Conference Reports

The First IEEE MTT-S Latin America Microwave Conference

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The Administrative Committee of the IEEE Microwave Theory and Techniques Society (MTT-S) approved, in 2015, an initiative to create the IEEE MTT-S Latin America Microwave Conference (LAMC), to be held every two years in December starting in 2016. LAMC was conceived as an international conference with a broad scope on RF and microwave engineering and technologies, and it is expected to move around to different locations in Latin America (IEEE Region 9). LAMC is technically and financially sponsored by the MTT-S, and it has the following general goals:

- to encourage technological, scientific, and academic development in Latin American countries in the areas of RF and microwaves
- to increase the number of papers from Latin America published in IEEE and MTT-S journals

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Ke Wu 2016 MTT-S President Ecole Polytechnique, University of Montreal, Canada	"Millimeter-Wave Identification, Sensing, and Tracking (MIST) Systems for Future Internet of Things and Smart Environment"	
James C. Rautio President and CEO, Sonnet Software, United States	"Æthereal Waves Make History: The Four Scientists Who Saved James Clerk Maxwell's Theories"	
Minoru Fujishima Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan	"Near-Fiber-Optic-Speed Wireless Communication with Terahertz CMOS Technology"	
Steven C. Reising Colorado State University, Fort Collins, United States	"Improved Remote Sensing of Hurricanes and Tropical Systems Using CubeSat Constellations of Millimeter-Wave to THz Systems for Repeat-Pass Radiometry"	

Figure 1. *LAMC 2016 keynote speakers.*

- to promote participation in global MTT-S events
- to encourage the development of local MTT-S activities
- to increase MTT-S membership in Latin America
- to increase interest in and perceptions of the relevance of the MTT-S with respect to local needs.

The first such conference, LAMC 2016, was held 12–14 December 2016 in Puerto Vallarta, Mexico, at the Sheraton Buganvilias Resort and Convention Center. LAMC 2016 welcomed the participation of technical presentations by authors from the following Latin American countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Nicaragua, and Peru. Additionally, the LAMC 2016 technical program was enriched by papers submitted from countries outside Latin America: Canada, China, France, Germany, India, Italy, Japan, Korea, Pakistan, Spain, the United Kingdom, the Ukraine, and the United States.

LAMC 2016 assembled an excellent set of world-class technical talks, including truly outstanding keynote speakers, highly relevant invited special sessions, and excellent regular and poster sessions, as well as a two-day exhibition bringing together high-tech companies, government agencies, and academic institutions. More specifically, LAMC 2016 included four keynote speakers, six special sessions, eight regular technical sessions, four poster sessions, and a culturally rich social program.

Our first edition of LAMC had 135 officially registered attendees and received 78 submitted papers, all of which were peer reviewed by at least three international experts on each particular topic. From these submitted papers, 47 were accepted for presentation during the conference,

Mike Resso and Heidi Barnes (Keysight Technologies)	Signal Integrity and Power Integrity Challenges for Internet Infrastructure Physical Layer
Jiangqi He and Jayashree Kar (Intel Corporation)	High-Speed and High-Power Technologies for Modern Data Centers
Vicente E. Boria-Esbert (Technical University of Valencia) and Miguel A. Gómez-Laso (Public University of Navarre)	Microwave Research and Technology Activities in Spain
George E. Ponchak (NASA Glenn Research Center) and John W. Bandler (McMaster University and Bandler Corporation)	Preparing and Presenting Papers for MTT-S Journals and Conferences Part 1: How to Write a Paper for IEEE Journals and Navigate the Review Process Part 2: You, Your Slides, and Your Posters: Allies or Foes?
Tushar Sharma (iRadio Lab, University of Calgary) and José E. Rayas-Sánchez (The Jesuit University of Guadalajara)	Enabling Information and Communications Technologies for Humanitarian Aid
Thomas M. Weller and Eduardo A. Rojas-Nastrucci (University of South Florida)	RF Applications of 3-D Additive Manufacturing: Materials, Processes, and Opportunities

Figure 2. *LAMC 2016 special sessions: organizers and session titles.*

Figure 3. *Participants in the SIGHT/HAC special session during LAMC 2016.*

Figure 4. *Representative LAMC 2016 oral sessions.*

either in regular oral sessions or in poster sessions, for a total number of 60 conference papers (including 13 invited papers presented in special sessions).

The keynote speakers at LAMC 2016 included Ke Wu, James C. Rautio, Minoru Fujishima, and Steven C. Reising (see Figure 1). The specific topics covered in the six LAMC 2016 special sessions are shown in Figure 2, along with the corresponding session organizers.

Aligning the IEEE Humanitarian Activities Committee (HAC) with the MTT-S and IEEE Antennas and Propagation Society Special Interest Group in Humanitarian Technology (SIGHT), and with enthusiastic support from MTT-S Young Professionals members, LAMC 2016 offered a special session of particular relevance for the region, "Enabling Information and Communications Technologies for Humanitarian Aid" (see Figure 3) and introduced several humanitarian initiatives involving wireless RF technologies bringing positive impactful changes.

LAMC 2016's regular oral sessions (see Figure 4) were organized into the following technical topic areas: 1) optimization and surrogate modeling, 2) wireless communications and applications, 3) sensors and power-delivery methods, 4) power amplifiers, 5) RF integrated circuits, 6) tunable devices, 7) passive components and antennas, and 8) microwave systems and applications.

In conjunction with LAMC 2016's technical sessions, our two-day exhibition (see Figure 5) included high-tech companies representing the state of the art in the region when it comes to materials, components, and test/measurement equipment as well as design and simulation software. Our exhibition also included Mexican government agencies promoting high-tech industry investment and development as well as local research centers and universities. For a more integrated program, LAMC 2016's poster sessions were implemented in the same exhibition area (see Figure 6).

Balancing our technical activities, LAMC 2016's social program offered unique opportunities for networking and cultural experiences. A welcome reception was offered on the first day, including traditional Mexican food and folkloric dances. Our gala dinner took place on the second day; it was quite unconventional, sited at the secluded cove of Las Caletas, with ancient civilization music performed along with pre-Hispanic Mexican dances, giving conference attendees the opportunity to take a scenic ocean cruise across Bandera's Bay (Figure 7). On the third and final day, a tequila tasting complemented with mariachi music was offered (Figure 8).

The authors of accepted and presented papers during LAMC 2016 were invited

Figure 5. *LAMC 2016 exhibitors included Keysight, Rohde & Schwarz, Intel, ISOC, Inceleris, Wuth Elektronik, ETS-Lindgren, Signal Test, Anritsu, Test Technology, National Instruments, and various educational and governmental institutions.*

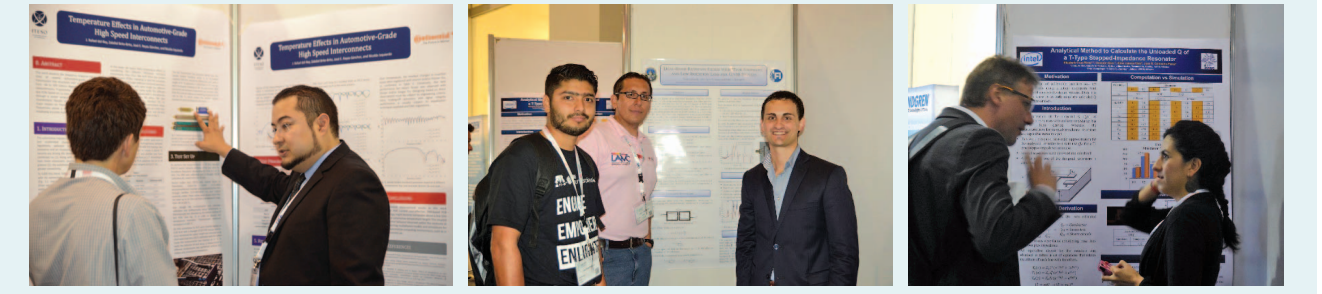

Figure 6. *Views of the LAMC 2016 poster sessions.*

Figure 7. *Various activities during the LAMC 2016 gala dinner.*

Figure 8. *Scenes of the many social events held during LAMC 2016, including the final evening's tequila tasting.*

to submit an expanded version of their work for review, with the aim of publishing it in an LAMC 2016 mini special issue of *IEEE Transactions on Microwave Theory and Techniques*.

On the afternoon prior to the LAMC 2016 inaugural session, a joint MTT-S Chapter Chairs meeting (CCM) and Technical Coordinating Committee (TCC) meeting took place, aimed at addressing Latin American volunteers on topics related to MTT-S operations, Women in Microwaves, Young Professionals in Microwaves, new TCC initiatives, and the MTT-S Distinguished Microwave Lecturers Program. It also addressed proposals for coming editions of LAMC.

Finally, we would like to cordially invite everyone in the MTT-S community to attend the next edition of this emerging conference, LAMC 2018, to be held in Arequipa, Peru, in December 2018.