

Thursday, March 29

09:00–12:40 Room I
CA13: Numerical Modeling of Periodic Structures and Metamaterials

Chairs: Stefano Maci (University of Siena, Italy), Raj Mittra (Penn State University, USA)

09:00 Efficient Numerical Investigation of an Active Reconfigurable Periodic Structure

Ladislau Matekovits (Politecnico di Torino & Macquarie University, Sydney, Italy); Mirko Bercigli (IDS Ingegneria Dei Sistemi S.p.A, Italy); Rodolfo Guidi (IDS Ingegneria Dei Sistemi S.p.A, Italy)

09:20 Efficient Analysis of Multi-Resonant Periodic Structures for the Improved Analysis and Design of Reflectarray Antennas

Rafael Florencio (Universidad de Sevilla, Spain); Rafael Boix (University of Seville, Spain); Jose A. Encinar (Universidad Politécnica de Madrid, Spain)

09:40 FETI Domain Decomposition Method for the Electromagnetic Characterization of Meta Materials and Antenna Arrays

André Barka (ONERA -The French Aerospace Lab, France); Vincent Gobin (ONERA Toulouse, France); Francois-Xavier Roux (ONERA, France)

10:00 Scattering From Truncated Cylinders with a Mixed 2-D/3-D Domain Decomposition Scheme

David Duque (Technische Universiteit Eindhoven, The Netherlands); Vito Lancellotti (Technical University of Eindhoven, The Netherlands); Bastiaan de Hon (Technische Universiteit Eindhoven, The Netherlands); Anton G. Tjihuis (TU/e Eindhoven University of Technology, The Netherlands)

10:20 Performance of Uniaxial Multilayer Cylinders Used for Invisible Cloak Realization

Dario Bojanjac (University of Zagreb, Croatia); Branimir Ivšić (University of Zagreb, Croatia); Tin Komljenovic (University of Zagreb, Croatia); Zvonimir Sipus (University of Zagreb, Croatia)

10:40 Coffee Break

09:00–12:40 Room II
A14-3: New Materials, Meta-materials, EBG Structures III

Chairs: Ioan E. Lager (Delft University of Technology, The Netherlands), Richard Langley (University of Sheffield, United Kingdom)

09:00 Circular Polarization Selective Surface for Dual-Optics CP Offset Reflector Antennas in Ku-band

Juanjo Sanz-Fernandez (European Space Agency, The Netherlands); Elena Saenz (European Space Agency, The Netherlands); Peter de Maagt (European Space Agency, The Netherlands); Cyril Mangenot (European Space Agency, The Netherlands)

09:20 A Cartesian Cloaking Comprised of Gradually Sparser Dielectric Layers Exploiting Snell's Law

Constantinos A Valagiannopoulos (Aalto University, Finland)

09:40 Inkjet Printing of Frequency Selective Surfaces on EBG Antenna Radome

Eric Arnaud (University of LIMOGES, France); Ahmad Kanso (University of Limoges, France); Thierry Monediere (University of Limoges & CNRS, France); Damien Passerieux (University of Limoges, France); Marc Thevenot (XLIM-UMR 6172-CNRS, University of Limoges, France); Eloi Beaudrouet (CERADROP, France); Chrystelle Dossou-yovo (CERADROP, France); Rémi Noguéra (CERADROP, France)

10:00 Hybridization Band Gap Based Smart Antennas: Deep Subwavelength Yet Directional and Strongly Decoupled MIMO Antennas

Geoffroy Lerosey (Institut Langevin - ESPCI ParisTech and CNRS, France); Christian Leray (Time Reversal Communications SA, France); Fabrice Lemoult (Institut Langevin - ESPCI ParisTech and CNRS, France); Julien de Rosny (Laboratoire Ondes et Acoustique (LOA), France); Arnaud Tourin (Laboratoire Ondes et Acoustique (LOA), France); Mathias Fink (Laboratoire Ondes et Acoustique, France)

11:00 New Numerical Techniques for Efficient and Accurate Analysis of FSSs, EBGs and Metamaterials

Raj Mittra (Penn State University, USA); Chiara Pelletti (The Pennsylvania State University, USA); Ravi Kumar Arya (The Pennsylvania State University, USA); Giacomo Bianconi (Penn State University, USA); Tim McManus (The Pennsylvania State University, USA); Agostino Monorchio (University of Pisa, Italy); Nikolaos L. Tsitsas (National Technical University of Athens, Greece)

11:20 Numerical Modeling of Nanostructured Metamaterials

Andrea Vallecchi (University of Siena, Italy); Matteo Albani (University of Siena, Italy); Filippo Capolino (University of California, Irvine, USA)

11:40 Microwave Modeling of Single Multi-Wall Carbon Nanotubes

Anestis Katsounaros (Queen Mary, University of London, United Kingdom); Jiefu Zhang (Queen Mary, University of London, United Kingdom); Yang Hao (Queen Mary, University of London, United Kingdom)

12:00 Comparison of Different Numerical Models for Volumetric Metamaterials

Enrica Martini (University of Siena, Italy); Giovanni Maria Sardi (University of Siena, Italy); Stefano Maci (University of Siena, Italy)

12:20 Forward Scattering Properties of Periodic Metamaterials

Iman Vakili (Lund University, Sweden); Mats Gustafsson (Lund University, Sweden); Daniel Sjöberg (Lund University, Sweden)

09:00–12:40 Club A
P13-2: Stochastic and Deterministic Channel Modelling II

10:20 CPW-Fed Bow-tie Slot antenna/AMC Combination for Dual-band Applications on Metallic Objects
 María Elena de Cos (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

10:40 Coffee Break

11:00 Practical Realization of Isotropic RF Replica of Plasmonic Sphere
 Damir Muha (University of Zagreb, Croatia); Mario Mlakar (FER, Croatia); Silvio Hrabar (University of Zagreb, Croatia); Davor Zaluski (University of Zagreb, Croatia)

11:20 Downshifting Extraordinary Transmission by Meander-Lines in Hole Arrays
 Víctor Torres (Universidad Pública de Navarra, Spain); Pablo Rodríguez-Ulibarri (Universidad Pública de Navarra, Spain); Miguel Beruete (Universidad Pública de Navarra, Spain); Francisco Falcone (Universidad Pública de Navarra, Spain); Mario Sorolla (Universidad Pública de Navarra, Spain); Miguel Navarro-Cía (Universidad Pública de Navarra, Spain)

11:40 Small Antenna Over AMC Surface with/out Vias
 Shaozhen Zhu (University of Sheffield, United Kingdom); Kenneth Lee Ford (University of Sheffield, United Kingdom); Alan Tennant (University of Sheffield, United Kingdom); Richard Langley (University of Sheffield, United Kingdom)

12:00 Design of Circularly Polarized Fabry-Perot Cavity Antenna
 Robert Orr (Queen's University Belfast, United Kingdom); George Goussetis (Reader, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom)

12:20 CPW-Fed Monopole/EBG Combination with Bandwidth Enhancement for Dual-band Applications
 María Elena de Cos (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

Chairs: Mario Orefice (Politecnico di Torino, Italy), Jonathan Michael Rigelsford (The University of Sheffield, United Kingdom),

09:00 Field Strength Prediction for Environment Aware MIMO Channel Models
 Florian Schröder (RWTH Aachen University & Lehrstuhl für Theoretische Informationstechnik, Germany); Michael Reyer (RWTH Aachen University, Germany); Rudolf Mathar (RWTH Aachen University, Germany)

09:20 Diffraction From Frequency Selective Surfaces for Secure Building Applications
 Jiayin Roberts (University of Sheffield, United Kingdom); Jonathan Michael Rigelsford (The University of Sheffield, United Kingdom); Kenneth Lee Ford (University of Sheffield, United Kingdom)

09:40 A Solution for ILS Disturbance Due to a Building
 Andrew Thain (EADS - Innovation Works, France); Jean-Pierre Estienne (EADS - Innovation Works, France); Jerome Robert (EADS Innovation Works, France); Gilles Peres (EADS - Innovation Works, France); Guillaume Cambon (Airbus - SAS, France); Laurent Evain (Airbus SAS, France); Bertrand Spitz (ENAC, France)

10:00 Implementation and Validation of a 2.5D Intelligent Ray Launching Algorithm for Large Urban Scenarios
 Zhihua Lai (Ranplan Wireless Network Design Ltd. & University of Bedfordshire, United Kingdom); Hui Song (Ranplan Wireless Network Design Ltd, United Kingdom); Peng Wang (University of Bedfordshire, United Kingdom); Haiwang Mu (China Mobile Design Institute ChongQing Branch, P.R. China); Lei Wu (China Mobile Design Institute ChongQing Branch, P.R. China); Jie Zhang (University of Sheffield, Dept. of Electronic and Electrical Engineering, United Kingdom)

10:20 First and Second Order Statistics of Clear-Air Attenuation on 11 GHz Terrestrial Path
 Martin Grabner (Czech Metrology Institute, Czech Republic); Vaclav Kvicera (Czech Metrology Institute, Czech Republic); Pavel Pechac (Czech Technical University in Prague, Czech Republic); Otakar Jicha (Czech Technical University in Prague, Czech Republic)

10:40 Coffee Break

11:00 Estimation of the Dynamics Parameter of Rain Attenuation Time Series Synthesizers
 Fernando J. A. Andrade (Pontifical Catholic University of Rio de Janeiro, Brazil); Luiz A R da Silva Mello (PUC/RIO & Inmetro, Brazil)

11:20 The New Vector Fitting Approach to Modeling of UWB Channels Containing Convex Obstacles
 Piotr Górnaiak (Poznań University of Technology, Poland); Wojciech Bandurski (Poznań University of Technology, Poland)

11:40 Propagation Modelling in a Container Environment
 Emmeric Tanghe (Ghent University, Belgium); Wout Joseph (Ghent University, Belgium); Peter Ruckebusch (Ghent University, Belgium); Luc Martens (Ghent University, Belgium); Ingrid Moerman (Ghent University - IBBT, Belgium)

12:00 Transparency of Buildings to the Radiowave Propagation at VHF-UHF Frequencies
 Mario Orefice (Politecnico di Torino, Italy); Guillermo C Vietti (Politecnico di Torino, Italy)

09:00–12:40 Club B
CP04: Channel Modelling for Mobile SatCom and SatNav Systems (Convened by COST IC0802)

Chairs: Uwe-Carsten G. Fiebig (German Aerospace Center (DLR), Germany), Fernando Pérez-Fontán (University of Vigo, Spain)

09:00 Measurements of the Land Mobile and Nomadic Satellite Channels at 2.2 GHz and 3.8 GHz
 Frederic Lacoste (CNES, France); Joel Lemorton (ONERA, France); Laurent Casadebaig (ONERA, France); Franck Rousseau (CNES, France)

09:20 Building Penetration Loss Modelling for Satellite Services at L-, S- and C-band
 Milan Kvicera (Czech Technical University in Prague, Czech Republic); Pavel Pechac (Czech Technical University in Prague, Czech Republic)

09:40 A Rural Channel Model for Satellite Navigation Applications
 Frank M Schubert (Aalborg University, Germany); Bernard Henri Fleury (Aalborg University, Denmark); Roberto Prieto-Cerdeira (European Space Agency, The Netherlands); Alexander Steingass (DLR Oberpfaffenhofen, Germany); Andreas Lehner (German Aerospace Center, DLR, Germany)

10:00 Flexible Statistical Multipath and Shadowing Model for Land Mobile Satellite Navigation
 Roberto Prieto-Cerdeira (European Space Agency, The Netherlands); Frank M Schubert (Aalborg University, Germany); Raul Orus Perez (European Space Agency (ESA) / ESTEC, The Netherlands)

10:20 Validation of Aeronautical Fuselage Channel Model for Iris Air-Traffic Management Via Satellite
 Eva Salvador Marquez (European Space Agency (ESA) / ESTEC, The Netherlands); Roberto Prieto-Cerdeira (European Space Agency, The Netherlands); Raul Orus Perez (European Space Agency (ESA) / ESTEC, The Netherlands); Paolo Burzigotti (European Space Agency ESA/ESTEC, The Netherlands)

09:00–12:40

Club C

A20-1: Small Antennas, RFID Tags and Sensors I**10:40 Coffee Break****11:00 Frequency Dependence of Vegetation Shadowing Loss for Satellite Services**

Petr Horak (Czech Technical University in Prague, Czech Republic); Pavel Pechac (Czech Technical University in Prague, Czech Republic)

11:20 A Three Components Model for Simplified Building Scattering in Urban Environment

Mehdi Ait-Ighil (ONERA/CNES Toulouse & Onera / CNES / TAS, France); Fernando Pérez-Fontán (University of Vigo, Spain); Joel Lemorton (ONERA, France); Frederic Lacoste (CNES, France); Géraldine Artaud (CNES, France); Christophe Bourga (Thalès Alenia Space, France); Michel Bousquet (SUPAERO, France)

11:40 A Generative MIMO Channel Model Encompassing Single Satellite and Satellite Diversity Cases

Guillaume Carrie (ONERA, France); Fernando Pérez-Fontán (University of Vigo, Spain); Frederic Lacoste (CNES, France); Joel Lemorton (ONERA, France)

12:00 On a Satellite-to-Indoor Channel Model: The Multipath Components

Jost Thomas (German Aerospace Center (DLR), Germany); Wei Wang (German Aerospace Center (DLR), Germany); Uwe-Carsten G. Fiebig (German Aerospace Center (DLR), Germany); Fernando Pérez-Fontán (University of Vigo, Spain)

12:20 Narrow- and Wideband Land Mobile Satellite Channel Statistics for Various Environments at Ku-band

Franz Teschl (Joanneum Research, Austria); Veikko Hovinen (University of Oulu, Finland); Fernando Pérez-Fontán (University of Vigo, Spain); Michael Schönhuber (Joanneum Research, Austria); Roberto Prieto-Cerdeira (European Space Agency, The Netherlands)

Chairs: Antoine Roederer (Technical University of Delft - IRCTR, The Netherlands), Milan Polivka (Czech Technical University in Prague, Czech Republic)

09:00 Compact Diversity Antenna Using Dipole and Monopole Modes

Kengo Nishimoto (Mitsubishi Electric Corporation, Japan); Toru Fukasawa (Mitsubishi Electric Corporation, Japan); Toyohisa Tanaka (Mitsubishi Electric Corporation, Japan); Hiroaki Miyashita (Mitsubishi Electric Corporation, Japan); Yoshihiko Konishi (Mitsubishi Electric Corporation, Japan)

09:20 Electrical Properties of Spherical Dipole Antennas with Lossy Material Cores

Troels V. Hansen (Technical University of Denmark, Denmark); Oleksiy S. Kim (Technical University of Denmark, Denmark); Olav Breinbjerg (Technical University of Denmark, Denmark)

09:40 Novel Analytical Procedures for Folded Strip Dipole Antennas

Shady Keyrouz (Eindhoven University of Technology & University of Ulm, The Netherlands); Huib J. Visser (IMEC Netherlands, The Netherlands); Ruud Vullers (imec-Netherlands, The Netherlands); Anton G. Tjihuis (TU/e Eindhoven University of Technology, The Netherlands)

10:00 A Theoretical Study on a Circular Microstrip Antenna in a Parallel Plate Waveguide

Narihiro Nakamoto (ATR Wave Engineering Laboratories, Japan); Tomohiro Oka (ATR Wave Engineering Laboratories, Japan); Shoichi Kitazawa (ATR, Japan); Hiroshi Ban (ATR Wave Engineering Laboratories, Japan); Kiyoshi Kobayashi (Advanced Telecommunications Research Institute International, Japan)

10:20 Electrically Small Spiral Transmission Line-Connected Triple-Arm Folded Monopole Antenna

Milan Polivka (Czech Technical University in Prague, Czech Republic); David Vrba (Czech Technical University in Prague & FEE, Czech Republic)

10:40 Coffee Break**11:00 IR-UWB Radar System and Tag Design for Time-coded Chipless RFID**

Angel Ramos (Universitat Rovira i Virgili, Spain); David Girbau (Universitat Rovira i Virgili, Spain); Antonio Lazaro (URV, Spain); Sergi Rima (Universitat Rovira i Virgili, Spain)

11:20 Design of a Passive Tag for Indoor Localization

Catarina Cruz (Instituto de Telecomunicações & Instituto Universitário de Lisboa ISCTE-IUL, Portugal); Jorge R. Costa (Instituto de Telecomunicações / ISCTE-IUL, Portugal); Carlos A. Fernandes (Instituto de Telecomunicações, Instituto Superior Técnico, Portugal)

11:40 Experimental Study of the Antenna Influence in RTLS Based-On RFID

Gonzalo Crespo (Public University of Navarra, Spain); Jorge Teniente (Public University of Navarra, Spain); Iñigo Ederra (Universidad Pública de Navarra, Spain); Ramon Gonzalo (Public University of Navarra, Spain)

12:00 Water Infiltration Detection in Civil Engineering Structures Using RFID

Santiago Capdevila (Universitat Politècnica de Catalunya, Spain); Gemma Roqueta (Universitat Politècnica de Catalunya & University of California, Irvine, Spain); Marta Guardiola (Universitat Politècnica de Catalunya (UPC), Spain); Luis Jofre (UPC, Spain); Jordi Romeu (Universitat Politècnica de Catalunya, Spain); Jean-Charles Bolomey (Supelec, France)

12:20 An Accurate Linear Electrical Model Applied to a Series and Parallel 2.45 GHz Dual-Diode Rectenna Array

Hakim Takhedmit (Université de Paris-Est Marne-la-Vallée, France); Laurent Cirio (Université de Paris-Est Marne-la-Vallée, France); Odile Picon (Université Paris-Est (Marne-la-Vallée), France); Jean Daniel Lan Sun Luk (University of La Reunion, France)

09:00–12:40 Club D**CM03: Antenna Diagnostics and Post-processing (AMTA Convened Session)**

Chairs: Doren W. Hess (MI Technologies, USA), Lars Jacob Foged (SATIMO, Italy)

09:00 On the Fast Multipole Method Applications for Inverse Problems

Yuri Álvarez (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain); José Ángel Martínez-Lorenzo (The Gordon CenSSIS, Northeastern university, USA); Carey Rappaport (Northeastern University, USA)

09:20 Far-Field Uncertainty Due to Instrumentation Errors in Multilevel Plane Wave Based Near-Field Far-Field Transformed Planar Near-Field Measurements

Muhammad Ayyaz Qureshi (Technische Universität München, Germany); Carsten H Schmidt (Technische Universität München, Germany); Kazeem A. Yinusa (Technische Universität München, Germany); Thomas F. Eibert (Technische Universität München, Germany)

09:40 Imaging of Element Excitations with Spherical Scanning

Doren W. Hess (MI Technologies, USA); Scott McBride (MI Technologies, USA)

10:00 A Modified Holographic Technique for Cylindrical Near-Field Antenna Measurements

David Smith (Northumbria University, United Kingdom); Vladimir Schejbal (University of Pardubice, Czech Republic); Ludvik Prouza (University of Pardubice, Czech Republic)

10:20 Comparative Investigation of Methods to Reduce Truncation Errors in Partial Spherical Near-Field Antenna Measurements

Lars Jacob Foged (SATIMO, Italy); Lucia Scialacqua (SATIMO, Italy); Francesco Saccardi (SATIMO, Italy); Francesca Mioc (Consultant, Switzerland); Javier Leonardo Araque Quijano (Universidad Nacional de Colombia & Politecnico di Torino, Colombia); Enrica Martini (University of Siena, Italy); Stefano Maci (University of Siena, Italy); Marco Sabbadini (Esa Estec, The Netherlands); Giuseppe Vecchi (Politecnico di Torino, Italy)

10:40 Coffee Break**11:00 Reflector Surface Distortion Compensation Using Reflectarrays: Experimental Verification**

Harish Rajagopalan (University of California Los Angeles (UCLA), USA); Yahya Rahmat-Samii (University of California Los Angeles (UCLA), USA)

11:20 Multi-Frequency, Multi-Resolution and Probe Compensated Advanced Near-Field Antenna Characterization

Amedeo Capozzoli (Università di Napoli Federico II, Italy); Claudio Curcio (Università di Napoli Federico II, Italy); Angelo Liseno (Università di Napoli Federico II, Italy)

11:40 Antenna Diagnostics on Planar Arrays Using a 3D Source Reconstruction Technique and Spherical Near-Field Measurements

Erik Jørgensen (TICRA, Denmark); Doren W. Hess (MI Technologies, USA); Peter Meincke (TICRA, Denmark); Oscar Borries (Technical University of Denmark & Ticra, Denmark); Cecilia Cappellin (TICRA, Denmark); Jeffrey A. Fordham (MI Technologies, USA)

12:00 Antenna Characterization with Multiple Scatterers by Means of Equivalent Currents and Spherical Wave Expansion

Yuri Álvarez (Universidad de Oviedo, Spain); Jaime Laviada (Universidad de Oviedo, Spain); Cebrián García (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

12:20 Application of Postprocessing Techniques Methods for Noise Reduction in Cylindrical Near Field Antenna Measurements

Francisco José Cano (Technical University of Madrid, Spain); Manuel Sierra-Castañer (Technical University of Madrid, Spain)

09:00–12:40 Club E**CA10: Mm-Wave Antenna-Systems**

Chairs: Cyril Luxey (University of Nice Sophia-Antipolis, France), Jiro Hirokawa (Tokyo Institute of Technology, Japan)

09:00 Integrated Antenna Concept for Millimeter-Wave Front-End Modules in Proven Technologies

Ulf Johannsen (Eindhoven University of Technology, The Netherlands); A. B. (Bart) Smolders (Eindhoven University of Technology, The Netherlands); Ad Reniers (TU/e, The Netherlands); Rainier Van Dommele (TU/e, The Netherlands); Mingda Huang (Eindhoven University of Technology, The Netherlands)

09:20 120-GHz-band Antenna Technologies for over-10-Gbps Wireless Data Transmission

Akihiko Hirata (NTT Corporation & NTT Micorsystem Integration Laboratories, Japan); Hiroyuki Takahashi (NTT Corporation, Japan); Jun Takeuchi (NTT Corporation, Japan); Naoya Kukutsu (NTT Corporation, Japan); Dongjin Kim (Tokyo Institute of Technology, Japan); Jiro Hirokawa (Tokyo Institute of Technology, Japan)

09:40 High Gain 60 GHz LTCC Chain Antenna Array with Substrate Integrated Waveguide Feed Network

Antti E. I. Lamminen (VTT Technical Research Centre of Finland, Finland); Jussi Säily (VTT Technical Research Centre of Finland, Finland)

10:00 Millimeter-wave Antenna Pattern Measurement Using High Extinction Ratio Mach-Zehnder Modulator

Michitaka Ameya (NMIJ/AIST, Japan); Satoru Kurokawa (National Institute of Advanced Industrial Science and Technology, Japan); Masanobu Hirose (National Institute of Advanced Industrial Science and Technology, Japan)

10:20 60 GHz Polarimetric MIMO Sensing: Architectures and Technology

Alexis Paolo Garcia Ariza (Ilmenau University of Technology & Institute of Information Technology, Germany); Robert Müller (TU Ilmenau, Germany); Ralf Stephan (Technische Universität Ilmenau, Germany); Frank Wollenschläger (Ilmenau University of Technology, Germany); Alexander Schulz (Ilmenau University of Technology, Germany); Mohamed Elkhoully (IHP, Germany); Christoph Scheytt (IHP, Germany); Uwe Trautwein (MEDAV GmbH, Germany); Jens Müller (Ilmenau University of Technology, Germany); Reiner S. Thomä (Ilmenau University of Technology, Germany); Matthias Hein (Ilmenau University of Technology, Germany)

10:40 Coffee Break**11:00 Innovative Multilayered Millimetre-Wave Antennas for Multi-Dimensional Scanning and Very Small Footprint Applications**

Tarek Djerafi (Ecole Polytechnique de Montreal, Canada); Olivier Kramer (Ecole Polytechnique de Montreal, Canada); Nasser Ghassemi (Ecole Polytechnique de Montreal, Canada); Ajay Babu Guntupalli (Ecole Polytechnique, University of Montreal, Canada); Bassel Youzkati-EI-Khatib (Ecole Polytechnique de Montreal, Canada); Ke Wu (Ecole Polytechnique (University of Montreal) & Center for Radiofrequency Electronics Research of Quebec, Canada)

11:20 A Three-Dimensional Metal-Only Reflectarray with Multiple Rectangular Grooves and an Open-Ended Rectangular Waveguide (OERW) Feed

Woo Jin Byun (Electronics and Telecommunications Research Institute, Korea); Yong Heui Cho (Mokwon University, Korea)

09:00–12:40 **Club H**
CA06: Reconfigurable Antenna Arrays Theory, Implementations and Applications

11:40 Antenna-in-Package Using PCB and IPD Technologies for 60 GHz Applications
 Diane Titz (University of Nice, France); Fabien Ferrero (University of Nice, France); Cyril Luxey (University of Nice Sophia-Antipolis, France); Gilles Jacquemod (University of Nice, France); Claire Laporte (STMicroelectronics, France); Hilal Ezzeddine (STMicroelectronics, France)

12:00 60 GHz Antennas and Module Development for WiGig Applications
 Romain Pilard (STMicroelectronics, Technology R&D, STD, TPS Lab, France); Frederic Giancesello (Crolles, France); Daniel Gloria (STMicroelectronics, France)

12:20 Antennas on Silicon: Hybrid Integration Versus SoC Solutions?
 Christian Person (Lab-STICC/MOM UMR CNRS, France); Christophe Calvez (Telecom Bretagne University, France); Juan Pablo Guzman (Telecom Bretagne University, France); Yenny C Pinto (Telecom Bretagne & WHISTLAB, France); Michel Ney (TELECOM Bretagne Institute, France); Didier Belot (ST Microelectronics, France); Daniel Gloria (STMicroelectronics, France); Romain Pilard (STMicroelectronics, Technology R&D, STD, TPS Lab, France); Denis Pache (ST Microelectronics, France); Nejdlat Demirel (IMS, France); Eric Kerhervé (University of Bordeaux, France)

Chairs: Paolo Rocca (University of Trento, Italy), Tommaso Isernia (University of Reggio Calabria, Italy)

09:00 On the Design of Butler-like Type Matrices for Low SLL Multibeam Antennas
 Fanourios Fakoukakis (Democritus University of Thrace, Microwaves Lab Xanthi, Greece); George Kyriacou (Democritus University of Thrace, Greece); John Sahalos (Aristotle University of Thessaloniki, GR, Thessaloniki & University of Nicosia, CY, Nicosia, Greece)

09:20 A Projection Approach to Model the Main Beam of Non-Regular Arrays in Presence of Mutual Coupling
 Christophe Craeye (Université Catholique de Louvain, Belgium); David González-Ovejero (Université catholique de Louvain, Belgium); Nima Razavi Ghods (University of Cambridge, United Kingdom); Eloy de Lera Acedo (University of Cambridge, United Kingdom)

09:40 A Metasurface Isoflux Antenna
 Gabriele Minatti (University of Siena, Italy); Stefano Maci (University of Siena, Italy); Patrizio De Vita (IDS Ingegneria Dei Sistemi, Italy); Angelo Freni (University of Florence, Italy); Marco Sabbadini (Esa Estec, The Netherlands)

10:00 C-band and Ka-band Reconfigurable Planar Reflectors
 Philippe Ratajczak (Orange Labs, France); Patrice Brachat (France Telecom, France); Jean-Marc Fargeas (Orange Labs, France); Jean-Marc Baracco (Mardel, France); Giovanni Toso (European Space Agency, The Netherlands)

10:20 Synthesis of Co-Polar and Cross-Polar Patterns with Dynamic Range Ratio Reduction for Phase-Only Reconfigurable Arrays
 Giulia Buttazoni (University of Trieste, Italy); Roberto Vescovo (University of Trieste, Italy)

10:40 Coffee Break

11:00 Design of a Reconfigurable Reflectarray Based on a Varactor Tuned Element
 Francesca Venneri (University of Calabria, Italy); Sandra Costanzo (University of Calabria, Italy); Giuseppe Di Massa (University of Calabria, Italy); Antonio Borgia (DEIS - University of Calabria, Italy); Pasquale Corsonello (University of Calabria, Italy); Marco Salzano (University of Calabria, Italy)

11:20 Reconfigurable Sensor Networks with a Real Time Optimization Method
 Oscar Quevedo-Teruel (Universidad Autónoma de Madrid, Spain); Eva Rajo-Iglesias (University Carlos III of Madrid, Spain)

11:40 An On-Board Reconfigurable Antenna System for Ka-Band Broadcasting Satellite Services
 Piero Gabellini (Space Engineering S.p.a., Italy); Nicola Gatti (Space Engineering, Italy); Carlo Capsoni (Politecnico di Milano, Italy); Laura Resteghini (Politecnico di Milano, Italy); Antonio Martellucci (European Space Agency, The Netherlands); Peter Rinous (European Space Agency (ESTEC), The Netherlands)

12:00 Dynamic Array Beamforming by Photonic Feedback Sensor Network
 Pietro Vinetti (Innovation Team, SELEX Sistemi Integrati, Italy); Michele D'Urso (SELEX Sistemi Integrati, Italy); Massimiliano Dispenza (Selex-SI, Italy)

12:20 Multiband Shared Aperture Adaptive Array
 Yoshihiko Kuwahara (Shizuoka University, Japan)

09:00–12:40 **Room III**
A12: Mobile Communication

Chairs: Anja K Skrivervik (EPFL, Switzerland), Jaume Anguera (Fractus, Spain)

09:00 Evaluation of LTE Link-Level Performance with Closed Loop Spatial Multiplexing in a Realistic Urban Macro Environment
 Christian Schneider (Ilmenau University of Technology, Germany); Reiner S. Thomä (Ilmenau University of Technology, Germany)

09:20 ANALYSIS of Some Techniques to Enhance the Bandwidth of HANDSET ANTENNAS USING METALLIC STRIPS
 Jaume Anguera (Fractus, Spain); Aurora Andújar (Fractus, Spain); Cristina Picher (Fractus, Spain); Carles Puente (Fractus, Spain); Sungtek Kahng (University of Incheon, Korea)

09:40 Low-Profile Ka-Band Satellite Terminal Antenna Based on a Dual-Band Partially Reflective Surface
 Alexander Krauss (Ilmenau University of Technology, Germany); Hendrik Bayer (Ilmenau University of Technology, Germany); Ralf Stephan (Technische Universität Ilmenau, Germany); Matthias Hein (Ilmenau University of Technology, Germany)

10:00 Metamaterial-inspired Antennas for Telecommunication Applications
 Giorgio Bertin (Telecom Italia Lab, Italy); Bruno Piovano (Telecom Italia Lab, Italy); Roberto Vallauri (Telecom Italia, Italy); Filiberto Bilotti (University Roma Tre, Italy); Lucio Vegni (University of Roma Tre, Italy)

10:20 Multiband Handset Antennas by Combining Monopoles and Intelligent Ground Planes
 Cristina Picher (Fractus, Spain); Jaume Anguera (Fractus, Spain); Aurora Andújar (Fractus, Spain); Carles Puente (Fractus, Spain); Adrián Bujalance (Universitat Ramon Llull, La Salle, Spain)

10:40 Coffee Break

09:00–12:40 Room IV**A06: Beamforming, Data Processing and Multiple Beam Antennas****11:00 Ground Plane Booster Antenna Technology. Human Head Interaction: Functional and Biological Analysis**

Aurora Andújar (Fractus, Spain); Jaume Anguera (Fractus, Spain); Cristina Picher (Fractus, Spain); Carles Puente (Fractus, Spain)

11:20 MIMO Performance Optimisation of Car Antennas

Matthias Geissler (IMST, Germany); Christos Oikonomopoulos-Zachos (IMST GmbH, Germany); Taleb Ould (IMST, Germany); Matthias Arnold (IMST GmbH, Germany)

11:40 Study on the Minimum Required Size of the Low-Band Cellular Antenna in Variable-Sized Mobile Terminals

Jari P Holopainen (Aalto University School of Electrical Engineering, Finland); Janne Ilvonen (Aalto University School of Electrical Engineering, Finland); Risto Valkonen (Aalto University, Finland); Bin Abdullah Al-Hadi Azremi (Aalto University School of Electrical Engineering, Finland); Pertti Vainikainen (Aalto University, Finland)

12:00 User Influence on the Mean Effective Gain for Data Mode Operation of Mobile Handset

Jesper Ø Nielsen (Aalborg University, Denmark); Boyan R Yanakiev (Molex & Aalborg University, Denmark); Ivan Bonev (, Denmark); Morten Christensen (Molex Interconnect, Denmark); Gert Pedersen (Aalborg University, Denmark); Cyril Luxey (University of Nice Sophia-Antipolis, France); Aliou Diallo (University of Nice, France); Ibra Dioum (Ecole Supérieure Polytechnique – Université Cheikh Anta Diop, Senegal)

12:20 Wideband Circular Polarised Antenna with High Polarisation Purity Over a Wide Angular Range

O Malyuskin (Queens University Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom)

Chairs: Manuel Sierra Perez (Universidad Politécnica de Madrid, Spain), Christian Rusch (Karlsruhe Institute of Technology, Germany)

09:00 Effect of Beamforming on Full and Semi Cooperative MIMO in Real Measured Channels

Maryam Rahimi (Aalborg University, Denmark); Elisabeth de Carvalho (Aalborg University, Denmark); Boyan R Yanakiev (Molex & Aalborg University, Denmark); Gert Pedersen (Aalborg University, Denmark)

09:20 60 GHz Membrane Antenna Array for Beam Steering Applications

Mikko Kyrö (Aalto University School of Electrical Engineering, Finland); Veli-Matti Kolmonen (Aalto University & School of Electrical Engineering, Finland); Pertti Vainikainen (Aalto University, Finland); Diane Titz (University of Nice, France); Cyril Luxey (University of Nice Sophia-Antipolis, France); Christina Villeneuve (LAAS-CNRS University of Toulouse, France)

09:40 Circularly Polarized Multi-Beam Lens Antenna System. Comparison Between 2 Polarizers

Marco Letizia (École Polytechnique Fédérale de Lausanne, Switzerland); Jean-François Zürcher (EPFL, Switzerland); Benjamin Fuchs (EPFL - LEMA, Switzerland); Carlos Zorraquino Gastón (Universidad Carlos III de Madrid, Spain); Juan R Mosig (Ecole Polytechnique Federale de Lausanne, Switzerland)

10:00 Phase Optimization for Near Field Focus on Simultaneous Targets Using Antenna Arrays

Jana Álvarez (University of Oviedo, Spain); Rafael Ayestarán (University of Oviedo, Spain); Germán León (Universidad de Oviedo, Spain); Jesús Alberto López-Fernández (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

10:20 On the Design and Measurement of a Novel Non-Orthogonal Multi-Beam Network for Triangular Arrays of Three Radiating Elements

Javier García-Gasco Trujillo (Universidad Politécnica de Madrid, Spain); Álvaro Noval Sánchez de Toca (Universidad Politécnica Madrid & Grupo de Radiación, Spain); Ignacio Montesinos-Ortego (Technical University of Madrid, Spain); Manuel Sierra Perez (Universidad Politécnica de Madrid, Spain)

10:40 Coffee Break**11:00 Deterministic Beamforming for Enhanced Vertical Sectorization and Array Pattern Compensation**

Elpiniki Tsakalaki (Aalborg University, Greece); Luis Maestro Ruiz de Temiño (Nokia-Siemens Networks, Spain); Tomi Haapala (Nokia Siemens Networks, Finland); Javier López Román (Vodafone Technology Networks, Spain); Miguel Arranz (, Spain)

11:20 Planar Beam Switched Antenna with Butler Matrix for 60 GHz WPAN

Christian Rusch (Karlsruhe Institute of Technology, Germany); Christian Karcher (Karlsruhe Institute of Technology, Germany); Stefan Beer (Karlsruhe Institute of Technology, Germany); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

11:40 A High Performance Circular Polarised Retrodirective Antenna with Basic Array Function for Service Activated SATCOM Systems

Neil Buchanan (Queens University Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom); Maarten van der Vorst (European Space Agency, The Netherlands); O Malyuskin (Queens University Belfast, United Kingdom)

12:00 Coherently Fed Frequency Scanning Phased Array Structure for Imaging Applications

Belen Larumbe-Gonzalo (Antenna Group. Public University of Navarra, Spain); Ainara Rebollo (Public University of Navarra, Spain); Jorge Teniente (Public University of Navarra, Spain)

12:20 Antenna Module with Integrated Scan-Phase Antenna Diversity System for SDARS

Simon Senega (University of the Bundeswehr Munich, Germany); Stefan Lindenmeier (Universität der Bundeswehr, Germany)

14:00–16:20 **Poster Hall****POST3: Poster Session 3 – Antennas**

Chairs: Geoffroy Lerosey (Institut Langevin - ESPCI ParisTech and CNRS, France), Jussi Rahola (Optenni Ltd, Finland), Milan Kvicera (Czech Technical University in Prague, Czech Republic)

1) Design and Analysis of a Compact Size Planar Antenna for UWB Applications

Emad Tammam (Egypt-Japan University of Science and Technology & Minia University, Egypt); Kuniaki Yoshitomi (Kyushu University, Japan); Ahmed Allam (Egypt-Japan University of Science and Technology, Egypt); Mohamed El-Sayed (Alexandria University, Egypt); Ramesh K Pokharel (Kyushu University, Japan); Keiji Yoshida (Kyushu University, Japan)

2) A Novel Compact Ultra-Wideband Dipole Antenna

Dinh Thanh Le (University of Electro-Communications, Japan); Yoshio Karasawa (University of Electro-Communications, Japan)

3) A Proximity-Fed Ultra-Wideband Annular Slot Antenna with Band-Notch Characteristics Via a Split-Ring Parasitic Element

Elsayed Esam Khaled (Assiut University & Engineering Faculty, Egypt); Ayman Saad (Minia University, Egypt); Deena Salem (Electronics Research Institute, Egypt)

4) Square Circular Polarized Dielectric Resonator Antenna with a Rotated Notch

Ali Khalaj (University Technology Malaysia, Iran); Mohamad Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia); Noor Asniza Murad (Universiti Teknologi Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Universiti Teknologi Malaysia, Malaysia)

5) Guided Wave Structure for Dual Leaky-Mode Microstrip Antenna Design

Guang-Fu Cheng (National Taiwan University, Taiwan); Ching-Kuang Tzuang (National Taiwan University, Taiwan)

6) H-Shaped Microstrip Patch Antenna Using L-Probe Fed for Wideband Applications

Mohd Tarmizi Ali (Universiti Teknologi Mara, Malaysia); Norhaslin Nordin (Universiti Teknologi MARA, Malaysia); Idnin Pasya (University Teknologi MARA, Malaysia); Mohd Nor Md Tan (University Technology Mara, Malaysia)

7) Novel Loop and Dipole Based UWB Antennas for GPR and Communication Applications

Hugo Jenks (University of Bath, United Kingdom); Stephen Pennock (University of Bath, United Kingdom); Miles Redfern (University of Bath, United Kingdom); Giovanni Orlando (University of Bath, United Kingdom)

8) A UWB Monopole Antenna for GPR Application

Ping Cao (University of Liverpool, United Kingdom); Yi Huang (University of Liverpool, United Kingdom); Jingwei Zhang (University of Liverpool, United Kingdom)

9) New EBG Solutions for Mutual Coupling Reduction

Gonzalo Expósito-Domínguez (Universidad Politécnica de Madrid & Radiation Group, Spain); José-Manuel Fernández-González (Universidad Politécnica de Madrid, Spain); Pablo Padilla (University of Granada, Spain); Manuel Sierra-Castañer (Technical University of Madrid, Spain)

10) Filtering EBG Structures Implemented in Coplanar Waveguide Feedline of Planar Slot Antenna

Piotr Kurgan (Gdansk University of Technology, Poland); Adrian Bekasiewicz (Gdansk University of Technology, Poland); Marek Kitlinski (Gdansk University of Technology, Poland)

11) Bandwidth Enhancement Through Coupling Microstrip Patch Antenna and Electromagnetic Band-Gap Resonances

Ramona Cosmina Hadarig (Universidad de Oviedo, Spain); María Elena de Cos (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

12) On the Bandwidth Enhancement of Patch Antenna Using EBG/AMC Structures

Ramona Cosmina Hadarig (Universidad de Oviedo, Spain); María Elena de Cos (Universidad de Oviedo, Spain); Fernando Las-Heras (Universidad de Oviedo, Spain)

13) Scattering and Reflection of a Quasi-Periodic Unit Cell Sequence for Reflectarray and Holographic Applications

Yogesh Ranga (CSIRO, Australia); Stuart G Hay (CSIRO ICT Centre, Australia); Ladislau Matekovits (Politecnico di Torino & Macquarie University, Sydney, Italy); Mario Orefice (Politecnico di Torino, Italy); Karu Esselle (Macquarie University, Australia)

14) Towards Experimental Investigation of Metamaterial-based DB Surface in Waveguide Environment

Davor Zaluski (University of Zagreb, Croatia); Damir Muha (University of Zagreb, Croatia); Silvio Hrabar (University of Zagreb, Croatia)

15) Multiple Fork-Like EBG Structure and Its Analysis as Artificial Magnetic Conductor

Mohammad Mehdi Fakharian (Electrical Engineering and Computer, Semnan University, Iran)

16) A Compact Five-Band SLR Type Metamaterial

Ozan Yurduseven (Ankara University, Turkey); Asim Yilmaz (Ankara University, Turkey); Gönül Turhan Sayan (Middle East Technical University, Turkey)

17) Some Design Parameters for High Q Filters Built in Metamaterial Technology

Ladislau Matekovits (Politecnico di Torino & Macquarie University, Sydney, Italy); Aldo De Sabata (Politecnica University of Timisoara, Italy)

18) Experimental and Numerical Investigations of Oscillations in Extracted Material Parameters for Finite Bragg Stacks Using the NRW Method

Niels C. J. Clausen (Technical University of Denmark, Denmark); Samel Arslanagić (Technical University of Denmark, Denmark); Olav Breinbjerg (Technical University of Denmark, Denmark)

19) Analysis of the Radiation Characteristics of CRLH LWAs Around Broadside

Juan Sebastián Gomez-Díaz (EPFL, Switzerland); Alejandro Alvarez-Melcon (Technical University of Cartagena, Spain); Julien Perruisseau-Carrier (Ecole Polytechnique Fédérale de Lausanne & EPFL, Switzerland)

20) Dispersion Analysis of a Reconfigurable Unit Cell in a One Dimensional Periodic Architecture

Dushmantha Thalakituna (Macquarie University, Australia); Ladislau Matekovits (Politecnico di Torino & Macquarie University, Sydney, Italy); Karu Esselle (Macquarie University, Australia); Stuart G Hay (CSIRO ICT Centre, Australia); Michael Heimlich (Macquarie University, Australia)

21) Textile Artificial Magnetic Conductor for GPS Applications

Marcio Silva Pimenta (Laboratoire d'Electronique Antennes et Télécommunications, France); Fabien Ferrero (University of Nice, France); Patrice Brachat (France Telecom, France); Philippe Ratajczak (Orange Labs, France); Robert Staraj (University of Nice-Sophia Antipolis, France); Jean Marc Ribero (LEAT, France)

22) Compact and Broadband Leaky Wave Antenna Using Composite Right/Left-Handed Transmission Line for Mobile Handsets

Hirohisa Kitahara (National Defense Academy, Japan); Naobumi Michishita (National Defense Academy, Japan); Yoshihide Yamada (National Defense Academy, Japan)

23) Artificial Magnetic Conductors Realized by Planar Array of Loaded Loop for Antenna Applications

Seyed Mohammad Hashemi (Iran University of Science & Technology, Iran); Mohammad Soleimani (Iran University of Science and Technology, Iran)

24) Designing a Partially Reflective Surface for Tri-band Sectoral Antennas

Mohamad Hajj (CISTEME-ESTER Technopole, France); Regis Chantalat (CISTEME, France); Moustapha Salah Toubet (XLIM - UMR 6172 – CNRS, University of Limoges, France); Bernard Jecko (University of Limoges, France)

25) Ultra Wide Stop Band LPF with Using Defected Microstrip Structures

Alireza Mallahzadeh (Shahed University, Iran); Bahman Rahmati (Shahed University, Iran); Mahmood Alamolhoda (Islamic Azad University, Iran); Amirhossein Ghasemi (Université Paris Ouest La Défense, France)

26) Flat Cavity Antenna

Aleksey Ershov (Southern Ural State University, Russia)

27) Horizontally Polarized Omnidirectional Segmented Loop Antenna

Xianming Qing (Institute for Infocomm Research, Singapore); Zhi Ning Chen (Institute for Infocomm Research, Singapore)

28) High Gain Circular Polarization Antenna for 5.8 GHz with Left-Handed Materials

Aline Coelho de Souza (IMEP-LAHC, France); Tan Phu Vuong (Grenoble INP, France); Christian Defay (MultiToll Solutions SAS, France)

29) A Printed Radial Configuration of Width-Modulated Strip-Lines for Controlled Guided-Wave Radiation

Symon K Podilchak (Queen's University & Royal Military College of Canada, Canada); Ladislau Matekovits (Politecnico di Torino & Macquarie University, Sydney, Italy); Al P. Freundorfer (Queen's University, Canada); Yahia Antar (Royal Military College of Canada, Canada); Mario Orefice (Politecnico di Torino, Italy)

30) Electrical Small Meander Line Patch Antenna

Sarina Pasakawee (University of Manchester, United Kingdom)

31) Volume Reduction of Planar Substrate Integrated Waveguide Cavity-Backed Antennas

Christian Tovar (Universidad de los Andes, Colombia); Juan Bohorquez (Universidad de Los Andes, Colombia); Omar Nova Manosalva (Universidad de Los Andes, Colombia); Néstor M. Peña (Universidad de los Andes, Colombia)

32) Optimal Design of Wideband Microstrip Arrays with High Aperture Efficiency on FR4 Substrate

Zhongkun Ma (Katholieke Universiteit Leuven, Belgium); Guy A. E. Vandenbosch (Katholieke Universiteit Leuven, Belgium)

33) Planar Antenna Arrays for Long Range Links

Jan Puskely (Brno University of Technology, Czech Republic); Libor Slama (Tesla a. s., Czech Republic); Zbynek Raida (Brno University of Technology, Czech Republic)

34) 1-6 GHz UWB Phase Shifter Design and Implementation with Surface Micromachining

Korkut Kaan Tokgöz (Middle East Technical University, Turkey); Çağrı Çetintepe (Middle East Technical University, Turkey); Şimşek Demir (Middle East Technical University, Turkey)

35) Compact UWB Power Divider Packaged by Using Gap-Waveguide Technology

Hasan Raza (Chalmers University of Technology, Sweden); Jian Yang (Chalmers University of Technology, Sweden)

36) Comparisons of Solutions for Forward Scattering

Vladimir Schejbal (University of Pardubice, Czech Republic); Ondrej Fiser (Institute of Atmospheric Physics & Fac. of Electrical Engineering and Informatics/Uni of Pardubice, Czech Republic); Petr Svoboda (Consulting Engineer, Czech Republic)

37) SBR Ray Tracing on NURBS for Electromagnetic Scattering Simulations

Frank Weinmann (Fraunhofer FHR, Germany)

38) Performance of an Enclosed MEMS Mounted Shunt on a CPW Line

Jérôme Massiot (ONERA, France)

39) A Single Feed Reconfigurable Polarization Printed Monopole Antenna

Mohammad Hosein Amini (University of Shahed, Iran); Hamid Reza Hassani (Shahed University, Iran); Sajad Mohammad ali nezhad (Shahed university, Iran)

40) A New Switched Polarisation Antenna

Farid Ghanem (Centre de Développement des Technologies Avancées, Algeria)

41) Tunable PIFA Slot Antenna for Mobile Handset and WLAN Applications

Issa Elfergani (University of Bradford, United Kingdom); Abubakar Sadiq Hussaini (Instituto de Telecomunicações & University of Bradford, Portugal); Raed A Abd-Alhameed (University of Bradford, United Kingdom); Stephen M R Jones (University of Bradford, United Kingdom); Mark Child (University of Bradford, United Kingdom); Jonathan Rodriguez (Instituto de Telecomunicações, Portugal)

42) Frequency Reconfigurable Aperture Coupled Antenna

Muhammad Faizal Ismail (Universiti Teknologi Malaysia, Malaysia); Mohamad Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia); Huda A. Majid (Universiti Teknologi Malaysia, Malaysia); Mohamad Rijal Hamid (Universiti Teknologi Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Universiti Teknologi Malaysia, Malaysia); Noor Asniza Murad (Universiti Teknologi Malaysia, Malaysia)

43) Optimization Procedures for the Design of Reconfigurable Compact Multi-Band Antennas

Sergio Arianos (Politecnico di Torino, Italy); Javier Araque Quijano (Universidad Nacional de Colombia, Colombia); Francesca Vipiana (Istituto Superiore Mario Boella (ISMB), Italy); Gianluca Dassano (Politecnico di Torino, Italy); Giuseppe Vecchi (Politecnico di Torino, Italy); Mario Orefice (Politecnico di Torino, Italy)

44) Evaluation of a Reflectarray with Independent Scanning of Two Linearly-Polarized Beams

Eduardo Carrasco (Universidad Politécnica de Madrid & ETSI-Telecomunicacion, Spain); Jose A. Encinar (Universidad Politécnica de Madrid, Spain); Julien Perruisseau-Carrier (Ecole Polytechnique Fédérale de Lausanne & EPFL, Switzerland)

45) Shaped Beam Synthesis for Shaped Reflector Antenna Using PSO Algorithm

Mohammad Mehdi Samadi Taheri (Shahed University, Iran); Alireza Mallahzadeh (Shahed University, Iran); Ali Foudazi (Shahed University & Iran Telecommunication Research Center, Iran)

46) Design and Shaping of Offset Dual-Reflector Antennas From Far-Field and Near-Field Measurements of the Feed Horns

Ahmed Fachar (Universidad Politécnica de Madrid & Radiation Group, Spain); Leandro De Haro Ariet (Polytechnic University of Madrid, Spain)

47) 2D Beam-Steering with Non-Symmetrical Beam Using Non-Symmetrical Integrated Lens Antenna
Aki Karttunen (Aalto University, Finland); Juha Ala-Laurinaho (Aalto University, Finland); Ronan Sauleau (University of Rennes 1, France); Antti V. Räsänen (Aalto University, Finland)

48) Retrodirective Rotman Lens Constraining Factors
Yunhua Zhang (Queen's University of Belfast, United Kingdom); Steven Christie (Queens University of Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom); Robert Cahill (Queens University Belfast, United Kingdom); Jian Zhang (Queen's University of Belfast, United Kingdom)

49) Radome Design for Hat-Fed Reflector Antenna
Erik G Geterud (Chalmers University of Technology, Sweden); Jian Yang (Chalmers University of Technology, Sweden)

50) Measurement Campaign of the Ka-Band Discrete Lens Antenna for Multibeam Applications
Oier Dominguez (University of Basque Country, Spain); Juan Lizarraga (Public University of Navarra, Spain); Jorge Teniente (Public University of Navarra, Spain); Carlos Del-Río (Public University of Navarra & Antenna Group, Spain)

51) Improvement of Parameters Electrically Small Antennas of a Microwave Range
Viktor Vladimirovich Ovsyanikov (Dnipropetrovsk National University named after Oles Gonchar, Ukraine); Yevgeniy Romanenko (Yuzhnoe State Design Office, Ukraine); Olexandr Makarov (Yuzhnoe State Design Office, Ukraine); Olexandr Ol'shevs'kiy (Yuzhnoe State Design Office, Ukraine)

52) Analysing Admittance of Obstacles in Evanescent Waveguide Using the Imaginary Smith Chart
Peter Ludlow (Queen's University Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom); Dmitry E Zelenchuk (Queen's University of Belfast, United Kingdom)

53) Wireless Sensors Remotely Powered by RF Energy
Hubregt J. Visser (imec The Netherlands, The Netherlands); Ruud Vullers (imec-Netherlands, The Netherlands)

54) A Novel RFID Tag Antenna Mountable on Metallic Objects
Majid Alkhambashi (University of Bradford, United Kingdom); Abubakar Sadiq Hussaini (Instituto de Telecomunicações & University of Bradford, Portugal); Raed A Abd-Alhameed (University of Bradford, United Kingdom); Chan Hwang See (University of Bradford, United Kingdom); Jim M. Noras (University of Bradford, United Kingdom); Mark Child (University of Bradford, United Kingdom); Jonathan Rodriguez (Instituto de Telecomunicações, Portugal)

55) Circular Polarization Wire Patch Antenna for RFID Applications
Sylvain Pflaum (LEAT CNRS University of Nice Sophia Antipolis, France); Robert Staraj (University of Nice-Sophia Antipolis, France); Georges Kossivavas (University of Nice, France)

56) Detection of Spiral Resonator Array for Chipless RFID
Milan Polivka (Czech Technical University in Prague, Czech Republic); Jaroslav Havlíček (Czech Technical University in Prague, Czech Republic); Milan Svanda (Czech Technical University in Prague, Czech Republic); Jan Macháč (Czech Technical University in Prague, Czech Republic)

57) Meandered Monopole Coupled Loop Antenna
Yaakoub Taachouche (Institute of Electronic and Telecommunication of Rennes (IETR) & University of Rennes 1, France); Franck Colombel (Université de Rennes 1, France); Mohamed Himdi (Université de Rennes 1, France)

58) A Consideration of Open- and Short-End Type Helical Antennas for Magnetic-Coupled Resonant Wireless Power Transfer
Hiroshi Hirayama (Nagoya Institute of Technology, Japan); Tomohiro Amano (Nagoya Institute of Technology, Japan); Nobuyoshi Kikuma (Nagoya Institute of Technology, Japan); Kunio Sakakibara (Nagoya Institute of Technology, Japan)

59) Wireless UHF RFID Chip Impedance Measurement by Only Using an RFID Reader
Michael Heiss (Fraunhofer IPMS, Germany); Wolf-Joachim Fischer (Fraunhofer IPMS, Germany)

60) Measurements of a RFID Antenna for Cable Identification Application
Tin Komljenovic (University of Zagreb, Croatia); Zvonimir Sipus (University of Zagreb, Croatia); Juraj Bartolić (University of Zagreb, Croatia); Igor Krois (University of Zagreb, Croatia)

61) Design and Analysis of Efficient Fractal Antennas for UHF RFID Passive Tags
Emmanuel Aivazis (Aristotle University, Greece); Katherine Siakavara (Aristotle University, Greece); John Sahalos (Aristotle University of Thessaloniki, GR, Thessaloniki & University of Nicosia, CY, Nicosia, Greece)

62) Optimizing the Localization Accuracy of a RTLS Sensor Node by Using a Metal Reflector
Evanaska Nogueira (IMEP-LAHC, France); Mathieu Huchard (Fireflies RTLS, France); Fabien Ndagijimana (University Joseph Fourier & IMEP-LAHC lab, France); Tan Phu Vuong (Grenoble INP, France)

63) UHF RFID Humidity Sensor Tag Based on Hygroscopic Polymeric Load
Sabina Manzari (University of Rome Tor Vergata, Italy); Cecilia Occhiuzzi (University of Rome „Tor Vergata“, Italy); Shankar Nawale (Veer mata Jijabai Technological Institute, Mumbai, Italy); Alexandro Catini (University of Roma Tor Vergata, Italy); Corrado Di Natale (Università di Roma Tor Vergata, Italy); Gaetano Marrocco (University of Rome Tor Vergata, Italy)

64) Bandwidth Improvement of Compact High Permittivity RDRA Using Parasitic Conducting Strips
Ehab Hamad (Aswan Faculty of Engineering, South Valey University, Egypt); Hany Atallah (South Valley University, Egypt)

65) Miniaturized PIFA Antenna for 2.4 GHz ISM Band Applications
Wen-Jiao Liao (National Taiwan University of Science and Technology, Taiwan); Te-Ming Liu (National Taiwan University of Science and Technology, Taiwan); Shu-Yin Ho (National Taiwan University of Science and Technology, Taiwan)

66) A Novel Metamaterial-Based RFID Antenna with Efficient of Operating Distance
Maciej Smierzchalski (IETR - University of Rennes 1, France); Sylvain Collardey (University of Rennes 1, France); Kourosh Mahdjoubi (University of Rennes 1, France)

67) The Design of CRLH-Based Compact LTE MIMO Antennas
Seongryong Yoo (University of Incheon, Korea); Kyungseuk Kahng (University of Incheon, Korea); Sungtek Kahng (University of Incheon, Korea); Inkyu Yang (University of Incheon, Korea); Jeongho Ju (Electronics and Telecommunications Research Institute, Korea); Jaume Anguera (Fractus, Spain)

- 68) A Small Size Nickel-Ferrite Rectangular Dielectric Resonator Antenna**
Elder Oliveira (Universidade Federal do Rio Grande do Norte, Brazil); Adaildo Dassuncao (Federal University of Rio Grande do Norte & UFRN - CT - DCO, Brazil); Joao Oliveira (Federal University of Rio Grande do Norte, Brazil); Alciney Cabral (Federal University of Rio Grande do Norte, Brazil); Lucianna Vieira (Federal University of Campina Grande, Brazil)
- 69) Pattern Synthesis of Linear Antenna Arrays Using a Genetic Algorithm with Physical Size Constraint**
Matthew Hawes (University of Sheffield, United Kingdom); Wei Liu (University of Sheffield, United Kingdom)
- 70) Circularly Polarized Elliptical Dielectric Resonator Antenna with a Conformal Strip Excitation**
Hassan Al-Lawati (University of Sheffield, United Kingdom); Salam Khamas (University of Sheffield, United Kingdom)
- 71) Electrodynamic Characteristics of a Loop Antenna Located on the Surface of an Axially Magnetized Plasma Column**
Anna Zaitseva (University of Nizhny Novgorod, Russia); Alexander Kudrin (University of Nizhny Novgorod, Russia); Tatyana Zaboronkova (Technical University of Nizhny Novgorod, Russia)
- 72) Leaky-Wave Long Slot Antenna Design Using Ridged Waveguide**
Alireza Mallahzadeh (Shahed University, Iran); Mohammad Hosein Amini (University of Shahed, Iran); Sajad Mohammad ali nezhad (Shahed university, Iran)

- 73) Differential Evolution as Applied to Electromagnetics: Advances, Comparisons, and Applications**
Giacomo Oliveri (University of Trento & ELEDIA Research Center, Italy); Paolo Rocca (University of Trento, Italy); Andrea Massa (University of Trento, Italy)
- 74) Active Directional Attenuators**
Hynek Bartik (Czech Technical University in Prague, Czech Republic)
- 75) Analysis of a Bent-Dipole**
Christian Fazi (ARL, USA); Christopher Kenyon (ARL, USA); Robert Atkinson (ARL, USA)
- 76) Improvement of Sensitivities of Single-Layer Multiple Ring Elements for the Design of Reflectarrays**
Iván Barriuso (University of Cantabria, Spain); Angel Luis Gutiérrez (University of Cantabria, Spain); Marta Lanza (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)
- 77) Active Impedance Calculation in Uniform Microstrip Patch Antenna Arrays with Simulated Data**
Mustafa Secmen (Yasar University, Turkey)
- 78) An EER Based Phase Conjugator for Retrodirective Response Using Modern Wireless Signal Formats**
Reinel Marante (Universidad de Cantabria, Spain); Nieves Ruiz (Universidad de Cantabria, Spain); Jose A García (Universidad de Cantabria, Spain); Lorena Cabria (TTI, Spain)
- 79) Annular Ring Slot Radiating Element for Integrated Millimeter Wave Arrays**
G. Amendola (Universita della Calabria, Italy); Emilio Arnieri (Universita' della Calabria, Italy); Luigi Boccia (University of Calabria, Italy); Volker Ziegler (EADS Innovation Works, Germany)

- 80) Low-Cost Variable Fidelity Bayesian Support Vector Machine Modeling of Planar Slot Antennas**
J. Pieter Jacobs (University of Pretoria, South Africa); Slawomir Koziel (Reykjavik University, Iceland); Stanislav Ogurtsov (Reykjavik University, Iceland)
- 81) Analytical Model for TM Scattering of 1-D Narrow Slit Gratings Loaded with Dielectric Slabs**
Raúl Rodríguez-Berral (Universidad de Sevilla, Spain); Francisco Mesa (University of Seville, Spain); Francisco Medina (University of Seville, Spain)
- 82) RCS Analysis of Finite Graphene Sheets Through an Enhanced Frequency-Dependent FDTD Method**
George Bouzianas (Aristotle University of Thessaloniki, Greece); Nikolaos V. Kantartzis (Aristotle University of Thessaloniki, Greece); Theodoros Tsiboukis (Aristotle University of Thessaloniki, Greece)
- 83) A Sequentially Rotated RHCP Stacked Patch Antenna Array for INMARSAT-M Land Applications**
Sara Kaffash (K.N.Toosi University of Technology, Iran)
- 84) Resonant Frequency Analysis of Microstrip Antenna on Dielectric-Magnetic Medium**
Cristhianne Vasconcelos (Federal University of Rio Grande do Norte, Brazil); Maria Albuquerque (Federal University of Rio Grande do Norte, Brazil); Valdemir Neto (Federal University of Rio Grande do Norte, Brazil); Adaildo Dassuncao (Federal University of Rio Grande do Norte & UFRN - CT - DCO, Brazil)

- 85) An Octave Bandwidth Electromagnetic Band Gap (EBG) Structure for a UWB Antenna**
Sandeep Palreddy (Microwave Engineering Corporation, USA); Amir Zaghloul (Virginia Polytechnic Institute and State University, USA); Youn Lee (US Army Research Laboratory, USA)
- 86) Wearable Finger Multiband Antenna for BAN Use**
Hisao Iwasaki (Japan)

14:00–16:20 **Club A**
EurAAP Propagation WG Inaugural Meeting
 (Thomas Kürner)

14:00–16:20 **Club H**
EurAAP + ESoA Student Best Paper Award
 (Cyril Luxey, Stefano Maci)

15:00–16:20 **Room I**
INV7: Invited lectures: P. Kolesnikoff, M. Paquay

Chairs: Dirk Heberling (RWTH Aachen University, Germany), Olav Breinbjerg (Technical University of Denmark, Denmark)

15:00 Development of a Compact Range for System Level Testing
 Paul Kolesnikoff (Ball Aerospace, USA)

15:40 Challenges and Perspectives for Space Antenna Testing
 Maurice Paquay (European Space Agency, The Netherlands)

15:00–16:20 **Room II**
INV8: Invited lectures: D. Jackson, M. Okoniewski

Chairs: Christophe Craeye (Université Catholique de Louvain, Belgium), Carlo Rizzo (Tecnologica Ltd., United Kingdom)

15:00 Directive Planar Antennas Based on Leaky Waves
 David R. Jackson (University of Houston, USA)

15:40 Accelerating Electromagnetic Simulators Using Graphics Processing Units
 Michal Okoniewski (Acceleware Inc., Canada)

16:40–18:20 **Room I**
A10-1: Millimeter / Sub-millimeter Wave and THz Technologies I

Chairs: Robert Müller (TU Ilmenau, Germany), Ronan Sauleau (University of Rennes 1, France)

16:40 Efficiency Calculation of THz Photoconductive Antennas in a Pulsed System
 Neda Khiabani (University of Liverpool, United Kingdom); Yi Huang (University of Liverpool, United Kingdom); Yao-Chun Shen (University of Liverpool, United Kingdom); Stephen Boyes (The University of Liverpool, United Kingdom)

17:00 60 GHz Ultrawideband Front-Ends with Gain Control, Phase Shifter, and Wave Guide Transition in LTCC Technology
 Robert Müller (TU Ilmenau, Germany); Frank Wollenschläger (Ilmenau University of Technology, Germany); Alexander Schulz (Ilmenau University of Technology, Germany); Mohamed Elkhoully (IHP, Germany); Uwe Trautwein (MEDAV GmbH, Germany); Matthias Hein (Ilmenau University of Technology, Germany); Jens Müller (Ilmenau University of Technology, Germany); Alexis Paolo Garcia Ariza (Ilmenau University of Technology & Institute of Information Technology, Germany); Reiner S. Thomä (Ilmenau University of Technology, Germany)

17:20 Mono-block Dielectric Resonator Antenna with Incorporated Excitation for 60 GHz Integrated Systems
 Juan Pablo Guzman (Telecom Bretagne University, France); Christophe Calvez (Telecom Bretagne University, France); Michel Ney (TELECOM Bretagne Institute, France); Christian Person (Lab-STICC/MOM UMR CNRS, France); Romain Pilard (STMicroelectronics, Technology R&D, STD, TPS Lab, France); Frederic Gianesello (Crolles, France)

16:40–18:20 **Room II**
A18-1: Reconfigurable Antennas I

17:40 Development of Lens-Coupled LEKID Detectors Arrays for THz Radiation

Beatriz Blázquez (Universidad Complutense de Madrid, Spain); Nuria Llombart (Universidad Complutense de Madrid, Spain); Juan Bueno (Centro de Astrobiología CSIC INTA, Spain); Andrea Neto (Delft University of Technology, The Netherlands)

18:00 Hyper-acuity Through Inverse Filtering: Application to Terahertz Cameras

Oier Dominguez (University of Basque Country, Spain); Carlos Del-Río (Public University of Navarra & Antenna Group, Spain)

Chairs: Gregory Huff (Texas A&M University, USA), Hynek Bartik (Czech Technical University in Prague, Czech Republic)

16:40 A Narrowband Frequency-Tunable Antenna for Cognitive Radio Applications

Ali Ramadan (American University of Beirut, Lebanon); Mohammed Al-Husseini (American University of Beirut, Lebanon); Karim Youssef Kabalan (American University of Beirut, Lebanon); Ali El-Hajj (American University of Beirut, Lebanon); Youssef Tawk (University of New Mexico, USA); Christos Christodoulou (University of New Mexico, USA); Joseph Costantine (California State University Fullerton, USA)

17:00 A Novel Scheme for Realizing a Microstrip Antenna with Switchable Circular Polarization

Billy Wu (University of Calgary, Canada); Michal Okoniewski (University of Calgary, Canada)

17:20 Automation of Reconfiguration, Compensation, and Thermoregulation Using Vascular Networks

Gregory Huff (Texas A&M University, USA); Stephen Long (Texas A&M University, USA); Franklin Drummond (Texas A&M University, USA); Samuel Lee (Texas A&M University, USA); Eric Estes (Texas A&M University, USA); Robert Burgess (Texas A&M University, USA); Jonathan Berry (Texas A&M University, USA)

17:40 Time-Modulation for MIMO Systems - Potentials and Trends

Paolo Rocca (University of Trento, Italy); Lorenzo Poli (University of Trento, Italy); Ephrem Bekele (University of Trento, Italy); Andrea Massa (University of Trento, Italy)

18:00 Design of Medium-Size Dielectric Bifocal Lenses for Wide-Angle Beam Scanning Antennas

Vu La (University of Rennes 1, France); Ngoc Tinh Nguyen (University of Rennes 1, France); Massimiliano Casaletti (University of Siena, Italy); Ronan Sauleau (University of Rennes 1, France)

16:40–18:20 **Club A**
P04: Propagation Aspects in Wireless Sensor Networks

Chairs: Carlos Del-Río (Public University of Navarra & Antenna Group, Spain), Dmitry E Zelenchuk (Queen's University of Belfast, United Kingdom)

16:40 An Elliptical Analytic Link Loss Model for Wireless Propagation Around the Human Torso

Rohit Chandra (Lund University, Sweden); Anders Johansson (Lund University, Sweden)

17:00 Impact of Channel Modeling on Accurate Estimation of On-Body Channel Capacity

Asimina Michalopoulou (NCSR-Demokritos, Greece); Theodore Zervos (NCSR „Demokritos“, Institute of Informatics & Telecommunications, Greece); Kostas Peppas (Institute of research „Demokritos“, Greece); Fotis Lazarakis (NCSR Demokritos, Institute of Informatics & Telecommunications, Greece); Antonis A Alexandridis (NCSR „Demokritos“, Greece); Kostas Dangakis (NCSR „Demokritos“, Greece); Dimitra I Kaklamani (National Technical University of Athens, Greece)

17:20 Transmission Characteristics Between Wearable and Embedded Transceivers Based on Near-Field Coupling

Yuichi Kado (Kyoto Institute of Technology & Graduate School of Science and Technology, Japan); Tomoaki Yanagawa (Kyoto Institute of Technology, Japan); Kohei Nagata (Kyoto Institute of Technology, Japan); Taku Kobase (Kyoto Institute of Technology, Japan); Tatsuya Kusunoki (Kyoto Institute of Technology, Japan); Ryouji Nagai (Kyoto Institute of Technology, Japan); Hiromitsu Ozaki (Kyoto Institute of Technology, Japan); Hitoshi Shimasaki (Kyoto Institute of Technology, Japan); Mitsuru Shinagawa (Hosei University, Japan)

17:40 Topological and Morphological Influence in the Performance of MIMO Techniques in Complex Indoor Scenarios

Luis Lenin Trigueros (Universidad Publica de Navarra, Spain); Leire Azpilicueta (Universidad Publica de Navarra, Spain); Carlos Del-Río (Public University of Navarra & Antenna Group, Spain); Francisco Falcone (Universidad Publica de Navarra, Spain)

18:00 Effect of Polarisation Diversity on Phase Conjugation Assisted Communications in Urban Canyon Environment

Dmitry E Zelenchuk (Queen's University of Belfast, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom)

16:40–18:20 Club B
P07: Propagation for Mobile Satellite Services and Navigation

Chairs: Fernando Pérez-Fontán (University of Vigo, Spain), Roberto Prieto-Cerdeira (European Space Agency, The Netherlands)

- 16:40 State Modeling of the Land Mobile Satellite Channel with Angle Diversity**
 Daniel Arndt (Fraunhofer Institute for Integrated Circuits & Ilmenau University of Technology, Germany); Thomas Heyn (Fraunhofer IIS, Germany); Albert Heuberger (Ilmenau University of Technology, Germany); Roberto Prieto-Cerdeira (European Space Agency, The Netherlands); Ernst Eberlein (Fraunhofer Institute for Integrated Circuits, Germany)
- 17:00 Electromagnetic Simulations for Aeronautical Satellite Communications Channel Model**
 Lorena Lozano (University of Alcalá, Spain); María Jesús Algar (University of Alcalá, Spain); Ivan Gonzalez (Universidad de Alcalá, Spain); Alvaro Somolinos (University of Alcalá, Spain); Felipe Cátedra (University of Alcalá, Spain); Roberto Prieto-Cerdeira (European Space Agency, The Netherlands); Paolo Burzigotti (European Space Agency ESA/ESTEC, The Netherlands)
- 17:20 Influence of the Rain Cell Structure on Attenuation Predictions on Earth-Space Paths**
 George Brost (Air Force Research Lab, USA)
- 17:40 Investigation of Diffraction Effects in GNSS Using Ray Tracing Channel Modelling**
 Marcos Liso Nicolás (Technische Universität Braunschweig, Germany); Marios Smyrniotis (Leibnitz Universität Hannover, Germany); Steffen Schön (Leibnitz Universität Hannover, Germany); Thomas Kürner (Technische Universität Braunschweig, Germany)
- 18:00 Ionosphere Scintillation Modelling / Satellite Navigation Impairments & Radar Observations**
 Yannick Béniguel (IEEA, France)

16:40–18:20 Club C
A20-2: Small Antennas, RFID Tags and Sensors II

Chairs: Kengo Nishimoto (Mitsubishi Electric Corporation, Japan), Milan Polivka (Czech Technical University in Prague, Czech Republic)

- 16:40 A Metamaterial-Based Series Connected Rectangular Patch Antenna Array for UHF RFID Readers**
 Benjamin Braaten (North Dakota State University, USA); Sayan Roy (North Dakota State University, USA); Sanjay Nariyal (North Dakota State University, USA); Masud Aziz (University of Kansas, USA); Muhammad Mubeen Masud (North Dakota State University, USA); Bilal Ijaz (North Dakota State University, USA)
- 17:00 Impact Analysis of Silicon and Bondwires on an On-Chip Antenna**
 Philipp Gentner (Vienna University of Technology, Austria); Ayse Adalan (Vienna University of Technology, Austria); Arpad L Scholtz (Vienna University of Technology, Austria); Christoph F Mecklenbräuker (Vienna University of Technology, Austria)
- 17:20 On the Currents Magnitude of a Tunable Planar-Inverted-F Antenna for Low-Band Frequencies**
 Samantha Caporal Del Barrio (Aalborg University, Denmark); Mauro Pelosi (Aalborg University, Denmark); Ondřej Franek (Aalborg University & APNet Section, Denmark); Gert Pedersen (Aalborg University, Denmark)
- 17:40 Direction Dependent Modulation of an RFID Tag**
 Yang Wang (University of Sheffield, United Kingdom); Alan Tennant (University of Sheffield, United Kingdom); Richard Langley (University of Sheffield, United Kingdom)
- 18:00 A Discussion of a SRR Parasitic Antenna for an RFID TAG ANTENNA by Using Lumped Element**
 Abdelhak Ferchichi (university of Sciences Tunisia, Tunisia)

16:40–18:20 Club D
CM04: Recent Technical Advances in Antenna Test Systems (AMTA Convened Session)

Chairs: Carlo Rizzo (Tecnologica Ltd., United Kingdom), Daniel J. Janse van Rensburg (Near Field Systems Inc., USA)

- 16:40 Combined Plane Wave - Point Source Near-Field Far-Field Transformation for Short Measurement Distances**
 Carsten H Schmidt (Technische Universität München, Germany); Dennis T. Schobert (Technische Universität München, Germany); Thomas F. Eibert (Technische Universität München, Germany)
- 17:00 Advances in Antenna Measurement Instrumentation and Systems**
 Steven Nichols (MI Technologies, USA); Roger Dygert (MI Technologies, USA); David Wayne (MI Technologies, USA)
- 17:20 Achieved Accuracy of a Spherical Near-Field Arch Positioning System**
 Jeffrey A. Fordham (MI Technologies, USA); Tim Schwartz (MI Technologies, USA); George Cawthon (MI Technologies, USA); Youlian Netzov (MI Technologies, USA); Scott McBride (MI Technologies, USA); Makary Awadalla (MI Technologies, USA); David Wayne (MI Technologies, USA)
- 17:40 Cylindrical NF-FF Transformation From NF Data Acquired on a Non-classical Sampling Grid**
 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 Migliozi (University of Salerno, Italy); Carlo Rizzo (Tecnologica Ltd., United Kingdom)
- 18:00 Computational and Experimental Verification of Far-Field Mathematical Absorber Reflection Suppression**
 Stuart F Gregson (Nearfield Systems Inc. & Queen Mary, University of London, USA)

16:40–18:20 Club E
A07-4: Electromagnetic Theory and Numerical Techniques IV

Chairs: Luis Jofre (UPC, Spain), Zvonimir Sipus (University of Zagreb, Croatia)

- 16:40 Advances in Inverse Scattering Arising From the Physical Meaning of the Linear Sampling Method**
 Ilaria Catapano (CNR - National Research Council of Italy, Italy); Lorenzo Crocco (CNR - National Research Council, Italy); Loreto Di Donato (University of Reggio Calabria, Italy); Tommaso Isernia (University of Reggio Calabria, Italy)
- 17:00 Numerical Integration of Sommerfeld Integrals Based on Singularity Extraction Techniques and Double Exponential-Type Quadrature Formulas**
 Vladimir Volski (KU Leuven, Belgium); Guy A. E. Vandenbosch (Katholieke Universiteit Leuven, Belgium); Ruzica Golubović Niciforović (Ecole Polytechnique Federale de Lausanne, Switzerland); Athanasios Polimeridis (EPFL, Switzerland); Juan R Mosig (Ecole Polytechnique Federale de Lausanne, Switzerland)
- 17:20 Method of Generalized Debye Sources for the Analysis of Electromagnetic Scattering by Arbitrary Shaped Bodies**
 Evgeny Chernokozhin (Tel Aviv University, Israel); Amir Boag (Tel Aviv University, Israel)
- 17:40 Low-Cost Design Optimization of Antennas Using Adjoint Sensitivity**
 Slawomir Koziel (Reykjavik University, Iceland); Stanislav Ogurtsov (Reykjavik University, Iceland)
- 18:00 REACH/PREACH - A Physical Optics Based Tool for Simulation of Radome Effects on Antenna Patterns**
 Thomas Schuster (EADS Cassidian, Germany); Michael Sabielny (Cassidian, Germany)

16:40–18:20 Club H**A04-3: Array Antennas incl. Reflect Array III**

Chairs: Per Ingvarson (RUAG Space AB, Sweden), Zbynek Raida (Brno University of Technology, Czech Republic)

16:40 Ka-band Dual Frequency Switchable Reflectarray

Akiko Kohmura (Electronic Navigation Research Institute, Japan); Jerome Lanteri (Université Nice Sophia Antipolis, France); Fabien Ferrero (University of Nice, France); Claire Migliaccio (Université Nice Sophia Antipolis, France); Philippe Ratajczak (Orange Labs, France); Shunichi Futatsumori (Electronic Navigation Research Institute, Japan); Naruto Yonemoto (Electronic Navigation Research Institute, Japan)

17:00 Antennas with Synthesized Frequency Dependency of Gain

David Wolansky (Brno University of Technology, Czech Republic); Petr Vsetula (Brno University of Technology, Czech Republic); Zbynek Raida (Brno University of Technology, Czech Republic); Peter S Hall (University of Birmingham, United Kingdom)

17:20 A Wideband (3 to 5 GHz) Wide-Scan Connected Array of Dipoles with Low Cross Polarization

Daniele Cavallo (Delft University of Technology, The Netherlands); Andrea Neto (Delft University of Technology, The Netherlands); Giampiero Gerini (TNO - Defence, Security and Safety, The Netherlands)

17:40 Slot Antenna in Ridge Gap Waveguide Technology

Ashraf Zaman (Chalmers University of Technology, Sweden); Per-Simon Kildal (Chalmers University of Technology, Sweden)

18:00 Common-Mode Rejection in a Connected Array of Dipoles with Inherent Frequency Selectivity Properties

Lorenzo Cifola (TNO - Defense, Security and Safety & Università Politénica della Marche, The Netherlands); Daniele Cavallo (Delft University of Technology, The Netherlands); Giampiero Gerini (TNO - Defence, Security and Safety, The Netherlands); Silvio Savoia (University of Sannio, Italy); Antonio Morini (Università Politénica delle Marche, Italy); Giuseppe Venanzoni (Università Politénica delle Marche, Italy)

16:40–18:20 Room III**A19-2: Reflector and Lens Antennas II**

Chairs: Robert Lehmensiek (EMSS Antennas (Pty) Ltd & Cape Peninsula University of Technology, South Africa), Benjamin Fuchs (EPFL - LEMA, Switzerland)

16:40 Wide Flare Angle Axially Corrugated Conical Horn Design for a Classical Offset Dual-Reflector Antenna

Robert Lehmensiek (EMSS Antennas (Pty) Ltd & Cape Peninsula University of Technology, South Africa); Dirk de Villiers (Stellenbosch University, South Africa)

17:00 Synthesized Elliptical Lens with Optimized Extension for Focal Array Fed Lens Antennas

Ngoc Tinh Nguyen (University of Rennes 1, France); Massimiliano Casaletti (University of Siena, Italy); Vu La (University of Rennes 1, France); Ronan Sauleau (University of Rennes 1, France)

17:20 Analysis of Curved Frequency Selective Reflector Antenna Systems - a Combined Approach

Sinisa Skokic (University of Zagreb, Croatia); Zvonimir Sipus (University of Zagreb, Croatia); Stefano Maci (University of Siena, Italy); Marko Bosiljevac (University of Zagreb, Croatia); Massimiliano Casaletti (University of Siena, Italy)

17:40 Synthesis and Analysis of the Sardinia Radio Telescope BWG System for TT&C Capabilities Using a Gaussian Beam Approach

Andrea Giannini (University of Pavia, Italy); Filippo Concaro (European Space Agency, Germany); Pier Mario Besso (Esa – Esoc, Germany); Mattia Mercolino (European Space Agency, Germany); Javier De Vicente (European Space Agency, Italy); Luciano Garramone (Agenzia Spaziale Italiana, Italy); Roberto Ambrosini (INAF, Italy); Luca Perregri (University of Pavia, Italy); Marco Pasian (University of Pavia, Italy); Maurizio Bozzi (University of Pavia, Italy)

18:00 Numerical Optimization of a TARA-like Shielded Parabolic Reflector

Vitaliy Bulygin (A.Y. Usikov Institute of RadioPhysics and Electronics, Kharkov, Ukraine)

16:40–18:20 Room IV**A22-2: On-body Antennas II**

Chairs: Dirk Heberling (RWTH Aachen University, Germany), Milan Svanda (Czech Technical University in Prague, Czech Republic)

16:40 Body Effects on the GPS Antenna of a Wearable Tracking Device

Xi Lin Chen (IT'IS Foundation & Schmid and Partner Engineering AG, Switzerland); Niels Kuster (IT'IS Foundation, Switzerland); Yu Chee Tan (Green Antenna Pte. Ltd., Singapore); Nicolas Chavannes (Schmid & Partner Engineering AG, Switzerland)

17:00 2-Port Antenna on Fleece Substrate for On-body MIMO Applications

Edlira Stavrou (IMST, Germany); Hammam Shakhtour (RWTH Aachen University, Germany); Joerg Pamp (RWTH Aachen University, Germany); Dirk Heberling (RWTH Aachen University, Germany)

17:20 Dual-Band Sierpinski Textile PIFA Efficiency Measurements

Ping Jack Soh (Katholieke Universiteit Leuven & Universiti Malaysia Perlis (UniMAP), Belgium); Stephen Boyes (University of Liverpool, Belgium); Guy A. E. Vandenbosch (Katholieke Universiteit Leuven, Belgium); Yi Huang (University of Liverpool, United Kingdom); Zhongkun Ma (Katholieke Universiteit Leuven, Belgium)

16:40–18:20 Room V
W8: EurAAP Working Group – ESoA and board