

2009 REME International Workshop on Metamaterials

Venue: Aula de Grados, Escuela Politécnica Superior, Universidad Carlos III de Madrid, Leganés (Madrid), Spain

Chairmen: Francisco Medina and Daniel Segovia-Vargas

Monday, July 6

8:15	Registration
8:45	Opening Ceremony Prof. Dr. Carlos Balaguer Bernaldo de Quirós , Universidad Carlos III de Madrid Vice-chancellor
9:00	Alejandro Martínez , Universidad Politécnica de Valencia, Spain <i>Photonic metamaterials: applications in the optical domain</i>
9:45	Richard W. Ziolkowski , University of Arizona, USA <i>Metamaterial-inspired Engineering of Antenna Systems</i>
11:15	Coffee Break
11:45	Silvio Hrabar , University of Zagreb, Croatia <i>Active Dispersionless Metamaterials – a Path towards Broadband Cloaking</i>
13:15	Ferran Martín , Universitat Autònoma de Barcelona, Spain <i>Recent advances in the design of microwave components on the basis of metamaterial concepts</i>
14:00	Lunch Venue: Hotel Tryp Leganés
15:30	Eva Rajo-Iglesias , Universidad Carlos III de Madrid, Spain <i>Metamaterial EBG-based Gap Waveguide Technology for Millimeter and Submillimeter Wave Circuitry</i>
16:15	Ramón Gonzalo , Universidad Pública de Navarra, Spain <i>Antenna design at microwave and sub-millimetre wave frequencies using metamaterials</i>
17:00	Coffee Break
17:30	José Represa , Universidad de Valladolid, Spain <i>Chiral Media for Microwave Applications</i>
18:15	Daniel Segovia-Vargas , Universidad Carlos III de Madrid, Spain <i>Active Circuits with CRLH Transmission Lines</i>
19:00	Closing Ceremony

Third Young Scientist Meeting on Metamaterials YSMM'09

Venue: Aula de Grados, Escuela Politécnica Superior, Universidad Carlos III de Madrid, Leganés (Madrid), Spain

Tuesday, July 7

8:15	Registration
8:45	Opening Ceremony Prof. Dr. Antonio Artés Rodríguez , Universidad Carlos III de Madrid Vice-chancellor
9:00	Session 1 <i>Computational Methods, Modeling and Optimization</i>
11:00	Coffee Break
11:30	Session 2 <i>Reconfigurable Metamaterials, Active and Passive Microwave Devices</i>
13:30	Lunch Venue: Hotel Tryp Leganés
15:00	Session 3 <i>Antenna Applications</i>
18:00	Social Event Guided Tour in Madrid Bus departure from Leganés Campus
21:00	Gala Dinner Venue: Restaurante Pedro Larumbe, ABC Serrano, Madrid

Wednesday, July 8

8:45	Registration
9:00	Session 4 <i>Meta-surfaces and Antenna Applications</i>
11:00	Coffee Break
11:30	Session 5 <i>Novel Materials, Antenna Applications and Homogenization</i>
13:30	Lunch Venue: Hotel Tryp Leganés
15:00	Session 6 <i>Enhanced Transmission, THz and Optical Metamaterials</i>
17:00	Closing Ceremony

Session 1	Computational Methods, Modeling and Optimization	Tuesday, July 7 9:00 – 11:00
Session Chair: Óscar Quevedo Teruel		
9:00	1.1 (Invited) Optimization Considerations for the Design of Periodic Structures and Metamaterials O. Quevedo-Teruel ¹ , M. Ng Mou Kehn ² , L. Inclán-Sánchez ¹ and E. Rajo-Iglesias ¹ ¹ <i>Universidad Carlos III de Madrid, Spain</i> ² <i>Concordia University, Canada</i>	
9:40	1.2 FDTD Modeling and Visualization of Transient Microwave Signals in Dispersive Double Negative Media A. Grande, J. A. Pereda, O. González and A. Vegas <i>Universidad de Cantabria, Spain</i>	
10:00	1.3 Progress on Circuit Modeling of Extraordinary Transmission F. Medina, F. Mesa, and R. Rodríguez-Berral <i>Universidad de Sevilla, Spain</i>	
10:20	1.4 Modeling Open Split Ring Resonator (OSRRs) and Open Complementary Split Ring Resonator (OCSRRs) in Coplanar Waveguide Technology M. Durán-Sindreu, F. Aznar, A. Vélez, J. Bonache and F. Martín <i>Universitat Autònoma de Barcelona, Spain</i>	
10:40	1.5 Simulating Compound Gratings with a Microstrip Circuit A. Fernández-Prieto, F. Medina and F. Mesa <i>Universidad de Sevilla, Spain</i>	

Session 2	Reconfigurable Metamaterials, Active and Passive Microwaves Devices	Tuesday, July 7 11:30 – 13:30
Session Chair: Marta Gil		
11:30	2.1 (Invited) Reconfigurable Split-ring Resonators based on Ferroelectric Materials M. Gil ¹ , C. Damm ² , A. Giere ² , M. Sazegar ² , J. Bonache ¹ , R. Jakoby ² and F. Martín ¹ ¹ <i>Universitat Autònoma de Barcelona, Spain</i> ² <i>Technische Universität Darmstadt, Germany</i>	
12:10	2.2 Microwave Filters based on Composite Right/Left Handed Transmission Lines J. Selga, M. Gil, F. Aznar, J. Bonache and F. Martin <i>Universitat Autònoma de Barcelona, Spain</i>	
12:30	2.3 Design of Recursive Active Filters with CRLH Lines O. García-Pérez ¹ , V. González-Posadas ² and D. Segovia-Vargas ¹ ¹ <i>Universidad Carlos III de Madrid, Spain</i> ² <i>Universidad Politécnica de Madrid, Spain</i>	
12:50	2.4 Applications of CRLH-TLs in Distributed Amplifiers and Mixers J. Mata-Contreras, C. Camacho-Peñalosa and T. M. Martín-Guerrero <i>Universidad de Málaga, Spain</i>	
13:10	2.5 Power Considerations in Meta-Distributed Amplifiers F. Y. Ng-Molina, C. Camacho-Peñalosa and T. M. Martín-Guerrero <i>Universidad de Málaga, Spain</i>	

Session 3	Antenna Applications	Tuesday, July 7 15:00 – 17:00
Session Chair: Francisco Javier Herraiz Martínez		
15:00	3.1 (Invited) Applications of Metamaterial Loaded Printed Antennas F. J. Herraiz-Martínez ¹ , E. Ugarte-Muñoz ¹ , J. Montero-de-Paz ¹ , P. S. Hall ² , D. Segovia-Vargas ¹ ¹ <i>Universidad Carlos III de Madrid, Spain</i> ² <i>University of Birmingham, UK</i>	
15:40	3.2 Investigations of the Possibilities of a Metamaterial-Based Waveguide as a Slotted Antenna M. Navarro-Tapia ¹ , J. Esteban ² , and C. Camacho-Peñalosa ¹ ¹ <i>Universidad de Málaga, Spain</i> ² <i>Universidad Politécnica de Madrid, Spain</i>	
16:00	3.3 Bi-Band PIFA over a Metamaterial Structure M. Eizmendi ¹ , H. H. Ouslimani ² , J. Zbitou ² and A. Priou ² ¹ <i>Universitat Politècnica de Catalunya, Spain</i> ² <i>University Paris-Ouest Nanterre La Défense, France</i>	
16:20	3.4 Multifrequency Patch Antennas with Parasitic SRRs in X-Band J. Montero-de-Paz, E. Ugarte-Muñoz, F. J. Herraiz-Martínez and D. Segovia-Vargas <i>Universidad Carlos III de Madrid, Spain</i>	
16:40	3.5 Multilayer Compact EBG-filters and their Application to Proximity Coupling Patch Antennas L. Inclán-Sánchez, E. Rajo-Iglesias and J. L. Vázquez-Roy <i>Universidad Carlos III de Madrid, Spain</i>	
17:00	3.6 Filtering-Lens Structure Based on SRRs for Conical Horn Antennas in the Low Terahertz Band B. Andrés-García ¹ , L. E. García-Muñoz ¹ , V. González-Posadas ² and D. Segovia-Vargas ¹ ¹ <i>Universidad Carlos III de Madrid, Spain</i> ² <i>Universidad Politécnica de Madrid, Spain</i>	

Session 4	Meta-surfaces and Antenna Applications	Wednesday, July 8 9:00 – 11:00
Session Chair: Elena Saenz		
9:00	4.1 (Invited) Meta-surfaces for Antenna Applications E. Saenz ^{1,2} , R. Gonzalo ¹ , I. Ederra ¹ and P. de Maagt ² ¹ <i>Universidad Pública de Navarra, Spain</i> ² <i>European Space Research and Technology Centre, The Netherlands</i>	
9:40	4.2 EBG Superstrate Technology for GNS Applications J. C. Iriarte ¹ , A. Osés ¹ , I. Ederra ¹ , R. Gonzalo ¹ and P. de Maagt ² ¹ <i>Universidad Pública de Navarra, Spain</i> ² <i>European Space Research and Technology Centre, The Netherlands</i>	
10:00	4.3 Planar Meta-surfaces for Dual-Polarized Dual-Frequency Antennas E. Ugarte-Muñoz, J. Montero-de-Paz, F. J. Herraiz-Martínez and D. Segovia-Vargas <i>Universidad Carlos III de Madrid, Spain</i>	
10:20	4.4 Eigenmode Analysis of an Aperiodic AMC Surface for Wideband Antennas R. M. Mateos and C. Craeye <i>Universite Catholique de Louvain, Belgium</i>	
10:40	4.5 Application of Metamaterial Structures in Antennas J. M. Fernández and M. Sierra-Castañer <i>Universidad Politécnica de Madrid, Spain</i>	

Session 5	Novel Materials, Antenna Applications and Homogenization	Wednesday, July 8 11:30 – 13:30
Session Chair: Pere J. Ferrer		
11:30	5.1 (Invited) Review on Artificial Materials for Antenna Applications P. J. Ferrer, J. M. González-Arbesú and J. Romeu <i>Universitat Politècnica de Catalunya, Spain</i>	
12:10	5.2 Epsilon Near Zero Metal-Dielectric Composite Material A. P. Vinogradov ¹ , A. V. Dorofeenko ¹ , E. O. Liznev ¹ , A. M. Merzlikin ¹ and S. Zouhdi ² ¹ <i>Institute for Theoretical and Applied Electromagnetics RAS, Russia</i> ² <i>Laboratoire de Génie Electrique de Paris Supélec, France</i>	
12:30	5.3 Non-local Homogenization Theory for Metamaterials Made of SRRs: Magnetoinductive and Transverse Electromagnetic Waves J. D. Baena ¹ , L. Jelinek ² , R. Marqués ² and M. Silveirinha ³ ¹ <i>Universidad Nacional de Colombia, Bogotá, Colombia</i> ² <i>Universidad de Sevilla, Spain</i> ³ <i>University of Coimbra, Portugal</i>	
12:50	5.4 (Invited) Beyond Isotropic Metamaterials: From Anisotropic to Bianisotropic Media Using the Geometric Perspective Provided by Clifford Algebra S. A. Matos, C. R. Paiva, A. M. Barbosa <i>Instituto Superior Técnico, Lisbon, Portugal</i>	

Session 6	Enhanced Transmission, THz and Optical Metamaterials	Wednesday, July 8 15:00 – 17:00
Session Chair: Sérgio A. Matos		
15:00	<p>6.1 Investigation of Doubly Periodic EOT-Hole-Arrays at THz-Frequencies: Ordinary and Anomalous Resonant Transmission</p> <p>S. Kuznetsov¹, M. Navarro-Cía², V. Kubarev¹, A. Gelfand³, M. Beruete², I. Campillo⁴ and M. Sorolla²</p> <p>¹ <i>Novosibirsk State University, Russia</i> ² <i>Universidad Pública de Navarra, Spain</i> ³ <i>Institute of Semiconductor Physics SB RAS, Russia</i> ⁴ <i>CIC nanoGUNE, Spain</i></p>	
15:20	<p>6.2 The Ridge Gap Waveguide: Operation and Characterization as Transmission Line</p> <p>E. Alfonso¹, A. Valero-Nogueira¹, E. Rajo-Iglesias², A. U. Zaman³, M. Baquero¹ and P.-S. Kildal³</p> <p>¹ <i>Universidad Politécnica de Valencia, Spain</i> ² <i>Universidad Carlos III de Madrid, Spain</i> ³ <i>Chalmers University of Technology, Sweden</i></p>	
15:40	<p>6.3 Subwavelength Holes vs. Propagating Holes in EOT Prism Configuration</p> <p>M. Navarro-Cía¹, M. Beruete¹, F. Falcone¹, I. Campillo² and M. Sorolla¹</p> <p>¹ <i>Universidad Pública de Navarra, Spain</i> ² <i>CIC nanoGUNE, Spain</i></p>	
16:00	<p>6.4 Near-Zero-Index Lens Based on Extraordinary Transmission Metamaterial</p> <p>M. Navarro-Cía¹, M. Beruete¹, I. Campillo² and M. Sorolla¹</p> <p>¹ <i>Universidad Pública de Navarra, Spain</i> ² <i>CIC nanoGUNE, Spain</i></p>	
16:20	<p>6.5 Transmission Resonance in CSRR Metasurfaces</p> <p>M. Aznabet, O. El Mrabet, M. Navarro-Cía, M. Beruete, F. Falcone and M. Sorolla</p> <p><i>Universidad Pública de Navarra, Spain</i></p>	
16:40	<p>6.6 Modeling and Understanding Plasmonic Resonances in Optical Metamaterials</p> <p>F. J. Rodríguez-Fortuño, R. Ortuno, C. García-Meca, J. Martí and A. Martínez</p> <p><i>Universidad Politécnica de Valencia, Spain</i></p>	