

VIII EIEC  
8<sup>th</sup> Iberian Meeting on Computational Electromagnetics

Schedule

Time	Tuesday, November 1	Wednesday, November 2	Thursday, November 3	Friday, November 4
09:00-10:40		Session A	Session E	Tour
10:40-11:10		Coffee break	Coffee break	
11:10-12:30		Session B (In memoriam Miguel Angel Solano)	Session F	
12:30-14:30		Lunch	Lunch	
14:30-16:10	Arrival, check-in and registration	Session C	Session G	
16:10-16:40		Coffee break	Coffee break	
16:40-18:00		Session D	Closing Session	
18:00-22:00	Dinner	Dinner	Conference dinner	

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Scientific Program

Wednesday, November 2, 2011

Session	Time	No.	Title	Authors	Affiliation
<p>Session A Numerical Techniques I  09:00-10:40  Chair: Felipe Cátedra</p>	09:00-09:20	4	Supercomputing Solutions to Extreme Large Problems in Electromagnetics	J. M. Taboada <sup>1</sup> , M. G. Araujo <sup>2</sup> , F. Obelleiro <sup>2</sup> , J. L. Rodríguez <sup>2</sup> , L. Landesa <sup>1</sup>	<sup>1</sup> Universidad de Extremadura, Caceres, Spain <sup>2</sup> Universidad de Vigo, Vigo, Spain
	09:20-09:40	14	Block LU Decomposition versus Partitioned Matrix Inverse for Compressed Direct Solution of Method of Moments Linear System	A. Heldring and J. M. Rius	AntennaLab, Dept. Teoria del Senyal i Comunicacions Universitat Politècnica de Catalunya Barcelona, Spain
	09:40-10:00	15	Sparsified ACA for accelerated Iterative Solution of the MoM Linear System	A. Heldring <sup>1</sup> , J. M. Rius <sup>1</sup> , E. Ubeda <sup>1</sup> and J. M. Tamayo <sup>2</sup>	<sup>1</sup> AntennaLab, Dept. of Signal Processing and Telecommunications, Universitat Politècnica de Catalunya, Barcelona, Spain <sup>2</sup> ISAE Institut Supérieur de l'Aéronautique et de l'Espace, Toulouse, France.
	10:00-10:20	26	A Domain Decomposition Approach using Method of Moments	Carlos Delgado, Eliseo Garcia, Iván Gonzalez and Felipe Cátedra	Escuela Politécnica, University of Alcalá, Alcalá de Henares, Spain
	10:20-10:40	20	Carrier Photogeneration within Si:H/a-SiC:H Multilayer Structures simulated by FDTD Algorithm	Alessandro Fantoni <sup>1</sup> , Pedro Pinho <sup>1,2</sup> , Paula Louro <sup>1</sup> , e Manuela Vieira <sup>1</sup>	<sup>1</sup> Instituto Superior de Engenharia de Lisboa (ISEL), Departamento de Engenharia Electrónica e Telecomunicações e de Computadores (DEETC), Lisboa, Portugal <sup>2</sup> Instituto de Telecomunicações, Campus Universitário de Santiago, Aveiro, Portugal
Coffee break	10:40-11:10				
<p>Session B Complex Media I (In Memoriam Miguel Ángel Solano)  11:10-12:30  Chair: Ángel Vegas  Co-chair: José Represa</p>	11:10-11:30	30	From the Perfect Electromagnetic Conductor (PEMC) to its Generalization – Minkowskian Isotropic Media (MIM)	Carlos R. Paiva <sup>1</sup> and Sérgio A. Matos <sup>2</sup>	<sup>1</sup> Instituto de Telecomunicações and Instituto Superior Técnico, Lisboa, Technical University of Lisbon, Lisboa, Portugal <sup>2</sup> Instituto Universitário de Lisboa (ISCTE-IUL), Instituto de Telecomunicações, Lisboa, Portugal
	11:30-11:50	9	Nuevas Propiedades de la Propagación Guiada en Estructuras Cerradas con Medios Quirales	Álvaro Gómez, Angel Vegas y Miguel A. Solano	Dpto. de Ing. de Comunicaciones. Universidad de Cantabria, Santander
	11:50-12:10	18	Biaxial Media Beyond Electric Anisotropy	Sérgio A. Matos <sup>1</sup> , Carlos R. Paiva <sup>2</sup> , and Afonso M. Barbosa <sup>2</sup>	<sup>1</sup> Instituto Universitário de Lisboa (ISCTE-IUL), Instituto de Telecomunicações, Lisboa, Portugal <sup>2</sup> Instituto de Telecomunicações and Instituto Superior Técnico, Lisboa, Technical University of Lisbon, Lisboa, Portugal

	12:10-12:30	31	Waveguides containing Minkowskian Isotropic Media (MIM) and the Perfect Electromagnetic Conductor (PEMC)".	Filipa R. Prudêncio <sup>1</sup> , Sérgio A. Matos <sup>2</sup> , and Carlos R. Paiva <sup>1</sup>	<sup>1</sup> Instituto de Telecomunicações and Instituto Superior Técnico, Lisboa, Technical University of Lisbon, Lisboa, Portugal <sup>2</sup> Instituto Universitário de Lisboa (ISCTE-IUL), Instituto de Telecomunicações, Lisboa, Portugal
Lunch	12:30-14:30				
Session C Microwave and Optical Components and Systems 14:30-16:10 Chair: Jesús Rebollar	14:30-14:50	8	Actividades del Consorcio Espacial Valenciano en el Testeo de Componentes Pasivos de Microondas Empleados en Comunicaciones Espaciales Operando en Régimen de Alta Potencia	Benito Gimeno <sup>1,2</sup> , Vicente E. Boria <sup>2,3</sup> , David Argilés <sup>2</sup> , David Raboso <sup>4</sup>	<sup>1</sup> Departamento de Física Aplicada y Electromagnetismo – ICMUV, Universidad de Valencia <sup>2</sup> VAL SPACE CONSORTIUM, Valencia <sup>3</sup> Departamento de Comunicaciones – ITEAM, Universidad Politécnica de Valencia <sup>4</sup> European Space Agency (ESA), European Space Research and Technology Center (ESTEC), Noordwijk, The Netherlands
	14:50-15:10	21	Electromagnetic Simulation Challenges in the ESS-Bilbao Linac	Oscar González, Adolfo Vélez, Juan Luis Muñoz, Joaquín Portilla, Victor Etxebarria, Francisco Javier Bermejo	ESS-Bilbao, Bilbao, Spain
	15:10-15:30	19	Nuevas Aportaciones al Diseño de Filtros Microtira y Líneas Diferenciales del Grupo de Microondas de la Universidad de Sevilla	A. Fernández-Prieto, M. C. Velázquez-Ahumada, J. Martel, F. Medina, F. Mesa	Grupo de Microondas, Universidad de Sevilla, Sevilla, España
	15:30-15:50	6	Design of Contiguous-Band Elliptic-Response Manifold Output Multiplexers by Efficient Cancellation of Reactive Impedance Parts	José R. Montejogaraí <sup>1</sup> , Carlos A. Leal-Sevillano <sup>1</sup> , Jorge A. Ruiz-Cruz <sup>2</sup> , Jesús M. Rebollar <sup>1</sup> , Luis Rogla <sup>3</sup> , Santiago Sobrino <sup>3</sup>	<sup>1</sup> Departamento de Electromagnetismo y Teoría de Circuitos, Escuela Técnica Superior de Ingenieros de Telecomunicación, Universidad Politécnica de Madrid, Madrid, Spain <sup>2</sup> Escuela Politécnica Superior, Universidad Autónoma de Madrid, Madrid, Spain. <sup>3</sup> Thales Alenia Space España, Madrid Spain.
	15:50-16:10	2	LSM and LSE Formulation Applied to the Computational Evaluation of Thickness and Refractive Index of Single-Mode Planar Optical Waveguides from Effective Index Measurements	Adrián Fdez Gavela <sup>1</sup> , Silvino José Antuña Presa <sup>1</sup> , Miguel García Granda <sup>2</sup> , María Rodríguez Lastra <sup>3</sup> , José Rodríguez García <sup>1</sup>	<sup>1</sup> Physics Department, University of Oviedo, Oviedo, Spain <sup>2</sup> R&D Engineer, ETH Zurich, Zürich, Switzerland <sup>3</sup> Energy Department, University of Oviedo, Oviedo, Spain
Coffee break	16:10-16:40				

<p>Session D Antennas and Periodic Structures</p> <p>16:40-18:00</p> <p>Chair: Carlos Fernandes</p>	16:40-17:00	10	Efficient Analysis of Multilayered Periodic Structures with Application to the Design of Reflectarray Antennas	Rafael Florencio <sup>1</sup> , Rafael R. Boix <sup>1</sup> , and José A. Encinar <sup>2</sup>	<sup>1</sup> Dept. of Electronics and Electromagnetism, College of Physics, University of Seville, Seville, Spain <sup>2</sup> Dept. of Electromagnetism and Circuit Theory, School of Telecommunications, University of Madrid, Madrid, Spain
	17:00-17:20	24	Recent Advances in Circuit Modeling of the Transmission of Electromagnetic Waves through Periodic Screens	Raúl Rodríguez-Berral <sup>1</sup> , Francisco Medina <sup>2</sup> , Francisco Mesa <sup>1</sup> , María García-Vigueras <sup>3</sup> , and José L. Gómez-Tornero <sup>3</sup>	<sup>1</sup> Dep. of Applied Physics, University of Seville, Spain <sup>2</sup> Dep. of Electronics & Electromagnetism, University of Seville, Spain <sup>3</sup> Dep. de las Tecnologías de la Información y las Comunicaciones, Universidad Politécnica de Cartagena, Spain
	17:20-17:40	23	Shaped Lens Antenna for Low-Cost Mechanical Beam Steering at Millimeter-Waves	Carlos A. Fernandes <sup>1</sup> , Raul C. Martins <sup>1</sup> , Tomás Radil <sup>1</sup> , Pedro M. Ramos <sup>1</sup> , Eduardo B. Lima <sup>1</sup> , Carla R. Medeiros <sup>1</sup> and Jorge R. Costa <sup>1,2</sup>	<sup>1</sup> Instituto Telecomunicações, Instituto Superior Técnico, Lisboa, Portugal <sup>2</sup> ISCTE-IUL Instituto Universitário de Lisboa, Lisboa, Portugal
	17:40-18:00	27	Simulation and Measurements of Ultra Wideband Antenna Radiation Efficiency	Nuno Pires <sup>1,2</sup> , Marco Letizia <sup>1</sup> , Stephen Boyes <sup>3</sup> , Yang Lu <sup>3</sup> , Yi Huang <sup>3</sup> , Anja Skrivervik <sup>1</sup> , and António A. Moreira <sup>2</sup>	<sup>1</sup> Laboratoire d'Electromagnétisme et d'Acoustique, École Polytechnique Fédérale de Lausanne, Switzerland <sup>2</sup> Instituto de Telecomunicações, Instituto Superior Técnico, Lisbon, Portugal <sup>3</sup> University of Liverpool, United Kingdom

Thursday, November 3, 2011

Session	Time	No.	Title	Authors	Affiliation
<p>Session E Complex Media II</p> <p>09:00-10:40</p> <p>Chair António Topa</p>	09:00-09:20	29	Recent Investigation on Indefinite Medium Waveguides	António L. Topa, Carlos R. Paiva, and Afonso M. Barbosa	Instituto de Telecomunicações and Instituto Superior Técnico, Technical University of Lisbon, Portugal
	09:20-09:40	3	Comparación Numérica de Diferentes Estructuras Quirales	I. Barba, A.C.L. Cabeceira, A. Grande, J. Represa	Dpto. de Electricidad y Electrónica. Universidad de Valladolid, Valladolid
	09:40-10:00	16	Boosting the Cherenkov Radiation with a Nanowire Material	David E. D. Fernandes, Stanislav I. Maslovski, Mário G. Silveirinha	Departamento de Engenharia Electrotécnica e de Computadores, Instituto de Telecomunicações, Universidade de Coimbra, Coimbra, Portugal
	10:00-10:20	32	Electromagnetic Modelling of Nanowires and Carbon-Nanotubes through Integral Equations	Mario F. Pantoja, Amelia R. Bretones, Salvador G. García, and Rafael G. Martin	Departamento de Electromagnetismo y Física de la Materia, Universidad de Granada, Granada, Spain
	10:20-10:40	17	Dispersion and Losses in Surface Waveguides containing Complex Media	João R. Canto, Carlos R. Paiva, and Afonso M. Barbosa	Instituto de Telecomunicações and Instituto Superior Técnico, Technical University of Lisbon, Av. Rovisco Pais 1, 1049-001 Lisboa, Portugal,
Coffee break	10:40-11:10				

Session F Antennas 11:10-12:30  Chair: José Margineda	11:10-11:30	1	Antenna Array Simultaneous Focus on Multiple Targets	Rafael G. Ayestarán, Jana Álvarez, Germán León, Jesús A. López-Fernández, Fernando Las-Heras	Department of Electrical Engineering, University of Oviedo, Gijón, Spain
	11:30-11:50	7	Modelado de Antenas Mediante Dipolos Elementales Equivalentes Basado en Traslación de Modos Esféricos y Algoritmos Genéticos	Juan Francisco Izquierdo, Jesús Rubio	Dpto de Tecnología de Computadores y de las Comunicaciones, Escuela Politécnica, UEX, Cáceres
	11:50-12:10	22	Method of Moments based on RWG Elements for Antennas Loaded with Split-Square Resonators	Jessica Moysen-Cortes, L. E. García-Muñoz, Daniel Segovia-Vargas	University Carlos III of Madrid, Signal Processing and Communications Department, Spain
	12:10-12:30	12	Diseño de un Dispositivo para el Estudio de Efectos Electromagnéticos en Gametos Porcinos	José Margineda <sup>1</sup> , Angel J. García-Collado <sup>1,2</sup> , Gregorio J. Molina-Cuberos <sup>1</sup> , Ernesto Martín <sup>1</sup> , Juan Muñoz <sup>1</sup> , Sergio Navarro Sánchez <sup>3</sup>	<sup>1</sup> Electromagnetismo Aplicado, Universidad de Murcia, Murcia <sup>2</sup> Dpto. Ciencias Politécnicas, Universidad Católica San Antonio, Murcia <sup>3</sup> Dpto. I+D+i, TAHE Fertilidad, Murcia
Lunch	12:30-14:30				
Session G Numerical Techniques II 14:30-16:10  Chair: Juan Mosig	14:30-14:50	11	A GPU Accelerated Scattering Solver Based on the Single Level Fast Multipole Method	Jesús A. López-Fernández, M. López-Portugués, Rafael G. Ayestarán, Germán León, Fernando Las-Heras	Department of Electrical Engineering, University of Oviedo, Gijón, Spain
	14:50-15:10	13	Numerical Investigations of Nonlinear Nonparaxial Beam Propagation on Graphics Processing Units	Pedro Chamorro-Posada <sup>1</sup> , Julio Sánchez-Curto <sup>1</sup> and Graham S. McDonald <sup>2</sup>	<sup>1</sup> Dpto. de Teoría de la Señal y Comunicaciones e Ingeniería Telemática, Universidad de Valladolid, ETSI Telecomunicación, Valladolid, Spain <sup>2</sup> Scholl of Computing, Science and Engineering at the University of Salford, Joule Physics Laboratory, Newton Building, Salford, UK
	15:10-15:30	5	A New Technique Based on Finite Element Method for Optimizing Microstrip Antenna Profile	B. El Jaafari, M. A. González de Aza, J. García Jimenez, J. Zapata	Departamento de Electromagnetismo y Teoría de Circuitos, Universidad Politécnica de Madrid
	15:30-15:50	28	Novel Time Domain FE/FD Solvers for EMC Assessment	Jesus Alvarez <sup>2</sup> , Guadalupe Gutierrez <sup>3</sup> , Luis D. Angulo <sup>1</sup> , Hai Lin <sup>4</sup> , Amelia R. Bretones <sup>1</sup> , and Salvador G. Garcia <sup>1</sup>	<sup>1</sup> University of Granada, Granada, Spain <sup>2</sup> Cassidan Air Sytems, Getafe, Spain <sup>3</sup> Airbus Military, Getafe, Spain <sup>4</sup> Wuhan University, Hubei, China
	15:50-16:10	25	Optimized Machine Precision Double Exponential Quadratures applicable in Weakly Singular Integrals	Ioannis D. Koufogiannis, Athanasios G. Polimeridis, Michael Mattes, Juan R. Mosig	Laboratoire d'Electromagnétisme et d'Acoustique, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland
Coffee break	16:10-16:40				
Closing Session and Next Meeting Proposal	16:40-18:00				
Conference Dinner	18:00-22:00				