

Monday 16th of May - Rectorate, Piazza S. Marco, 4

16:30	Opening session <i>Chairs: R.D. Graglia, G. Pelosi</i>
16:30	Welcome Address <i>R.D. Graglia, G. Pelosi</i>
16:45	Finite Elements in Microwave Engineering: 1968 to 1992 <i>Jon P. Webb</i>
17:30	Hybrid Finite Element Methods from 1990 to 2005 <i>John L. Volakis</i>
18:15	Technical Program presentation <i>S. Selleri</i>
18:30	Welcome Drink

Tuesday 17th of May - Centro Arte e Cultura, Piazza S. Giovanni 7

	Room A	Room B
	S1 Multi-Physics FEM Techniques in the Simulation of Semiconductor Devices <i>Organizer: G. Ghione</i> <i>Chairs: G. Ghione</i>	S6 Advanced FEM and Hybrid Techniques I <i>Organizers: B. Notaros, J. Zapata</i> <i>Chairs: B. Notaros, J. Zapata</i>
8:00	Finite-Element NEGF Analysis of Optoelectronic Devices <i>X. Zhou, F. Bertazzi, M. Goano, G. Ghione, E. Bellotti, F. Dolcini, F. Rossi</i>	Second-order N'ed'elec Curl-Conforming Prism for Finite Element Computations <i>A. Amor-Martin, L.E. Garcia-Castillo</i>
8:20	Numerical FEM Techniques for the Sensitivity Parametric Analysis in Electro-Thermal Physics-Based Semiconductor Device Models <i>F. Bonani, S. Donati Guerrieri, G. Ghione</i>	Analysis of 3D Components by 2D FEM <i>G. G. Gentili, L. Accatino</i>
8:40	Parallel Deterministic Solution of the Boltzmann Transport Equation for Semiconductors <i>K. Rupp, A. Morhammer, T. Grasser, A. Jnge</i>	Exact Discrete Electromagnetism by Sampling and Interpolation <i>E. Scholz, S. Lange, T. Eibert</i>
9:00	Electrothermal Simulation of Wide-Area Power Semiconductor Devices During Out-of-SOA Events <i>A. Irace</i>	A CAD Method based on Hybrid FEM and Spherical Modes for Direct Domain Decomposition <i>P. Robustillo, J. Rubio, J. Zapata, J.R. Mosig</i>
9:20	A 3D Finite Element Framework for Comprehensive Multi-Physics Simulation of Semiconductor Devices <i>R. Sacco, A.G. Mauri</i>	Finite Element 1-D Solutions in the Presence of Moving Media <i>A.Z. Ilic, S.V. Savic, M.M. Ilic,</i>
9:40	Multi-physics Simulations in MEMS <i>A. Corigliano, A. Ghisi, S. Mariani</i>	Nonrigorous Symmetric Second- Order Absorbing Boundary Condition: Accuracy, Convergence and Possible Improvements <i>S.V. Savic, A.Z. Ilic, B.M. Notaros, M.M. Ilic</i>

10:00	Coffee Break	Coffee Break
10:30	S9 Optimization Techniques and Parameter Space Sweep <i>Organizers: R. Dyczij-Edlinger</i> <i>Chairs: R. Dyczij-Edlinger</i>	S7 Advanced FEM and Hybrid Techniques II <i>Organizers: B. Notaros, J. Zapata</i> <i>Chairs: B. Notaros, J. Zapata</i>
10:30	Reduced Basis Model Reduction for Time-Harmonic Maxwell's Equations with Stochastic Coefficients <i>M. Hess, P. Benner</i>	Posidonia: A Tool for HPC and Remote Scientific Simulations <i>A. Amor-Martin, I. Martinez-Fernandez, L.E. Garcia-Castillo</i>
10:50	Adaptive Model-Order Reduction for the Simulation of Devices Fed by Dispersive Waveguides Based on the Finite-Element Scattering Formulation <i>R. Baltes, A. Sommer, O. Farle, R. Dyczij-Edlinger</i>	Evaluation of Galerkin Interactions between Surface or Volumetric Elements <i>J. Rivero, F. Vipiana, D. R. Wilton, W.A. Johnson</i>
11:10	Reduced-Basis Method for Geometric Parameters in Computer-Aided Design of Microwave Filters and Diplexers <i>V. de la Rubia, A. Lamecki, M. Mrozowski</i>	FEM-BCI: a Set of Hybrid Methods for the Computation of Electromagnetic Fields in Open Boundaries <i>G. Aiello, S. Alfonzetti, N. Salerno</i>
11:30	Mesh Deformation Techniques in Parametric Modeling and Numerical Optimization of High Frequency Devices. <i>A. Lamecki, L. Balewski, M. Mrozowski</i>	The Efficient Mixed FEM with Mass-Lumping and Impedance Transmission Boundary Condition for Computing Optical Waveguide Modes <i>N. Liu, G. Cai, Q.H. Liu</i>
11:50	Proper Generalized Decomposition Method Applied to Solve 3D Low Frequency Electromagnetic Field Problems <i>T. Henneron, S.Clenet</i>	A New 3D DGTD Method Hybridizing the Finite Element and Finite Difference Techniques with Non-Conformal Meshes <i>Q. Sun, Q. Ren, Q. Zhan, Q.H. Liu</i>
12:10	Robust, Efficient and Accurate Computation of Nonlinear Eigenvalue Problems from Maxwell equations <i>M. Eller, S. Reitzinger, S. Schop, S. Zaglmayr</i>	Multiscale Finite Element Modeling for Composite Material Characterization <i>B.-Y. Wu, X.-Q. Sheng, Y. Hao</i>
12:30	Lunch Break	Lunch Break
14:00	S2 FEM in Italy I <i>Organizers: A. Toscano, A. Laudani</i> <i>Chairs: A. Toscano, A. Laudani</i>	S4 Acceleration/Preconditioning Techniques for large Problems <i>Organizers: A. Boag, B. Shanker</i> <i>Chairs: A. Boag, B. Shanker</i>
14:00	Convergence Analysis of a NURBSBased Boundary Integral Equation Solver <i>U. Iemma, V. Marchese</i>	Hierarchical Functions for Multiscale Problems <i>R.D. Graglia, A.F. Peterson, P. Petrini, L. Matekovits</i>
14:20	Equivalent Polynomial Quadrature for Discontinuous Fields in the Extended Finite Element Method <i>G. Ventura</i>	Linear Complexity Direct Finite Element Solvers for General Electromagnetic Forward Analysis and Inverse Design <i>B. Zhou, D. Jiao</i>
14:40	Derivatives Computation of FEM Solution by Using RPQ Formulae <i>S. Coco, A. Laudani</i>	Multilevel Nonuniform-Grid Algorithm for EM Scattering Problems <i>E.V. Chernokozhin, Y. Brick, G. Lombardi, R.D. Graglia, A. Boag</i>

15:00	FEM Computation of Current Density and Oersted Field in Real Spin-Torque Driven Magnetization Devices <i>A. Giordano, G. Finocchio, A. Laudani</i>	A Combined Mechanical-Electromagnetic Analysis of Dish Reflector Antennas <i>D.J. Ludick, D.B. Davidson, M. Venter, G. Venter</i>
15:20	Numerical Simulations of Surface Plasmon Polaritons Using FEM <i>G. Lo Sciuto, G. Capizzi</i>	Novel Surface-Volume-Surface Electric Field Integral Equation for Solution of Scattering Problems on Penetrable Objects <i>F. Hosseini, A. Menshov, V. Okhmatovski</i>
15:40	FEM-NN Tool for the Simulation of Vector-Hysteresis in Magnetic Device <i>E. Cardelli, A. Faba, A. Laudani, G.M. Lozito, F. Riganti Fulginei, A. Salvini</i>	Babich's Expansion and the Fast Huygens Sweeping Method for the Helmholtz Equation at High Frequencies <i>J. Qian, W. Lu, R. Burridge</i>
16:00	Coffee Break	Coffee Break
16:30	S3 FEM in Italy II <i>Organizers: A. Toscano, A. Laudani</i> <i>Chairs: A. Toscano, A. Laudani</i>	S5 Integral Equation / BEM Methods <i>Organizers: A. Boag, B. Shanker</i> <i>Chairs: A. Boag, B. Shanker</i>
16:30	Applications of Numerical Methods in Metamaterials at Microwave Frequencies <i>M.Barbuto, F. Bilotti, A.Monti, D. Ramaccia, A. Tobia, A. Toscano, S.Vellucci</i>	The Integral Equation MEI revisited <i>J.M. Rius, A. Heldring, E. Ubeda</i>
16:50	FEM Simulations of Acoustic Metasurfaces <i>F. Asdrubali, F. Bilotti, P. Gori, C. Guattari, A. Monti, D. Ramaccia, A. Toscano</i>	Isogeometric Method of Moments Analysis for Electric Field Integral Equations Using Subdivision Surfaces <i>J. Li, B. Shanker</i>
17:10	Volterra Series for an Iterative Finite Element Time Domain Solution of Wave Propagation in Nonlinear Media <i>S. Maddio, G. Pelosi, M. Righini, S. Selleri</i>	Graph Laplacian Based Algorithms for Stable Current Discretizations on Macro Elements <i>R. Mitharwal, F.P. Andriulli</i>
17:30	Design of Orthomode Transducers Using FEM Software Packages <i>G. Gentili, R. Nesti</i>	From Surface Equivalence Principle to Modular Domain Decomposition <i>F. Muth, H. Schneider</i>
17:50	A FEM Aided Approach to Cost-Effective Design of Direction Finding Asymmetric Arrays <i>L. Scorrano, L. Dinoi</i>	A Novel Mortar Surface Technique for Modeling of Multi-Scale Stratified Composites <i>Z. Peng</i>
	Social Dinner	Social Dinner

Wedsnday 18th of May - Centro Arte e Cultura, Piazza S. Giovanni 7

	Room A	Room B
	S10	S11
	FEM Applications	Domain Decomposition and Non-Linear FEM
	<i>Chairs: G. Ghione</i>	<i>Chairs: G. Battistelli, S. Selleri</i>
8:00	Anisotropic Material Modeling in FEKO with Hybrid FEM/MoM <i>E.A. Attardo, M. Bingle, U. Jakobus</i>	Combined Domain Decomposition and Model Order Reduction to Solve Complex RF Problems Using FEniCS <i>T. Flisgen, Johann Heller, Ursula van Rienen</i>
8:20	Design, Finite Element Analysis and Fabrication of a 3D Periodic Structure to Read the Temperature of the Objects in Microwave Cavities <i>A. Bostani</i>	A Spurious-Mode Free Jacobi-Davidson Method Combined with Domain Decomposition for the Modal Analysis of Electromagnetic Structures <i>O. Floch, R. Baltes, A. Sommer, R. DyczijEdlinger</i>
8:40	Study of the Proximity Effect and the Distribution Parameters of Multi-Conductor Transmission Line <i>L. Guizhen, G. Qingxin, Y. Hongcheng, L. Zengrui</i>	Efficient FEM Software Package Integration with Evolutionary Algorithms for Large Electromagnetic Problems <i>E. Agastra, A. Lala, B. Kamo, L. Ntibarikure</i>
9:00	Finite Element Modelling of Liquid Crystal-Based Microwave Devices <i>F. Anbal Fernndez, R. James, L. Seddon, S.E. Day, D. Mirshekar-Syahkal</i>	FEM-Based Optimization of Dummy Loads for High-power Wideband Microwave Calorimeters <i>V.Yu. Kozhevnikov, A.I. Klimov</i>
9:20	The Finite Element Method for 2400 MHz Cylindrical Waveguide Antenna Modeling <i>E. El Kennassi, K.I. Janati, A. Dirhar, L. Bousshine</i>	Localized Diffusive Source Estimation via an Hybrid Finite Element/Kalman Filtering Approach <i>G. Battistelli, L. Chisci, N. Forti, G. Pelosi, S. Selleri</i>
9:40	A Proposal of Electromagnetic Field Analysis Method for Airport Surface in VHF Band <i>R. Kato, R. Suga, A. Kezuka, O. Hashimoto</i>	Coupled Discontinuous Galerkin Time-Domain Simulation of the Nonlinear Electromagnetic-Plasma Interaction <i>S. Yan, J.-M. Jin</i>
10:00	Coffee Break	
	S12	S8
	FEM Theory	Parallel Computation on Multi- and Many-core Computers
	<i>Chairs: David B.</i>	<i>Organizers: A.E. Yilmaz</i> <i>Chairs: J. Fostier, A.E. Yilmaz</i>
10:30	Structured Meshes Using Computed Basis Functions <i>M. Nazari, J.P. Webb</i>	Parallel Wideband ACE-FMM for Large-Scale Distributed-Memory Clusters <i>S. Hughey, H.M. Aktulga, B. Shanker</i>
10:50	On the Preconditioning of the Differential A- Φ Formulation	A Parallel, Distributed-Memory MLFMA for the Stochastic Galerkin Method

	<i>Y.-L. Li, S. Sun, W.C. Chew, L.J. Jiang</i>	<i>Z. Zubac, J. Fostier, D. De Zutter, D. Vande Ginste</i>
11:10	Impact of Causality on Computational Techniques <i>T.K. Sarkar, M. Salazar-Palma</i>	Fast Scalable Parallel Direct Solutions to Surface Integral Equations in Computational Electromagnetics <i>B.M. Notaros, A.B. Manic, X.S. Li, F.-H. Rouet</i>
11:30	Accurate and Efficient Nystrom Volume Integral Equation Method for the Maxwell Equations for Multiple 3-D Scatterers for Meta-Material Applications <i>W. Cai</i>	Parallel MLFMA Accelerated Higher-Order Solution of Large Scattering Problems via Locally Corrected Nystrom Discretization of CFIE <i>M. Shafieipour, I. Jeffrey, J. Aronsson, V. Okhmatovski</i>
11:50	Modeling the Ion-Exchange Process for Diffusion Waveguides Within Thin Glass Sheets <i>T. Kuhler, D. Zhang, E. Griesse</i>	High-Performance Surface Integral Equation Solver for Extreme Large Multi-Scale Electromagnetic Problems <i>Z. Peng, B. MacKie-Mason</i>
12:10	Multiphysics Simulation of Integrated Circuits with the Finite Element Method <i>T. Lu, J.-M. Jin</i>	An Empirical Methodology for Judging the Performance of Parallel Algorithms on Heterogeneous Clusters <i>J.W. Massey, A. Menshov, A.E. Yilmaz</i>