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26 - 30 March 2017

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ACES 2017 Technical Program

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ACES 2017 Technical Program

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05:10PM-05:30PM	“Electromagnetic Optimization of MIMO Channels using GPUs” 217 Alfonso Breglia, Amedeo Capozzoli, Claudio Curcio, Salvatore Di Donna, and Angelo Liseno	

05:30PM-05:50PM	“Accelerating Fast Marching for Geometrical Optics” 219 Amedeo Capozzoli, Claudio Curcio, Angelo Liseno, and Salvatore Savarese
05:50PM-06:10PM	“Large Inverse-Scattering Solutions with DBIM on GPU-Enabled Supercomputers” 221 Mert Hidayetoglu, Carl Pearson, Weng Cho Chew, Levent Gurel, and Wen-Mei Hwu

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Session 27 04:50PM-06:30PM	Computational Electromagnetics, Advanced Algorithms and Emerging Applications – 3 Session Organizers: Zhen Peng, Li Jiang Session Chairs: Shunichi Futatsumori, Adaildo G. D’Assunção
04:50PM-05:10PM	“Aircraft Electromagnetic Field Estimation for Wireless Avionics Intra-Communication Band Using Large-Scale FDTD Analysis” 223 Shunichi Futatsumori, Kazuyuki Morioka, Akiko Kohmura, Naruto Yonemoto, Takashi Hikage, Kanji Yahagi, Masami Shirafune, Manabu Yamamoto, Toshio Nojima, and Shoichi Narahashi
05:10PM-05:30PM	“A Uniform Geometrical Theory of Diffraction Formulation for the Diffraction by a Perfect Electric Conductor and Impedance Finite Width Strip” 225 Mohammad Rashedi and Abdorreza Torabi
05:30PM-05:50PM	“Design of Rotatable Metasurface Microstrip Antenna with Reconfigurable Polarization” 227 Felipe F. Araújo, Adaildo G. D’Assunção, Luis F. V. T. Costa, and William S. Alves
05:50PM-06:10PM	“A Speeding up Technique for Lossy Anisotropic Algorithm in FDTD Method” 229 Fatih Kaburcuk and Atef Z. Elsherbeni

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Session 28 04:50PM-06:30PM	Optimization and Modeling Methods for EM-Driven Design Session Organizer: Slawomir Koziel Session Chair: Slawomir Koziel
04:50PM-05:10PM	“Rapid Design Optimization of Compact Couplers Using Response Features and Adjoint Sensitivities” 231 Slawomir Koziel and Adrian Bekasiewicz
05:10PM-05:30PM	“Multi-Objective EM-Driven Design of Integrated Spiral Inductors by Pareto Front Exploration” 233 Slawomir Koziel and Piotr Kurgan
05:30PM-05:50PM	“Surrogate-assisted Transformation Optics Inspired GRIN Lens Design and Optimization” 235 Sawyer D. Campbell, Jogender Nagar, John A. Easum, Douglas H. Werner, and Pingjuan L. Werner
05:50PM-06:10PM	“Research on EM Characteristics Modeling of Sea Surface by Ship EDF” 237 Gao Shuang, Mei Jiahe, Guo Lingfei, Jiang Tao, and Zhang Yachen

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04:50PM-05:10PM	“The Role of the Skin Modeling in LF Dosimetry” 239 Valerio De Santis, Tommaso Campi, Silvano Cruciani, and Mauro Feliziani

05:10PM-05:30PM	“Assessment of the Uncertainty in 50 Hz Foetal Exposure due to Tissues Conductivity Variation” 241 Serena Fiocchi, Paolo Ravazzani, and Marta Parazzini	
05:30PM-05:50PM	“Assessment of Fetal Exposure to 4G LTE Tablet in Realistic Scenarios using Stochastic Dosimetry” 243 E. Chiamello, M. Parazzini, P. Ravazzani, and J. Wiart	
05:50PM-06:10PM	“Exposure to Electric and Magnetic Fields at Intermediate Frequencies of Household Appliances” 245 Sam Aerts, Carolina Calderon, Blaz Valic, Matthias Van den Bossche, Leen Verloock, Myron Maslanyj, Darren Addison, Peter Gajsek, Luc Martens, Martin Roosli, Elisabeth Cardis, and Wout Joseph	
Session 30 06:10PM-07:00PM	Plenary Talk – 4	Room Continenti
	“Using Different Techniques for Electromagnetic Design and Verification of Large and Complex Structures: Industrial Cases of Interest” IDS Ingegneria dei Sistemi	

ACES 2017 Technical Program

Wednesday, March 29

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Session 32 09:40AM-10:30AM	Plenary Talk – 6 “(Heterogeneous) Parallel Solutions of Billion-Unknown Problems: Applications and Big-Data Aspects” Levent Gürel	Room Continenti
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Session 33 11:00AM-01:20PM	Electromagnetic Techniques for the Internet of Things – 1 Session Organizers: Paolo Nepa, Alessandra Costanzo Session Chairs: Paolo Nepa, Alessandra Costanzo	
11:00AM-11:20AM	“Phase-Only Synthesis of Convex Metallic Reflectarray Antennas for Multi-beam Radiations via Steepest Descent Method” 247 Jen-Wei Liu and Hsi-Tseng Chou	
11:20AM-11:40AM	“Energy Paradigms of Augmented Tags for the Internet of Things Deployment” 249 Smail Tedjini, Gianfranco Andia Vera, and Yvan Duroc	
11:40AM-12:00PM	“Principal Component Analysis of CSI for the Robust Wireless Detection of Passive Targets” 251 F. Viani, A. Polo, E. Giarola, M. Salucci, and A. Massa	
12:00PM-12:20PM	“Miniature Rectenna Design” 253 Hubregt J. Visser	
12:20PM-12:40PM	“A Portable RFID Reader Augmented with Tracking Capabilities for Indoor Monitoring of People” 255 Giacomo Paolini, Diego Masotti, and Alessandra Costanzo	
12:40PM-01:00PM	“3D Antenna for Wireless Power Transmission” 257 Gonçalo Dias, Pedro Pinho, Ricardo Gonçalves, and Nuno Carvalho	
01:00PM-01:20PM	“RFID Sensing Breadboard for Industrial IoT” 259 Cecilia Occhiuzzi, Sabina Manzari, Stefano Caizzone, Sara Amendola, and Gaetano Marrocco	
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Session 34 11:00AM-01:20PM	Computational Electromagnetics, Advanced Algorithms and Emerging Applications – 4 Session Organizers: Zhen Peng, Li Jiang Session Chairs: Fayçal Benmohamed	
11:00AM-11:20AM	“Numerical Simulation of Wave Propagation in Microstrip Line Containing Magnetic Layer” 261 Fayçal Benmohamed, Didier Vincent, Jingyi Wang, and Junwu Tao	

11:20AM-11:40AM	“Wave Concept in MoM-GEC Formalism” 263 Ahmed Nouainia, Mohamed Hajji, and Taoufik Aguilu	
11:40AM-12:00PM	“Determined Factor Parameter Analysis for System of Information Recovery from USB-Keybaord Compromising Emanations” 265 Rostislav I. Sokolov and Renat R. Abdullin	
12:00AM-12:20PM	“Radar Big Data Reduction Using Hardware and Software Solutions” 267 Sabikun Nahar, Lingyun Ren, Aly E. Fathy, Nghia Tran, and Ozlem Kilic	
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Session 35 11:00AM-01:20PM	Nanoelectronics and Nanoelectromagnetics: Modeling and Applications Session Organizers: Antonio Maffucci, Sergey Maksimenko Session Chairs: Antonio Maffucci, Sergey Maksimenko	
11:00AM-11:20AM	“Can a Degenerate Electron Gas Stabilize Excitons in Semiconductors?” N/A Axel Hoffmann, C. Nenstiel, G. Callsen, F. Nippert, and M. R. Wagner	
11:20AM-11:40AM	“Electron Beam Induced Terahertz Čerenkov Radiation from Multilayer Graphene Sandwiches” 271 Konstantin Batrakov and Sergey Maksimenko	
11:40AM-12:00PM	“Tunable Electromagnetic Response of Free-standing 3D Carbon Nanotube Network in the Ka-band” 273 M. V. Shuba, D. Yuko, P. P. Kuzhir, S. A. Maksimenko, and M. Scarselli	
12:00PM-12:20PM	“Carbon Thin Films as Effective Absorbers of Microwave Radiation: Experiment and EMC Applications” 275 Polina Kuzhir, Alesia Padabskaya, Nadezhda Volynets, Konstantin Batrakov, Sergey Maksimenko, Tommi Kaplas, Yuri Svirko, and Philippe Lambin	
12:20PM-12:40PM	“Carbon Nanotube Interconnects with Negative Temperature Coefficient of the Resistance” 277 A. Maffucci, G. Miano, F. Micciulla, A. Cataldo, and S. Bellucci	
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Session 36 11:00AM-01:20PM	Antenna Design – 2 Session Chair: Michael Johnson	
11:00AM-11:20AM	“A System-by-Design Approach for Efficient Multiband Patch Antennas Design” 279 M. Salucci, G. Oliveri, P. Rocca, and A. Massa	
11:20AM-11:40AM	“On the Comparison and Evaluation of Sparse Array Synthesis Methods” 281 Daniele Pinchera, Marco Donald Migliore, Mario Lucido, and Fulvio Schettino	
11:40AM-12:00PM	“Uniform Theory of Diffraction Approximation for Large Antenna Array Fields” 283 Michael R. Johnson and Omar W. Ali	
12:00PM-12:20PM	“Optimal Synthesis of Monopulse Beamforming Weights for Airborne Radars through Convex Optimization” 285 G. Gottardi, N. Ebrahimi, P. Rocca, and A. Massa	
12:20PM-12:40PM	“Optimization-based Design of Innovative Grating-lobe Free Radar UWB Architectures” 287 L. Tenuti, P. Rocca, and A. Massa	
12:40PM-01:00PM	“Circular Slotted Reconfigurable Multiband Patch Antenna for Wireless Applications” 289 Rashid Saleem and Asim Quddus	
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Session 37 02:30PM-04:30PM	Electromagnetic Techniques for the Internet of Things – 2 Session Organizers: Paolo Nepa, Alessandra Costanzo Session Chairs: Paolo Nepa, Alessandra Costanzo
02:30PM-02:50PM	“Autonomous Wearable RFID-Based Sensing Platform for the Internet-of-Things” 291 Sam Lemey, Sam Agneessens, Patrick Van Torre, Kristof Baes, Hendrik Rogier, and Jan Vanfleteren
02:50PM-03:10PM	“Synthesis of Near Field Focused Arrays Including Far Field Constrains” 293 Rafael G. Ayestaran, Marcos R. Pino, and Paolo Nepa
03:10PM-03:30PM	“Resonant Inductive WPT Link Operating in a Coupling-independent Regime” 295 Alessio De Angelis, Marco Dionigi, Paolo Carbone, Mauro Mongiardo, Qinghua Wang, Wenquan Che, Franco Mastri, Alessandra Costanzo, Giuseppina Monti, and Luciano Tarricone
03:30PM-03:50PM	“The SARFID Technique in Handling Systems Applications” 297 Alice Buffi, Paolo Nepa, and Marcos R. Pino
03:50PM-04:10PM	“A Proximity Wireless Sensor Based on Backscatter Communication” 299 Angel Servent, Spyros Daskalakis, Ana Collado, and Apostolos Georgiadis
04:10PM-04:30PM	“Experimental Assessment of a Design Criterion for RFID Wearable Antennas” 301 P. Nepa, A. Michel, G. Manara, R. Colella, L. Catarinucci, L. Tarricone, G. A. Casula, G. Mazzarella, and G. Montisci
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Session 38 02:30PM-04:30PM	Low-Frequency Electromagnetic Inverse Problems – 1 Session Organizer: Alessandro Formisano Session Chair: Alessandro Formisano
02:30PM-02:50PM	“Sensor Selection via Convex Optimization in Remote Contact-free Measurement of Currents” 303 Fatemeh Ghasemifard and Martin Norgren
02:50PM-03:10PM	“Magnetic Polarizability Tensors for Low Frequency Object Classification and Detection” 305 P. D. Ledger and W. R. B. Lionheart
03:10PM-03:30PM	“Lorentz Force Evaluation with an Extended Area Approach” 307 E.-M. Dölker, R. Schmidt, K. Weise, B. Petković, M. Ziolkowski, H. Brauer, and J. Haueisen
03:30PM-03:50PM	“Calculation of Eddy Currents in Moving Conductors Using the Meshfree Charge Simulation Method” 309 B. Petković and J. Haueisen
03:50PM-04:10PM	“Spatial Harmonic Current Density Basis for Faults Identification in Fuel Cell Stack from External Magnetic Field Measurements” 311 Lyes Ifrek, Olivier Chadebec, Gilles Cauffet, Yann Bultel, Sébastien Rosini, and Luc Rouveyre
04:10PM-04:30PM	“Generalization of the Vector Hysteron Model through the Dependence of Moving Functions on Frequency” 313 Antonino Laudani, Gabriele-Maria Lozito, Francesco Riganti-Fulginei, Alessandro Salvini, Ermanno Cardelli, Antonio Faba, and Simone Quondam
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Session 39 02:30PM-03:30PM	Tutorial – 2	Room Pacifico
	“Higher-Order Hierarchical Vector Polynomial Bases for CEM” 490 Roberto D. Graglia, Andrew F. Peterson	

Session 40 03:30PM-04:30PM	Tutorial – 3 “Developing Singular Vector Bases for CEM” 515 Andrew F. Peterson, Roberto D. Graglia	Room Pacifico
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Session 41 02:30PM-04:30PM	Antenna Design – 3 Session Chairs: Lorenzo Poli, Victor Chechetkin	
02:30PM-02:50PM	“Power Pattern Sensitivity Analysis of Reflectarray Antennas to Substrate Uncertainties through the Minkowski Interval Analysis” 315 N. Ebrahimi, P. Rocca, and A. Massa	
02:50PM-03:10PM	“Equivalent Circuit Model of a Triple Frequency Rejection Band UWB Antenna” 317 Yanyan Wang, Tao Jiang, and Yingsong Li	
03:10PM-03:30PM	“Innovative Simplified Array Design for Wireless Power Transmission” 319 G. Oliveri, P. Rocca, L. Poli, and A. Massa	
03:30PM-03:50PM	“An Integer Genetic Algorithm for Optimal Clustering in Phased Array Antenna” 321 L. Poli, G. Oliveri, and A. Massa	
03:50PM-04:10PM	“Reconfigurable Electrically Small Split Ring Resonator Antenna” 323 A. Bakhmutov, N. Knyazev, and V. Chechetkin	
04:10PM-04:30PM	“A Square Slot Circularly Polarized Microstrip Antenna with Enhanced Bandwidth” 325 Obeng Kwakye Kingsford Sarkodie, Kang Kai, and Mujeeb Abdullah	
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Session 42 04:50PM-06:30PM	Wireless Power Transfer Session Organizer: Shishir Punjala Session Chair: Shishir Punjala	
04:50PM-05:10PM	“Wireless Power Transfer via Negative Permittivity Metamaterials as Resonating Elements” 327 Antonios G. Pelekanidis, Antonios X. Lalas, Nikolaos V. Kantartzis, Tadao Ohtani, and Yasushi Kanai	
05:10PM-05:30PM	“A Multiantenna Approach to Maximize Wireless Power Transferred to Implantable Devices” 329 H. Dinis, I. Colmiais, and P. M. Mendes	
05:30PM-05:50PM	“Coil Designs that Enable Wireless Powering by Cancelling Flux Leakage” 331 Shishir Punjala	

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Session 43 04:50PM-06:30PM	Advanced Applications – 1 Session Chair: Paolo Petrini	
04:50PM-05:10PM	“Microwave Measurement Technique for Evaluating the Polarization of the Electromagnetic Field within a Reverberating Chamber” 333 Antonio Sorrentino, José. J. Gil, Maurizio Migliaccio, Giuseppe Ferrara, and Sergio Cappa	
05:10PM-05:30PM	“Artificial Ionospheric Scintillation Effects on Communication Signals in the V and W Bands” 335 David Smith, Peter Collins, James Fee, James C. Petrosky, Andrew Terzuoli, and Caglar Yardim	
05:30PM-05:50PM	“Variational Analysis of Substrate-Integrated Waveguides with Longitudinal Slot” 337 Nghia Nguyen-Trong, Leonard Thomas Hall, and Christophe Fumeaux	

05:50PM-06:10PM	“Proposal of EMTP Analysis Model for a Surge Phenomenon Arising on a Power Cable Assembled in a Transmission Tower” 339 Ryoji Oshiro, Yuto Hachiman, Taishi Shiozuka, and Eiji Kaneko
06:10PM-06:30PM	“Propagation Modelling and Channel Estimation: A Comparison among Different Channel Indicators in Severe Multipath Environments” 341 Antonio Sorrentino, Giuseppe Ferrara, Maurizio Migliaccio, Sergio Cappa, and Lorenzo Mucchi

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05:10PM-05:30PM	“Frequency Domain Analysis of New Differential-mode Twisted Wire Crosstalk Model” 345 Yaxiu Sun, Jianli Wang, Junzhu Qian, and Ming Zhang
05:30PM-05:50PM	“Analysis and Evaluation of One-dimensional Sea Surface Features Based on FSV” 347 Nan Bi, Xiaojun Wang, Tao Jiang, and Yachen Zhang
05:50PM-06:10PM	“Groundwave Propagation in a Nonhomogeneous Atmosphere: Prediction Using 3D Parabolic Equation” 349 Zeina El Ahdab and Funda Akleman
06:10PM-06:30PM	“The Calculation of Equivalent Electromagnetic Parameters in Multilayer Composite Materials” 351 Yaxiu Sun, Junzhu Qian, Jianli Wang, and Ming Zhang

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Thursday, March 30

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Session 46 09:50AM-10:30AM	Algorithms for Unique Applications – 2 Session Chair: Paolo Petrini	
09:50AM-10:10AM	“Portable High-Performance Software Design Using Templated Meta-Programming for EM Calculations” 353 Jamie Infantolino, James Ross, and David Richie	
10:10AM-10:30AM	“Modeling of Stability of Electrostatic and Magnetostatic Systems” 355 Michael Grinfeld and Pavel Grinfeld	
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Session 47 09:50AM-10:30AM	Computational Electromagnetics, Advanced Algorithms and Emerging Applications – 5 Session Organizers: Zhen Peng, Li Jiang Session Chair: Fatih Kaburcuk	
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10:10AM-10:30AM	“Modelling of Electromagnetic Scattering from Large and General Intakes on Complex Platforms” 359 A. Mori, S. Bertini, M. Bercigli, P. de Vita, and S. Sensani	
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Session 48 09:50AM-10:30AM	Electromagnetic Non Destructive Evaluation Session Organizers: Lalita Upda, Antonello Tamburrino Session Chair: Antonello Tamburrino	
09:50AM-10:10AM	“Electromagnetic Material Parameter Extraction of Ferrites up to the GHz Range via Measurements and Simulations” 361 Christian Reinhold, Peter Scholz, and Ulrich Jumar	
10:10AM-10:30AM	“Monotonicity Principle in Pulsed Eddy Current Testing and Its Application to Defect Sizing” 363 Zhiyi Su, Lalita Udpa, Gaspare Giovinco, Salvatore Ventre, and Antonello Tamburrino	
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Session 49 09:50AM-10:30AM	Antenna Design – 4 Session Chair: William O’Keefe Coburn
09:50AM-10:10AM	“Concentric Substrate Geometry for a Multi-Mode and Dual-Band Rectangular Array” 365 Gregory Mitchell and Amir Zaghloul
10:10AM-10:30AM	“Suspended Plate Antenna Array for High Power” 367 Seth A. McCormick and William O. Coburn
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Session 50 11:00AM-01:20PM	Novel Computational Methodologies for Electromagnetics, Optics and Photonics Session Organizer: James B. Cole Session Chair: James B. Cole
11:00AM-11:20AM	“A One-dimensional Randomly Rough Interface that Produces a Specified Angular Distribution of the Intensity of the Light Transmitted Through it” 369 Ingve Simonsen and Alexei A. Maradudin
11:20AM-11:40AM	“Control of the Coherence of Light Transmitted through a One-dimensional Randomly Rough Interface that acts as a Schell-model Source” 371 Alexei A. Maradudin and Ingve Simonsen
11:40AM-12:00PM	“Complete Families in Inverse Obstacle Scattering” 373 Giovanni Franco Crosta
12:00PM-12:20PM	“An Improved Subspace Projection Method of Underdetermined Direction of Arrival Estimation for Frequency Hopping Signals” 375 Chaozhu Zhang and Yu Wang
12:20PM-12:40PM	“A Hybrid LVD-HAF Method of Quadratic Frequency-Modulated Signals” 377 Fulong Jing, Weijian Si, and Shuhong Jiao
12:40PM-01:00PM	“Equilibrium Shape of Ferrofluid in the Uniform External Field” 379 Michael Grinfeld and Pavel Grinfeld
01:00PM-01:20PM	“Scattering by a Chiral Elliptic Cylinder Placed in Another Infinite Chiral Medium” 381 A.-K. Hamid
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Session 51 11:00AM-01:20PM	Inverse Scattering Techniques for GPR and Subsurface Imaging Session Organizers: Lorenzo Poli, Salucci Marco, Lara Pajewski Session Chairs: Lorenzo Poli, Salucci Marco, Lara Pajewski
11:00AM-11:20AM	“Frequency-Hopping GPR Prospecting of Sparse Scatterers through Bayesian Compressive Sensing” 383 M. Salucci, L. Tenuti, G. Oliveri, and A. Massa
11:20AM-11:40AM	“Pros and Cons of Microwave Imaging Techniques for the Reconstruction of Velocity Profiles of Cylindrical Targets in Axial Motion” 385 Massimo Brignone, Matteo Pastorino, Mirco Raffetto, and Andrea Randazzo
11:40AM-12:00PM	“On Time-Domain Use of the Cylindrical Wave Approach” 387 Cristina Ponti and Giuseppe Schettini
12:00PM-12:20PM	“Development of Electromagnetic Simulators for Ground Penetrating Radar” 389 Lara Pajewski, Sinisa Antonijevic, Vicko Doric, Dragan Poljak, Antonios Giannopoulos, Craig Warren, and Daniele Pirrone

12:20PM-12:40PM	“Short-Term Scientific Missions on Forward and Inverse Electromagnetic-Scattering Techniques for Ground Penetrating Radar” 391 Lara Pajewski, Antonios Giannopoulos, Marian Marciniak, Simone Meschino, Alexei Popov, Igor Prokopovich, Alessio Ventura, and Craig Warren	
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01:00PM-01:20PM	“Advanced Imaging for Down-Looking Contactless GPR Systems” 395 Davide Comite, Alessandro Galli, Ilaria Catapano, and Francesco Soldovieri	
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Session 52 11:00AM-01:20PM	Novel Photonic Material and Devices – 2 Session Organizers: Salah Obayya, Mohamed Swillam Session Chair: Salah Obayya	
11:00AM-11:20AM	“Intersecting Silicon Nano-Walls with Planar Nano-Gold Layers for Solar Energy Harvesting” 397 Nihal F. F. Areed, Sami Zenad, and Salah S. A. Obayya	
11:20AM-11:40AM	“Padé Boundary Conditions for Finite Element Time Domain Beam Propagation Method” 399 Khaled S. R. Atia, A. M. Heikal, and S. S. A. Obayya	
11:40AM-12:00PM	“Modified BPM for Plasmonic Modeling” 401 Adel Shaaban, M. F. O. Hameed, S. S. A. Obayya, Lotfi R. Gomaa, and M. A. Swillam	
12:00PM-12:20PM	“Light Absorption Enhancement in Thin Film Hydrogenated Amorphous Si Solar Cells” 403 C. Mennucci, M. C. Giordano, C. Martella, D. Repetto, F. Buatier De Mongeot, M. H. Muhammad, A. H. K. Mahmoud, M. F. O. Hameed, and S. S. A. Obayya	
12:20PM-12:40PM	“Surface Plasmon Photonic Crystal Fiber Biosensor for Glucose Monitoring” 405 Mohammad Y. Azab, M. F. O. Hameed, A. M. Heikal, S. S. A. Obayya, and M. A. Swillam	
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Session 53 11:00AM-01:20PM	Biological Effects of Electric, Magnetic and Electromagnetic Fields: Innovative Applications in Daily Life – 1 Session Organizers: Alessandro Fanti, Bruno Bisceglia Session Chair: Alessandro Fanti	
11:00AM-11:20AM	“Electromagnetic Stimuli in Therapeutics and Resuscitation” 407 Oana Mihaela Drosu	
11:20AM-11:40AM	“Sodium Imaging of the Human Knee Cartilage with Magnetic Resonance at Ultra High Field: Development of a Double Frequency ($^1\text{H}/^{23}\text{Na}$) RF Coil” 409 Francesca Maggiorelli, Joshua D. Kaggie, Martin J. Graves, Guido Buonincontri, Alessandra Retico, Laura Biagi, Gianluigi Tiberi, and Michela Tosetti	
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12:00PM-12:20PM	“Application of EMFs at Microwave Frequencies for Brain Stroke Detection: Preliminary Results” 413 I. Bisio, A. Fedeli, F. Lavagetto, G. Luzzati, M. Pastorino, M. Raffetto, A. Randazzo, and E. Tavanti	
12:20PM-12:40PM	“Antenna for Contact Microwave Radiometers for Monitoring of the Brain Microwave Radiation” 415	

	B. A. Panchenko, V. S. Kublanov, S. A. Baranov, V. I. Borisov, and Y. E. Sedelnikov	
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Session 54 02:30PM-04:30PM	Applications of Antennas and Arrays Session Chair: Randy Haupt	
02:30PM-02:50PM	“A Ku band Circularly Polarized 2x2 Microstrip Antenna Array for Remote Sensing Applications” 417 Roger Ferré, Fermín Mira, Guido Luzi, Jordi Mateu, and Christos Kalialakis	
02:50PM-03:10PM	“Investigation of Efficient Simulation Methods for Finite Large X-Band Arrays in HFSS” 419 Elicia Harper, Carolyn Reistad, and Alkim Akyurtlu	
03:10PM-03:30PM	“Genetic Algorithm Optimization of a Dual Polarized Concentric Ring Array” 421 Pedro Mendes Ruiz, Israel D. Hinostrza Sáenz, Régis Guinvarc’h, and Randy L. Haupt	
03:30PM-03:50PM	“Mutual Coupling Reduction in Array Elements Using EBG Structures” 423 Hassan Sajjad, Sana Khan, and Ercument Arvas	
03:50PM-04:10PM	“Design of Compact Dual-Element Antenna Array for LTE700 and WWAN Applications” 425 Hari Shankar Singh and Manoj Kumar Meshram	
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Session 55 02:30PM-04:30PM	Low-Frequency Electromagnetic Inverse Problems – 2 Session Organizer: Alessandro Formisano Session Chair: Alessandro Formisano	
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