

R15: EMC / EMI

Conveners: Carl Baum (University of New Mexico, USA) and Juergen Nitsch (Otto-von-Guericke University Magdeburg, Germany)

Variations on the Switched-Oscillator Theme

Carl Baum (University of New Mexico, USA)

pp. 1-4

HF Coupling to a Transmission Line Inside a Rectangular Cavity

Sergey Tkachenko (Otto von Guericke University Magdeburg, Germany); Juergen Nitsch (Otto-von-Guericke University Magdeburg, Germany); Ralf Vick (Otto-von-Guericke University Magdeburg, Germany)

pp. 5-8

Graded Dielectric Lens to Match 100 Ps Pulses Into Biological Targets

Prashanth Kumar (University of New Mexico, USA); Serhat Altunc (University of New Mexico, USA); Carl Baum (University of New Mexico, USA); Christos Christodoulou (University of New Mexico, USA); Edl Schamiloglu (University of New Mexico, USA)

pp. 9-12

Characterisation of an Effective EMI Noise Separation Including a Standard LISN

Juergen Stahl (University of Erlangen Nuremberg, Germany); Daniel Kuebrich (University of Erlangen Nuremberg, Germany); Thomas Duerbaum (University of Erlangen Nuremberg, Germany)

pp. 13-16

Study on Measurement of VFTO Based on Electric Field Sensor

Weidong Zhang (North China Electric Power University, P.R. China)

pp. 17-20

S03: Analytic Identities and Limitations in Electromagnetic Theory

Conveners: Mats Gustafsson (Lund University, Sweden) and Gerhard Kristensson (Lund University, Sweden)
Limitations on the Absorbing Performance of Particular Classes of Materials

Konstantin. N. Rozanov (Institute for Theoretical and Applied Electromagnetics, Russia)

pp. 21-24

On the Physical Limit of Radar Absorbers

Anders Karlsson (Lund University, Sweden); Alireza Kazemzadeh (Lund University, Sweden)

pp. 25-28

Causality and Its Implications for Passive and Active Media

Johannes Skaar (Norwegian University of Science and Technology (NTNU), Norway)

pp. 29-32

Sum Rules and Constraints on Passive Systems with Applications in Electromagnetics

Anders Bernland (Lund University, Sweden); Mats Gustafsson (Lund University, Sweden); Annemarie Luger (Lund University, Sweden)

pp. 33-36

Sum Rules and Physical Bounds in Electromagnetic Theory

Mats Gustafsson (Lund University, Sweden); Daniel Sjöberg (Lund University, Sweden); Anders Bernland (Lund University, Sweden); Gerhard Kristensson (Lund University, Sweden); Christian Sohl (Lund University, Sweden)

pp. 37-40

S05: Theoretical Aspects of Discrete Field Formulations

Conveners: Markus Clemens (Bergische Universität Wuppertal, Germany) and Rolf Schuhmann (Universität Paderborn, Germany)

Advances in Macromodeling Technique

Jakub Podwalski (Gdansk University of Technology, Poland); Michal Mrozowski (, Poland)

pp. 41-43

Self-Adaptive Multi-Point Sweep for the Broadband Finite-Element Analysis of Waveguide Modes

Alwin Schultschik (Saarland University, Germany); Ortwin Farle (Saarland University, Germany); Romanus Dyczij-Edlinger (Saarland University, Germany)

pp. 44-47

Derivatives of Partial Inductances for the Sensitivity Analysis in PEEC Systems

Peter Scholz (Technische Universitaet Darmstadt, Germany); Wolfgang Ackermann (Technische Universitaet Darmstadt, Germany); Thomas Weiland (Technische Universitaet Darmstadt, Germany)

pp. 48-51

Calculation of Fields and Their Derivatives in Highly Resonating Structures with the FEM

Wolfgang Ackermann (Technische Universitaet Darmstadt, Germany); Galina Benderskaya (CST AG - Computer Simulation Technology, Germany); Thomas Weiland (Technische Universitaet Darmstadt, Germany)

pp. 52-55

FIT & FLAME for Sharp Edges in Electrostatics

Christoph Classen (Universitaet Paderborn, Germany); Bastian Bandlow (Universitaet Paderborn, Germany); Rolf Schuhmann (Universitaet Paderborn, Germany); Igor Tsukerman (The University of Akron, USA)

pp. 56-59

S06: Beam Methods

Conveners: Amir Shlivinski (Ben-Gurion University of the Negev, Israel) and Christine Letrou (TELECOM Sud Paris, France)

Wave Analysis of Airy Beams

Yan Kaganovsky (Tel Aviv University, Israel); Ehud Heyman (Tel Aviv University, Israel)

pp. 60-63

Sensitivity of Electromagnetic Waves to a Heterogeneous Bianisotropic Structure

Ludek Klimeš (Charles University in Prague, Czech Republic)

pp. 64-67

Frame Based Gaussian Beam Bouncing

Ihssan Ghannoum (TELECOM SudParis, France); Christine Letrou (TELECOM SudParis, France); Gilles Beauquet (THALES Air Systems S.A., France)

pp. 68-71

Plane-Wave Decomposition of Reflected TE Gaussian-Beam From Moving Dielectric Interface

Timor Melamed (Ben-Gurion University of the Negev, Israel); Harel Haim (Ben-Gurion University of the Negev, Israel); Coby Maron (Ben-Gurion University of the Negev, Israel)

pp. 72-73

An Exact Non Redundant Complex Source Point Beam Representation of an EM Field Obtained From a Spherical Wave Expansion

Enrica Martini (University of Siena, Italy); Giacomo Carli (University of Siena, Italy); Stefano Maci (University of Siena, Italy)

pp. 74-76

T1: Tutorial 1

Convener: Karl J. Langenberg (University of Kassel, Germany)

Electromagnetism, Nanotechnologies and Biology: New Challenges and Opportunities

Ovidio Mario Bucci (University of Naples, Italy)

pp. 77-80

P1: Poster Session - 1

Evaluation of System for Estimating Sheet Resistance Using DFFC

Toshihide Tosaka (NICT, Japan)

pp. 81-84

Electro-Orientation Spectra of Hematic Cells

José L. Sebastián (Universidad Complutense de Madrid, Spain); Sagrario Muñoz (Universidad Complutense de Madrid, Spain); Miguel Sancho (Universidad Complutense de Madrid, Spain); Genoveva Martínez (Universidad Complutense de Madrid, Spain)

pp. 85-88

Development of Parallel Computation System of FDTD/FIT Dedicated Computers

Yuya Fujita (Muroran Institute of Technology, Japan)

pp. 89-92

Different Approaches of Numerical Analysis of Electromagnetic Phenomena in Shaded Pole Motor with Application of Finite Elements Method

Vasilija Sarac (Associate Profesor at Electrotechnical Faculty in Radovis, Macedonia)

pp. 93-96

Four Dimensional Domain Decomposition Method

Hideki Kawaguchi (Muroran Institute of Technology, Japan); Thomas Weiland (Technische Universitaet Darmstadt, Germany)

pp. 97-99

Propagation of Transversely Bounded Nonlinear Electromagnetic Pulses Through Periodic Media

Volodymyr Grimalsky (Autonomous University of State Morelos (UAEM), Mexico); Christian Castrejon-M. (Autonomous University of State Morelos (UAEM), Mexico); Svetlana Koshevaya (Autonomous University of State Morelos (UAEM), Mexico)

pp. 100-103

Large Scale Underwater FDTD ELF Simulations Using Acceleware and MPI Parallel Processing

Dennis Sullivan (University of Idaho, USA); Yang Xia (University of Idaho, USA); Alireza Mansoori (University of Idaho, USA)

pp. 104-106

Electromagnetic Scattering of Space-Target with Wrapped Layer

Gu Jun (Shanghai Institute of Radio Equipment 846 Min Jing Road Shanghai 200438, China, P.R. China); Liang Zichang (Shanghai Institute of Radio Equipment 846 Min Jing Road Shanghai 200438, China, P.R. China); Wang Xiaobing (Shanghai Institute of Radio Equipment 846 Min Jing Road Shanghai 200438, China, P.R. China); Yue-Hui Hui-Yue (Shanghai Institute of Radio Equipment 846 Min Jing Road Shanghai 200438, China, P.R. China)

pp. 107-110

CIP-BS Method for Solving Maxwell's Equations

Yoshiaki Ando (The University of Electro-Communications, Japan)

pp. 111-113

R1: Electromagnetic Theory - 1

Convener: Hamit Serbest (Cukurova University, Turkey)

Analysis of a Transmission Line Periodically Loaded with Amplitude and/or Position-Modulated Loads

Enas S, Sakr (Cairo University, Egypt)

pp. 114-117

Complex Aberration and a New Cerenkov Effect for Superluminal Phase Velocities

Sérgio Matos (Instituto de Telecomunicações, Portugal); Carlos Paiva (Instituto de Telecomunicações, Portugal); Afonso Barbosa (Instituto Superior Tecnico - Instituto de Telecomunicacoes, Portugal)

pp. 118-121

Critique of Antenna Fundamental Limitations

Said Mikki (Royal Military College of Canada, Canada); Yahia Antar (Royal Military College of Canada, Canada)

pp. 122-125

R10: Numerical Methods: General Aspects - 1

Conveners: Amir Boag (Tel Aviv University, Israel) and Vitaliy Lomakin (University of California, San Diego, USA)

Analysis and Stable Inversions of Standard Quasi-Helmholtz Decompositions

Francesco Andriulli (Politecnico di Torino, Italy)

pp. 126-129

Calderón Preconditioning Techniques for Integral Equation Based Methods

Su Yan (University of Electronic Science and Technology of China, USA); Jian-Ming Jin (University of Illinois at Urbana-Champaign, USA); Zaiping Nie (University of Electronic Science and Technology of China, P.R. China)

pp. 130-133

A Memory Saving Vector Fast Multipole Algorithm for Solving the Augmented EFIE

Yang Liu (The University of Hong Kong, P.R. China); Weng Chew (The University of Hong Kong, Hong Kong); Li Jiang (University of Hong Kong, P.R. China)

pp. 134-137

3D Non-Uniform Grid Algorithm for the Compression of Non-Symmetric MoM Matrices

Yaniv Brick (Tel Aviv, Israel); Amir Boag (Tel Aviv University, Israel)

pp. 138-141

On the Use of Implicit Runge-Kutta Methods for the Discretization of Time Domain Integral Equations

Daniel Weile (University of Delaware, USA); Xiaobo Wang (University of Delaware, USA)

pp. 142-144

S 04: Electromagnetic subsurface/underground sensing - 1

Conveners: Danilo Erricolo (University of Illinois at Chicago, USA) and Michael A. Saville (Air Force Institute of Technology, USA)

Recent Theoretical and Experimental Advances in Electromagnetic Sensing of Subsurface Profiles

Mahta Moghaddam (University of Michigan, USA)

pp. 145-147

Microwave Mobile Sensor Networks Within Underground Conduits Filled of Fluids

Daniele Trincherò (Politecnico di Torino, Italy); Riccardo Stefanelli (Politecnico di Torino - iXem Labs, Italy)

pp. 148-151

GPR Modeling for Landmine Detection

María Antonia González Huici (Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR), Germany); Udo Uschkerat (Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR), Germany)

pp. 152-155

Recent Issues Relevant to GPR Prospecting

Raffaele Persico (IBAM-CNR, Italy); Francesco Soldovieri (CNR, Italy)

pp. 156-159

S15: Techniques for Solving Multi- Scale and Real-World Problems in Computational Electromagnetics - 1

Convener: Raj Mittra (Penn State University, USA)

A Non-Overlapping and Non-Conformal Domain Decomposition Method with Second Order Transmission Condition for Modelling Large Finite Antenna Arrays

Zhen Peng (ElectroScience Lab, The Ohio State University, USA); Jin-Fa Lee (Ohio State University, USA)

pp. 160-163

Fast Frequency Sweep in Domain Decomposition Analysis of Large Finite Antenna Arrays

Valentin de la Rubia (Universidad de Extremadura, Spain)

pp. 164-167

Finite-Array Characterization with the Help of the ASM-MBF Method: Eigenmode Analysis

Christophe Craeye (Université Catholique de Louvain, Belgium)

pp. 168-170

RUFD: a General-Purpose, Non-Iterative and Matrix-Free CEM Algorithm for Solving Electromagnetic Scattering and Radiation Problems in the Frequency Domain

Raj Mittra (Penn State University, USA); X. Yang (Penn State University, USA); K. Panayappan (Penn State University, USA); W Yu (Penn State University, USA)

pp. 171-174

Time-Domain Solver for Electromagnetic Computation by Fast Inversion of Laplace Transform

Shinichiro Ohnuki (Nihon University, Japan); Yuya Kitaoka (Nihon University, Japan); Tatsuichiro Okada (Nihon University, Japan); Seiya Kishimoto (Nihon University, Japan)

pp. 175-176

R1: Electromagnetic Theory - 2

Convener: Hamit Serbest (Cukurova University, Turkey)

Incomplete Modified Spherical Bessel Functions: a New Class of Special Functions for Electromagnetics

Diego Caratelli (Delft University of Technology, The Netherlands); Alexander Yarovoy (Delft University of Technology, The Netherlands)

pp. 177-180

Transient Electromagnetic Field of a Vertical Magnetic Dipole Above a Plane Plasmonic Half-Space

Bert Jan Kooij (Delft University of Technology, The Netherlands)

pp. 181-184

On the Sampling of Electromagnetic Fields

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

pp. 185-188

Non-Minimum Phase Behavior Due to Fractional Hilbert Transform in Broadband Circular Polarization Antennas

Heinrich Foltz (The University of Texas--Pan American, USA); James S. McLean (TDK R&D Corp, USA); Armando Medina (TDK RF Solutions, USA); Robert Sutton (TDK R&D Corp, USA)

pp. 189-191

Doubly Skew: a New Class of Non-Birefringent Media

Luzi Bergamin (Aalto University, Finland)

pp. 192-195

R10: Numerical Methods: General Aspects -2

Conveners: Amir Boag (Tel Aviv University, Israel) and Vitaliy Lomakin (University of California, San Diego, USA)

Parallel Generalized Method of Moments for Analysis of Transient Scattering From PEC Objects

Naveen Nair (Michigan State University, USA); Andrew Pray (Michigan State University, USA); Melapudi Vikram (Michigan State University, USA); B. Shanker (Michigan State University, USA)

pp. 196-199

On the Numerical Evaluation of the Testing Integrals for the Galerkin Discretization of Surface Integral Equations

Guido Lombardi (Politecnico di Torino, Italy); Roberto D Graglia (Politecnico di Torino, Italy); Mirko Bercigli (IDS Ingegneria Dei Sistemi S.p.A, Italy); Rodolfo Guidi (IDS Ingegneria Dei Sistemi S.p.A, Italy)

pp. 200-203

Efficient Calculation of 1-D Periodic Green's Functions for Leaky-Wave Applications

Simone Paulotto (University of Houston, USA); Guido Valerio (Sapienza University of Rome, Italy); David Jackson (University of Houston, USA); Donald R Wilton (University of Houston, USA); Paolo Baccarelli ("Sapienza" University of Rome, Italy); Ferhat Celepcikay (University of Houston, USA); Alessandro Galli (Sapienza University of Rome, Italy); W. Johnson (Sandia National Laboratories, USA)

pp. 204-207

Fast Interpolation Method for Periodic Unit Cell Problems

Shaojing Li (University of California, San Diego, USA); Derek Van Orden (University of California, San Diego, USA); Vitaliy Lomakin (University of California, San Diego, USA)

pp. 208-210

Uses and Efficient Evaluation of Half-Line Source Potentials and Their Derivatives

Ferhat Celepcikay (University of Houston, USA); Donald R Wilton (University of Houston, USA); David Jackson (University of Houston, USA); Simone Paulotto (University of Houston, USA); W. Johnson (Sandia National Laboratories, USA)

R17: Smart Antennas

Convener: Heinz Chaloupka (Bergische Universitaet Wuppertal, Germany)

DOA Estimation Using Matrix Pencil and ESPRIT Methods Using Single and Multiple Snapshots

Tapan K. Sarkar (Syracuse University, USA)

pp. 215-218

MIMO Performance of Closely Spaced Antennas in the 700 MHz Band

Anders Derneryd (Ericsson AB, Sweden); Jonas Fridén (Ericsson AB, Sweden); Anders Stjernman (Ericsson AB, Sweden)

pp. 219-222

A Simulation Model for Wideband MIMO Vehicle-to-Vehicle Fading Channels in T-Junction Propagation Environments

Wei Zhou (Wuhan University of Technology, Norway); Matthias Pätzold (University of Agder, Norway); Wei Chen (Wuhan University of Technology, P.R. China); Zhiyi He (Wuhan university of technology, P.R. China)

pp. 223-226

On a MIMO-OTA Testing Based on Multi-Probe Technology

Tommi Laitinen (Helsinki University of Technology, Finland)

pp. 227-230

Smart Antennas in Aerospace Applications

Jaco Verpoorte (National Aerospace Laboratory NLR, The Netherlands); Harmen Schippers (National Aerospace Laboratory NLR, The Netherlands); Chris Roeloffzen (University of Twente, The Netherlands); David Marpaung (University of Twente, The Netherlands)

pp. 231-234

Phase Conjugating Lens for Subwavelength Spaced PSK Same Frequency Far Field Signal Recovery

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

pp. 235-238

S04: Electromagnetic subsurface/underground sensing - 2

Conveners: Danilo Erricolo (University of Illinois at Chicago, USA), Michael A. Saville (Air Force Institute of Technology, USA)

Dual-Probe Lowloss Material Extraction Technique

Michael J Havrilla (Air Force Institute of Technology, USA); Milo W Hyde (Air Force Institute of Technology, USA)

pp. 239-242

Experimental Validation of RF Tomography

Vittorio Picco (University of Illinois at Chicago, USA); Danilo Erricolo (University of Illinois at Chicago, USA); Lorenzo Lo Monte (General Dynamics, USA)

pp. 243-244

SIMO-Based Approach for Subsurface Sensing

Alexander G. Yarovoy (Delft University of Technology, The Netherlands); Xiaodong Zhuge (Delft University of Technology, The Netherlands)

pp. 245-248

Low Frequency Measurement Techniques for Coupling Into Underground Cavities

Matthew B. Higgins (U.S. Army Research Laboratory, USA); Marvin Morris (Sandia National Laboratories, USA); Michele Caldwell (Sandia National Laboratories, USA)

pp. 249-252

On the Imaging Applications of Ground Penetrating Radar

Enes Yigit (Mersin University, Turkey); Sevet Demirci (Mersin University,, Turkey); Caner Ozdemir (Mersin University, Turkey)

pp. 253-256

S15: Techniques for Solving Multi- Scale and Real-World Problems in Computational Electromagnetics - 2

Convener: Raj Mittra (Penn State University, US)

On the Use of the Method of Moments in Plasmonic Applications

Guy Vandenbosch (Katholieke Universiteit Leuven, Belgium)

pp. 257-260

Parallel FDTD Modeling of Metallic Nanolens

Christos Argyropoulos (Queen Mary, University of London, United Kingdom); Efthymios Kallos (Queen Mary, University of London, United Kingdom); Atiqur Rahman (Queen Mary, University of London, United Kingdom); Yan Zhao (Assumption University of Thailand, Thailand); Yang Hao (Queen Mary, University of London, United Kingdom)

pp. 261-264

A New Technique for Efficient Simulation of RF and Microwave Circuits in Layered Media Using the Equivalent Medium Approach Combined with CBFM

Bianconi (University of Pisa, Italy); Raj Mittra (Penn State University, USA); K. Du (Penn State University, USA); Simone Genovesi (University of Pisa, Italy); Agostino Monorchio (Univeristy of Pisa, Italy)

pp. 265-268

On Shape Optimization of Wire Dipole Antennas

Juhani Kataja (Aalto University, Finland)

pp. 269-271

Localized and Observer-Dependent Importance of Currents for HF Scattering and Reduction of Unknowns in MoM

Makoto Ando (Tokyo Institute of Technology, Japan); Keita Ito (Tokyo Institute of Technology, Japan)

pp. 272-274

R12: Numerical Time-Domain Methods - 1

Conveners: Thomas Weiland (TU Darmstadt, Germany) and Rolf Schuhmann (Univ. of Paderborn, Germany)

Time and Frequency Domain Simulation of Photonic Nanocavities

Bastian Bandlow (Universitaet Paderborn, Germany); Christoph Classen (Universitaet Paderborn, Germany); Rolf Schuhmann (Universitaet Paderborn, Germany)

pp. 275-278

Development of the TLM Method for EMC/EMI Analysis

David Johns (CST of America, USA)

pp. 279-282

Regular Space Filling Tetrahedral Elements for Transmission Line Modelling (TLM)

Phillip Sewell (University of Nottingham, United Kingdom); Christos Christopoulos (University of Nottingham, United Kingdom); Trevor Benson (University of Nottingham, United Kingdom); David Thomas (University of Nottingham, United Kingdom); Ana Vukovic (University of Nottingham, United Kingdom)

pp. 283-286

Time Reversal and Optimal Electromagnetic Structure Synthesis

Wolfgang Hoefer (Institute of High Performance Computing, Singapore)

pp. 287-290

Time Domain Methods for Slowly Varying Fields

Stephan Koch (Technische Universitaet Darmstadt, Germany); Thomas Weiland (Technische Universitaet Darmstadt, Germany)

pp. 291-294

R13: Guided Waves

Convener: Shibani K. Koul, Indian Institute of Technology, Delhi (India)

Validation of Ray Optics Capability to Analyze the Transfer Behavior of Bent Optical Slab Waveguides

Matthias Stallein (Universitaet Paderborn, Germany); Bastian Bandlow (Universitaet Paderborn, Germany); Rolf Schuhmann (Universitaet Paderborn, Germany)

pp. 295-298

Electromagnetic Short Pulse Generation Techniques

Mithilesh Kumar (Indian Institute of Technology, Delhi, India); Ananjan Basu (Indian Institute of Technology, Delhi, India); Shibani K Koul (Indian Institute of Technology Delhi, India)

pp. 299-302

Continuous One-Sided Beam Scanning Through Broadside From Backfire to Forward Fire by Efficient Surface-Wave Excitation

Symon K Podilchak (Queen's University, Canada); Al P. Freundorfer (Queen's University, Canada); Yahia Antar (Royal Military College of Canada, Canada)

pp. 303-306

Excitation of Modes Guided by a Cylindrical Channel in a Lossy Gyrotropic Medium

Vasiliy Es'kin (University of Nizhny Novgorod, Russia); Alexander Kudrin (University of Nizhny Novgorod, Russia)

pp. 307-310

S02: Nonstandard Boundary Conditions in Electromagnetics

Convener: Ari Sihvola (Aalto University of Science and Technology, Finland)

Extremely Anisotropic Boundary Conditions and Their Optical Applications

Andrea Alù (The University of Texas at Austin, USA); Nader Engheta (University of Pennsylvania, USA)

pp. 311-314

Extreme Electromagnetic Boundary Conditions

Arthur D Yaghjian (Research Consultant, USA)

pp. 315-318

The Auxiliary Source Method and Its Application to the Reflection Problem At an Interface with Tilted Wires

Stanislav Maslovski (Universidade de Coimbra - Instituto de Telecomunicações, Portugal); Tiago Morgado (Universidade de Coimbra - Instituto de Telecomunicações, Portugal); Mario Silveirinha (Universidade de Coimbra - Instituto de Telecomunicações, Portugal)

pp. 319-322

Surface Waves Modes on Artificial Anisotropic Boundary Conditions

Francesco Caminita (University of Siena, Italy); Agnese Mazzinghi (University of Florence, Italy); Stefano Maci (University of Siena, Italy)

pp. 323-326

S12: Electromagnetics for Short-Range Communication

Convener: Giuliano Manara (University of Pisa, Italy)

Full-Wave Simulation of Body Area Networks Using the FDTD Method

Jonathan N Bringuier (Penn State University, USA); Raj Mittra (Penn State University, USA)

pp. 327-328

Wireless Power Harvesting with Planar Rectennas for 2.45 GHz RFIDs

John L. Volakis (Ohio State University, USA); Chi-Chih Chen (The Ohio State University, USA); Ugur Olgun (The Ohio State University, USA)

pp. 329-331

An Analytical Path-Loss Model for on-Body Radio Propagation

Gareth A Conway (Queen's University, Belfast, United Kingdom); William G. Scanlon (Queen's University Belfast, United Kingdom); Simon Cotton (Queen's University, Belfast, United Kingdom); Mark J. Bentum (University of Twente, The Netherlands)

pp. 332-335

Gaussian Beam Summation Algorithm for Ultra Wide Band Indoor Channel Characterization

Vadim Timchenko (Tel Aviv University, Israel); Ehud Heyman (Tel Aviv University, Israel); Amir Boag (Tel Aviv University, Israel)

pp. 336-339

Performance Analysis of Near-Field Focused Planar Arrays

Alice Buffi (University of Pisa, Italy); Paolo Nepa (University of Pisa, Italy); Giuliano Manara (University of Pisa, Italy)
pp. 340-343

T2: Tutorial 2

Convener: Karl J. Langenberg (University of Kassel, Germany)

Challenges in Bio-Electromagnetic Modeling

Carsten Potratz (University of Rostock, Germany); Sabine Petersen (Universität Rostock, Germany);
Annekathrin Grünbaum (Universität Rostock, Germany); Ursula van Rienen (Universität Rostock, Germany)
pp. 344-347

P2: Poster Session - 2

Slot Resonances in Axially-Symmetrical Radiators of Pulsed and Monochromatic TM-Waves

Kostyantyn Sirenko (Institute of Radiophysics and Electronics of National Academy of Sciences, Ukraine)
pp. 348-351

Phaseless Retrieval of Point-Like Scatterers: Theoretical Foundation of the Subspace Method

Xudong Chen (National University of Singapore, Singapore)
pp. 352-355

Numerical Evaluation of an Ultra High-Speed X-Ray Camera with Respect to Gated Image Simultaneity

Yoshihiro Ito (Yuge National College for Maritime Technology, Japan)
pp. 356-357

GO-Based Gain Optimization of a Dielectric Lens Antenna Considering Substrate Reflections

Peter Wenig (University of Erlangen-Nuremberg, Germany); Robert Weigel (Institute for Electronics
Engineering, Erlangen-Nuernberg Uni., Germany)
pp. 358-361

Inverse Scattering of Random Media

Gregory Samelsohn (Holon Institute of Technology, Israel)
pp. 362-365

Vehicle-to-Vehicle Communication System EMI Characterization on Automotive Electronics

Theodoros I. Kosmanis (Alexander Technological Educational Institute of Thessaloniki, Greece); Theodoros
T. Zygiridis (University of Western Macedonia, Greece); Nikolaos V. Kantartzis (Aristotle University of
Thessaloniki, Greece); Paul T. Aisopoulos (Alexander Technological Educational Institute of Thessaloniki,
Greece)
pp. 366-369

FDTD Analysis of a Planar Spiral Antennas for the Ground Penetrating Radar

Yiwei He (Osaka Electro-communication University, Japan)
pp. 370-372

The Effect of Gap Size on Dipole Impedance Using the Induced EMF Method

Maryam Dehghani Estarki (Simon Fraser University, Canada); Xing Yun (Simon Fraser University, Canada);
Xu Han (Simon Fraser University, Canada); Rodney Vaughan (Simon Fraser University, Canada)
pp. 373-376

Frequency-Agile, Miniaturized Slot Antenna for Hand-Held Devices

Shih-Yuan Chen (National Taiwan University, Taiwan)
pp. 377-380

R06: Inverse Scattering and Imaging - 1

Convener: Toru Sato (Kyoto University, Japan)

Inverse Scattering Using a Time Reversal RADAR

Lucio Bellomo (LSEET, Université du Sud Toulon-Var, France); Marc Saillard (University of Toulon,
France); Sébastien Pioch (LSEET, Université du Sud Toulon-Var, France); Patrick Chaumet (Institut Fresnel,
France); Kamal Belkebir (Institut Fresnel, France)

pp. 381-384

3D Quantitative Imaging of a Complex Shape Target From Microwave Scattering Measurements

Christelle Eyraud (Institut Fresnel UMR CNRS 6133, France); Jean-Michel Geffrin (Institut Fresnel UMR CNRS 6133, France); Amélie Litman (Institut Fresnel UMR CNRS 6133, France)

pp. 385-387

Experimental Study on Super-Resolution 3-D Imaging Algorithm Based on Extended Capon with Reference Signal Optimization for UWB Radars

Shouhei Kidera (University of Electro-Communications, Japan); Takuya Sakamoto (Kyoto University, Japan); Toru Sato (Kyoto University, Japan)

pp. 388-391

Stability and Resolution of Two Methods for Small Scatterer Localization

Raffaele Solimene (Second University of Naples, Italy); Aniello Buonanno (Second University of Naples, Italy); Rocco Pierri (SUN, Italy)

pp. 392-395

Near-Field Microwave Holographic Imaging: Target Localization and Resolution Study

Maryam Ravan (McMaster University, Canada); Reza Amineh (McMaster University, Canada); Natalia Nikolova (McMaster University, Canada)

pp. 396-399

R08: Random Media and Rough Surfaces -1

Convener: Alexander Yarovoy (Technical University of Delft, The Netherlands)

Elimination of Wave Intensity Fluctuations in Random Inhomogeneous Media

Mikhail Tinin (Irkutsk State University, Russia)

pp. 400-403

Theoretical Model of Transient Random Fields Based on the Fluctuation-Dissipation Theorem

Gabriele Gradoni (Università Politecnica delle Marche (UNIVPM), Italy); Luk Arnaut (National Physical Laboratory, United Kingdom)

pp. 404-407

Numerical Analysis of the Propagation of Light in a Disordered Waveguide System

Akira Komiyama (Osaka Electro-Communication University, Japan)

pp. 408-411

Estimating the Expected Power Density in a Reverberating Cavity Through Space Averaging

Andrea Cozza (Supélec, France)

pp. 412-415

Diffraction Effects in Residual Error of Dual-Frequency Global Navigation Satellite Systems

Byoung Chul Kim (Pusan National University, Korea); Mikhail Tinin (Irkutsk State University, Russia)

pp. 416-419

R17: UWB Antennas -1

Conveners: Debatosh Guha (University of Calcutta, India) and Yahia Antar (Royal Military College of Canada, Canada)

A Compact Printed Inverted Cone Antenna for UWB Based Applications

Deepti Krishna (Cochin University of Science and Technology, India)

pp. 420-423

A New Ultra Wideband Fractal Antenna

Abolfazl Azari (Islamic Azad university, Iran)

pp. 424-427

Ultrawideband Monopole-Dielectric Resonator Antennas: Designs and Advances

Debatosh Guha (University of Calcutta, India); Yahia Antar (Royal Military College of Canada, Canada)

pp. 428-431

S09: Novel Mathematical Methods in Electromagnetics -1

- Conveners: Oliver Dorn (University of Manchester, UK), K. Kobayashi (Chuo University, Japan), Dominique Lesselier (CNRS, France), and Youri Shestopalov (Karlstad University, Sweden)
- Analysis and Model Synthesis of Resonant Units for Radiators of High-Power Short Radio Pulses
Kostyantyn Sirenko (Institute of Radiophysics and Electronics of National Academy of Sciences, Ukraine);
Vadim Pazyinin (Institute of Radiophysics and Electronics of National Academy of Sciences, Ukraine)
pp. 432-434
- Polarization-Dependent Distribution of the Zeros of EM Waves Scattered From Polygonal Objects
Masahiro Hashimoto (Osaka Electro-Communication University, Japan)
pp. 435-438
- On the Theory of TM- Electromagnetic Guided Waves in a Film with Nonlinear Permittivity
Kadriya Yuskaeva (University of Osnabrueck, Germany); Valeriy Serov (University of Oulu, Finland); Hans
Werner Schürmann (University of Osnabrueck, Germany)
pp. 439-441
- Analysis of Inverse Scattering in a Waveguide Using the Method of Volume Singular Integral Equation
Yury Smirnov (Head of Department at Penza State University, Russia); Youri Shestopalov (Karlstad
University, Sweden)
pp. 442-444
- LASSO - an Iterative Framework for Probe Methods
Roland Potthast (University of Reading, Germany)
pp. 445-448

S10: Numerical Methods: Integral Equations - 1

- Convener: Thomas F. Eibert (Technische Universitaet Muenchen, Germany)
- Using Finite Difference Delay Modeling and the Nyström Method for the Discretization of Two-Dimensional Scattering Problems
Daniel Weile (University of Delaware, USA); Yuan Lin (University of Delaware, USA)
pp. 449-452
- An Approach for Solving the Time Domain Electric Field Integral Equation (TD-EFIE) Utilizing a Novel Basis Function
Jonathan N Bringuier (Penn State University, USA); Raj Mittra (Penn State University, USA)
pp. 453-455
- Meshless Evaluation of Domain Integrals for Solving Electromagnetic Integral Equations
Meisong Tong (University of Illinois at Urbana-Champaign, USA); Weng Chew (The University of Hong Kong, Hong Kong)
pp. 456-459
- Calderon Preconditioned Electric Current Formulation
Pasi Ylä-Oijala (Aalto University, Finland); Sami Kiminki (Aalto University, Finland)
pp. 460-462
- Hybrid Finite Element-Boundary Integral Method Accelerated by the NSPW-MLFMA
Pieterjan Demarcke (University of Ghent, Belgium); Hendrik Rogier (Ghent University, Belgium)
pp. 463-466

R06: Inverse Scattering and Imaging -2

- Convener: Toru Sato (Kyoto University, Japan)
- Detection Using Microwaves and Self-Adjoint Sensitivity Analysis
Li Liu (PhD Candidate, Canada); Aastha Trehan (McMaster University, Canada); Natalia Nikolova (McMaster University, Canada)
pp. 467-470
- Polarimetric Through-the-Wall Imaging
Wenji Zhang (Villanova University, USA); Christopher Thajudeen (Villanova University, USA); Ahmad Hoorfar (Villanova University, USA)
pp. 471-474

Diffraction Tomography of Inhomogeneous Media with Higher Resolvability: the Case of Strong Phase Variations
Yury Kravtsov (Institute of Physics, Maritime University, Poland); Mikhail Tinin (Irkutsk State University, Russia); Sergei Knizhin (Irkutsk State University, Russia)
pp. 475-478

R08: Random Media and Rough Surfaces -2

Convener: Alexander Yarovoy (Technical University of Delft, The Netherlands)

Rough Surface Scattering At Low Grazing Incidence: a Dedicated Model

Marc Saillard (University of Toulon, France); Gabriel Soriano (Aix-Marseille University, France)
pp. 479-481

Extension of the Geometric Optics Approximation to the Scattering From Rough Layers

Nicolas Pinel (University of Nantes, France); Joel T. Johnson (The Ohio State University, USA); Christophe Bourlier (University of Nantes, France)
pp. 482-485

Ground Wave Propagation Along a Rough Sea Homogeneous Surface in the 10-100 MHz Band

Christophe Bourlier (University of Nantes, France); Kubické Gildas (IREENA, France)
pp. 486-489

R17: UWB Antennas -2

Conveners: Debatosh Guha (University of Calcutta, India) and Yahia Antar (Royal Military College of Canada, Canada)

Characterization of Ultrawideband Antennas

Tapan K. Sarkar (Syracuse University, USA)
pp. 490-492

Analysis of the UWB Antennas Angular Dependent Radiation of Impulse Signals

Elena Pancera (Karlsruhe Institute of Technology, Germany); Joaquim Fortuny-Guasch (Joint Research Center, Italy); Werner Wiesbeck (Karlsruhe Institute of Technology, Germany)
pp. 493-496

Active UWB Antenna

Mithilesh Kumar (Indian Institute of Technology, Delhi, India); Ananjan Basu (Indian Institute of Technology, Delhi, India); Shibani K Koul (Indian Institute of Technology Delhi, India)
pp. 497-500

Tapered Slot Antenna for UWB Applications

Jawad Siddiqui (Royal Military College of Canada, Canada); Yahia Antar (Royal Military College of Canada, Canada); Al P. Freundorfer (Queen's University, Canada); Said Mikki (Royal Military College of Canada, Canada); Thayanathan Thayaparan (Radar Applications and Space Technology, Defence Research and Development Canada, Ottawa, Canada, Canada)
pp. 501-504

S09: Novel Mathematical Methods in Electromagnetics -2

Conveners: K. Kobayashi (Chuo University, Japan) and Yuri Shestopalov (Karlstad University, Sweden)

Spectral Expansion Method of Beam Wave Scattering by Objects with Smooth Surfaces and Wedges

Yasumitsu Miyazaki (Aichi University of Technology, Japan)
pp. 505-508

Inverse Problem Characterization Using an Adaptive Database

Sandor Bilicz (BUTE, Hungary); Marc Lambert (CNRS, France); Szabolcs Gyimothy (BUTE, Hungary)
pp. 509-512

Wavelet Analysis for an Electromagnetic Field

Mikhail S. Sidorenko (St-Petersburg State University, Russia, Russia)
pp. 513-514

Inverse Problems for Helmholtz Equation Under Uncertainty Conditions

Oleksandr Nakonechny (Taras Shevchenko National University of Kyiv, Ukraine)
pp. 515-516

Estimation of Solutions of Helmholtz Problems with Uncertain Data

Youri Shestopalov (Karlstad University, Sweden); Yury Podlipenko (National Taras Shevchenko University of Kyiv, Ukraine); Vladimir Prishlyak (National Taras Shevchenko University of Kyiv, Ukraine)
pp. 517-519

S10: Numerical Methods: Integral Equations - 2

Convener: Thomas F. Eibert (Technische Universitaet Muenchen, Germany)

A Multilevel Interpolating Fast Integral Solver with Fast Fourier Transform Acceleration

Dennis Schobert (Technische Universität München, Germany); Thomas F. Eibert (Technische Universität München, Germany)
pp. 520-523

Fast Direct Solution of the Combined Field Integral Equation

Alexander Heldring (Polytechnical University of Catalunya, Spain); Jose M. Tamayo (Universitat Politècnica de Catalunya, Spain); Juan M. Rius (Universitat Politècnica de Catalunya, Spain)
pp. 524-527

A Fast Spectral-Domain Solver for Quasi-3D Structures with Arbitrary Vertical Conductors in Multilayered Media

Thomas Vaupel (Fraunhofer FHR, Germany)
pp. 528-531

Computer Simulations of 2-Dimensional Slab Waveguides with Photonic Crystal Structure by Method of Moments

Masahiro Tanaka (Gifu University, Japan)
pp. 532-535

Design of Optical Devices Using Frequency Domain Solvers

Ergun Simsek (Bahcesehir University, Turkey); Qing Liu (Duke University, USA)
pp. 536-539

R14: Interaction of EM with Biological Tissue

An Electrical Double Layer Model with Spatial Variation of the Permittivity

Ekaterina Gongadze (Universität Rostock, Germany); Aleš Iglič (University of Ljubljana, Slovenia); Sabine Petersen (Universität Rostock, Germany); Ursula van Rienen (Universität Rostock, Germany)
pp. 540-543

SAR Evaluation by Modal Decomposition Using Induced Near-Field of Equivalent Current Sources

Ouanes Aiouaz (Orange Labs R&D, France)
pp. 544-546

Calculation of the SAR Induced in Head Tissues Using a High Order DGTD Method and Triangulated Geometrical Models

Stéphane Lanteri (INRIA - Sophia Antipolis, France); Joe Wiart (France Telecom R&D, France); Man-Fai Wong (France Telecom R&D, France)
pp. 547-550

Correlation Between Peak Spatial-Average SAR and Maximum Temperature Elevation in Layered Cubical Model in the Frequency Range Above 3 GHz

Akimasa Hirata (Nagoya Institute of Technology, Japan); Kei Sugiura (Nagoya Institute of Technology, Japan); Yuya Kanai (Nagoya Institute of Technology, Japan); Osamu Fujiwara (Nagoya Institute of Technology, Japan)
pp. 551-554

R21: Special Antenna Concepts

A Crustal Movement Observation System Using Quasi-Zenith Satellites

Shinji Kuroda (Mitsubishi Electric Corporation, Japan); Tadashi Oshima (Mitsubishi Electric Corporation, Japan); Shuji Urasaki (Hiroshima Institute of Technology, Japan)

pp. 555-558

Sub-Wavelength Near Field Imaging Using a Cross Polarised Slot with Wire Insert

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

pp. 559-561

S11: EM Engineering

Convener: Anton G. Tijhuis (TU/e Eindhoven University of Technology, The Netherlands)

Proposal on Human Detection System Around Detached House Using UHF Band Transmitters

Masahiro Nishi (Hiroshima City University, Japan); Yusei Kishizuka (Hiroshima City University, Japan); Takahiro Maeda (Hiroshima City University, Japan); Koichi Shin (Hiroshima City University, Japan); Teruaki Yoshida (Hiroshima City University, Japan)

pp. 562-565

Phase Conjugating Lens for Image Manipulation

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

pp. 566-569

An Electromagnetic Model for Post-Wall Waveguide Building Blocks

Teis Coenen (TU Eindhoven, The Netherlands); Dave Bekers (TNO Defence Security and Safety, The Netherlands); Joseph Tauritz (University of Twente, The Netherlands); Frank van Vliet (TNO Defence Security and Safety, The Netherlands)

pp. 570-572

Optimized Design of a Compact Low-Cost 4 Element Microstrip Antenna Array for WLAN

Zhongkun Ma (Katholieke Universiteit Leuven, Belgium); Vladimir Volski (KU Leuven, Belgium); Guy Vandenbosch (Katholieke Universiteit Leuven, Belgium)

pp. 573-576

Kirchhoff Integrals Applied to 3D Simulations of Radio Wave Propagation Over Complex Terrain

Christopher Coleman (University of Adelaide, Australia)

pp. 577-579

S13: Micromodeling and Characterization of Composite Materials -1

Conveners: Daniel Sjöberg (Lund University, Sweden) and Niklas Wellander (Swedish Defence Research Agency, Sweden)

Padé Approximations in Inverse Homogenization and Numerical Simulation of Electromagnetic Fields

Elena Cherkav (University of Utah, USA); Dali Zhang (University of Calgary, Canada)

pp. 580-583

A New Mixing Rule for Predicting of Frequency-Dependent Material Parameters of Composites

Konstantin N. Rozanov (Institute for Theoretical and Applied Electromagnetics, Russia); Marina Koledintseva (Missouri University of Science and Technology, USA); James Drewniak (Missouri University of Science and Technology, USA)

pp. 584-587

Different Retrieval Methods Based on s-Parameters for the Permittivity of Composites

Jiaran Qi (Helsinki University of Technology, Finland); Henrik Kettunen (Helsinki University of Technology, Finland); Henrik Wallén (Aalto University School of Science and Technology, Finland); Ari Sihvola (Aalto University of Science and Technology, Finland)

pp. 588-591

Characterization of Composite Materials in Waveguides

Daniel Sjöberg (Lund University, Sweden); Christer Larsson (Lund University, Sweden)

pp. 592-595

Modelling of Magnetic Radar Absorbing Composites

Harmen Schippers (National Aerospace Laboratory NLR, The Netherlands); Jaap Heijstek (National Aerospace Laboratory NLR, The Netherlands); Tomas Lundin (Saab AB Aerosystems, Sweden)

T3: Tutorial 3

Convener: Karl J. Langenberg (University of Kassel, Germany)
Computational Optoelectronics as Analysis and Design Tool
Bernd Witzigmann (University of Kassel, Germany)
pp. 600-603

R03: Solution to Canonical Problems

Convener: John M. Arnold (University of Glasgow, UK)
Low Frequencies and Peak Amplitude in UWB Pulse Propagation
Natalie Cartwright (SUNY New Paltz, USA)
pp. 604-607

An Alternative Integral Equation for Calculating the Surface Charge in a Parallel Disk Capacitor
Norgren (Kungliga Tekniska Högskolan, Sweden)
pp. 608-611

Low Frequency Electromagnetic Scattering From Metallic Discs
Andrey Osipov (German Aerospace Center (DLR), Germany)
pp. 612-615

R04: Scattering: Numerical Methods -1

Conveners: Levent Gürel (Bilkent University, Turkey) and John L. Volakis (Ohio State University, USA)
An Efficient Parallel Implementation of the Multilevel Fast Multipole Algorithm for Rigorous Solutions of Large-Scale Scattering Problems
Ozgun Ergul (University of Strathclyde, United Kingdom); Levent Gürel (Bilkent University, Turkey)
pp. 616-619

A Vector Fast Multipole Algorithm for Low Frequency Problems
Yang Liu (The University of Hong Kong, P.R. China); Weng Chew (The University of Hong Kong, Hong Kong)
pp. 620-623

Integral Equation Based Domain Decomposition Method for Electromagnetic Wave Scattering Problems
Zhen Peng (ElectroScience Lab, The Ohio State University, USA); Jin-Fa Lee (Ohio State University, USA)
pp. 624-627

R07: Propagation and Scattering in Layered Structures

Convener: Li Kai (Zhejiang University, China)
Analysis of Radiation From a Line Source in Periodic Cylindrical Structures
Vakhtang Jandieri (Kumamoto University, Japan); Kiyotoshi Yasumoto (Kyushu University, Japan)
pp. 628-631

Characteristics of the FM Radio Waves Propagated Over the Epicenters
Teruaki Yoshida (Hiroshima City University, Japan); Ryusuke Fujimoto (Hiroshima City University, Japan); Koichi Shin (Hiroshima City University, Japan); Masahiro Nishi (Hiroshima City University, Japan)
pp. 632-635

S01: Terahertz Technologies

Conveners: Amir Zaghloul (Virginia Polytechnic Institute and State University, USA) and Ozlem Kilic (The Catholic University of America, USA)
Three-Dimensional Terahertz Interferometric Imaging System for Concealed Object Detection

Alex Goltsman (Virginia Polytechnic Institute, USA); Charles Dietlein (US Army Research Laboratory, USA); David Wikner (US Army Research Laboratories, USA); Ozlem Kilic (The Catholic University of America, USA); Amir Zaghloul (Virginia Polytechnic Institute and State University, USA)
pp. 636-639

Broadband Terahertz Modulators Based on Reconfigurable Metamaterials and Their Potential Application in Terahertz Imaging

Mona Jarrahi (University of Michigan, USA)
pp. 640-642

S13: Micromodeling and Characterization of Composite Materials -2

Conveners: Daniel Sjöberg (Lund University, Sweden) and Niklas Wellander (Swedish Defence Research Agency, Sweden)

Transmission Line Model with X-Circuit for a Metamaterial Layer Made of Pairs of Dogbone- Shaped Planar Conductors

Filippo Capolino (University of California, Irvine, USA); Andrea Vallechi (University of Siena, Italy); Matteo Albani (University of Siena, Italy)
pp. 643-645

R04: Scattering: Numerical Methods -2

Conveners: Levent Gürel (Bilkent University, Turkey) and John L. Volakis (Ohio State University, USA)

A Complete Basis Function Set for Curved Surfaces

Massimiliano Casaletti (University of Siena, Italy); Stefano Maci (University of Siena, Italy); Giuseppe Vecchi (Politecnico di Torino, Italy)
pp. 646-648

Numerical Methods for Scattering Problems Expressed in Terms of Normal Field Components and Their Normal Derivatives

Pasi Ylä-Oijala (Aalto University, Finland); Sami Kiminki (Aalto University, Finland); Johannes Markkanen (Aalto University, Finland); Henrik Wallén (Aalto University School of Science and Technology, Finland); Ari Sihvola (Aalto University of Science and Technology, Finland); Ismo Lindell (Aalto University, School of Science and Technology, Finland); Seppo Järvenpää (Aalto University, Finland)
pp. 649-652

The T-Matrix Method for Solving Two-Dimensional Scattering Problems

Christian Sohl (Lund University, Sweden); Mats Gustafsson (Lund University, Sweden)
pp. 653-656

Scattering Analysis of Discrete Bodies of Revolution Via an Efficient Numerical Algorithm

Hristos T. Anastassiou (Hellenic Aerospace Industry, Greece); Nikolaos L. Tsitsas (National Technical University of Athens, Greece); Panagiotis J. Papakanellos (Hellenic Air Force Academy, Greece)
pp. 657-659

Formulation of Electromagnetic Scattering From Cylinder Located Near Periodic Surface

Koki Watanabe (Fukuoka Institute of Technology, Japan); Kiyotoshi Yasumoto (Kyushu University, Japan)
pp. 660-663

R09: Complex Media -1

Conveners: Ben Zion Steinberg (Tel Aviv University, Israel) and Gerhard Kristensson (Lund University, Sweden)

Electromagnetic Properties of Composite Materials Containing Carbon Nanotubes

Gregory Slepyan (Belarus State University, Belarus); Mikhail Shuba (Belarus State University, Belarus); Sergey Maksimenko (Belarus State University, Belarus); Christian Thomsen (Technische Universität, TU Berlin, Germany); Akhlesh Lakhtakia (Pennsylvania State University, USA)
pp. 664-667

A Transformation-Optics-Inspired Route to Sensor Invisibility Based on Cloak/Anti-Cloak Interactions

Ilaria Gallina (University of Sannio, Italy); Giuseppe Castaldi (University of Sannio, Italy); Vincenzo Galdi (University of Sannio, Italy); Andrea Alù (The University of Texas at Austin, USA); Nader Engheta (University of Pennsylvania, USA)

pp. 668-671

Electromagnetic Cloaking by Change of Variables

Niklas Wellander (Swedish Defence Research Agency, Sweden); Gerhard Kristensson (Lund University, Sweden)

pp. 672-675

Thin Wideband Absorber with Optimal Thickness

Alireza Kazemzadeh (Lund University, Sweden)

pp. 676-679

Electrodynamic Synergy of Micro-Properties and Macro-Structure in Particle Arrays

Ben Zion Steinberg (Tel Aviv University, Israel); Yakir Hadad (Tel-Aviv University, Israel)

pp. 680-683

R10: Numerical Methods: General Aspects -3

Conveners: Amir Boag (Tel Aviv University, Israel) and Vitaliy Lomakin (University of California, San Diego, USA)

A Legendre Pseudospectral Frequency-Domain Method for Solving Maxwell's Equations

Chih Yu Wang (National Taiwan University, Taiwan); Shih-Yung Chung (National Taiwan University, Taiwan); Chun-Hao Teng (National Chiao Tung University, Taiwan); Hung-chun Chang (National Taiwan University, Taiwan)

pp. 684-687

Order Reduction of Finite Element Models of Passive Electromagnetic Structures with Statistical Variability

Andreas Cangellaris (University of Illinois, USA); Prasad Sumant (University of Illinois, USA); Narayan Aluru (University of Illinois, USA); Hong Wu (Extreme DA, USA)

pp. 688-691

Comparative Analysis Between 3D-TLM Nodes in the Frequency Domain

Meriam Attia (National school of engineering of Tunis (ENIT), Tunisia); Michel Ney (TELECOM Bretagne Institute, France); Taoufik Aguil (ENIT, Tunisia)

pp. 692-695

New Modelling Aspects in the Method of Lines

Larissa Vietzorreck (Technische Universitaet Muenchen, Germany); Mohammed Furqan (Technische Universitaet Muenchen, Germany)

pp. 696-698

Full-Wave and Fast Analysis of Conformal Microstrip Lines and Antennas

Marcos Heckler (German Aerospace Center (DLR), Germany); Achim Dreher (German Aerospace Center (DLR), Germany)

pp. 699-702

R16: Antenna Arrays -1

Convener: Alexander Yarovoy (Technical University of Delft, The Netherlands)

Closed-Form Time-Domain Expressions for the 2D Pulsed EM Field Radiated by an Array of Slot Antennas of Finite Width

Martin Stumpf (Brno University of Technology, Czech Republic); Adrianus T De Hoop (Delft University of Technology, The Netherlands); Ioan Lager (Delft University of Technology, The Netherlands)

pp. 703-706

Treating Linear Antenna Arrays as Sampled Continuous Source Distributions

Thomas F. Eibert (Technische Universität München, Germany)

pp. 707-710

Limitations on the Effective Area and Bandwidth Product for Array Antennas

Lars Jonsson (Royal Institute of Technology (KTH), Sweden); Mats Gustafsson (Lund University, Sweden)

pp. 711-714

An Efficient Method to Design Planar Arrays for High Power Applications by Mutual Coupling Optimization
Luca Cisoni (iXem Labs, Politecnico di Torino, Italy); Riccardo Stefanelli (Politecnico di Torino - iXem Labs, Italy); Daniele Trincherò (Politecnico di Torino, Italy); Pier Mario Besso (Esa – Esoc, Germany); Guillaume Dauron (Esa – Esoc, Germany)
pp. 715-718

Patch Arrays Integrated with an EBG-Surface
Francesco Caminita (University of Siena, Italy); Sandra Costanzo (University of Calabria, Italy); Giuseppe Di Massa (University of Calabria, Italy); Stefano Maci (University of Siena, Italy); Giuseppe Mauriello (Selex Galileo, Italy); Ignazio Venneri (University of Calabria, Italy); Giacomo Guarnieri (Selex Galileo, Italy)
pp. 719-721

S16: In Memoriam Femke Olyslager - 1

Conveners: Daniel De Zutter (Ghent University, Belgium) and Ludger Klinkenbusch (Christian-Albrechts-Universitaet zu Kiel, Germany)

On the Classification of Electromagnetic Media
Ismo Lindell (Aalto University, School of Science and Technology, Finland)
pp. 722-725

Olyslager Approach to Bianisotropic Mixtures
Ari Sihvola (Aalto University of Science and Technology, Finland)
pp. 726-729

Electromagnetic Waves in Complex Eutectic Structures
Andrzej Stefanski (Institute of Electronic Materials Technology, Poland); Maria Kafesaki (University of Crete, Greece); Dorota Pawlak (Institute of Electronic Materials Technology, Poland)
pp. 730-732

Energy Vs. Group Velocity for Elastic Waves in Homogeneous Anisotropic Solid Media
Karl J. Langenberg (University of Kassel, Germany); Rene Marklein (University of Kassel, Germany); Klaus Mayer (University of Kassel, Germany)
pp. 733-736

Spherical-Multipole Based Time-Domain Near-Field to Near-Field Transformation
Ludger Klinkenbusch (Christian-Albrechts-Universitaet zu Kiel, Germany)
pp. 737-740

R04: Scattering: Numerical Methods -3

Conveners: Levent Gürel (Bilkent University, Turkey) and John L. Volakis (Ohio State University, USA)
Analytical Theory and Equivalent Circuit for Extraordinary Transmission Through Arrays of Slits Perforated in Realistic Metallic Screens
Vicente Delgado (University of Seville, Spain); Francisco Mesa (University of Seville, Spain); Lukas Jelinek (Czech Technical University in Prague, Czech Republic); Ricardo Marques (University of Seville, Spain)
pp. 741-743

Comparison of Transmission Resonance Phenomena Through Small Coupling Apertures Between Two Kinds of Transmission Resonance Structures
Jong-Eon Park (Kyungpook National University, Korea); Young-Ki Cho (Kyungpook National University, Korea)
pp. 744-747

A Perfectly Matched Layer Based Technique for the Scattering From 1-D Periodic Microstrip Structures
Dries Vande Ginste (Ghent University, Belgium); Hendrik Rogier (Ghent University, Belgium)
pp. 748-751

On a High-Order Discontinuous Galerkin Method Applied to Canonical Scattering Problems
Christian Engström (ETH Zurich, Switzerland)
pp. 752-755

R09: Complex Media -2

Conveners: Ben Zion Steinberg (Tel Aviv University, Israel) and Gerhard Kristensson (Lund University, Sweden)

Carbon Onions for Electromagnetic Applications

Sergey Maksimenko (Belarus State University, Belarus); Polina Kuzhir (Institute of Nuclear Problem at Belarusian State University, Belarus); Gregory Slepyan (Belarus State University, Belarus); Vladimir Kuznetsov (Boreskov Institute of Catalysis SB RAS, Russia); Sergey Moseenkov (Boreskov Institute of Catalysis, Russia); Olga Shenderova (International Technology Center, Raleigh, NC, USA); Alexander Okotrub (Nikolaev Institute of Inorganic Chemistry SB RAS, Russia); Lyuba Bulusheva (Nikolaev Institute of Inorganic Chemistry SB RAS, Russia); Jan Macutkevicius (Semiconductor Physics Institute, Lithuania); Philippe Lambin (FUNDP – University of Namur, Belgium); Anatoly Romanenko (Novosibirsk State University, Russia)

pp. 756-759

Negative Index of Refraction, Perfect Lenses and Transformation Optics -- Some Words of Caution.

Luzi Bergamin (Aalto University, Finland); Alberto Favaro (Imperial College London, United Kingdom)

pp. 760-763

All-Spectrum Oblique Transmission Through a Periodic Screen

Daniel Sjöberg (Lund University, Sweden); Mats Gustafsson (Lund University, Sweden); Christer Larsson (Lund University, Sweden)

pp. 764-767

A Geometrically Simple Benchmark Problem for Negative Index Metamaterial Homogenization

Henrik Wallén (Aalto University School of Science and Technology, Finland); Henrik Kettunen (Helsinki University of Technology, Finland); Jiaran Qi (Helsinki University of Technology, Finland); Ari Sihvola (Aalto University of Science and Technology, Finland)

pp. 768-771

A Plethora of Negative-Refraction Phenomenons in Relativistic and Non-Relativistic Scenarios

Tom Mackay (University of Edinburgh, United Kingdom); Akhlesh Lakhtakia (Pennsylvania State University, USA)

pp. 772-775

R10: Numerical Methods: General Aspects -4

Conveners: Amir Boag (Tel Aviv University, Israel) and Vitaliy Lomakin (University of California, San Diego, USA)

Antenna Mismatch Induced by Nearby Scatterers Through a Spherical Wave - Generalized Scattering Matrix Approach

Cristian Della Giovampaola (University of Siena, Italy); Enrica Martini (University of Siena, Italy); Alberto Toccafondi (University of Siena, Italy); Stefano Maci (University of Siena, Italy)

pp. 776-779

Mutual Coupling Between Two Arbitrarily Oriented and Positioned Antennas in Near- and Far-Field Regions

Ahmed Akgiray (University of California Los Angeles, USA); Yahya Rahmat-Samii (University of California Los Angeles (UCLA), USA)

pp. 780-783

Fast Fourier Transform Preprocessing for Accelerated Plane Wave Based Spherical Near-Field Far-Field Transformation

Carsten H Schmidt (Technische Universität München, Germany); Tommi Laitinen (Helsinki University of Technology, Finland); Thomas F. Eibert (Technische Universität München, Germany)

pp. 784-787

Three-Dimensional Geometry Variation of FIT Systems for Model Order Reduction

Kynthia Stavarakakis (Technische universität Darmstadt, Germany); Tilmann Wittig (CST AG, Germany); Wolfgang Ackermann (Technische Universitaet Darmstadt, Germany); Thomas Weiland (Technische Universitaet Darmstadt, Germany)

pp. 788-791

R16: Antenna Arrays -2

Convener: Alexander Yarovoy (Technical University of Delft, The Netherlands)

Circular Array of Wideband 3D Vivaldi Antennas

Rémi Sarkis (Université catholique de Louvain, Belgium); Christophe Craeye (Université Catholique de Louvain, Belgium)

pp. 792-794

A Perturbation Technique for Improving the Design of a Planar Slot Array

Sembiam Rengarajan (California State University, USA)

pp. 795-798

Low Profile Array with Reduced Radar Cross Section

Simone Genovesi (University of Pisa, Italy); Agostino Monorchio (University of Pisa, Italy)

pp. 799-802

S16: In Memoriam Femke Olyslager - 2

Conveners: Daniel De Zutter (Ghent University, Belgium) and Ludger Klinkenbusch (Christian-Albrechts-Universität zu Kiel, Germany)

Perfectly Matched Layer Based Modelling of Layered Media: Overview and Perspective

Dries Vande Ginste (Ghent University, Belgium); Hendrik Rogier (Ghent University, Belgium); Daniel De Zutter (Ghent University, Belgium)

pp. 803-806

Highly Accurate Finite Difference Analysis of Leaky, Guided and Complex Waves in Photonic Optical Fibres and Dielectric Waveguiding Structures

Piotr Kowalczyk (Gdansk University of Technology, Poland); Michal Mrozowski (, Poland)

pp. 807-809

Preconditioning Iterative MLFMA Solutions of Integral Equations

Levent Gürel (Bilkent University, Turkey); Tahir Malas (Bilkent University, Turkey); Ozgur Ergul (University of Strathclyde, United Kingdom)

pp. 810-813

Recent Advances in Boundary Element Methods Applied to Conducting and Dielectric Electromagnetic Scattering Problems

Kristof Cools (Ghent University, Belgium)

pp. 814-817

Kirchhoff's Approach as Formulated in His 1882 Paper

Ning Yan Zhu (University of Stuttgart, Germany)

pp. 818-821

R02: Mathematical Modelling of EM Problems -1

Conveners: Vincenzo Galdi (University of Sannio, Italy) and Ehud Heyman (Tel Aviv University, Israel)

The Diffraction of a Dipole-Field by an Impedance Wedge

Mikhail Lyalinov (University of St. Petersburg, Russia); Ning Yan Zhu (University of Stuttgart, Germany)

pp. 822-824

Path Integrals in Electromagnetics

Carl Baum (University of New Mexico, USA)

pp. 825-828

Pulsed Beam Propagation in Plane Stratified Media: Asymptotically Exact Solutions

Yan Kaganovsky (Tel Aviv University, Israel); Ehud Heyman (Tel Aviv University, Israel)

pp. 829-832

Nonlinear Localized Structures for Solving Wave Equations Over Long Distances

John Steinhoff (University of Tenn. Space Inst., USA); Subhashini Chitta (Flow Analysis Inc, USA)

pp. 833-836

R11: Hybrid Methods

Conveners: Giuliano Manara (University of Pisa, Italy) and Prabhakar Pathak (The Ohio State University, USA)

On the Use of High-Frequency Asymptotic Concepts for the Development of Efficient Adaptive Numerical Integration Algorithms

Giorgio Carluccio (University of Siena, Italy); Matteo Albani (University of Siena, Italy)
pp. 837-840

Combined Use of PO-MoM and Local-MoM for Reducing MoM Areas for Wide Angular Observation Points

Makoto Ando (Tokyo Institute of Technology, Japan); Keita Ito (Tokyo Institute of Technology, Japan); Tetsu Shijo (Toshiba Corporation, Japan)
pp. 841-843

Hybrid Method Based on the Use of GSM Formalism with Complex Source Point Beams for the Analysis of Complex Antenna Problems

Enrica Martini (University of Siena, Italy); Giacomo Carli (University of Siena, Italy); Stefano Maci (University of Siena, Italy)
pp. 844-846

An Efficient Hybrid UTD-CSB-VWF Approach for the Analysis of Large Reflector Antennas

Prabhakar Pathak (The Ohio State University, USA); Youngchel Kim (Ohio State University, USA); Robert Burkholder (Ohio State University, USA); Teh-Hong Lee (Ohio State University, USA)
pp. 847-849

On the Hybridization of RUFD Algorithm with the DM Approach for Solving Multiscale Problems

Chiara Pelletti (University of Pisa, Italy); K. Panayappan (Penn State University, USA); Raj Mittra (Penn State University, USA); Agostino Monorchio (Univeristy of Pisa, Italy)
pp. 850-852

R19: Electrically Small Antennas -1

Convener: Arthur D Yaghjian (Research Consultant, Concord, USA)

On the Efficient Design, Analysis and Measurement of Bio-Implantable Electrically Small Antennas

Anja K Skrivervik (EPFL, Switzerland); Francesco Merli (Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland)
pp. 853-856

Quality Factor of an Electrically Small Magnetic Dipole Antenna with Magneto-Dielectric Core

Oleksiy S. Kim (Technical University of Denmark, Denmark); Olav Breinbjerg (Technical University of Denmark, Denmark)
pp. 857-858

High-Efficiency Super-Gain Antenna Arrays

Josef A. Nosseck (TU Munich, Germany)
pp. 859-860

Design of Electrically Small, Parasitic Arrays for Multiple Bands

Sungkyun Lim (University of Hawaii, USA); Jay Yu (University of Hawaii, USA)
pp. 861-863

Complex Traveling Waves on Periodic Arrays of Electrically Small Lossless or Lossy Dipole Scatterers

Robert Shore (Air Force Research Laboratory, USA); Arthur Yaghjian (Air Force Research Laboratory, USA)
pp. 864-867

R20: Antennas and Propagation for Car-to-Car Communication -1

Convener: Werner Wiesbeck (Karlsruhe Institute of Technology, Germany) and Thomas Kuerner (Technische Universitaet Braunschweig, Germany)

C2X Communications Overview

Werner Wiesbeck (Karlsruhe Institute of Technology, Germany); Lars Reichard (Karlsruhe Institute of Technology, Germany)
pp. 868-871

About the Multipath Stationarity of Car-to-Car Channels in the 5 GHz Band

Olivier Renaudin (Université Catholique de Louvain (UCL), Belgium); Veli-Matti Kolmonen (TKK Helsinki University of Technology, Finland); Pertti Vainikainen (Helsinki University of Technology (TKK), Finland); Claude Oestges (Université catholique de Louvain, Belgium)

pp. 872-875

Statistical Evaluation and Modeling of the Wideband Car-to-Car Channel At 5.7 GHz

Panagiotis Paschalidis (Fraunhofer Heinrich Hertz Institute, Germany); Kim Mahler (Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, Germany); Andreas Kortke (Fraunhofer Heinrich-Hertz-Institut, Germany); Michael Peter (Fraunhofer HHI, Germany); Mike Wisotzki (Fraunhofer Heinrich Hertz Institute, Germany); Wilhelm Keusgen (Fraunhofer Heinrich Hertz Institute, Germany)

pp. 876-879

3D Ray-Tracing Embedded Into an Integrated Simulator for Car-to-X Communications

Thomas Kürner (Technische Universität Braunschweig, Germany); Moritz Schack (TU Braunschweig, Germany)

pp. 880-882

"Virtual Drive" Physical Layer Simulations for Vehicle-to-Vehicle Communication

Lars Reichardt (University of Karlsruhe, Germany); Tom Schipper (Karlsruhe Institute of Technology (KIT), Germany); Thomas Zwick (Universität Karlsruhe (TH), Germany)

pp. 883-886

S14: Electromagnetic Methods for Nondestructive Evaluation -1

Conveners: Salvatore Caorsi (University of Pavia, Italy) and Matteo Pastorino (University of Genoa, Italy)

Particle Optimization with Metamodel for Crack Characterization

Remi Douvenot (L2S UMR 8506 (CNRS - Supélec - Université paris Sud 11), France); Marc Lambert (CNRS, France); Dominique Lesselier (L2S UMR 8506 (CNRS - Supélec - Université paris Sud 11), France)

pp. 887-890

Estimation of Multiple Surface Cracks Parameters Using MFL Testing

Maryam Ravan (McMaster University, Canada); Reza Amineh (McMaster University, Canada); Slawomir Koziel (Reykjavik University, Iceland); Natalia Nikolova (McMaster University, Canada); James Reilly (McMaster University, Canada)

pp. 891-894

A Simple Imaging Method for Non-Destructive Evaluation

Ilaria Catapano (CNR - National Research Council, IREA, Italy); Lorenzo Crocco (CNR - National Research Council, Italy); Loreto Di Donato (University of Reggio Calabria, Italy); Tommaso Isernia (University of Reggio Calabria, Italy)

pp. 895-897

A Comparison of Different Magnetic Force Distributions with Respect to Mechanical Deformations Using a Hybrid Calculation Method

Thomas Preisner (Leibniz Universität Hannover, Germany); Wolfgang Mathis (Universität Hannover, Germany)

pp. 898-901

Applied Modeling and Inverse Profiling in Electromagnetic Non-Destructive Evaluation

Rene Marklein (University of Kassel, Germany); Mehbub-ur Rahman (Federal Institute for Materials Research and Testing, Germany); Jinghong Miao (Tianjin Polytechnic University, P.R. China)

pp. 902-905

T4: Tutorial 4

Convener: Karl J. Langenberg (University of Kassel, Germany)

Analysis and Fabrication of Millimeter-Wave Slotted Waveguide Array Antennas

Jiro Hirokawa (Tokyo Institute of Technology, Japan)

pp. 906-909

R02: Mathematical Modelling of EM Problems -2

Conveners: Vincenzo Galdi (University of Sannio, Italy) and Ehud Heyman (Tel Aviv University, Israel)

Imaging of Objects in the Presence of Rough Surfaces Using Time-Reversal and Array Processing

Akira Ishimaru (University of Washington, USA)

pp. 910-913

Electromagnetic Field Theory - a Modern Tensorial Approach

Adrianus T De Hoop (Delft University of Technology, The Netherlands)

pp. 914-917

Radiation From an Electric Dipole Axially Mounted Above a Spheroidal Cavity Filled with DNG Metamaterial

Piergiorgio L.E. Uslenghi (University of Illinois at Chicago, USA); Amir Nader Askarpour (University of Tehran, Iran)

pp. 918-921

R19: Electrically Small Antennas -2

Convener: Arthur D Yaghjian (Research Consultant, Concord, USA)

Near-Field Microwave Probing of a Spherical Object

Mikhail Galin (Institute for Physics of Microstructures of Russian Academy of Sciences, Russia)

pp. 922-925

Metamaterial-Based Microstrip Antenna with Ground Slots for Gain-Enhanced Dual-Band Operations

Seongmin Pyo (Korea University, Korea); Min-Jae Lee (Korea University, Korea); Young-Sik Kim (Korea University, Korea)

pp. 926-929

AR Bandwidth Enhancement for Single-Feed Circularly Polarized Square Ring Slot Patch Antenna

Alice Buffi (University of Pisa, Italy); Roberto Caso (University of Pisa, Italy); Paolo Nepa (University of Pisa, Italy); Marcos Pino (Universidad de Oviedo, Spain)

pp. 930-933

R20: Antennas and Propagation for Car-to-Car Communication -2

Convener: Werner Wiesbeck (Karlsruhe Institute of Technology, Germany) and Thomas Kuerner (Technische Universitaet Braunschweig, Germany)

Performance Considerations for Automotive Antenna Equipment in Vehicle-to-Vehicle Communications

Oliver Klemp (Delphi Delco Electronics Europe GmbH, Germany)

pp. 934-937

Temporal Evolution of Channel Capacity in Vehicular MIMO Channels in the 5 GHz Band

Arrate Alonso (TU Wien, Austria); Christoph F Mecklenbräuer (Vienna University of Technology, Austria);

Alexander Paier (TU Wien, Austria); Thomas Zemen (FTW Forschungszentrum Telekommunikation Wien,

Austria); Nicolai Czink (Telecommunications Research Center Vienna (ftw.), Austria); Fredrik Tufvesson

(Lund University, Sweden)

pp. 938-941

Deterministic Propagation Modeling for Joint Radar and Communication Systems

Christian Sturm (Karlsruhe Institute of Technology (KIT), Germany); Martin Braun (Karlsruhe Institute of Technology (KIT), Germany); Werner Wiesbeck (Karlsruhe Institute of Technology, Germany)

pp. 942-945

S14: Electromagnetic Methods for Nondestructive Evaluation -2

Conveners: Salvatore Caorsi (University of Pavia, Italy) and Matteo Pastorino (University of Genoa, Italy)

Microwave Breast Imaging by the Filtered Forward-Backward Time-Stepping Method

Takashi Takenaka (Nagasaki University, Japan); Toshifumi Moriyama (Nagasaki University, Japan); Kismet

Anak Hong Ping (Universiti Malaysia Sarawak, Malaysia); Takafumi Yamasaki (Nagasaki University, Japan)

pp. 946-949

Security-Related Active Imaging of Dielectric Objects Attached to Human Bodies

Sebastian Bertl (Technische Universität München, Germany); Juergen B Detlefsen (Technische Universitaet Muenchen, Germany)
pp. 950-953

R02: Mathematical Modelling of EM Problems -3

Conveners: Vincenzo Galdi (University of Sannio, Italy) and Ehud Heyman (Tel Aviv University, Israel)
Wiener-Hopf Analysis of the Plane Wave Diffraction by a Finite Parallel-Plate Waveguide with Four-Layer Material Loading

K. Kobayashi (Chuo University, Japan); Jianping Zheng (Panasonic R&D Center China Co., Ltd., P.R. China); Erhao Shang (Japan Radio Co., Ltd., Japan)
pp. 954-957

Modelling of Computational Electromagnetics Problems by Using Discrete Trigonometric Transforms Matrices
Nikolaos L. Tsitsas (National Technical University of Athens, Greece)
pp. 958-961

Optical Leaky-Wave Nanoantenna: Complex Modes Along Linear Arrays of Plasmonic Nanoparticles
Andrea Alù (The University of Texas at Austin, USA)
pp. 962-965

Differences Between Extended-Integral-Equation and Method-of-Auxiliary-Sources Solutions of a Simple Scattering Problem
George Fikioris (National Technical University of Athens, Greece); Nikolaos L. Tsitsas (National Technical University of Athens, Greece); Ioannis Psarros (National Technical University of Athens, Greece)
pp. 966-969

R05: High-Frequency Methods

Convener: Stefano Maci (University of Siena, Italy)
Phase-Integral Formulation of the Single Layer Microstrip Green's Function
Deb Chatterjee (University of Missouri Kansas City (UMKC), USA)
pp. 970-973

Tendencies and Recent Novelties in the Heuristic Methods (Mini-Review)
Yury Kravtsov (Institute of Physics, Maritime University, Poland); Ning Yan Zhu (University of Stuttgart, Germany)
pp. 974-976

Frequency Dependent RCS of a Generic Airborne Target
Frank Weinmann (Fraunhofer FHR, Germany)
pp. 977-980

R12: Numerical Time-Domain Methods -2

Conveners: Thomas Weiland (Technische Universitaet Darmstadt, Germany) and Rolf Schuhmann (Universitaet Paderborn, Germany)

A Projection Penalization Approach for the High Order DG-FEM in the Time Domain
Erion Gjonaj (Technische Universitaet Darmstadt, Germany); Thomas Weiland (Technische Universitaet Darmstadt, Germany)
pp. 981-984

Discontinuous Galerkin Methods with Transient Hp-Adaptation
Sascha Schnepf (Technische Universität Darmstadt, Germany); Martin Lilienthal (Technische Universität Darmstadt, Germany); Thomas Weiland (Technische Universitaet Darmstadt, Germany)
pp. 985-988

Discontinuous Galerkin Time Domain for Maxwell's Equations on GPUs
Stylianos Dosopoulos (The Ohio State University, USA); Jin-Fa Lee (Ohio State University, USA)
pp. 989-991

DGTD Method on Hybrid Meshes for Time Domain Electromagnetics

Stéphane Lanteri (INRIA - Sophia Antipolis, France); Clément Durochat (INRIA, France)
pp. 992-995

A Low Storage Curvilinear Discontinuous Galerkin Time-Domain Method for Electromagnetics
Timothy Warburton (Rice University, USA)
pp. 996-999

S14: Electromagnetic Methods for Nondestructive Evaluation -3

Conveners: Salvatore Caorsi (University of Pavia, Italy) and Matteo Pastorino (University of Genoa, Italy)
E.M. Inverse Scattering and Multi-Layer Perceptrons: Towards the Automatic Reconstruction of Buried Layers' Properties

Salvatore Caorsi (University of Pavia, Italy); Mattia Stasolla (University of Pavia, Italy)
pp. 1000-1003

Characterization of Layered Media Using Full-Waveform Inversion of Proximal GPR Data

Julien Minet (Universite catholique de Louvain, Belgium); Patriarca Claudio (Delft University of Technology, The Netherlands); Evert Slob (Delft University of Technology, The Netherlands); Marnik Vanclooster (Universite catholique de Louvain, Belgium); Sebastien Lambot (Universite catholique de Louvain, Belgium)
pp. 1004-1007

Experimental Evaluation of a Prototype of a Microwave Imaging System

Andrea Salvadé (University of Applied Sciences of Southern Switzerland, Switzerland); Matteo Pastorino (University of Genoa, Italy); Ricardo D. Monleone (University of Applied Sciences of Southern Switzerland, Switzerland); Giovanni Bozza (University of Genoa, Italy); Thomas Bartesaghi (University of Applied Sciences of Southern Switzerland, Switzerland); Manuela Maffongelli (University of Applied Sciences of Southern Switzerland, Switzerland); Andrea Massimini (University of Applied Sciences of Southern Switzerland, Switzerland)
pp. 1008-1011

On the Exploitation of the Iterative Multi-Scaling Scheme for the Electromagnetic Non-Destructive Evaluation with the Inexact-Newton Method

Leonardo Lizzi (University of Trento, Italy); Giacomo Oliveri (University of Trento, Italy); Andrea Massa (University of Trento, Italy)
pp. 1012-1015

Digital Optical Microscopy Using the MR-CSI Method

Aria Abubakar (Schlumberger-Doll Research, USA); Peter van den Berg (Delft University of Technology, The Netherlands)
pp. 1016-1019