkki (University of Oulu, Finland); Eva Antonino-Daviu (Universidad Politécnica de Valencia, Spain); Miguel Ferrando-Bataller (Universidad Politécnica De Valencia, Spain); Erkki T. Salonen (University of Oulu, Finland)

22) **Microwave Multi-Sensor System for Estimation of Positions of Fast-Flying Objects**
Vojtech Jenik (Czech Technical University in Prague, Czech Republic); Premysl Hudec (Czech Technical University in Prague, Czech Republic)

23) **Novel Multipath Mitigating Ground Planes for Multiband Global Navigation Satellite System Antennas**
Moazam Maqsood (University of Surrey & Surrey Space Center, United Kingdom); Steven Gao (University of Surrey, United Kingdom); Tim Brown (University of Surrey, United Kingdom); Jiadong Xu (Northwestern Polytechnical University, P.R. China); Jianzhou Li (Northwestern Polytechnical University, P.R. China)

24) **Dimension Optimization on Mutual Coupling Reduction Between Two L-shaped Folded Monopole Antennas for Handset Using PSO**
Nguyen Tuan Hung (National Defense Academy of Japan, Japan); Hisashi Morishita (National Defense Academy, Japan); Kazuhiro Izui (Kyoto university, Japan); Shinji Nishiwaki (Kyoto university, Japan); Yoshio Koyanagi (Panasonic Mobile Communications, Japan)

Prague / Czech Republic | 26–30 March 2012 6th EUROPEAN CONFERENCE ON ANTENNAS AND PROPAGATION

MONDAY, MARCH 26
TUESDAY, MARCH 27
WEDNESDAY, MARCH 28
THURSDAY, MARCH 29
FRIDAY, MARCH 30

25) **Effect of the Mobile Terminal Antenna Efficiency on the Cellular Network Issues**
Markus Berg (University of Oulu, Finland); Marko Tapani Sonkki (University of Oulu, Finland); Sami Myllymäki (University of Oulu, Finland); Tommi Tuovinen (University of Oulu - Centre for Wireless Communications, Finland); Erkki T. Salonen (University of Oulu, Finland)

26) **Analysis of MIMO OTA Measurements for LTE Terminals Performed in Reverberation Chamber**
Charlie Orlenius (Bluetest AB, Sweden); Christian Lötbäck (Bluetest AB, Sweden); Anton Skårbratt (Bluetest AB, Sweden); John Åsberg (Bluetest AB, Sweden); Magnus Franzén (Bluetest AB, Sweden)

27) **Optimized Dual-Band Planar THz Waveguide**
Miguel Navarro-Cía (Universidad Publica de Navarra, Spain); Stefan Maier (Imperial College London, United Kingdom); Miguel Beruete (Universidad Publica de Navarra, Spain); Francisco Falcone (Universidad Publica de Navarra, Spain); Mario Sorolla (Universidad Publica de Navarra, Spain)

28) **Miniature Switchable Wideband Notch Antenna for Multistandard Wireless Terminals**
Manouan Aka Constant Niamien (Commissariat à Energie Atomique & LETI-MINATEC, France); Laurent Dussopt (CEA, LETI, Minatec, France); Christophe Delaveaud (CEA-LETI, France)

29) **A Novel Planar Four-Quad Antenna**
Shamim Ahmed (University of Ulm, Germany); Wolfgang Menzel (University of Ulm, Germany)

30) **Experimental Evaluation Toward Transmit and Receive Diversity Effect in SIMO/MIMO Sensors**
Kentaro Nishimori (Niigata University, Japan); Keita Ushiki (Niigata University, Japan); Naoki Honma (Iwate University, Japan)

31) **Compact 2.5-2.7 GHz Two Element MIMO Antenna System for Modern USB Dongle**
Vladimir Ssorin (Lobachevsky State University, Russia); Alexey Artemenko (The University of Nizhny Novgorod, Russia); Alexey Sevastyanov (Intel Corp., Russia); Roman Maslennikov (The University of Nizhny Novgorod, Russia)

32) **A Reconfigurable Printed Monopole Antenna for MIMO Application**
Amirhossein Ghasemi (Université Paris Ouest La Défense, France); Neamatollah Ghahvehchian (Shahed university, Iran); Alireza Mallahzadeh (Shahed University, Iran); Somayeh Sheikholvaezin (Shahed University, Iran)

33) **Active Region and Higher-Order Modes of Spiral Antennas**
Petr Piksa (Czech Technical University in Prague, Czech Republic); Milos Mazanek (Czech Technical University in Prague, Czech Republic)

34) **Wide Bandwidth and Small Size LPDA Antenna**
Amir Moallemizadeh (University of Shahed, Iran); Hamid Reza Hassani (Shahed University, Iran); Sajad Mohammad ali nezhad (Shahed university, Iran)

35) **Design and Optimisation of Compact Hybrid Quadrifilar Helical-Spiral Antenna in GPS Applications Using Genetic Algorithm**
Dawei Zhou (University of Surrey, United Kingdom); Steven Gao (University of Surrey, United Kingdom); Raed A Abd-Alhameed (University of Bradford, United Kingdom); Chong Zhang (University of Surrey, United Kingdom); Marhoun AlKhambashi (University of Bradford, United Kingdom); Jiadong Xu (Northwestern Polytechnical University, P.R. China)

36) **Hidden Patch Antenna Array with Nearly Undistorted Characteristics for 2.45 GHz Applications**
Rostyslav Dubrovka (Queen Mary, University of London, United Kingdom); Sergiy Martynyuk (National Technical University of Ukraine, Ukraine); Pavel Belov (Queen Mary University of London, United Kingdom)

37) **A Compact Triple-Band Fork-Shaped Printed Slot Antenna for GSM, Bluetooth and UWB Applications**
Mohammad Mehdi Samadi Taheri (Shahed University, Iran); Alireza Mallahzadeh (Shahed University, Iran); Sajad Mohammad ali nezhad (Shahed university, Iran)

38) **Compact, Multifunctional, Metamaterial-Inspired Monopole Antenna**
Saber Dakhli (SysCOM, Tunisia); Kourosh Mahdjoubi (University of Rennes 1, France); Hatem Rmili (ISSAT Mahdia, Tunisia); Jean-marie Floch (IETR, France); Habib Zangar (SysCOM, Tunisia)

39) **Characterization and Capacity Evaluation of Body-To-Body Channels Using MIMO Antennas**
Khalida Ghanem (Advanced Technologies Center (CDTA), Algeria)

40) **Bow-Tie Nano-Array Rectenna: Design and Optimization**
Ahmed M. A. Sabaawi (Newcastle University, United Kingdom); Charalampos C. Tsimenidis (Newcastle University, United Kingdom); Bayan Sharif (University of Newcastle Upon Tyne, United Kingdom)

41) **Dual Polarized Versus Single Polarized MIMO: A Study Over NLOS Propagation with Polarization Discrimination and Spatial Correlation Effects**
Maha Ben Zid (UJF Grenoble I & UJF Grenoble I, France); Kosai Raoof (Laboratoire LAUM, France); Ammar Bouallegue (National School of Engineers of Tunis, Tunisia)

42) **Performance Evaluation of Multi-antenna and Multi-mode Relays Using a Network Simulator**
Guillaume Villemaud (Université de Lyon, INRIA, INSA-Lyon, CITI, France); Cédric Lévy-Bencheton (Université de Lyon, INRIA, INSA de Lyon, CITI & INSA de Lyon, France); Tanguy Risset (CITI Laboratory - INSA Lyon, France)

43) **Orthogonal Antenna Architecture for MIMO Handsets**
Alexandru Tatomirescu (Aalborg University, Denmark); Osama Alrabadi (AAU, Denmark); Gert Pedersen (Aalborg University, Denmark)

44) **Stacked Patch Circular Polarized Antenna for GPS/Galileo Receiver Applications**
Oluyemi Falade (Queen Mary University of London, United Kingdom)

45) **Dual Band Single Layer Microstrip Antenna with Circular Polarization for WiMAX Application**
Seyed Mohammad Noghabaei (Faculty of Electrical Engineering Universiti Teknologi Malaysia, Malaysia); Sharul Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia); Mursyidul idzam Sabran (Universiti Teknologi Malaysia, Malaysia)

PROPAGATION

46) **Modulation Index Application for Satellite Adjacent Downlink Interference Identification**
Shkelzen Cakaj (Post and Telecommunication of Kosovo (PTK), Yugoslavia (defunct))

47) **Multi-Access Communication System in a Highly Reverberant Environment**
Padmini Sundaralingam (Queen's University Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom); Dmitry E Zelenchuk (Queen's University of Belfast, United Kingdom)

48) **Analysis of an UHF-RFID System in a Metallic Closed Vehicle**
Leire Azpilicueta (Universidad Publica de Navarra, Spain); Jose Javier Astrain (Universidad Publica de Navarra, Spain); Hugo Landaluce (Deustotech Institute of Technology - University of Deusto, Spain); Ignacio Angulo (University of Deusto, Spain); Asier Perallos (Fundacion Deusto, Spain); Jesus Villadangos (Universidad Publica de Navarra, Spain); Francisco Falcone (Universidad Publica de Navarra, Spain)

49) **SNR Estimation in HF Communications Channel**
Toomas Ruuben (Tallinn University of Technology, Estonia); Mari-Anne Meister (Tallinn University of Technology, Estonia); Eerik Lossmann (Tallinn University of Technology, Estonia); Julia Berdnikova (Tallinn University of Technology, Estonia); Urve Madar (Tallinn University of Technology, Estonia)

50) **Path Loss Model Between Mobile Terminals in Residential Area with a Curved Road**
Motoharu Sasaki (NTT Access Network Service Systems Laboratories, Japan); Wataru Yamada (NTT Access Network Service Systems Laboratories, Japan); Toshio Ito (NTT Access Network Service Systems Laboratories, Japan); Naoki Kita (NTT Access Network Service Systems Laboratories, Japan); Takatoshi Sugiyama (NTT, Japan)

51) **Small-scale Fading and Delay in Conference Room with 802.11 Coverage Problems**
Frederic Heereman (Ghent University & IBBT, Belgium); Wout Joseph (Ghent University, Belgium); Emmeric Tanghe (Ghent University, Belgium); David Plets (IBBT-Ghent University, Belgium); Luc Martens (Ghent University, Belgium)

52) **Co-existence of Cellular and Multiple Airborne Wireless Networks: Interference Statistical Distribution**
Nektarios Moraitis (National Technical University of Athens & Institute of Communications and Computers Systems, Greece); Athanasios D. Panagopoulos (National Technical University of Athens, Greece)

53) **Universal Approach for Definition of Diffraction Characteristics of Multilayered Structures**
Boris Panchenko (Radio Engineering Institute, Ural State Technical University, Yekaterinburg, Russia); Sergey Knyazev (Ural Federal University, Russia); Sergey Shabunin (Ural Federal University, Russia)

54) **Modeling and Characteristics of Mobile-to-Mobile Wideband MIMO Channel Based on the Geometrical Multi-Radii Two-Rings with Specified Frequency Selectivity**
Sangjo Yoo (Gwangju Institute of Science and Technology & Communication and Sensor Network Lab., Korea); Sujung Yoo (Gwangju Institute of Science and Technology, Korea); Jeehoon Lee (Gwangju Institute of Science and Technology, Korea); Kiseon Kim (GIST - Gwangju, Reoublic of Korea, Korea)

55) **Study of Ultra Wideband Localisation Techniques Using Various Monitoring Configurations**
Richa Bharadwaj (Queen Mary University of London, United Kingdom); Akram Alomainy (Queen Mary, University of London, United Kingdom); Clive Parini (QMUL, United Kingdom)

56) **Car-to-car Communication Using Efficient Far-Field RCS Simulations to Account for Reflecting Objects in the Communication Path**
Markus Schick (EM Software & Systems GmbH, Germany); Rene Fiedler (EM Software & Systems GmbH, Germany); Evan Lezar (EM Software & Systems GmbH, Germany); Ulrich Jakobus (EM Software & Systems GmbH, Germany)

57) **Coverage Optimization and Power Reduction in SFN Using a Hybrid PSO Algorithm**
Marta Lanza (University of Cantabria, Spain); Angel Luis Gutiérrez (University of Cantabria, Spain); Iván Barriuso (University of Cantabria, Spain); Oscar Fernandez Fernandez (University of Cantabria, Spain); Marta Domingo (University of Cantabria, Spain); Jesús Ramón Pérez (University of Cantabria, Spain); Luis Valle (University of Cantabria, Spain); Jose Basterrechea (University of Cantabria, Spain)

58) **Impact of Material Changes in Electromagnetic Dosimetry Estimation of Complex Indoor Scenarios**
Leire Azpilicueta (Universidad Publica de Navarra, Spain); Jorge Becerra (Universidad Pùblica de Pamplona & Universidad Autonoma de Nuevo León, Mexico); Francisco Falcone (Universidad Publica de Navarra, Spain); Silvia De Miguel (Institute of Health Carlos III, Spain); Victoria Ramos (Institute of Health Carlos III, Spain)

59) **Channel Model and Data Analysis for Indoor Environment**
Fabricio Barros (Pontificia Universidade Catolica do Rio de Janeiro, Brazil); Pedro Gonzalez (Pontificia Universidade Catolica do Rio de Janeiro, Brazil); Emanoel Costa (Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), Brazil); Jose R Bergmann (PUC-Rio, Brazil); Gláucio Lima Siqueira (Pontifícia Universidade Católica do Rio de Janeiro, Brazil); Bruno Castro (Federal University of Pará, Brazil); Gervásio Cavalcante (UFPA, Brazil)

60) **Criteria for Physical Dimensions of MIMO OTA Multi-Probe Test Setup**
Pekka Kyösti (Elektrobit, Finland); Lassi Hentilä (Elektrobit, Finland)

61) **Calculation of Doppler Spectrum for Simultaneous Time Varying Conditions**
Aritz Estévez (Tafco Metawireless, Spain); Jesus Illescas (Tafco Metawireless, Spain); Antonio Marcotegui (Tafco Metawireless, Spain); Francisco Falcone (Universidad Publica de Navarra, Spain)

62) **Experimental Characterization of a Femtocell Radio Channel**
João Braz (Inmetro, Brazil); Pedro Gonzalez Castellanos (National Institute of Metrology, Standardization and Industrial Quality, Brazil); Carlos Rodriguez Ron (PUC/Rio, Brazil); Luis Ramirez (Pontifícia Universidade Católica do Rio de Janeiro, Brazil); Leonardo Gonsioroski (PUC-Rio, Brazil); Luiz A R da Silva Mello (PUC/RIO & Inmetro, Brazil); Flavio Hasselmann (Pontifícia Universidade Católica do Rio de Janeiro, Brazil)

63) **MIMO Antenna Optimization for Enhanced Channel Capacity**
Lajos Nagy (Budapest University of Technology and Economics, Hungary)

64) **Wall Characterization Via TSVD in Through-the-Wall Imaging**
Raffaele Solimene (Second University of Naples, Italy); Andrea Baratonia (Second University of Naples, Italy); Antonietta D'Alterio (Seconsa Università degli Studi di Napoli, Italy); Rocco Pierri (SUN, Italy)

65) **A 3-D Model for MIMO Mobile-to-Mobile Amplify-and-Forward Relay Fading Channels**
Emmanouel T. Michailidis (University of Piraeus, Greece); Panagiotis Theofilakos (University of Piraeus, Greece); Athanasios G. Kanatas (University of Piraeus, Greece)

66) **A Post-Processing Technique for Scalloping Suppression Over ScanSAR Images**
Antonio Sorrentino (Università Parthenope, Italy); Domenico Schiavulli (Università Parthenope, Italy); Maurizio Migliaccio (Universita' Napoli Parthenope, Italy)

67) **Characterization of Propagation Mechanisms for the 2.4 GHz Channel at Athens International Airport**
Theofilos Chrysikos (University of Patras, Greece); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, Greece)

68) **Knowledge-Based Indoor Propagation Model**
Cristiane Ruiz Gomes (Federal University of Pará, Brazil); Igor Gomes (Federal University of Pará, Brazil); Hermínio Gomes (Federal University of Pará, Brazil); Jeferson Breno Negrão Leite (Federal University of Pará, Brazil); Regina de Nasaré Nascimento (UFPA, Brazil); Simone da Gra?a de Castro Fraiha (Federal University of Pará, Brazil); Gervásio Cavalcante (UFPA, Brazil)

69) **Indoor Propagation Model in 2.4 GHz with QoS Parameters Estimation in VoIP Calls, Considering Different Types of Walls and Floors**
Igor Gomes (Federal University of Pará, Brazil); Hermínio Gomes (Federal University of Pará, Brazil); Bruno Castro (Federal University of Pará, Brazil); Ramz Fraiha (UFPA, Brazil); Simone da Gra?a de Castro Fraiha (Federal University of Pará, Brazil); Gervásio Cavalcante (UFPA, Brazil)

MEASUREMENT

70) **Low Complexity Free Space Impedances Measurement of UWB Antennas**
Vit Sipal (University of Oxford, United Kingdom); Javier Gelabert (University of Oxford, United Kingdom); Christopher Stevens (University of Oxford, United Kingdom); David Edwards (University of Oxford, United Kingdom); Ben Allen (University of Bedfordshire, United Kingdom)

71) **Far-Field Evaluation Directly From Helicoidal Near-Field Data**
Francesco D'Agostino (University of Salerno, Italy); Flaminio Ferrara (University of Salerno, Italy); Claudio Gennarelli (University of Salerno, Italy); Rocco Guerriero (University of Salerno, Italy); Massimo Migliozzi (University of Salerno, Italy)

72) **Modeling of Unknown Echoic Measurement Facilities with Equivalent Scattering Centers**
Kazeem A. Yinusa (Technische Universität München, Germany); Carsten H Schmidt (Technische Universität München, Germany); Thomas F. Eibert (Technische Universität München, Germany)

73) **Measurements of Complex Permittivity of Geological Materials Mixtures at Rf Frequencies**
Antonio Sarri (IDS - Ingegneria Dei Sistemi S.p.A, Italy); Matteo Batisti (IDS Ignegeria dei Sistemi SpA, Italy); Matteo Bientinesi (CPTM, Italy)

74) **Visualization of Microwave Exposure in Industrial and Medical Applications**
Tomas Vydra (Czech Technical University, Czech Republic); Daniel Havelka (Czech Technical University in Prague, Czech Republic); Jan Vrba (Czech Technical University, Czech Republic)

75) **Bistatic RCS Measurements of Aircraft Seat Rows and Their Implementation in a Raytracer**
Robert Geise (Technische Universität Braunschweig, Germany); Achim Enders (TU Braunschweig, Germany); Martin Bachhuber (Diehl Aerospace GmbH, Germany)

76) **New MIMO OTA Figures of Merit**
Adoración Marín-Soler (EMITE Ing., Spain); David A Sánchez-Hernández (Universidad Politécnica de Cartagena, Spain)

77) **Improved Open Resonator Technique for Dielectric Characterization**
Sandra Costanzo (University of Calabria, Italy); Giuseppe Di Massa (University of Calabria, Italy); Oswaldo Moreno (University of Calabria, Italy)

78) **Accurate Imaging of a Moving Target in Shadow Regions with UWB Radar Using Doppler Effect**
Shuhei Fujita (Kyoto University, Japan); Takuya Sakamoto (Kyoto University, Japan); Toru Sato (Kyoto University, Japan)

79) **Wideband Experimental Characterization of Differential Antennas**
John Pantoja (University of Los Andes, Colombia); Néstor M. Peña (Universidad de los Andes, Colombia); Francisco Roman (National University of Colombia, Colombia); Felix Vega (Swiss Federal Institute of Technology (EPFL) & National University of Colombia, Switzerland); Farhad Rachidi (Swiss Federal Institute of Technology, Switzerland)

80) **Low Frequency Radar Imaging From Ramp Response Using the Level-Set Method**
Yanhua Wen (CNRS - Université de Nantes & IETR, France); Nicole de Beaucoudrey (CNRS - Université de Nantes & IETR, France)

81) **Numerical Standing Wave Reduction Method in Software Compact Range**
Kazuhiro Komiya (NTT DOCOMO, INC., Japan); Ryo Yamaguchi (NTT DOCOMO, INC., Japan)

82) **Super-Resolution Pulse Compression Techniques for Radar Subsurface Imaging**
Hui Zhang (Dresden University of Technology, Germany); Dirk Plettemeier (Dresden University of Technology, Germany)

83) **Coaxial Resonator and Measuring System for Dielectric Parameter Measurements**
Lajos Nagy (Budapest University of Technology and Economics, Hungary); Zoltán Szalay (BME, Hungary)

84) **Test on Antennas in a Reverberating Chamber and Comparison with Anechoic Chamber**
Giuseppe Ferrara (Università Parthenope, Italy); Angelo Gifuni (Universita di Napoli PArthenope, Italy); Antonio Sorrentino (Università Parthenope, Italy)

85) **Optical Fiber Link Antenna and EMI Measurement System Using Optical Biased Devises**
Satoru Kurokawa (National Institute of Advanced Industrial Science and Technology, Japan)

86) **Calibration Techniques for Multi-Sensors SAR System**
Gaetan Guevel (LabSTICC/Whist Lab, France); Joe Wiart (France Telecom R&D, France); Christian Person (Lab-STICC/MOM UMR CNRS, France); Romain Butet (Microwave Vision, France); Sylvie Le Dall (Microwave Vision, France); Yann Toutain (Microwave Vision, France)

87) **Near-field Contact-Less Return Loss Measurement of a 434MHz Dipole Antenna**
Manuel Monedero (University of Nice Sophia-Antipolis, France); Philippe Le Thuc (University of Nice-Sophia Antipolis, France); Eric Seguenot (Orange Labs - La Turbie, France); Robert Staraj (University of Nice-Sophia Antipolis, France)

88) **Ultra-small Analog Fibre-Optical Link for Interference-Free Antenna Signal Transmission**
Wieland Mann (enprobe GmbH, Germany); Klaus Petermann (Technical University of Berlin, Germany)

89) **Measurement of Magnetic Flux Density Vector**
Jan Kracek (Czech Technical University in Prague, Czech Republic); Milos Mazanek (Czech Technical University in Prague, Czech Republic)

14:00–16:20 Club H
CARE Workshop (Bruno Casali)

14:30–16:20 Club C
EurAAP Working Group – Small Antennas (Dirk Manteuffel)

14:30–16:20 Club E
EurAAP Working Group – Antenna Measurements (Lars Foged)

15:00–16:20 Room I
INV5: Invited lectures: J. Bernhard, O. Klemp

Chairs: Werner Wiesbeck (Karlsruhe Institute of Technology, Germany), Peter S Hall (University of Birmingham, United Kingdom)

15:00 Challenges and Opportunities for Antennas in Cognitive Radio
Jennifer Bernhard (University of Illinois, USA)

15:40 Challenges in Vehicular Connectivity and Antennas
Oliver Klemp (BMW Group Research and Technology, Germany)

15:00–16:20 Room II

INV6: Invited lectures: M. Neve, A. Sibille

Chairs: Miguel Ferrando-Bataller (Universidad Politécnica De Valencia, Spain), Pavel Pechac (Czech Technical University in Prague, Czech Republic)

15:00 Electromagnetic Engineering for Communications in the Built Environment
Michael Neve (University of Auckland, New Zealand)

15:40 How to Simplify Ultra Wide Band Radio Channel Models?
Alain Sibille (Telecom ParisTech, France)

16:40–18:20 Room I

A05: Automotive Antenna

Chairs: Werner Wiesbeck (Karlsruhe Institute of Technology, Germany), Gordana Klaric Felic (National ICT Australia (NICTA) & The University of Melbourne, Australia)

16:40 Folded Rotman Lens
Karim Tekkouk (University of Rennes1, France); Mauro Ettorre (University of Rennes 1 & UMR CNRS 6164, France); Ronan Sauleau (University of Rennes 1, France); Massimiliano Casaletti (University of Rennes1, France)

17:00 MRC Performance Benefit in V2V Communication Systems in Urban Traffic Scenarios
Jörg Nuckelt (Technische Universität Braunschweig, Germany); Thomas Kürner (Technische Universität Braunschweig, Germany)

17:20 Comparison of Automotive FM Antenna Diversity Concepts with a Compound Reception Test System
Sönke Treinies (Universität der Bundeswehr München, Germany); Jochen Hopf (University of the Bundeswehr, Germany); Stefan Lindenmeier (Universität der Bundeswehr, Germany)

17:40 Metal Plate Lens Antenna for Auomotive Radar at mm-Wave Frequencies
Gordana Klaric Felic (National ICT Australia (NICTA) & The University of Melbourne, Australia); Efstratios Skafidas (National ICT Australia, Australia); Robin Evans (University of Melbourne, Australia)

18:00 Modeling and Integration of Automotive Radiofrequency Antennas for Vehicle Access Systems
Raed El-makhour (RENAULT SAS & Technocentre - DIESE, France); Mickael Huard (Renault RSA, France); Eric Lardjane (Renault RSA, France)

16:40–18:20 Room II

A14-2: New Materials, Meta-materials, EBG Structures II

Chairs: Eva Rajo-Iglesias (University Carlos III of Madrid, Spain), Jan Macháč (Czech Technical University in Prague, Czech Republic),

16:40 A Wideband Metamaterial Meander-Line Antenna
Colan G. M. Ryan (University of Toronto, Canada); George V. Eleftheriades (University of Toronto, Canada)

17:00 Broadband, Compact Hard Waveguide and Its Application to Open-Ended Waveguides Dense Arrays
Eva Rajo-Iglesias (University Carlos III of Madrid, Spain); Stefano Maci (University of Siena, Italy)

17:20 Experimental Generation of Propagating Bessel Beams with a Low-Profile Leaky Radial Waveguide
Mauro Ettorre (University of Rennes 1 & UMR CNRS 6164, France); Scott Rudolph (Naval Research Laboratory, USA); Anthony Grbic (University of Michigan, Ann Arbor, USA)

17:40 Design of Printed Antennas on Reactive Impedance Substrates for Circular Polarization Operation in S-Band
Loic Bernard (ISL, France); Guillaume Chertier (Polytech'Nice, France); Ronan Sauleau (University of Rennes 1, France)

18:00 Design of an H-Plane Horn Array Antenna Using the Complete 1D/3D-EBG Waveguide in the THz Band
Daniel Sanchez-Escuderos (Universidad Politécnica de Valencia, Spain); Miguel Ferrando-Bataller (Universidad Politécnica De Valencia, Spain); Antonio Berenguer (Universitat Politécnica de Valencia & Instituto de Telecomunicaciones y Aplicaciones Multimedia, Spain); Mariano Baquero-Escudero (Universidad Politécnica de Valencia, Spain)

16:40–18:20 Club A

P13-1: Stochastic and Deterministic Channel Modelling I

Chairs: Robert J Watson (University of Bath, United Kingdom),Martin Grabner (Czech Metrology Institute, Czech Republic)

16:40 Propagation Modelling for White Space Geo-location Databases
Nathan Dumont (University of Bath, United Kingdom); Robert J Watson (University of Bath, United Kingdom); Stephen Pennock (University of Bath, United Kingdom)

17:00 Autoregressive Modeling of Frequency Selective Channels for Synchronized OFDM Systems
Xiang Xu (RWTH Aachen University, Germany); Rudolf Mathar (RWTH Aachen University, Germany)

17:20 A Simulation System to Evaluate Antenna Diversity Concepts for Improved Mobile Reception of COFDM-based Terrestrial Broadcasts
Christoph Neeb (Universität der Bundeswehr München, Germany); Stefan Lindenmeier (Universität der Bundeswehr, Germany)

17:40 On Predicting Large Scale Fading Characteristics with the MR-FDPF Method
Meiling Luo (Ranplan Wireless Network Design Ltd. & INSA-Lyon, CITI, United Kingdom); Nikolai Lebedev (CPE Lyon / CITI Laboratory, University of Lyon & Ranplan Ltd, France); Guillaume Villemaud (Université de Lyon, INRIA, INSA-Lyon, CITI, France); Guillaume de la Roche (Mindspeed Technologies, France); Jie Zhang (University of Sheffield, Dept. of Electronic and Electrical Engineering, United Kingdom); Jean-Marie Gorce (INSA-Lyon, France)

18:00 Efficient Evaluation of the Green's Function for a Bended Coplanar Waveguide
Constantinos A Valagiannopoulos (Aalto University, Finland)

16:40–18:20 Club B

P02: Polarisation in Propagation and Remote Sensing

Chair: Fernando Pérez-Fontán (University of Vigo, Spain), Stanislav Zvanovec (Czech Technical University in Prague, Czech Republic)

16:40 Preliminary Investigations of Three-Dimensional Microwave Tomography Using Different Data Sets
Hoi-Shun Lui (Chalmers University of Technology, Sweden); Andreas Fhager (Chalmers University of Technology, Sweden); Mikael Persson (Chalmers University of Technology, Sweden)

17:00 Evaluation of Signal Polarisation Effects Under Human Handling Influence in Public Femtocell Environment
Tengku Faiz Bin Tengku Mohmed Noor Izam (University of Surrey & University of Malaya, United Kingdom); Tim Brown (University of Surrey, United Kingdom)

17:20 Dual Frequency Polarizing Surfaces
Efstratios Doumanis (Queen's University Belfast, United Kingdom); George Goussetis (Reader, United Kingdom); Robert Cahill (Queen's University Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom); Hervé Legay (Thalès Alenia Space, France); Robert Orr (Queen's University Belfast, United Kingdom)

17:40 Shape Reconstruction of Scatterers by Suitable Inverse Processing of GPR Data
Guido Valerio (Université de Rennes 1, France); Francesco Soldovieri (CNR, Italy); Pier Matteo Barone (Roma Tre University, Italy); Sebastian Lauro (Roma Tre University, Italy); Elisabetta Mattei (Roma Tre University, Italy); Elena Pettinelli (Roma Tre University, Italy); Davide Comite (Sapienza University of Rome, Italy); Alessandro Galli (Sapienza University of Rome, Italy)

18:00 Microwave Scattering Experiment on a Wave Tank: Bistatic Setup
Nicole de Beaucoudrey (CNRS - Université de Nantes & IETR, France); François Poulain (CNRS - Université de Nantes & IETR, France); Laurent Davoust (CNRS - Ecole Centrale de Nantes, France); Jean-Marc Rousset (CNRS - Ecole Centrale de Nantes, France); Félicien Bonnefoy (CNRS - Ecole Centrale de Nantes, France)

16:40–18:20 Club C

Joint CA12, 22-2: Compressive Sensing in Electromagnetics and Non-uniform Array Antennas II

Chairs: Ioan E. Lager (Delft University of Technology, The Netherlands), Andrea Massa (University of Trento, Italy)

16:40 Sparse Array Synthesis Via Sequential Convex Optimizations
Benjamin Fuchs (EPFL - LEMA, Switzerland); Anja K Skrivervik (EPFL, Switzerland); Juan R Mosig (Ecole Polytechnique Federale de Lausanne, Switzerland)

17:00 Phase-only Synthesis of Conformal Aperiodic Reflectarrays with Multi-Frequency Specifications
Amedeo Capozzoli (Università di Napoli Federico II, Italy); Claudio Curcio (Università di Napoli Federico II, Italy); Angelo Liseno (Università di Napoli Federico II, Italy); Marzia Migliorelli (Space Engineering S.p.A, Italy); Giovanni Toso (European Space Agency, The Netherlands)

17:20 Experimental Validation of Fast Simulation Methods in the Framework of the SKA Telescope Project
Christopher Raucy (Université Catholique de Louvain, Belgium); Eloy de Lera Acedo (University of Cambridge, United Kingdom); Christophe Craeye (Université Catholique de Louvain, Belgium); David González-Ovejero (Université catholique de Louvain, Belgium); Nima Razavi Ghods (University of Cambridge, United Kingdom)

17:40 Element Sharing in Interleaved Antenna Arrays
Warren du Plessis (Council for Scientific and Industrial Research (CSIR), South Africa); Celma Kitching (Council for Scientific and Industrial Research (CSIR), South Africa); Abdulrahman bin Ghannam (King Abdulaziz City for Science and Technology (KACST), Saudi Arabia)

18:00 A New Perspective in the Synthesis of Reconfigurable Linear or Circularly Symmetric Array Antennas
Andrea Francesco Morabito (University Mediterranea of Reggio Calabria, Italy); Antonia Rita Laganà (University of Reggio Calabria, Italy); Tommaso Isernia (University of Reggio Calabria, Italy)

16:40–18:20 Club D

CM05: Automotive/ Telematics Antenna Testing (AMTA Convened Session)

Chairs: James Huff (The Howland Company, Inc., USA), Daniel J. Janse van Rensburg (Near Field Systems Inc., USA)

16:40 Mini Compact Range for Automotive RADAR Antenna Testing
Per Iversen (Orbit/FR, USA); Marcel Boumans (ORBIT/FR Europe GmbH, Germany); Sara Burgos (ORBIT/FR Europe GmbH & System Engineer and Project Manager, Germany)

17:00 State of the Art Spherical Near-Field Antenna Test Systems for Full Vehicle Testing
Per Noren (Microwave Vision Group, Sweden); Lars Jacob Foged (SATIMO, Italy); Philippe Garreau (Microwave Vision Group, France)

17:20 Exploring Radiating and Scattering Sources of Part of Vehicles by Means of Hemi-Spherical-Near-Field Antenna Measurementsl
Dieter Pototzki (Antenna Technology Center Europe & ATC GmbH, Germany); Andreas Griesche (Antenna Technology Center Europe & ATC GmbH, Germany)

17:40 Measuring the Radiation Patterns of SDARS Installed in Vehicles
James Huff (The Howland Company, Inc., USA); Carl Sirles (The Howland Company, Inc., USA)

18:00 Outdoor Far-Field Antenna Measurements System for Testing of Large Vehicles
Douglas. Kremer (US Army, USA)

16:40–18:20 Club E

IS-2: Industrial Session II

Chairs: Marta Martínez-Vázquez (IMST GmbH, Germany), Lars Jacob Foged (SATIMO, Italy)

16:40 TD and FD Simulations of Internal EM Environment in Small Aircraft and Experimental Test Comparison
Zdeněk Řezníček (Design and Engineering, Czech Republic); Pavel Tobola (Evektor, spol. s r. o., Czech Republic); Guido Rasek (Measuring and Test Engineering, Germany); Steffen Loos (Masurement and Testing, Germany)

17:00 Large Size, Lightweight, Luneburg Lenses for Multi-beam Antenna Applications
Leo Matytsine (Matsing Pte Ltd, Singapore); Pavel Lagoiski (Matsing Pte Ltd, Singapore); Michael Matytsine (Matsing Pte Ltd, Singapore); Serguei Matitsine (National University of Singapore & Matsing Pte Ltd, Singapore)

17:20 Antenna Measurement Using Large Size, Lightweight, Broadband Convex RF Lens
Leo Matytsine (Matsing Pte Ltd, Singapore); Pavel Lagoiski (Matsing Pte Ltd, Singapore); Serguei Matitsine (National University of Singapore & Matsing Pte Ltd, Singapore)

17:40 Phase- and Group Delay Measurements Over Large Distances
Thilo Bednorz (ROHDE & SCHWARZ GmbH & Co. KG, Germany)

18:00 Efield MDMM - A New and Innovative Domain Decomposition Technique for Advanced Cavity Problems
Bo Strand (Efield AB, ESI Group, Sweden); Bo Wästberg (Efield AB, ESI Group Sweden, Sweden); Erik Abenius (Efield AB, ESI Group Sweden, Sweden)

16:40–18:20 Club H

M11-2: Cellular and Automotive Application Measurements II

Chairs: Per-Simon Kildal (Chalmers University of Technology, Sweden), Thomas F. Eibert (Technische Universität München, Germany),

16:40 Phantoms for Antenna Measurements at 2.4 GHz
Benjamin Loader (National Physical Laboratory, United Kingdom); Tian Hong Loh (UK, National Physical Laboratory, United Kingdom)

17:00 Indoor Multi-User MIMO: Measured User Orthogonality and Its Impact on the Choice of Coding
Fredrik Rusek (Lund University, Sweden); Ove Edfors (Lund University, Sweden); Fredrik Tufvesson (Lund University, Sweden)

17:20 Straightforward MIMO OTA Characterization and Statistical Metrics for LTE Devices
Yifei Feng (RheinMain University of Applied Sciences, Germany); Werner Schroeder (RheinMain University of Applied Sciences, Germany); Thomas Kaiser (Universität Duisburg-Essen, Germany)

17:40 LTE MIMO Multiplexing Performance Measured in Reverberation Chamber and Accurate Simple Theory
Per-Simon Kildal (Chalmers University of Technology, Sweden); Ahmed Hussain (Chalmers University of Technology, Sweden); Giuseppe Durisi (Chalmers University of Technology, Sweden); Charlie Orlenius (Bluetest AB, Sweden); Anton Skårbratt (Bluetest AB, Sweden)

18:00 Real-Time Ultrawideband MIMO Channel Sounding
Seun Sangodoyin (University of Southern California, USA); Jussi Salmi (Aalto University, Finland); Somasundaram Niranjayan (University of Southern California, USA); Andreas Molisch (University of Southern California, USA)

16:40–18:20 Room III

A19-1: Reflector and Lens Antennas I

Chairs: Per Ingvarson (RUAG Space AB, Sweden), Milos Mazanek (Czech Technical University in Prague, Czech Republic)

16:40 Bifocal Antenna Based on Dual-Reflectarray Dual-Offset Configuration
Javier Rodriguez-Alvarez (Universidad de Oviedo, Spain); Manuel Arrebola (Universidad de Oviedo, Spain); Carolina Tienda (Universidad Politécnica de Madrid, Spain); Jose A. Encinar (Universidad Politécnica de Madrid, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

17:00 Synthesis and Rigorous Analysis of Omnidirectional ADE Antenna with Shaped Main Reflector Described by Local Conic Sections
Rafael A. Penchel (PUC-Rio, Brazil); Sandro R. Zang (PUC-Rio, Brazil); Jose R Bergmann (PUC-Rio, Brazil); Fernando Moreira (Federal University of Minas Gerais, Brazil)

17:20 A Circular Eleven Feed with Significantly Improved Aperture Efficiency Over 1.3-14 GHz
Jungang Yin (Norwegian University of Science and Technology (NTNU), Norway); Jian Yang (Chalmers University of Technology, Sweden); Miroslav Panteleev (Onsala Space Observatory, Chalmers University of Technology, Sweden); Leif Helldner (Chalmers University of Technology, Sweden)

17:40 A Dual-Band Multimode Monopulse Tracking Antenna for Land-Mobile Satellite Communications in Ka-Band
Hendrik Bayer (Ilmenau University of Technology, Germany); Alexander Krauss (Ilmenau University of Technology, Germany); Ralf Stephan (Technische Universität Ilmenau, Germany); Matthias Hein (Ilmenau University of Technology, Germany)

18:00 Active Array Fed Reflector Antennas. Practical Relations and Efficiency
Alexander Shishlov (Company Radiofizika, Russia); Irina Vilenko (Company Radiofizika, Russia); Yury Krivosheev (Company Radiofizika, Russia)

16:40–18:20 Room IV

A15: Planar and Conformal Antennas

Chairs: Anja K Skrivervik (EPFL, Switzerland), Pavel Hazdra (Czech Technical University in Prague, Czech Republic),

16:40 Ku-Band Dielectric-Loaded SIW Horn for Vertically- Polarized Multi-Sector Antennas
Mohsen Yousefbeiki (École Polytechnique Fédérale de Lausanne (EPFL), Switzerland); Juan R Mosig (Ecole Polytechnique Federale de Lausanne, Switzerland); Carlos A. Fernandes (Instituto de Telecomunicaoes, Instituto Superior Tecnico, Portugal)

17:00 Circularly Polarized Ring-Slot Antenna for RFID Readers
Mónica Ramírez (Autonomous University of Barcelona, Spain); Josep Parrón (Universitat Autònoma de Barcelona, Spain)

17:20 Tuning a Dual-Band Bowtie Slot Antenna with Parabolic Radiating Slots for the 900 MHz and 2400 MHz Bands
Layne Berge (North Dakota State University & Center for Nanoscale Science and Engineering, USA); Michael Reich (North Dakota State University, USA); Masud Aziz (University of Kansas, USA); Benjamin Braaten (North Dakota State University, USA)

17:40 Dual-Polarized K/Ka-Band Planar Log-Periodic Antenna
Hongyu Zhou (University of Colorado, USA); Yunda Wang (University of Colorado, USA); Yung-Chen Lee (University of Colorado, USA); Dejan Filipovic (University of Colorado at Boulder, USA)

18:00 Circularly Polarized Microstrip Patch Antenna Fed by Substrate Integrated Waveguide
Tomas Mikulasek (Brno University of Technology, Czech Republic); Jaroslav Lacik (Brno University of Technology, Czech Republic)