



LAMC 2023: General Program Overview

Time	Wednesday, December 6	Thursday, December 7	Friday, December 8
8:30 - 8:40	Welcome Remarks		
8:40 - 9:20	Keynote Speaker: Prof. Maurizio Bozzi. “Microwave Sensors: Novel Techniques, Topologies, and Manufacturing Technologies”	Keynote Speaker: Prof. Manos M. Tentzeris. “Zero-Power Additively Manufactured FHE-Enabled Wireless/5G+ Ultrabroadband Modules for IoT, SmartAg, Industry 4.0 and Smart Cities Applications: From Dream to Reality”	Keynote Speaker: Prof. Q. J. Zhang. “AI and Machine Learning for Microwaves - Past, Present and Future Trends”
9:20 - 10:40	WM1S1: Passive Components, Circuits, and Devices I (80 min, 4 papers-20 min)	THM1S4: Communication System (80 min, 4 papers-20 min)	FM1S7: CAD Techniques for RF and Microwave Engineering (80 min, 4 papers-20 min)
10:40 - 11:10	Coffee Break PS: Poster Session, (30 min) Industrial Exhibition	Coffee Break PS: Poster Session (30 min) Industrial Exhibition	Coffee Break, (30 min) Industrial Exhibition
11:10 - 12:30	WM2S2: Active and Passive Antennas I (80 min, 4 papers-20 min)	THM2S5: Active Devices, Circuits and Measurement Systems (60 min, 3 papers-20 min)	FM2S8: Active and Passive Antennas II (80 min, 4 papers-20 min)
12:30 - 13:00	Invited Speaker: Prof. Shibin K. Koul “Medical Applications of MHz to Sub-THz Waves”	Invited Speaker: Dr. Matthew A. Morgan “Coupled-Ladder Reflectionless Filters”	Invited Speaker: Dr. George E. Ponchak “How to Write a Paper for IEEE MTT-S Journals and Navigate the Review Process”
13:00 - 14:30	Lunch	Lunch	Lunch
14:30 - 15:10	Keynote Speaker: Prof. Carlos Saavedra “Electromagnetic Deactivation of the Human Coronavirus Through Resonance Phenomena”	Keynote Speaker: Prof. José C. Pedro. “An Overview of Nonlinear Modeling of RF and Microwave Devices”	Industry Panel: “Challenges and Opportunities on Microwave-related Industrial Applications in Latin America” (40 min)
15:10 - 15:40	Coffee Break PS: Poster Session (30 min) Industrial Exhibition	Coffee Break PS: Poster Session (30 min) Industrial Exhibition	MLVC: Multilingual Video Competition (30 min) Industrial Exhibition
15:40 - 17:00	WA1S3: RF and Applications (80 min, 4 papers-20 min)	THA1S6: Passive Components, Circuits, and Devices II (80 min, 4 papers-20 min)	Closing Remarks and WIM+YP Reception
17:00 - 21:00	Welcome Reception	Gala Dinner and Cultural Event	



LAMC 2023: Technical Sessions

WM1S1: Passive Components, Circuits, and Devices I (Wednesday, December 6)

Time	Paper	Authors	Affiliations	Countries
9:20 - 9:40	WM1S1-1: Frequency-Selective Resonator with Tunable Passband Based on Loaded Rings	Eduardo Campos-Olivares, Alexander E. Martynyuk, Jorge Rodriguez-Cuevas, and José Martinez-Lopez	Universidad Nacional Autónoma de México (UNAM)	Mexico
9:40 - 10:00	WM1S1-2: Bias Tee Design for RF Power Amplifiers and GaN FETs Characterization	E. A. Hernández-Domínguez, J. R. Loo-Yau, A. Sánchez-Ramos and A. Villagran Gutierrez	Centro de Investigación y Estudios Avanzados del I.P.N. Unidad Guadalajara (Cinvestav-GDL)	Mexico
10:00 - 10:20	WM1S1-3: New Design of Metamaterial Absorber for Electromagnetic Shielding in Electric Vehicles	Valdeth S. Sousa, Diego N. Lemos, and Leandro T. Manera	State University of Campinas	Brazil
10:20 - 10:40	WM1S1-4: Frequency-Selective Surface that Blocks Different WLAN Bands Based on Polarization	Diego N. Lemos and Marcelo G. Villalva	State University of Campinas	Brazil



WM2S2: Active and Passive Antennas I (Wednesday, December 6)

Time	Paper	Authors	Affiliations	Countries
11:10 - 11:30	WM2S2-1: EMI Mitigation Enabled by a Printed Dipole Antenna with Composite Right/Left-Handed (CRLH) Structure: A Demonstration	Daichi Hirahara	Japan Aerospace Exploration Agency	Japan
11:30 - 11:50	WM2S2-2: Radome Effects on X-band Horn Antenna	Marcos C. L. Siu ¹ , Filipe O. Andrade ¹ , Canisio B. Junior ¹ , and Vanessa P. R. Magri ²	¹ Navy Research Institute ² Fluminense Federal University	Brazil
11:50 - 12:10	WM2S2-3: Multiband UWB RF Sniffer - An Antipodal Vivaldi Metamaterial Antenna Technology for Vehicular EMC Application	Thiago S. Mota, Geyse M. S. Silva, and Leandro T. Manera	State University of Campinas	Brazil
12:10 - 12:30	WM2S2-4: Reduced Length Linear Tapered Slot Antenna	Martínez Silva Martín Javier and María Susana Ruíz Palacios	University of Guadalajara	Mexico



WA1S3: RF System and Applications (Wednesday, December 6)

Time	Paper	Authors	Affiliations	Countries
15:40 - 16:00	WA1S3-1: Time Division Duplexing for Enhanced Simultaneous Wireless Information and Power Transfer via Backscattering	Yasser Qaragoez, Vladimir Volskiy, Sofie Pollin, and Dominique Schreurs	KU Leuven	Belgium
16:00 - 16:20	WA1S3-2: Comparison of LiDAR and RGB Sensor Technologies Applied to Close-Range Remote Sensing	Sergio Arriola-Valverde, Anibal Ruiz-Barquero, and Renato Rimolo-Donadio	Instituto Tecnológico de Costa Rica (ITCR)	Costa Rica
16:20 - 16:40	WA1S3-3: Simulation and Characterization the Blade and Bow-tie Prototypes Antennas for the 21-cm Line Observation	Oscar Restrepo ^{1,2} , Germán Chaparro ³ , Ricardo Bustos ⁴ , Fausto Patricio Mena ⁵ , Jhon Vera ¹ , and Sergio Mora ¹	¹ Universidad ECCI, ² Universidad de Chile, ³ Universidad de Antioquia, ⁴ Universidad Católica de la Santísima Concepción, ⁵ Central Development Laboratory National Radio Astronomy Observatory	Colombia/ Chile
16:40 - 17:00	WA1S3-4: High Performance RFID Temperature Sensor for IoT Applications	Rihab Faouel ¹ , Maha Added ² , and Nouredine Boulejfen ³	¹ Polytechnic School of Tunisia, University of Carthage, ² ESPRIT School of Engineering, ³ Military Research Center, Military Air Base Aouina	Tunisia



PS: Poster Session (Wednesday/ Thursday, December 6-7)

Time	Paper	Authors	Affiliations	Countries
10:40 - 11:10 and 15:10 - 15:40	PS-1: Radiated Emissions of a CNC in a GTEM cell	Isael Uriel Madrigal Sánchez, Roberto Linares y Miranda, Jesus Orlando Hernández Cortés, J. H. Caltenco Franca	Politécnico Nacional, Unidad Profesional Adolfo López Mateos	Mexico
	PS-2: Two-Ray Model Analysis for Overwater Communication at 28 GHz with Different Heights	Jorge A. Celades-Martínez ¹ , Mauricio Rodríguez ¹ , Miguel Gutiérrez Gaitán ^{2,3} and Luis Almelda ^{3,4}	¹ Pontifica Universidad Católica de Valparaíso, ² Universidad Andres Bello, ³ CISTER Research Centre, ⁴ Universidade do Porto	Chile/ Portugal
	PS-3: Microwave Intermediate Frequency (IF) Subsystem for Potential Nanosatellite and Space Wireless Communications	Julietta Cortez-Green, Celso Gutiérrez-Martínez, José Alfredo Torres-Fórtiz and Jacobo Meza-Pérez	Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE)	Mexico
	PS-4: Wideband Passive Resistorless Negative Group Delay Circuit	Nathan B. Gurgel ¹ , Glaucio Fontgalland ¹ , Leonardo O. Sousa ² , Humberto D. de Andrade ² , and Blaise Ravelo ³	¹ Federal University of Campina Grande, ² Federal Rural University of Semiarid ³ Nanjing University of Information Science and Technology	Brazil/ China
	PS-5: A Ka-band Electromagnetic Absorber based on Loaded Ring Slots	Jose E. Hernandez-Garcia and Lourdes Martinez-Lopez	Universidad Nacional Autónoma de México (UNAM)	Mexico



THM1S4: Communications (Thursday, December 7)

Time	Paper	Authors	Affiliations	Countries
9:20 - 9:40	THM1S4-1: Hybrid Sensing and Communications Receiver Front-End for Mobile Communications Applications	Armin Schuster, Torsten Reissland, and Robert Weigel	Institute for Electronics Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg	Germany
9:40 - 10:00	THM1S4-2: SAR estimation in a child due to RF exposures from several laptops in a classroom environment	Norton Escopelli Soares, Giovani Bulla, Claudio E. Fernandez-Rodriguez, and Alvaro A. A. De Salles	Federal University of Rio Grande do Sul	Brazil
10:00 - 10:20	THM1S4-3: Low-cost, high-stability arbitrary clock source using software GNSS drift correction	Christian Dorn ¹ , Thomas Kurin ² , Jasmin Gabsteiger ² , Fabian Lurz ³ , and Amelie Hagalauer ^{1,4}	¹ Technical University of Munich, ² Friedrich-Alexander-Universität Erlangen-Nürnberg, ³ Hamburg University of Technology	Germany
10:20 - 10:40	THM1S4-4: Experimental Coverage Measurement on a Commercial 5G Network in the 28 GHz mm-Wave Band	Javier Enrique Arévalo Peña ¹ , Ariel Eleazar Nuñez Lobos ² , Cesar Azurdla Meza ² , Javier Leonardo Araque Quijano ¹ , and Jorge Ignacio Sandoval Arenas ²	¹ Universidad Nacional de Colombia, ² Universidad de Chile	Colombia/ Chile



THM2S5: Active Devices, Circuits and Measurement Systems (Thursday, December 7)

Time	Paper	Authors	Affiliations	Countries
11:10 - 11:30	THM2S5-1: A Time-Domain Vector Network Analyzer Suitable to Characterize Passive and Active Devices	A. Villagran-Gutierrez ¹ , J. R. Loo-Yau ¹ , E. A. Hernández-Domínguez ¹ , B. E. Figueroa-Reséndiz ¹ , P. Moreno ¹ and J. Apolinar Reynoso Hernández ²	¹ Centro de Investigación y Estudios Avanzados del I.P.N. Unidad Guadalajara (Cinvestav-GDL), ² Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE)	Mexico
11:30 - 11:50	THM2S5-2: Application of Software Defined Radio Technology for Low-Cost Characterization of Frequency-Selective Surfaces	Diego N. de Lemos, Luiz F. P. Oliveira, and Marcelo G. Villalva	University of Campinas	Brazil
11:50 - 12:10	THM2S5-3: A Class-F Power Amplifier Design using a Commercial Nonlinear Embedding Model	Hamza Salem ¹ , Patrick Roblin ¹ , Yuhan Zheng ¹ , Jose I. Martinez-Lopez ² , Dominic Mikrut ¹ , and Emad Embarak ²	¹ The Ohio State University, ² Universidad Nacional Autónoma de México	United States of America/ Mexico
12:10 - 12:30	THM2S5-4: FNNs models for Regression of S-Parameters in Multilayer Interconnects with Different Electrical Lengths	Allan Sánchez-Masís ¹ , Renato Rimolo-Donadio ¹ , Kallol Roy ² , Modar Sulaiman ² , and Christian Schuster ³	¹ Instituto Tecnológico de Costa Rica (ITCR), ² University of Tartu, ³ Hamburg University of Technology (TUHH)	Costa Rica/ Estonia/ Germany



THA1S6: Passive Components, Circuits and Devices II (Thursday, December 7)

Time	Paper	Authors	Affiliations	Countries
15:40 - 16:00	THA1S6-1: Determination of the Relative Permittivity and Loss Tangent of liquid samples using a miniature low-cost microwave sensor	Karen N. Olan-Nuñez, Roberto S. Murphy-Arteaga, and Héctor Noel Morales-Lovera	Instituto Nacional de Astrofísica, Óptica, y Electrónica (INAOE)	Mexico
16:00 - 16:20	THA1S6-2: Compact Filtering Power Divider with Low Insertion Loss for GNSS Signals	Ramón López La Valle	Universidad Nacional de la Plata	Argentina
16:20 - 16:40	THA1S6-3: Design of -45° Constant BP-NGD Microwave Phase Shifter Using LCL T-Cell	H. Du ¹ , F. Wan ¹ , B. Ravelo ¹ , G. Fontgalland ² , Nour Mohammad Murad ³	¹ Nanjing University, ² University of Mount Union, ³ Université de La Réunion, Saint-Pierre	China/ Brazil/ France



FM1S7: CAD Techniques for RF and Microwave Engineering (Friday, December 8)

Time	Paper	Authors	Affiliations	Countries
9:20 - 9:40	FM1S7-1: Neural network learning techniques comparison for a multi physics second-order low-pass filter	Jorge Dávalos-Guzmán ¹ , Jose L. Chavez-Hurtado ² , and Zabdiel Brito-Brito ³	¹ Intel Corporation ² ITESO-The Jesuit University of Guadalajara, ³ Centre Tecnològic de Telecomunicacions de Catalunya	Mexico/ Spain
9:40 - 10:00	FM1S7-2: PCIe Gen6 Physical Layer Equalization Tuning by Using Unsupervised Machine Learning Techniques	Francisco E. Rangel-Patiño ^{1,2} , Andres Viveros-Wacher ¹ , Sofia D. Rodriguez-Saenz ¹ , José E. Rayas-Sánchez ² , Edgar A. Vega-Ochoa ¹ , and Hemanth Shival ¹	¹ Intel Corporation, ² ITESO-The Jesuit University of Guadalajara	Mexico/ United States of America
10:00 - 10:20	FM1S7-3: Space Sampling Techniques Comparison for a Synthetic Low-Pass Filter Bayesian Neural Network	Jorge Dávalos-Guzmán ¹ , Jose L. Chavez-Hurtado ² , Zabdiel Brito-Brito ³ , and Katrin A. Orstein ⁴	¹ Intel Corporation, ² ITESO-The Jesuit University of Guadalajara, ³ Centre Tecnològic de Telecomunicacions de Catalunya, ⁴ Fraunhofer IIS/EAS	Mexico/ United States of America/ Germany/ Spain
10:20 - 10:40	FM1S7-4: PCB Auto Routing Algorithm Based on Morphological Operations	Luis Carlos Álvarez-Mata ^{1,2} and Juan Carlos Rojas-Fernández ³	¹ Intel Corporation, Instituto ² Tecnologico de Costa Rica, and ³ Texas Tech University	Costa Rica



FM2S8: Active and Passive Antennas II (Friday, December 8)

Time	Paper	Authors	Affiliations	Countries
11:10 - 11:30	FM2S8-1: Multilayer Manufactured X-Band Electromagnetic Coupling Structure for Detachable Wireless Antenna Feed	Blake Roberts, Eduardo A. Rojas-Nastrucci	Embry-Riddle Aeronautical University	United States of America
11:30 - 11:50	FM2S8-2: Construction and Design of a 3.5 GHz Multi-Beam Antenna using Butler Network	Jorge Sosa-Pedroza, Fabiola Martínez Zúñiga, Daniel Juárez-Rodríguez, and Alejandro Trejo-León	Escuela Superior de Ingeniería Mecánica y Eléctrica Unidad Zacatenco (ESIME-IPN)	Mexico
11:50 - 12:10	FM2S8-3: Application of a Corner Reflector to Reduce the Dispersion of the OAM Beam of a Compact Antenna	T. A. C. Barros ¹ , G. Fontgalland ¹ , F. L. Teixeira ² , P. H. F. Silva ³ , and P. C. Assis ⁴	¹ Federal University of Campina Grande, ² The Ohio State University, ³ Federal Institute of Paraiba, ⁴ Universidade Estadual da Paraiba	Brazil/ United States of America
12:10 - 12:30	FM2S8-4: Operation of Rigid-Flex 3-D Printed Microwave Antennas for UWB Radar Under Thermal and Vibration Stress Conditions	F. Rodriguez-Morales ¹ , V. Occhiogrosso ¹ , B. Scarbrough ¹ , E. Arnold ¹ , V. Gjokaj ² , J. Albrecht ² , J. Papapolymerou ³ and P. Chabal ²	¹ University of Kansas, ² Michigan State University	United States of America



LAMC 2023: Special Session - Industry Panel

**Industry Panel (Friday, December 8)
2:30 PM - 3:10 PM**

Challenges and Opportunities on Microwave-related Industrial Applications in Latin America

In this panel, prominent industrial researchers, and application engineers with extensive working experience at high-tech companies located in Latin America will participate. They will highlight the most relevant needs and opportunities in high-frequency and high-speed technologies and applications for Latin America from their own industrial perspective. Audience participation will be encouraged.

Moderator:

Dr. José Rodrigo Camacho-Pérez
Tecnológico de Monterrey
Mexico

Invited Panelist:

Dr. Aurea Edna Moreno-Mojica
Synopsys
Mexico

Eng. Luis Damazzio
RDAltanova - Advantest
Costa Rica

Eng. Caique Calegari
NEGER Telecom
Brasil

Dr. Francisco Elias Rangel-Patiño
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