

June 21 - Morning	
08:30 - 09:00	Workshop Breakfast (Sala Agora)
09:00 - 09:10	Opening Remarks - Levent Gürel
09:10 - 09:20	Local Information - Eduard Ubeda
	Session I Chair: Johann van Tonder
09:20 - 09:40	Recent Advances in Evaluating Green's Functions for Multi-Layered Media and Half-Space Problems Dawei Li, Donald R. Wilton , David R. Jackson, <i>U. Houston, USA</i>
09:40 - 10:00	Numerical Advances in the Full-Wave Analysis of Periodic Multilayered Structures with Application to Reflectarray Antennas Rafael Florencio, <i>Polytechnic U. Madrid, Spain</i> ; Rafael Rodriguez Boix , <i>U. Seville, Spain</i> ; José A. Encinar, <i>Polytechnic U. Madrid, Spain</i>
10:00 - 10:20	DGFM-Enhanced Theory of Characteristic Modes for Finite Antenna Array Analysis Daniel J. Ludick , David B. Davidson, <i>Stellenbosch U., South Africa</i>
10:20 - 10:40	MPI+X Block-Based Preconditioner for the Electric-Field Integral Equation (EFIE) Systems of Equations Matthew T. Bettencourt , Brian Zinser, Roy E. Jorgenson, <i>Sandia National Laboratories, USA</i>
10:40 - 11:00	Volumetric Testing with Wedges for a Nonconforming Discretization of the PMCHWT Formulation Ivan Sekulic , Eduard Ubeda, Juan M. Rius, <i>U. Politècnica de Catalunya, Spain</i>
11:00 - 11:20	Coffee Break
	Session II Chair: Luis Emilio Garcia-Castillo
11:20 - 11:40	On the Accuracy of the Adaptive Cross Approximation Algorithm Alex Heldring , Eduard Ubeda, Ivan Sekulic, Juan Manuel Rius, <i>U. Politècnica de Catalunya, Spain</i>
11:40 - 12:00	A Novel Massively-Parallel Processing Framework for Real-Time MIMO and Smart Antenna Array Beam Control John Persano, Said Mikkj , <i>U. New Haven, USA</i> ; Yahia Antar, <i>Royal Military College, Canada</i>
12:00 - 12:20	Comparison of Supervised Learning Algorithms for RF-Based Breast Cancer Detection Sudarshan Nayak , Dipanjan Gope, <i>Indian Institute of Science, India</i>
12:20 - 12:40	A Study on the Dispersion Relation of Periodic Structures Using Commercial Simulators Alejandro Javier Martinez-Ros , Francisco Mesa, <i>U. Sevilla, Spain</i>
12:40 - 13:00	Analysis of Gold and Magnetic Nanoparticles in Presence of Microwave Exposure for Hyperthermia Application Naina Narang , Satya Kesh Dubey, Vijay Narain Ojha, <i>CSIR National Physical Laboratory, India</i>
June 22 - Morning	
	Session III Chair: Donald R. Wilton
08:50 - 09:10	Efficient Inclusion of Magnetic Materials in Self-Consistent Nonlinear Plasma Evolution Salvatore Ventre, Fabio Villone, <i>U. Cassino e del Lazio Meridionale, Italy</i> ; Andrea Chiariello, <i>Seconda U. Napoli, Italy</i> ; Bruno Carpentieri , <i>Free U. Bozen-Bolzano, Italy</i> ; Guglielmo Rubinacci, <i>U. Napoli Federico II, Italy</i> ; Domenico Abate, <i>Consorzio RFX, Italy</i> ; JET contributors
09:10 - 09:30	Quantitative Phase Imaging of Red Blood Cell by Diffraction Phase Microscopy Ozlem Kocahan , <i>Namik Kemal U., Turkey</i> ; Erhan Tiryaki, <i>Canakkale Onsekiz Mart U., Turkey</i> ; Cagla Durmus, Merve Naz Elmas, <i>Namik Kemal U., Turkey</i> ; Emre Coskun, Serhat Ozder, <i>Canakkale Onsekiz Mart U., Turkey</i>
09:30 - 09:50	A New Method for Anthropogenic Noise Removal in the ELF Band Based on ICA Technique Jesús Rodríguez-Camacho , David Blanco, Juan Francisco Gómez-Lopera, Jesús Fornieles-Callejón, María Carmen Carrión, <i>U. Granada, Spain</i>
09:50 - 10:10	Cylindrical Antenna System for Medical Microwave-Imaging Application Fengzhou Wang , <i>U. Edinburgh, UK</i>
10:10 - 10:30	Dual-Frequency Oil Spill Detection Algorithm Bilal Hammoud, <i>Lebanese U., Lebanon</i> ; Fatima Mazeh, Kassem Jomaa , <i>IMEP-LaHC, France</i> ; Hussam Ayad, <i>Lebanese U., Lebanon</i> ; Fabien Ndagijimana, <i>IMEP-LaHC, France</i> ; Ghaleb Faour, <i>CNRS-L, Remote Sensing Center, Lebanon</i> ; Jalal Jomaa, <i>Lebanese U., Lebanon</i>
10:30 - 10:50	Coffee Break
	Session IV Chair: Nikolaos L. Tsitsas
10:50 - 11:10	A Study on Dynamic Threshold for the Crosstalk Reduction in Frequency-Modulated Radars Alina Caddemi, Emanuele Cardillo , <i>U. Messina, Italy</i>
11:10 - 11:30	A Linear Sampling Method for Through-the-Wall Radar Detection Matthew Charnley, <i>Rutgers U., USA</i> ; Aihua Wood , <i>Air Force Institute of Technology, USA</i>
11:30 - 11:50	Robust Iterative Method for Modeling Nonlinear Optical Phenomena in Frequency Domain Lijun Yuan, <i>Chongqing Technology and Business U., China</i> ; Ya Yan Lu , <i>City U. Hong Kong, China</i>
11:50 - 12:10	A Finite Element Mesh Truncation Technique for Scattering and Radiation Problems in HPC Environments Adrian Amor-Martin, <i>U. Carlos III de Madrid, Spain</i> ; Daniel Garcia-Donoro, <i>Xidian U., China</i> ; Luis Emilio Garcia-Castillo , <i>U. Carlos III de Madrid, Spain</i>
12:10 - 12:30	A Method for Reducing Excitation Complexity of Plane-Wave Generation Rensheng Xie, Xi Wang, Rongwei Wang, Shouzheng Zhu , <i>East China Normal U., China</i>

June 22 - Afternoon

Session V

Chair: Bruno Carpentieri

14:20 - 14:40 **BETSi: An Electromagnetic Time-Domain Simulation Tool for Antennas and Heterogeneous Media in Ground-Penetrating Radar and Biomedical Applications**
Christoph Statz, Dirk Plettemeier, *Technische U. Dresden, Germany*

14:40 - 15:00 **Overview of the Lebedev Method for FDTD Modelling of Anisotropic Materials**
Michael E. Potter, Mahbod Salmasi, Michal Okoniewski, *U. Calgary, Canada*; Marcel Nauta, *Acceleware, Canada*

15:00 - 15:20 **Synthesis of Multiband Matching Networks for Non-Resonant Antennas**
Jaume Anguera, *U. Ramon Llull, Spain*; Aurora Andújar, *Fractus, Spain*; Jaakko Juntunen, Jussi Rahola, *Optenni, Finland*

15:20 - 15:40 **Investigation of Electromagnetic Energy Harvesting by Using Fractal Antenna**
Huriye Ozdemir, Tayfun Nesimoglu, *Middle East Technical U. Northern Cyprus Campus, TRNC*

15:40 - 16:00 **On the Effects of Microgeometry on RCS**
Johan C. Smit, *CSIR DPSS, South Africa*; Johann W. Odendaal, *U. Pretoria, South Africa*

Coffee Break

Session VI

Chair: Christoph Statz

16:20 - 16:40 **On Methods Employing Auxiliary Sources for Non-Circular Scattering Problems**
Nikolaos L. Tsitsas, *Aristotle U. Thessaloniki, Greece*; Grigorios P. Zouros, George Fikioris, *National Technical U. Athens, Greece*; Yehuda Leviatan, *Technion-Israel Institute of Technology, Israel*

16:40 - 17:00 **An Efficient Ray-Tracing Acceleration Technique for Mobile Receivers in Urban Environments**
Sajjad Hussain, Conor Brennan, *Dublin City U., Ireland*

17:00 - 17:20 **Dey-Mittra Conformal FDTD Meshing with Blender as a Graphics Interface**
Gary Junkin, *U. Autónoma de Barcelona, Spain*

17:20 - 17:40 **Optical Control of Gain Amplifiers at Microwave Frequencies**
Alina Caddemi, Emanuele Cardillo, *U. Messina, Italy*

17:40 - 18:00 **Application and Implementation of Computational Electromagnetics in Radio-Frequency Integrated-Circuit Design**
Cuong Huynh, Juseok Bae, Cam Nguyen, *Texas A&M U., USA*

June 23 - Morning

Session VII

Chair: Wen-mei Hwu

08:50 - 09:10 **Improving the Convergence and Parallel Memory Efficiency of the MLFMM in FEKO**
Johann van Tonder, *Altair Development, South Africa*; Ulrich Jakobus, Florian Rieger, *Altair Engineering, Germany*; Marianne Bingle, Marlize Schoeman, *Altair Development, South Africa*

09:10 - 09:30 **SlotFFT Techniques for Fast Computation of Large and Periodic Electromagnetics Problems**
Luis Landesa, Alberto Serna, *U. Extremadura, Spain*; Mario F. Manzano, *ADASA Sistemas, Spain*; Jose M. Taboada, *U. Extremadura, Spain*; Diego M. Solis, *U. Vigo, Spain*

09:30 - 09:50 **Full-Wave Simulation of Realistic Plasmonic Systems via Surface Integral Equation Fast Solvers**
José Manuel Taboada, *U. Extremadura, Spain*; Diego Martínez Solís, *U. Pennsylvania, USA*; Fernando Obelleiro, Jose Luis Rodríguez, *U. Vigo, Spain*; Luis Landesa, *U. Extremadura, Spain*

09:50 - 10:10 **A New Algorithm for Radar Target Identification Using a GPU-Accelerated ACGF-SEM Technique**
Abdelelah M. Alzahed, *Royal Military College, Canada*; Said M. Mikki, John Persano, *U. New Haven, USA*; Yahia M. M. Antar, *Royal Military College, Canada*

10:10 - 10:30 **A Compact High-Power Microwave Metamaterial Slow-Wave Structure: From Computational Design to Hot Test Validation**
Sarita Prasad, Sabahattin Yurt, Kevin Shipman, Dmitrii Andreev, Daniel Reass, Mikhail Fuks, Edi Schamiloglu, *U. New Mexico, USA*

Coffee Break

Session VIII

Chair: Eduard Ubeda

10:50 - 11:10 **High Performance Computing Using Python: Advances in Geophysical Electromagnetic Modelling**
Octavio Castillo-Reyes, Josep de la Puente, José Maria Cela, *Barcelona Supercomputing Center, Spain*

11:10 - 11:30 **GPU-Accelerated Explicit Time Integration of Eddy Current Problems**
Jennifer Dutié, Markus Clemens, *U. Wuppertal, Germany*; Sebastian Schöps, *Technische U. Darmstadt, Germany*

11:30 - 11:50 **Comparative Performance Evaluation of Multi-GPU MLFMM Implementation for 2-D VIE Problems**
Carl Pearson, Mert Hidayetoğlu, Wei Ren, Weng Cho Chew, Wen-mei Hwu, *U. Illinois at Urbana-Champaign, USA*

11:50 - 12:10 **Scalable Parallel DBIM Solutions of Inverse-Scattering Problems**
Mert Hidayetoğlu, Carl Pearson, Levent Gürel, Wen-mei Hwu, Weng Cho Chew, *U. Illinois at Urbana-Champaign, USA*

Keynote Speech

Massively-Parallel Heterogeneous Computing Systems for Solving Large ProblemsWen-mei Hwu, *U. Illinois at Urbana-Champaign, USA***Closing Remarks - Levent Gürel**