

TECHNICAL SESSIONS

08:00–09:40 | Tuesday, 6 June 2017 | Hawai'i Convention Center



	Room: 314	Room: 315	Room: 316A	Room: 316B
	TU1E: Multiscale and Multiphysics Modeling for RF, Microwave, Terahertz and Optical Applications Chair: Zhizhang Chen, <i>Dalhousie University</i> Co-Chair: Costas Sarris, <i>University of Toronto</i>	TU1F: Broadband and Millimeter-Wave Power Amplifiers Chair: Charles Campbell, <i>QORVO, Inc.</i> Co-Chair: Zoya Popovic, <i>University of Colorado</i>	TU1G: 3D Printed Waveguides and Packages Chair: Telesphor Kamgaing, <i>Intel Corporation</i> Co-Chair: Thomas Weller, <i>University of South Florida</i>	TU1H: Recent Advances in Radar Systems Technology Chair: Arne Jacob, <i>Technical University of Hamburg</i> Co-Chair: Chris Rodenbeck, <i>Naval Research Laboratory</i>
08:00-08:20	TU1E-1: A Self-Consistent Integral Equation Framework for Simulating Optically-Active Media Connor Glosser, <i>Michigan State University</i> ; Carlo Piermarocchi, <i>Michigan State University</i> ; Balasubramaniam Shanker, <i>Michigan State University</i>	TU1F-1: A 1.5–88 GHz 19.5 dBm Output Power Triple Stacked HBT InP Distributed Amplifier Duy Nguyen, <i>University of California, Davis</i> ; Alexander Stameroff, <i>Keysight Technologies</i> ; Anh-Vu Pham, <i>University of California, Davis</i>	TU1G-1: MMIC Packaging and On-Chip Low-Loss Lateral Interconnection Using Additive Manufacturing and Laser Machining Ramiro Ramirez, <i>University of South Florida</i> ; Di Lan, <i>University of South Florida</i> ; Jing Wang, <i>University of South Florida</i> ; Tom Weller, <i>University of South Florida</i>	TU1H-1: Obstacle-Free Particle Measurement With a Bistatic CW-Radar Alwin Reinhardt, <i>University of Kiel</i> ; Alexander Teplyuk, <i>University of Kiel</i> ; Hendrik Brüns, <i>University of Kiel</i> ; Michael Höft, <i>University of Kiel</i> ; Ludger Klinkenbusch, <i>University of Kiel</i>
08:20-08:40	TU1E-2: An Efficient Algorithm for Simulation of Plasma Beam High-Power Microwave Sources Dong-Yeop Na, <i>Ohio State University</i> ; Fernando Teixeira, <i>Ohio State University/ElectroScience Laboratory</i> ; Yuri Omelchenko, <i>Trinum Research Inc.</i>	TU1F-2: A 4–10 GHz Fully-Integrated Stacked GaAs pHEMT Power Amplifier Haifeng Wu, <i>Chengdu Ganide Technology</i> ; Xuejie Liao, <i>Chengdu Ganide Technology</i> ; Cetian Wang, <i>Chengdu Ganide Technology</i> ; Yijun Chen, <i>Chengdu Ganide Technology</i> ; Yunan Hua, <i>Chengdu Ganide Technology</i> ; Liulin Hu, <i>Chengdu Ganide Technology</i> ; Jiping Lv, <i>Chengdu Ganide Technology</i> ; Wei Tong, <i>Chengdu Ganide Technology</i>	TU1G-2: Rapid Prototyping of Low Loss 3D Printed Waveguides for Millimeter-Wave Applications Junyu Shen, <i>North Carolina State University</i> ; Michael Aiken, <i>North Carolina State University</i> ; Morteza Abbas, <i>North Carolina State University</i> ; Dishit Parekh, <i>North Carolina State University</i> ; Xin Zhao, <i>North Carolina State University</i> ; Michael Dickey, <i>North Carolina State University</i> ; David Ricketts, <i>North Carolina State University</i>	TU1H-2: 77-GHz Active Quasi-Circulator Based Doppler Radar With Phase Evaluation for Object Tracking Matthias Porrantz, <i>Johannes Kepler University of Linz</i> ; Christoph Wagner, <i>Danube Integrated Circuit Engineering</i> ; Herbert Jaeger, <i>Danube Integrated Circuit Engineering</i> ; Andreas Stelzer, <i>Johannes Kepler University of Linz</i>
08:40-09:00	TU1E-3: Supercomputing-Enabled First-Principles Analysis of Wireless Channels in Real-World Environments Yang Shao, <i>University of New Mexico</i> ; Zhen Peng, <i>University of New Mexico</i>	TU1F-3: Efficient 2–16 GHz Flat-Gain Stacked Distributed Power Amplifier in 0.13 μm CMOS Using Uniform Distributed Topology Mohsin Tarar, <i>RWTH Aachen University</i> ; Thomas Buecher, <i>RWTH Aachen University</i> ; Saad Qayyum, <i>RWTH Aachen University</i> ; Renato Negra, <i>RWTH Aachen University</i>	TU1G-3: Selective Laser Melting Aluminum Waveguide Attenuation at K-Band Michael Hollenbeck, <i>Optisys</i> ; Karl Warnick, <i>Brigham Young University</i> ; Clinton Cathey, <i>Optisys</i> ; Janos Opra, <i>Optisys</i> ; Robert Smith, <i>Optisys</i>	TU1H-3: A Ku-Band CMOS FMCW Radar Transceiver With Ring Oscillator Based Waveform Generation for Snowpack Remote Sensing Yanghyo Kim, <i>University of California, Los Angeles</i> ; Adrian Tang, <i>University of California, Los Angeles</i> ; Kuo-Nan Liou, <i>University of California, Los Angeles</i> ; Thomas Painter, <i>Jet Propulsion Laboratory</i> ; M.C. Frank Chang, <i>University of California, Los Angeles</i>
09:00-09:20	TU1E-4: 3D Unconditionally Stable FDTD Modeling of Micromagnetics and Electrodynamics Zhi Yao, <i>University of California, Los Angeles</i> ; Ethan Wang, <i>University of California, Los Angeles</i>	TU1F-4: A K-Band Transformer Based Power Amplifier With 24.4-dBm Output Power and 28% PAE in 90-nm CMOS Technology Jung-Lin Lin, <i>National Taiwan University</i> ; Yu-Hsuan Lin, <i>National Taiwan University</i> ; Yuan-Hung Hsiao, <i>Taiwan Semiconductor Manufacturing Co., Ltd.</i> ; Huei Wang, <i>National Taiwan University</i>	TU1G-4: Integration of RF Functionalities in Microwave Waveguide Components Through 3D Metal Printing Oscar Peverini, <i>National Research Council of Italy</i> ; Mauro Lumia, <i>National Research Council of Italy</i> ; Giuseppe Addamo, <i>National Research Council of Italy</i> ; Flaviana Calignano, <i>Italian Institute of Technology</i> ; Giuseppe Virone, <i>National Research Council of Italy</i> ; Elisa Ambrosio, <i>Italian Institute of Technology</i> ; Diego Manfredi, <i>Italian Institute of Technology</i> ; Riccardo Tascone, <i>National Research Council of Italy</i>	TU1H-4: Simultaneous Localization and Data-Interrogation Using a 24-GHz Modulated-Reflector FMCW Radar System Werner Scheibelhofer, <i>Johannes Kepler University of Linz</i> ; Reinhard Feger, <i>Johannes Kepler University of Linz</i> ; Andreas Haderer, <i>Inras GmbH</i> ; Stefan Scheibelhofer, <i>Johannes Kepler University of Linz</i> ; Andreas Stelzer, <i>Johannes Kepler University of Linz</i>
09:20-09:40	TU1E-5: Two-Dimensional Multiphysics Model of Microwave Sintering Erin Kiley, <i>Massachusetts College of Liberal Arts</i> ; Vadim Yakovlev, <i>Worcester Polytechnic Institute</i>	TU1F-5: First Demonstration of W-Band Tri-Gate GaN-HEMT Power Amplifier MMIC With 30 dBm Output Power Erdin Ture, <i>Fraunhofer Institute for Applied Solid State Physics</i> ; Peter Brückner, <i>Fraunhofer Institute for Applied Solid State Physics</i> ; Mohamed Alsharif, <i>Technische Universität Ilmenau</i> ; Ralf Granzner, <i>Technische Universität Ilmenau</i> ; Frank Schwier, <i>Technische Universität Ilmenau</i> ; Rüdiger Quay, <i>Fraunhofer Institute for Applied Solid State Physics</i> ; Oliver Ambacher, <i>Fraunhofer Institute for Applied Solid State Physics</i>	TU1G-5: Additive Manufactured W-Band Waveguide Components Mike Coffey, <i>University of Colorado</i> ; Shane Verploegh, <i>University of Colorado</i> ; Stefan Edstaller, <i>Technische Universität München</i> ; Erich Grossman, <i>National Institute of Standards and Technology</i> ; Shawn Armstrong, <i>Visser Precision</i> ; Zoya Popovic, <i>University of Colorado</i>	TU1H-5: Demonstration of an Efficient High Speed Communication Link Based on Regenerative Sampling Christian Carlowitz, <i>University of Erlangen-Nuremberg</i> ; Martin Vossiek, <i>University of Erlangen-Nuremberg</i>

Don't miss the conch shell blowers and Tahitian dancers that open the Exhibition at 09:30

TECHNICAL SESSIONS

10:10–11:50 | Tuesday, 6 June 2017 | Hawai'i Convention Center



Room: 314

TU2E: Nonlinear Device, Circuit, and System Modeling & Analysis

Chair: Christopher Silva, *The Aerospace Corporation*
Co-Chair: Anding Zhu, *University College Dublin*

TU2E-1: Analysis of Thermal Coupling Effects in Integrated MIMO Transmitters
Emanuel Baptista; *Chalmers University of Technology*; Koen Buisman; *Chalmers University of Technology*; João Caldinhas Vaz; *Instituto Superior Tecnico*; Christian Fager; *Chalmers University of Technology*

TU2E-2: Nonlinear Technique for the Analysis of the Free-Running Oscillator Phase Noise in the Presence of an Interference Signal

Sergio Sancho; *University de Cantabria*; Almudena Suarez; *University de Cantabria*; Mabel Ponton; *University de Cantabria*

TU2E-3: Stability Analysis of Wireless Coupled-Oscillator Circuits

Mabel Ponton; *University de Cantabria*; Almudena Suarez; *University de Cantabria*

TU2E-4: Linearity and Dynamic Range of Carbon-Nanotube Field-Effect Transistors

Stephen Maas; *Nonlinear Technologies, Inc.*

TU2E-5: RF Harmonic Distortion Modeling in Silicon-Based Substrates Including Non-Equilibrium Carrier Dynamics

Martin Rack; *Université catholique de Louvain*; Jean-Pierre Raskin; *Université catholique de Louvain*

Room: 315

TU2F: Recent Advances in CMOS Integrated Circuits from Baseband to THz

Chair: Cynthia Hang, *Raytheon Company*
Co-Chair: Terry Cisco, *CAED*

TU2F-1: A 475–511 GHz Radiating Source With SIW-Based Harmonic Power Extractor in 40 nm CMOS

Kaizhe Guo; *Katholieke Universiteit Leuven*; Patrick Reynaert; *Katholieke Universiteit Leuven*

TU2F-2: 0.4-THz Wideband Imaging Transmitter in 65-nm CMOS

Zeshan Ahmad; *Texas Instruments, Inc.*; Kenneth O; *University of Texas at Dallas*

TU2F-3: A Fully-Integrated Cartesian Feedback Loop Transmitter in 65 nm CMOS

Jinbo Li; *University of California, Davis*; Ran Shu; *University of California, Davis*; Shilei Hao; *University of California, Davis*; Bo Yu; *University of California, Davis*; Tongning Hu; *University of California, Davis*; Yu Ye; *University of California, Davis*; Jane Gu; *University of California, Davis*

TU2F-4: A 0.029 mm² 8 Gbit/s Current-Mode AGC Amplifier With Reconfigurable Closed-Loop Control in 65 nm CMOS

Bharatha Kumar Thangarasu; *Singapore University of Technology and Design*; Kaixue Ma; *University of Electronic Science and Technology of China*; Kiat Seng Yeo; *Singapore University of Technology and Design*

TU2F-5: Experimental Study on Substrate Coupling in Bulk Silicon and RF-SOI CMOS up to 110 GHz

Vadim Issakov; *Infineon*; Johannes Rimmelspacher; *Infineon Technologies AG*; Andreas Werthof; *Infineon Technologies AG*; Amelie Hagelauer; *Friedrich-Alexander-Universität Erlangen-Nürnberg*; Robert Weigel; *University of Erlangen-Nuremberg*

Room: 316A

TU2G: Developments in High Power MMIC Amplifiers

Chair: Gayle Collins, *Nuvotronics*
Co-Chair: James Komiak, *BAE Systems*

TU2G-1: Single and Dual Input Packaged 5.5–6.5 GHz, 20 W, Quasi-MMIC GaN-HEMT Doherty Power Amplifier

Mohammed Ayad; *United Monolithic Semiconductors*; Marc Camiade; *United Monolithic Semiconductors*; Estelle Byk; *United Monolithic Semiconductors*; Denis Barataud; *Xlim - CNRS-Universite De Liroges*; Guillaume Neveux; *Xlim - CNRS-Universite De Liroges*

TU2G-2: A Compact 60 W MMIC Amplifier Based on a Novel 3-Way 1:2:1 Doherty Architecture With Best-in-Class Efficiency for Small Cells

Xavier Moronval; *Ampleon*; John Gajadharsing; *Ampleon*; Jean-Jacques Bouny; *Ampleon*

TU2G-3: Two-Stage Integrated Doherty Power Amplifier With Extended Instantaneous Bandwidth for 4/5G Wireless Systems

Seungkee Min; *NXP Semiconductors*; Henry Christange; *NXP Semiconductors*; Margaret Szymanowski; *NXP Semiconductors*

TU2G-4: 2 to 18 GHz High-Power and High-Efficiency Amplifiers

Phu Tran; *Northrop Grumman Aerospace Systems*; Michael Smith; *Northrop Grumman Aerospace Systems*; Mike Wojtowicz; *Northrop Grumman Aerospace Systems*; Mansoor Siddiqui; *Northrop Grumman Aerospace Systems*; Leo Callejo; *Northrop Grumman Aerospace Systems*

Room: 316B

TU2H: Multi-GHz Frontend Mixed-Signal Circuits and All-Digital Transmitters

Chair: Hyoung Soo Kim, *California State Polytechnic University Pomona*
Co-Chair: Hermann Boss, *Rohde & Schwarz GmbH & Co KG*

TU2H-1: 57.5 GHz Bandwidth 4.8 Vpp Swing Linear Modulator Driver for 64 GBaud m-PAM Systems

Alireza Zandieh; *University of Toronto*; Sorin Voinescu; *University of Toronto*; Peter Schvan; *Ciena, Corp.*

TU2H-2: A 128-GS/s 63-GHz-Bandwidth InP-HBT-Based Analog-MUX Module for Ultra-Broadband D/A Conversion Subsystem

Munehiko Nagatani; *Nippon Telegraph and Telephone Corp.*; Hitoshi Wakita; *Nippon Telegraph and Telephone Corp.*; Hideyuki Nosaka; *Nippon Telegraph and Telephone Corp.*; Kenji Kurishima; *Nippon Telegraph and Telephone Corp.*; Minoru Ida; *Nippon Telegraph and Telephone Corp.*; Yutaka Miyamoto; *Nippon Telegraph and Telephone Corp.*

TU2H-3: A 27-GHz 45-dB SFDR Track-and-Hold Amplifier Using Modified Darlington Amplifier and Cascoded SEF in 0.18 μm SiGe Process

Yu-An Lin; *National Central University*; Ya-Che Yeh; *National Central University*; Hong-Yeh Chang; *National Central University*

TU2H-4: A 2x2 80 Gbps 2¹⁵-1 PRBS Generator With Three Operational Modes and a Clock Divider

Mohammad Mahdi Khafaji; *Technische Universitaet Dresden*; Guido Belfiore; *Technische Universitaet Dresden*; Ronny Henker; *Technische Universitaet Dresden*; Frank Ellinger; *Technische Universitaet Dresden*

TU2H-5: All-Digital Transmitter Based on Cascaded Delta-Sigma Modulators for Relaxing the Analog Filtering Requirements

Daniel Dinis; *Instituto De Telecomunicacoes*; Arnaldo Oliveira; *Instituto De Telecomunicacoes*; José Vieira; *Instituto De Telecomunicacoes*

TU2H-6: An FPGA-Based All-Digital Transmitter With 9.6-GHz 2nd Order Time-Interleaved Delta-Sigma Modulation for 500-MHz Bandwidth

Masaaki Tanio; *NEC Corporation*; Shinichi Hori; *NEC Corporation*; Noriaki Tawa; *NEC Corporation*; Kazuaki Kunihiro; *NEC Corporation*

TU2H-7: All-Digital Transmitter Based Antenna Array With Reduced Hardware Complexity

Daniel Dinis; *Instituto De Telecomunicacoes*; Arnaldo Oliveira; *Instituto De Telecomunicacoes*; José Vieira; *Instituto De Telecomunicacoes*

Be sure to stop by the IMS Student Design Competition going on now in the Exhibit Hall (see p. 51 for details)

TUESDAY

INTERACTIVE FORUM



10:30–12:00 | Tuesday, 6 June 2017

Hawai'i Convention Center: Overlook Concourse

<p>TUIF1-1: Image Theory Based Miniaturization of Nonradiative Dielectric Coupler for Millimeter Wave Integrated Circuits Ahmed Sakr; <i>École Polytechnique de Montréal</i>; Walid Dyab; <i>École Polytechnique de Montréal</i>; Ke Wu; <i>École Polytechnique de Montréal</i></p>	<p>TUIF1-7: A Systematic Coupling Balance Scheme to Enhance Amplitude and Phase Matches for Long Traveling Multi-Phase Signals Jinbo Li; <i>University of California, Davis</i>; Jane Gu; <i>University of California, Davis</i></p>	<p>TUIF1-13: A Micromachined Packaging With Incorporated RF-Choke for Integration of Active Chips at Submillimeter-Wave Frequencies Armin Jam; <i>University of Michigan</i>; Jack East; <i>University of Michigan</i>; Kamal Sarabandi; <i>University of Michigan</i></p>	<p>TUIF1-19: Towards Low-Cost Sensors for Real-Time Monitoring of Contaminant Ions in Water Sources Amin Gorji; <i>Iowa State University</i>; Amy Kaleita; <i>Iowa State University</i>; Nicola Bowler; <i>Iowa State University</i></p>
<p>TUIF1-2: Plane-Wave Scattering of a Periodic Corrugated Cylinder Samuel Garcia; <i>Florida Atlantic University</i>; Jonathan Bagby; <i>Florida Atlantic University</i>; Ivette Morazzani; <i>Lockheed Martin Corp.</i></p>	<p>TUIF1-8: Half-Mode Hexagonal Substrate Integrated Waveguide (SIW) Structure and its Application Taehee Jang; <i>University of Michigan</i>; Komlan Payne; <i>Syracuse University</i>; L. Jay Guo; <i>University of Michigan</i>; Jun (Brandon) Choi; <i>Syracuse University</i></p>	<p>TUIF1-14: A Non-Galvanic D-Band MMIC-to-Waveguide Transition Using eWLB Packaging Technology Ahmed Hassona; <i>Chalmers University of Technology</i>; Zhongxia Simon He; <i>Chalmers University of Technology</i>; Chiara Mariotti; <i>Infineon Technologies AG</i>; Franz Dielacher; <i>Infineon Technologies Austria AG</i>; Vessen Vassilev; <i>Chalmers University of Technology</i>; Yinggang Li; <i>Ericsson AB</i>; Joachim Oberhammer; <i>KTH Royal Institute of Technology</i>; Herbert Zirath; <i>Chalmers University of Technology</i></p>	<p>TUIF1-20: Biological Cell Discrimination Based on Their High Frequency Dielectrophoretic Signatures at UHF Frequencies Fatima Hjeij; <i>Xlim - CNRS- Université De Limoges</i>; Claire Dalmay; <i>Xlim - CNRS- Université De Limoges</i>; Cristiano Palego; <i>Bangor University</i>; Mehmet Kaynak; <i>IHP Microelectronics</i>; Arnaud Pothier; <i>Xlim - CNRS- Université De Limoges</i></p>
<p>TUIF1-3: Electromagnetic Fields and Modes in 2-Layer Spherical Cavities Ingo Wolff; <i>IMST GmbH</i></p>	<p>TUIF1-9: Physical Evidence of Mode Conversion Along Mode-Selective Transmission Line Desong Wang; <i>École Polytechnique de Montréal</i>; Faezeh Fesharaki; <i>University of Victoria</i>; Ke Wu; <i>École Polytechnique de Montréal</i></p>	<p>TUIF1-15: Capacitive Microwave Resonator Printed on a Paper Substrate for CNT Based Gas Sensor Ayman Abdelghani; <i>Xlim - CNRS- Université De Limoges</i>; Dominique Baillargeat; <i>Xlim - CNRS- Université De Limoges</i>; Stéphane Bila; <i>Xlim - CNRS- Université De Limoges</i></p>	<p>TUIF1-21: Frequency-Division-Multiplexed Signal and Power Transfer for Wearable Devices Networked Via Conductive Embroideries on a Cloth Akihito Noda; <i>University of Tokyo</i>; Hiroyuki Shinoda; <i>University of Tokyo</i></p>
<p>TUIF1-4: A Negative Group Delay Tuner With Stable Insertion Loss Lin-Sheng Wu; <i>Shanghai Jiao Tong University</i>; Liang-Feng Qiu; <i>Shanghai Jiao Tong University</i>; Jun-Fa Mao; <i>Shanghai Jiao Tong University</i></p>	<p>TUIF1-10: Development of a Novel 10 GHz-Band Hose-Type Soft Resin Waveguide Shotaro Ishino; <i>Furuno Electric Co., Ltd.</i>; Koji Yano; <i>Furuno Electric Co., Ltd.</i>; Satoshi Matsumoto; <i>Furuno Electric Co., Ltd.</i>; Takuo Kashiwa; <i>Furuno Electric Co., Ltd.</i>; Naoki Shinohara; <i>Kyoto University</i></p>	<p>TUIF1-16: RF Characterization of Coplanar Waveguide (CPW) Transmission Lines on Single-Crystalline Diamond Platform for Integrated High Power RF Electronic Systems Yuxiao He; <i>Michigan State University</i>; Michael Becker; <i>Michigan State University</i>; Tim Grotjohn; <i>Michigan State University</i>; Aaron Hardy; <i>Michigan State University</i>; Matthias Muehle; <i>Michigan State University</i>; Thomas Schuelke; <i>Michigan State University</i>; John Papapolymerou; <i>Michigan State University</i></p>	<p>TUIF1-22: Wireless System for Continuous Monitoring of Core Body Temperature William Haines; <i>University of Colorado</i>; Parisa Momenroodaki; <i>University of Colorado</i>; Eric Berry; <i>University of Colorado</i>; Michael Fromand; <i>University of Colorado</i>; Zoya Popovic; <i>University of Colorado</i></p>
<p>TUIF1-5: Estimation of Conductive Losses in Complementary Split Ring Resonator (CSRR) Loading an Embedded Microstrip Line and Applications Lijuan Su; <i>University Autònoma de Barcelona</i>; Javier Mata-Contreras; <i>Universitat Autònoma de Barcelona</i>; Paris Véléz; <i>Universitat Autònoma de Barcelona</i>; Ferran Martin; <i>Universitat Autònoma de Barcelona</i></p>	<p>TUIF1-11: 3D Heterogeneous Integration Technology Using Hot via MMIC and Silicon Interposer With Millimeter Wave Application Jun Zhou; <i>Nanjing Electronic Device Research Institute</i>; Jiapeng Yang; <i>Nanjing Electronic Device Research Institute</i>; Ya Shen; <i>Nanjing Electronic Device Research Institute</i></p>	<p>TUIF1-17: All-Printed Conformal Electronically Scanned Phased Array Mahdi Haghzadeh; <i>University of Massachusetts, Lowell</i>; Craig Armiento; <i>University of Massachusetts, Lowell</i>; Alkim Akyurtlu; <i>University of Massachusetts, Lowell</i></p>	<p>TUIF1-23: 3D Printed Wearable Flexible SIW and Microfluidics Sensors for Internet of Things and Smart Health Applications Wenjing Su; <i>Georgia Institute of Technology</i>; Zihan Wu; <i>Georgia Institute of Technology</i>; Yunnan Fang; <i>Georgia Institute of Technology</i>; Ryan Bahr; <i>Georgia Institute of Technology</i>; Pulugurtha Markondeya Raj; <i>Georgia Institute of Technology</i>; Rao Tummala; <i>Georgia Institute of Technology</i>; Manos Tentzeris; <i>Georgia Institute of Technology</i></p>
<p>TUIF1-6: A Novel High Q Inductor Based on Double-sided Substrate Integrated Suspended Line Technology With Patterned Substrate Lianyue Li; <i>University of Electronic Science and Technology of China</i>; Kaixue Ma; <i>University of Electronic Science and Technology of China</i>; Shouxian Mou; <i>University of Electronic Science and Technology of China</i></p>	<p>TUIF1-12: Development of a 1.85 mm Coaxial Blind Mating Interconnect for ATE Applications Bill Rosas; <i>Signal Microwave</i>; Jose Moreira; <i>Advantest</i>; Daniel Lam; <i>Advantest America, Inc.</i></p>	<p>TUIF1-18: A Lego-Like Reconfigurable Cavity Using 3-D Polyjet Technology Yuxiao He; <i>Michigan State University</i>; Premjeet Chahal; <i>Michigan State University</i>; John Papapolymerou; <i>Michigan State University</i></p>	

Have you visited the MicroApps Theater (Exhibit Hall, Booth 1946) yet? (see p. 111 for today's schedule)



JOINT IMS/RFIC PANEL SESSION (GAME SHOW): WHO WANTS TO BE A MILLIMETERWAVIONAIRE?



11:45–12:45 | Tuesday, 6 June 2017
Hawai'i Convention Center: 316C

Organizers and Moderators: Earl McCune, *Eridan Communications*; Sherry Hess, *National Instruments*; Bodhisatwa Sadhu, *IBM T.J. Watson Research Center*; Oren Eliezer, *PHAZR*

Abstract:

In this game, two teams of contestants, including preselected and randomly selected contestants from the audience, will compete in answering questions on RF and microwave theory and history, including IMS/RFIC conference trivia. Prizes will be awarded to the contestants, as well as to others in the audience who may be called upon for answers. Bring your lunch and be prepared for a great deal of entertainment and a little bit of learning too!



WOMEN IN MICROWAVES TECHNICAL TRACK: WOMEN IN DEFENSE



13:30–15:10 | Tuesday, 6 June 2017
Hawai'i Convention Center: 316C

Organizer: Carolynn Kitamura, *Raytheon Space and Airborne Systems*

Session Chair: Kavita Goverdhanam, *US Army CERDEC*

Session Co-Chair: Carolynn Kitamura, *Raytheon Space and Airborne Systems*

Abstract:

To highlight the technical contributions of women in microwave engineering, a special session entitled "Women in Defense" showcases the work of several top women engineers in the United States defense industry and academia. The application of microwave technology in defense is often concealed behind closed doors, but we hope to shed some light on the research being done by these exceptional women engineers.

Speakers:



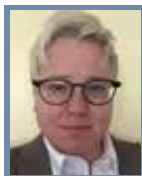
Dr. Kavita Goverdhanam
US Army CERDEC



Ms. Betsy DeLong
Office of Naval Research



Dr. Stacy Beun
Naval Research Laboratory



Dr. Molly Crane
Massachusetts Institute of Technology, Lincoln Laboratory



Dr. Zoya Popovic
University of Colorado Boulder

TECHNICAL SESSIONS

13:30–15:10 | Tuesday, 6 June 2017 | Hawai'i Convention Center



	Room: 312	Room: 313A	Room: 313B	Room: 313C
	TU3A: State of the Art in Cryogenic Low Noise Amplifiers Chair: Marian Pospieszalski, <i>National Radio Astronomy Observatory</i> Co-Chair: Luciano Boglione, <i>Naval Research Laboratory</i>	TU3B: Innovative Waveguide Components Chair: Christian Damm, <i>Technische Universität Darmstadt</i> Co-Chair: Chung-Tse Michael Wu, <i>Wayne State University</i>	TU3C: Wearable Systems and Enabling Technologies for Internet of Things (IoT) Chair: Vijay Nair, <i>Intel Corporation</i> Co-Chair: Kavita Goverdhanam, <i>US Army CERDEC</i>	TU3D: Emerging Space Systems and Associated Technology Chair: Mohamed Abouzahra, <i>Massachusetts Institute of Technology, Lincoln Laboratory</i> Co-Chair: Rudy Emrick, <i>Orbital ATK</i>
13:30-13:40	TU3A-1: A Wideband Cryogenic SiGe LNA MMIC With an Average Noise Temperature of 2.8 K From 0.2–3 GHz Su-Wei Chang; <i>University of Massachusetts, Amherst</i> ; Joseph Bardin; <i>University of Massachusetts, Amherst</i>	TU3B-1: Design of a Continuously Tunable W-Band Phase Shifter in Dielectric Waveguide Topology Roland Reese; <i>Technische Universität Darmstadt</i> ; Matthias Jost; <i>Technische Universität Darmstadt</i> ; Holger Maune; <i>Technische Universität Darmstadt</i> ; Rolf Jakob; <i>Technische Universität Darmstadt</i>	TU3C-1: In-Sensor Analytics and Energy-Aware Self-Optimization in a Wireless Sensor Node Ningyuan Cao; <i>Georgia Institute of Technology</i> ; Saad Bin Nasir; <i>Georgia Institute of Technology</i> ; Shreyas Sen; <i>Purdue University</i> ; Arijit Raychowdhury; <i>Georgia Institute of Technology</i>	TU3D-1: Evolution and Maturation of Small Space Microwave Technologies for U.S. Army Applications Mason Nixon; <i>US Army SMDC/ARSTRAT</i> ; Mark Ray; <i>Army SMDC</i> ; John London III; <i>U.S. Army</i>
13:40-13:50	TU3A-2: A Sub-Milliwatt 4–8 GHz SiGe Cryogenic Low Noise Amplifier Shirin Montazeri; <i>University of Massachusetts, Amherst</i> ; Joseph Bardin; <i>University of Massachusetts, Amherst</i>			
13:50-14:10	TU3A-3: Cryogenic LNAs for SKA Band 2 to 5 Joel Schlee; <i>Low Noise Factory</i> ; Giuseppe Moschetti; <i>Low Noise Factory</i> ; Niklas Wadefalk; <i>Low Noise Factory</i> ; Eunjung Cha; <i>Chalmers University of Technology</i> ; Arsalan Pourkabirian; <i>Chalmers University of Technology</i> ; Göran Alestig; <i>Chalmers University of Technology</i> ; John Halonen; <i>Chalmers University of Technology</i> ; Bengt Nilsson; <i>Chalmers University of Technology</i> ; Per-Åke Nilsson; <i>Chalmers University of Technology</i> ; Jan Grahn; <i>Chalmers University of Technology</i>	TU3B-2: Interference Based W-Band Single-Pole Double-Throw With Tunable Liquid Crystal Based Waveguide Phase Shifters Matthias Jost; <i>Technische Universität Darmstadt</i> ; Roland Reese; <i>Technische Universität Darmstadt</i> ; Sönke Schmidt; <i>Technische Universität Darmstadt</i> ; Matthias Nickel; <i>Technische Universität Darmstadt</i> ; Holger Maune; <i>Technische Universität Darmstadt</i> ; Rolf Jakob; <i>Technische Universität Darmstadt</i>	TU3C-2: A Varactor-Tuned Frequency-Reconfigurable Fabric Antenna Embedded in Polymer: Assessment of Suitability for Wearable Applications Roy B. V. B. Simorangkir; <i>Macquarie University</i> ; Yang Yang; <i>University of Technology Sydney</i> ; Karu Esselle; <i>Macquarie University</i> ; Yinliang Diao; <i>South China Agricultural University</i>	TU3D-2: Technology Development for Small Satellite Microwave Atmospheric Remote Sensing William Blackwell; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i>
14:10-14:30	TU3A-4: Two-Finger InP HEMT Design for Stable Cryogenic Operation of Ultra-Low-Noise Ka-Band LNAs Eunjung Cha; <i>Chalmers University of Technology</i> ; Giuseppe Moschetti; <i>Low Noise Factory</i> ; Niklas Wadefalk; <i>Low Noise Factory</i> ; Per-Åke Nilsson; <i>Chalmers University of Technology</i> ; Stella Bevilacqua; <i>SP Technical Research Institute of Sweden/Rise</i> ; Arsalan Pourkabirian; <i>Low Noise Factory</i> ; Piotr Starski; <i>Chalmers University of Technology</i> ; Jan Grahn; <i>Chalmers University of Technology</i>	TU3B-3: In-Plane Hollow Waveguide Crossover Based on Dielectric Insets for Millimeter-Wave Applications Matthias Jost; <i>Technische Universität Darmstadt</i> ; Roland Reese; <i>Technische Universität Darmstadt</i> ; Holger Maune; <i>Technische Universität Darmstadt</i> ; Rolf Jakob; <i>Technische Universität Darmstadt</i>	TU3C-3: Wearable Sensors Based on a High Sensitive Complementary Split-Ring Resonator for Accurate Cardiorespiratory Sign Measurements Ta-Chung Chang; <i>National Cheng Kung University</i> ; Chia-Ming Hsu; <i>National Cheng Kung University</i> ; Kuan-Wei Chen; <i>National Cheng Kung University</i> ; Chin-Lung Yang; <i>National Cheng Kung University</i>	TU3D-3: Design for Security: Guidelines for Efficient, Secure Small Satellite Computation Kyle Ingols; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i>
14:30-14:50	TU3A-5: Cryogenic MMIC Low-Noise Amplifiers for V-Band Mikko Varonen; <i>VTT Technical Research Centre of Finland</i> ; Lorene Samoska; <i>Jet Propulsion Laboratory</i> ; Pekka Kangaslahti; <i>Jet Propulsion Laboratory</i> ; Andy Fung; <i>NASA's Jet Propulsion Lab</i> ; Rohit Gawande; <i>NASA's Jet Propulsion Lab</i> ; Mary Soria; <i>NASA's Jet Propulsion Lab</i> ; Alejandro Peralta; <i>NASA's Jet Propulsion Lab</i> ; Robert Lin; <i>NASA's Jet Propulsion Lab</i> ; Richard Lai; <i>Northrop Grumman Corporation</i> ; Xiaobing Mei; <i>Northrop Grumman Corporation</i> ; Stephen Sarkozy; <i>Northrop Grumman Corporation</i>	TU3B-4: A Low Loss and Self-Packaged Patch Coupler Based on SISL Platform Yongqiang Wang; <i>University of Electronic Science and Technology of China</i> ; Kaixue Ma; <i>University of Electronic Science and Technology of China</i> ; Shouxian Mou; <i>University of Electronic Science and Technology of China</i>	TU3C-4: Characterization of Stretchable Serpentine Microwave Devices for Wearable Electronics Tammy Chang; <i>Stanford University</i> ; Casey Wojcik; <i>Stanford University</i> ; Yewang Su; <i>Chinese Academy of Sciences & University of Chinese Academy of Sciences</i> ; John Rogers; <i>University of Illinois at Urbana-Champaign</i> ; Thomas Lee; <i>Stanford University</i> ; Jonathan Fan; <i>Stanford University</i>	TU3D-4: Enabling Microsatellite Maneuverability: A Survey of Microsatellite Propulsion Technologies Robert Legge; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i> ; Emily Clements; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i> ; Adam Shabshelowitz; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i> ; Laura Bayley; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i>
14:50-15:10	TU3A-6: Cryogenic W-Band LNA for ALMA Band 2+3 With Average Noise Temperature of 24 K Yulung Tang; <i>Low Noise Factory AB</i> ; Niklas Wadefalk; <i>Low Noise Factory AB</i> ; Jacob Kooi; <i>California Institute of Technology</i> ; Joel Schlee; <i>Low Noise Factory AB</i> ; Giuseppe Moschetti; <i>Low Noise Factory AB</i> ; Jan Grahn; <i>Chalmers University of Technology</i> ; Per-Åke Nilsson; <i>Chalmers University of Technology</i> ; Arsalan Pourkabirian; <i>Chalmers University of Technology</i> ; Eunjung Cha; <i>Chalmers University of Technology</i> ; Silvia Tuzi; <i>Chalmers University of Technology</i>	TU3B-5: High Performance Air-Filled Substrate Integrated Waveguide Filter Post-Process Tuning Using Capacitive Post Tifenn Martin; <i>University of Bordeaux</i> ; Anthony Ghiotto; <i>University of Bordeaux</i> ; Tan Phu Vuong; <i>Université Grenoble Alpes</i> ; Frédéric Lotz; <i>Cobham Microwave</i> ; Pierre Monteil; <i>Cobham Microwave</i>	TU3C-5: Analysis of Quadratic Dickson Based Envelope Detectors for IoE Sensor Node Applications Pouyan Bassirian; <i>University of Virginia</i> ; Jesse Moody; <i>University of Virginia</i> ; Steven Bowers; <i>University of Virginia</i>	TU3D-5: A 666 GHz Demonstration Crosslink with 9.5 Gbps Data Rate William Deal; <i>Northrop Grumman Corporation</i> ; Tyler Foster; <i>Northrop Grumman Corporation</i> ; Mark Wong; <i>Northrop Grumman Corporation</i> ; Matthew Dion; <i>Northrop Grumman Corporation</i> ; Kevin Leong; <i>Northrop Grumman Corporation</i> ; Xiaobing Mei; <i>Northrop Grumman Corporation</i> ; Alexis Zamora; <i>Northrop Grumman Corporation</i> ; Kevin Kanemori; <i>Northrop Grumman Corporation</i> ; Louis Christen; <i>Northrop Grumman Corporation</i> ; Jack Tucek; <i>Northrop Grumman Corporation</i> ; Mark Basten; <i>Northrop Grumman Corporation</i> ; Kenneth Kreischer; <i>Northrop Grumman Corporation</i>

TECHNICAL SESSIONS

13:30–15:10 | Tuesday, 6 June 2017 | Hawai'i Convention Center



Room: 314	Room: 315	Room: 316A	Room: 316B	Room: 316C	
TU3E: Advanced GaN Transistor Modeling With Self-Heating and Trapping Effects Chair: Paul Tasker, <i>Cardiff University</i> Co-Chair: Shahed Reza, <i>Sandia National Laboratories</i>	TU3F: 3-D Tunable and Reconfigurable Filters Chair: Eric Naglich, <i>Naval Research Laboratory</i> Co-Chair: Xun Gong, <i>University of Central Florida</i>	TU3G: Functional Materials for RF and Microwave Control Applications Chair: Tony Ivanov, <i>Army Research Lab</i> Co-Chair: Amir Mortazawi, <i>University of Michigan</i>	TU3H: Integrated Circuits for Wireless Power Transfer Chair: Alessandra Costanzo, <i>University di Bologna</i> Co-Chair: Jenshan Lin, <i>University of Florida</i>	TU3I: Women in Defense Chair: Kavita Goverdhanam, <i>U.S. Army</i> Co-Chair:Carolynn Kitamura, <i>Raytheon Company</i>	
TU3E-1: Implementation of Self-Heating and Trapping Effects in Surface Potential Model of AlGaIn/GaN HEMTs Qingzhi Wu; <i>University of Electronic Science and Technology of China</i> ; Yuehang Xu; <i>University of Electronic Science and Technology of China</i> ; Zhigang Wang; <i>University of Electronic Science and Technology of China</i> ; Lei Xia; <i>University of Electronic Science and Technology of China</i> ; Jiang Hu; <i>University of Electronic Science and Technology of China</i> ; Bin Kang; <i>University of Electronic Science and Technology of China</i> ; Bo Yan; <i>University of Electronic Science and Technology of China</i> ; Ruimin Xu; <i>University of Electronic Science and Technology of China</i>	TU3F-1: K-Band Tunable Cavity Filter Using Dual TE₂₁₁ Mode Changsoo Kwak; <i>Electronics and Telecommunications Research Institute</i> ; Manseok Uhm; <i>ETRI</i> ; Inbok Yom; <i>ETRI</i>	TU3G-1: Fabrication and Characterization of V02-Based Series and Parallel RF Switches Junwen Jiang; <i>University of Waterloo</i> ; Grigory Chugunov; <i>University of Waterloo</i> ; Raafat Mansour; <i>University of Waterloo</i>	TU3H-1: A Wireless Power Receiver With an On-Chip Antenna for Millimeter-Size Biomedical Implants in 180 nm SOI CMOS Hamed Rahmani; <i>Rice University</i> ; Aydin Babakhani; <i>Rice University</i>	TU3I-1: RF Interference Mitigation Techniques to Enable Radio Communications Richard Yeager; <i>US Army CERDEC</i> ; Kavita Goverdhanam; <i>US Army CERDEC</i>	13:30-13:50
TU3E-2: A Drain Lag Model for GaN HEMT Based on Chalmers Model and Pulsed S-Parameter Measurements Peng Luo; <i>Ferdinand-Braun-Institut Leibniz-Institut für Höch</i> ; Olof Bengtsson; <i>Ferdinand-Braun-Institut</i> ; Matthias Rudolph; <i>Brandenburgische Technische Universität Cottbus</i>	TU3F-2: A Four-State Iris Wavguide Bandpass Filter With Switchable Irises Liang Gong; <i>University of New South Wales</i> ; King Yuk Chan; <i>University of New South Wales</i> ; Rodica Ramer; <i>University of New South Wales</i>	TU3G-2: Thick-Film MIM BST Varactors for GaN Power Amplifiers With Discrete Dynamic Load Modulation Sebastian Preis; <i>Ferdinand-Braun-Institut</i> ; Daniel Kienemund; <i>Technische Universität Darmstadt</i> ; Nikolai Wolff; <i>Ferdinand-Braun-Institut</i> ; Holger Maune; <i>Technische Universität Darmstadt</i> ; Rolf Jakob; <i>Technische Universität Darmstadt</i> ; Wolfgang Heinrich; <i>Ferdinand-Braun-Institut</i> ; Olof Bengtsson; <i>Ferdinand-Braun-Institut</i>	TU3H-2: A High-Efficiency Power Management IC With Power-Aware Multi-Path Rectifier for Wide-Range RF Energy Harvesting Shu-Hsuan Lin; <i>National Chiao Tung University</i> ; Chen-Yi Kuo; <i>National Chiao Tung University</i> ; Shao-Yung Lu; <i>National Chiao Tung University</i> ; Yu-Te Liao; <i>National Chiao Tung University</i>	TU3I-2: An Integrated Approach to Topside Design Betsy DeLong; <i>Office of Naval Research Laboratory</i>	13:50-14:10
TU3E-3: Extraction of a Trapping Model Over an Extended Bias Range for GaN and GaAs HEMTs Jabra Tarazi; <i>Macquarie University</i> ; James Rathmell; <i>The University of Sydney</i> ; Anthony Parker; <i>Macquarie University</i> ; Simon Mahon; <i>Macom</i>	TU3F-3: A 1.9–2.6 GHz Filter With Both Bandpass-to-Bandstop and Bandpass-and-Bandstop Cascading Function Tao Yang; <i>University of California at San Diego</i> ; Gabriel Rebeiz; <i>University of California at San Diego</i>	TU3G-3: Recent Advances in Fabrication and Characterization of GeTe-Based Phase-Change RF Switches and MMICs Pavel Borodulin; <i>Northrop Grumman Mission Systems</i> ; Nabil El-Hinnawy; <i>Northrop Grumman Mission Systems</i> ; Carlos Padilla; <i>Northrop Grumman Mission Systems</i> ; Matthew King; <i>Northrop Grumman Mission Systems</i> ; Daniel Johnson; <i>Northrop Grumman Mission Systems</i> ; Robert Young; <i>Northrop Grumman Mission Systems</i>	TU3H-3: W-Band Energy Harvesting Rectenna Array in 65-nm CMOS Edoh Shaulov; <i>Tel Aviv University</i> ; Samuel Jameson; <i>Tel Aviv University</i> ; Eran Socher; <i>Tel Aviv University</i>	TU3I-3: Cognitive Radar: Waveform Design for Target Detection Stacy Beun; <i>Naval Research Laboratory</i>	14:10-14:20
TU3E-4: A Temperature Dependent Empirical Model for AlGaIn/GaN HEMTs Including Charge Trapping and Self-Heating Effects An-Dong Huang; <i>National University of Singapore</i> ; Zheng Zhong; <i>National University of Singapore</i> ; Yong-Xin Guo; <i>National University of Singapore</i> ; Wen Wu; <i>Nanjing University of Science and Technology</i>	TU3F-4: Constant-Absolute-Bandwidth Frequency-Tunable Half-Mode SIW Filter Containing No Tunable Coupling Structures Seunggoo Nam; <i>Korea University</i> ; Boyoung Lee; <i>Korea University</i> ; Juseop Lee; <i>Korea University</i>	TU3G-4: A Half Mode Inkjet Printed Tunable Ferrite Isolator Farhan Abdul Ghaffar; <i>King Abdullah University of Science and Technology</i> ; Mohammad Vaseem; <i>King Abdullah University of Science and Technology</i> ; Joey Bray; <i>King Abdullah University of Science and Technology</i> ; Atif Shamim; <i>King Abdullah University of Science and Technology</i>	TU3H-4: Simultaneous Wireless Power Transfer and Communication to Chip-Scale Devices Brandon Arakawa; <i>University of Illinois at Urbana-Champaign</i> ; Liuqing Gao; <i>University of Illinois at Urbana-Champaign</i> ; Yansong Yang; <i>University of Illinois at Urbana-Champaign</i> ; Junfeng Guan; <i>University of Illinois at Urbana-Champaign</i> ; Anming Gao; <i>University of Illinois at Urbana-Champaign</i> ; Ruochen Lu; <i>University of Illinois at Urbana-Champaign</i> ; Songbin Gong; <i>University of Illinois at Urbana-Champaign</i>		14:20-14:30
TU3E-5: A New Compact Model for Al-GaN/GaN HEMTs Including Self-Heating Effects Zhang Wen; <i>University of Electronic Science and Technology of China</i> ; Yuehang Xu; <i>University of Electronic Science and Technology of China</i> ; Qingzhi Wu; <i>University of Electronic Science and Technology of China</i> ; Yong Zhang; <i>University of Electronic Science and Technology of China</i> ; Ruimin Xu; <i>University of Electronic Science and Technology of China</i> ; Bo Yan; <i>University of Electronic Science and Technology of China</i>	TU3F-5: L-Band High-Q Tunable Quasi-Absorptive Bandstop-to-All-Pass Filter Wei Yang; <i>Purdue University</i> ; Mark Hickie; <i>Purdue University</i> ; Dimitra Psychogiou; <i>University of Colorado at Boulder</i> ; Dimitrios Peroulis; <i>Purdue University</i>	TU3G-5: Investigation of ON-State Power Handing Dependence on Number of Cycles for Germanium Telluride RF Switches Sami Hawasli; <i>Army Research Lab</i> ; Leonard De La Cruz; <i>Sensors and Electron Devices Directorate, US Army</i> ; Nabil El-Hinnawy; <i>Northrop Grumman Corporation</i> ; Pavel Borodulin; <i>Northrop Grumman Corporation</i> ; Mathew King; <i>Northrop Grumman Corporation</i> ; Robert Young; <i>Northrop Grumman Corporation</i> ; Mona Zaghoul; <i>Department of Electrical and Computer Engineering</i> ; Tony Ivanov; <i>US Army Research Laboratory</i>	TU3H-5: Open Loop Dynamic Transmitter Voltage Scaling for Fast Response and Wide Load Range Power Efficient WPT System Toru Kawajiri; <i>Keio University</i> ; Hiroki Ishikuro; <i>Keio University</i>	TU3I-4: A Polarization Technique for Mitigating Low-Grazing-Angle Radar Sea Clutter Molly Crane; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i> ; David Mooradd; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i> ; Mabel Ramirez; <i>Massachusetts Institute of Technology, Lincoln Laboratory</i>	14:30-14:40
	TU3F-6: A Widely-Tunable Substrate-Integrated Balun Filter Mark Hickie; <i>Purdue University</i> ; Dimitrios Peroulis; <i>Purdue University</i>	TU3G-6: High Qm×Kt2 Intrinsically Switchable BST Thin Film Bulk Acoustic Resonators Milad Zolfgharloo Koobi; <i>University of Michigan</i> ; Seungku Lee; <i>University of Michigan</i> ; Amir Mortazawi; <i>University of Michigan</i>	TU3H-6: GaN HEMT Class-E Rectifier for DC+AC Power Recovery M. Nieves Ruiz Lavin; <i>University of Cantabria</i> ; David Vegas; <i>University of Cantabria</i> ; Jose-Ramon Perez-Cisneros; <i>University of Zaragoza</i> ; Jose A. Garcia; <i>University of Cantabria</i>		14:40-14:50
				TU3I-5: High-Performance Transceiver Components for Defense Communications and Sensing Zoya Popovic; <i>University of Colorado</i>	14:50-15:00
					15:00-15:10

TUESDAY

INTERACTIVE FORUM



13:30–15:00 | Tuesday, 6 June 2017

Hawai'i Convention Center: Overlook Concourse

<p>TUIF2-1: Implicit Space Mapping With Variable-Fidelity EM Simulations and Substrate Partitioning for Reliable Microwave Design Optimization Slawomir Koziel; <i>Reykjavik University</i>; Adrian Bekasiewicz; <i>Reykjavik University</i>; John Bandler; <i>McMaster University</i></p>	<p>TUIF2-7: Fabrication of Waveguide Butler Matrix for Short Millimeter-Wave Using X-Ray Lithography Mitsuyoshi Kishihara; <i>Okayama Prefectural University</i>; Akinobu Yamaguchi; <i>University of Hyogo</i>; Yuichi Utsumi; <i>University of Hyogo</i>; Isao Ohta; <i>University of Hyogo</i></p>	<p>TUIF2-13: Demonstration of a Hybrid Self-Tracking Receiver With DoA-Estimation for Retro-Directive Antenna Systems Andreas Winterstein; <i>German Aerospace Center</i>; Achim Dreher; <i>German Aerospace Center</i></p>	<p>TUIF2-19: Differentially-Fed Charge Pumping Rectifier Design With an Enhanced Efficiency for Ambient RF Energy Harvesting Hao Zhang; <i>Nanjing University of Science and Technology</i>; Zheng Zhong; <i>National University of Singapore</i>; Yongxin Guo; <i>National University of Singapore</i>; Wen Wu; <i>Nanjing University of Science and Technology</i></p>
<p>TUIF2-2: Automatic Parametric Model Development Technique for RFIC Inductors With Large Modeling Space Humayun Kabir; <i>NXP Semiconductors</i>; Lei Zhang; <i>NXP Semiconductors</i>; Kevin Kim; <i>NXP Semiconductors</i></p>	<p>TUIF2-8: Design, Fabrication and Characterization of Compact 4-Bit RF MEMS Capacitor Bank in Standard CMOS 0.35µm Process Ahmed Abdel Aziz; <i>University of Waterloo</i>; Raafat Mansour; <i>University of Waterloo</i></p>	<p>TUIF2-14: A 950 MHz RF 20 MHz Bandwidth Direct RF Sampling Bit Streamer Receiver Based on an FPGA Noriaki Tawa; <i>NEC Corporation</i>; Tomoya Kaneko; <i>NEC Corporation</i></p>	
<p>TUIF2-3: Efficient Extreme Learning Machine With Transfer Functions for Filter Design Li-Ye Xiao; <i>University of Electronic Science and Technology of China</i>; Wei Shao; <i>University of Electronic Science and Technology of China</i>; Tu-Lu Liang; <i>University of Electronic Science and Technology of China</i>; Bing-Zhong Wang; <i>University of Electronic Science and Technology of China</i></p>	<p>TUIF2-9: Impact of Metallization on Performance of Plasmonic Photoconductive Terahertz Emitters Deniz Turan; <i>University of California, Los Angeles</i>; Sofia Carolina Corzo-Garcia; <i>Centro de Investigaciones en Óptica</i>; Enrique Castro-Camus; <i>Centro de Investigaciones en Óptica</i>; Mona Jarrahi; <i>University of California, Los Angeles</i></p>	<p>TUIF2-15: Inkjet-Printed Antenna-Electronics Interconnections in Passive UHF RFID Tags Han He; <i>Tampere University of Technology</i>; Jun Tajima; <i>Osaka University</i>; Lauri Sydänheimo; <i>Tampere University of Technology</i>; Hiroshi Nishikawa; <i>Osaka University</i>; Leena Ukkonen; <i>Tampere University of Technology</i>; Johanna Virkki; <i>Tampere University of Technology</i></p>	
<p>TUIF2-4: Extreme Learning Machine for the Behavioral Modeling of RF Power Amplifiers Chengyu Zhang; <i>Tianjin University</i>; Yuan-Yuan Zhu; <i>Tianjin University</i>; Qian-Fu Cheng; <i>Tianjin University</i>; Hai-Peng Fu; <i>Tianjin University</i>; Jian-Guo Ma; <i>Guangdong University of Technology</i>; Qi-Jun Zhang; <i>Carleton University</i></p>	<p>TUIF2-10: Lens-Integrated Asymmetric-Dual-Grating-Gate High-Electron-Mobility-Transistor for Plasmonic Terahertz Detection Tomotaka Hosotani; <i>Tohoku University</i>; Fuzuki Kasuya; <i>Tohoku University</i>; Hiroki Taniguchi; <i>Tohoku University</i>; Takayuki Watanabe; <i>Tohoku University</i>; Tetsuya Suemitsu; <i>Tohoku University</i>; Taiichi Otsuji; <i>Tohoku University</i>; Tadao Ishibashi; <i>NTT Electronics Techno</i>; Makoto Shimizu; <i>NTT Electronics</i>; Akira Satou; <i>Tohoku University</i></p>	<p>TUIF2-16: A Humidity Sensor Based on V-Band Slotted Waveguide Antenna Array David Hotte; <i>Université Grenoble Alpes</i>; Romain Siragusa; <i>Université Grenoble Alpes</i>; Yvan Duroc; <i>Grenoble Institute of Technology</i>; Smail Tedjini; <i>Université Grenoble Alpes</i></p>	
<p>TUIF2-5: An Analytical Approach for Electrical and Thermal Simulation of Branch-Line Coupler Sheng Ni; <i>Shanghai Jiao Tong University</i>; Min Tang; <i>Shanghai Jiao Tong University</i>; Lin-Sheng Wu; <i>Shanghai Jiao Tong University</i>; Junfa Mao; <i>Shanghai Jiao Tong University</i></p>	<p>TUIF2-11: PAM-4 Receiver With Integrated Linear TIA and 2-Bit ADC in 0.13 µm SiGe:C BiCMOS for High-Speed Optical Communications Iria Garcia Lopez; <i>IHP Microelectronics</i>; Pedro Rito; <i>IHP Microelectronics</i>; Cagri Ulusoy; <i>Michigan State University</i>; Ahmed Awmy; <i>IHP Microelectronics</i>; Dietmar Kissinger; <i>IHP Microelectronics</i></p>	<p>TUIF2-17: Micrometric Displacement Sensor Based on Chipless RFID Etienne Perret; <i>Grenoble Institute of Technology</i></p>	
<p>TUIF2-6: Pneumatically Tuned Microfluidic Meta-Atom SRR Robiatun Awang; <i>Rmit University</i>; Wayne Rowe; <i>Rmit University</i></p>	<p>TUIF2-12: A 680 MHz to 4 GHz 4RX-1TX SoC for Cognitive Radio Applications Tajinder Manku; <i>Cognitive Systems Corp</i>; Oleksiy Kravets; <i>Cognitive Systems Corp</i>; Anith Selvakumar; <i>Cognitive System Corp</i>; Chris Beg; <i>Cognitive System Corp</i>; Karanvir Chattha; <i>Cognitive System Corp</i>; Don Dattani; <i>Cognitive System Corp</i>; Stephen Devison; <i>Cognitive System Corp</i>; Tim Magnusen; <i>Cognitive System Corp</i>; Nebu Mathai; <i>Cognitive System Corp</i>; John McGinn; <i>Cognitive System Corp</i>; Zohaib Moti; <i>Cognitive System Corp</i>; Marco Nogueira; <i>Cognitive System Corp</i>; Trevor Pace; <i>Cognitive System Corp</i>; Mike Ravkine; <i>Cognitive System Corp</i>; Rahul Singh; <i>Cognitive System Corp</i>; Chris Snyder; <i>Cognitive System Corp</i>; William Suriaputra; <i>Cognitive System Corp</i>; Volodymyr Yavorsky; <i>Cognitive System Corp</i></p>	<p>TUIF2-18: HEMT Based RF to DC Converter Efficiency Enhancement Using Special Designed Waveforms Ricardo Correia; <i>Instituto De Telecomunicacoes</i>; Nuno Carvalho; <i>Instituto De Telecomunicacoes</i></p>	

Visit the SCR-270 radar in the Historical Exhibit on the Overlook Concourse.

INTERACTIVE FORUM



15:40–17:10 | Tuesday, 6 June 2017

Hawai'i Convention Center: Overlook Concourse

<p>TUIF3-1: On-Wafer Time-Domain Measurement of Pulse-to-Pulse Stability for Microwave Power GaN HEMT Seifeddine Fakhfakh; <i>Xlim - CNRS- Universite De Liroges</i>; Lotfi Ayari; <i>Xlim - CNRS- Universite De Liroges</i>; Audrey Martin; <i>Xlim - CNRS- Universite De Liroges</i>; Michel Campovecchio; <i>Xlim - CNRS- Universite De Liroges</i>; Denis Barataud; <i>University of Limoges - XLIM Laboratory</i>; Guillaume Neveux; <i>Xlim - CNRS- Universite De Liroges</i></p>	<p>TUIF3-7: W-Band SiGe Attenuators Based on Compact Low-VSWR Topologies Roe Ben Yishay; <i>ON Semiconductor</i>; Danny Elad; <i>ON Semiconductor</i></p>	<p>TUIF3-13: A Power-Detecting, Null-Scanning, Retrodirective Array for a CubeSat Platform Reece Iwami; <i>University of Hawaii</i>; Tyler Chun; <i>University of Hawaii</i>; Wade Tonaki; <i>University of Hawaii</i>; Wayne Shiroma; <i>University of Hawaii</i></p>	<p>TUIF3-19: Wide Band, High Power, Same-Channel Full Duplex Transceiver System Demonstration Luciano Boglione; <i>Naval Research Laboratory</i>; Clayton Davis; <i>Naval Research Laboratory</i>; Joel Goodman; <i>Naval Research Laboratory</i>; Matthew McKeon; <i>Naval Research Laboratory</i>; David Parrett; <i>Naval Research Laboratory</i>; Sanghoon Shin; <i>Naval Research Laboratory</i>; Naomi Walker; <i>Naval Research Laboratory</i></p>
<p>TUIF3-2: A 3–10 GHz Contact-Less Complex Dielectric Spectroscopy System Reza Ebrahimi Ghiri; <i>Texas A&M University</i>; Ali Pourghorban Saghati; <i>Texas A&M University</i>; Kamran Entesari; <i>Texas A&M University</i></p>	<p>TUIF3-8: A Low Minimum Detectable Power, High Dynamic Range, V-Band CMOS Millimeter-Wave Logarithmic Power Detector Chien-Chang Chou; <i>National Cheng Kung University</i>; Wen-Chian Lai; <i>National Cheng Kung University</i>; Tzuen-Hsi Huang; <i>National Cheng Kung University</i>; Huey-Ru Chuang; <i>National Cheng Kung University</i></p>	<p>TUIF3-14: Direction of Arrival Estimation Performance for Compact Antenna Arrays With Adjustable Size Stefano Caizzone; <i>German Aerospace Center</i>; Wahid Elmarissi; <i>German Aerospace Center</i>; Marco A. M. Marinho; <i>University of Brasilia</i>; Felix Antreich; <i>Federal University of Ceara</i></p>	
<p>TUIF3-3: A New Nonlinear Behavioral Modeling Technique for RF Power Transistors Based on Bayesian Inference Jialin Cai; <i>Hangzhou Dianzi University</i>; Justin King; <i>University College Dublin</i>; Jose Pedro; <i>Instituto De Telecomunicacoes</i></p>	<p>TUIF3-9: Integrated Waveguide Power Combiners With Artificial Dielectrics for mm-Wave Systems Zhebin Hu; <i>Delft University of Technology</i>; Maria Alonso-delPino; <i>Jet Propulsion Laboratory</i>; Daniele Cavallo; <i>Delft University of Technology</i>; Harshitha Thippur Shivamurthy; <i>Delft University of Technology</i>; Marco Spirito; <i>Delft University of Technology</i></p>	<p>TUIF3-15: 2x2 MIMO In-Band Full-Duplex Radio Front-End for Self-Interference Cancellation in 90-MHz Bandwidth Donghyun Lee; <i>Yonsei University</i>; Byung-Wook Min; <i>Yonsei University</i></p>	
<p>TUIF3-4: A 2.6 GHz RF Power Amplifier With 25.6 dBm Linear Power and -47 dBc ACLR for Small-Cell Applications Wei-Tsung Li; <i>Industrial Technology Research Institute</i>; Chih-Chun Shen; <i>Industrial Technology Research Institute</i>; Shih-Ming Wang; <i>Industrial Technology Research Institute</i></p>	<p>TUIF3-10: Micromachined Terahertz Waveguide Band-pass Filters Jiang Hu; <i>University of Science and Technology of China</i>; Shuang Liu; <i>University of Science and Technology of China</i>; Yong Zhang; <i>University of Science and Technology of China</i>; Ruimin Xu; <i>University of Science and Technology of China</i></p>	<p>TUIF3-16: Low-Latency MISO FBMC-OQAM: It Works for Millimeter Waves! Ronald Nissel; <i>TU Wien</i>; Erich Zochmann; <i>TU Wien</i>; Martin Lerch; <i>TU Wien</i>; Sebastian Caban; <i>TU Wien</i>; Markus Rupp; <i>TU Wien</i></p>	
<p>TUIF3-5: Wideband Low-Cost Hybrid Coupler for mm-Wave Frequencies Martin Hitzler; <i>Ulm University</i>; Johannes Iberle; <i>Ulm University</i>; Winfried Mayer; <i>Endress+Hauser GmbH+Co. KG</i>; Helmut Barth; <i>Retiree</i>; Christian Waldschmidt; <i>Ulm University</i></p>	<p>TUIF3-11: Kilowatt Peak-Power Wideband Active Phased-Array Transmitter Young-Pyo Hong; <i>Korea Research Institute of Standards and Science</i>; Tong Ook Kong; <i>RFcore Co., Ltd</i>; Woosang Lee; <i>Agency for Defense Development</i>; Jin Soo Choi; <i>Agency for Defense Development</i>; No-Weon Kang; <i>Korea Research Institute of Standards and Science</i></p>	<p>TUIF3-17: Towards Circulator-Free Multi Antenna Transmitters for 5G André Prata; <i>Instituto De Telecomunicacoes</i>; Sérgio Pires; <i>Ampleon</i>; Mustafa Acar; <i>Ampleon</i>; Arnaldo Oliveira; <i>Instituto De Telecomunicacoes</i>; Nuno Carvalho; <i>Instituto De Telecomunicacoes</i></p>	
<p>TUIF3-6: 0.01 GHz to 110 GHz Distributed Common-Gate Power Detector in Standard CMOS 65 nm Technology Muh-Dey Wei; <i>RWTH Aachen University</i>; Renato Negra; <i>RWTH Aachen University</i></p>	<p>TUIF3-12: OAM Antenna Arrays at E-Band Lei Fang; <i>University of Texas at Dallas</i>; Haoan Yao; <i>University of Texas at Dallas</i>; Rashaunda Henderson; <i>University of Texas at Dallas</i></p>	<p>TUIF3-18: Orthogonal Time Frequency Space (OTFS) Modulation for Millimeter-Wave Communications Systems Ronny Hadani; <i>Cohere Technologies</i>; Shlomo Rakib; <i>Cohere Technologies</i>; Andreas Molisch; <i>University of Southern California</i>; Christian Ibars; <i>Cohere Technologies</i>; Anton Monk; <i>Cohere Technologies</i>; Michail Tsatsanis; <i>Cohere Technologies</i>; Jim Delfeld; <i>Cohere Technologies</i>; Andrea Goldsmith; <i>Stanford University</i>; Robert Calderbank; <i>Duke University</i></p>	



TECHNICAL SESSIONS

15:40–17:00 | Tuesday, 6 June 2017 | Hawai'i Convention Center



	Room: 312	Room: 313A	Room: 313B	Room: 313C
	TU4A: Non-Foster Circuits – Principles, Design Issues, and Applications Chair: Jay Banwait, <i>Harris Electronic Systems</i> Co-Chair: Steve Stearns, <i>Northrop Grumman Corporation</i>	TU4B: New Filter Design Methodologies Chair: Magdalena Salazar Palma, <i>University of Madrid</i> Co-Chair: Jiasheng Hong, <i>Heriot-Watt University</i>	TU4C: Innovative Techniques for Microwave Control Functions Chair: Zaher Bardai, <i>Retired: Owner, IMN Epiphany</i> Co-Chair: Jiang Zhu, <i>Google, Inc.</i>	TU4D: Advances in Microwave Systems for Deep Space Missions Chair: Christopher DeBoy, <i>Johns Hopkins University</i> Co-Chair: Dipak Srinivasan, <i>Johns Hopkins University</i>
15:40-16:00	TU4A-1: Circuit-Level Stability and Bifurcation Analysis of Non-Foster Circuits Almudena Suarez; <i>University of Cantabria</i> ; Franco Ramirez; <i>University of Cantabria</i>	TU4B-1: Direct Matrix Synthesis for In-Line Filters With Transmission Zeros Generated by Frequency-Variant Couplings Yuxing He; <i>University of Science and Technology of China</i> ; Gang Wang; <i>University of Science and Technology of China</i> ; Ligu Sun; <i>University of Science and Technology of China</i> ; Lu Wang; <i>University of Science and Technology of China</i> ; Rong Zhang; <i>University of Science and Technology of China</i> ; Gerard Rushingabigwi; <i>University of Science and Technology of China</i>	TU4C-1: Dual Polarized Active Frequency Selective Surface for High Power Applications at X-Band Ryan Gough; <i>North Star Scientific Corporation</i> ; Austin Bowman; <i>North Star Scientific Corporation</i> ; James Stamm; <i>North Star Scientific Corporation</i>	TU4D-1: Benchmarking the Future of RF in Space Missions: From Low Earth Orbit to Deep Space Pantelis-Daniel Arapoglou; <i>ESA</i> ; Massimo Bertinelli; <i>ESA</i> ; Paolo Concar; <i>ESA</i> ; Marco Lanucara; <i>ESA</i> ; Alberto Ginesi; <i>ESA</i>
16:00-16:20	TU4A-2: Design, Validation and Trade-Offs of Non-Foster Circuits Minu Jacob; <i>Keysight Technologies</i> ; Daniel Sievenpiper; <i>University of California at San Diego</i>	TU4B-2: Synthesis and Design of Dual-Wideband Filter With Composite Series and Shunt Resonators Zhiliang Li; <i>Chinese University of Hong Kong</i> ; Ke-Li Wu; <i>Chinese University of Hong Kong</i>	TU4C-2: A Tunable 0.86–1.03 GHz FDD Wireless Communication System With an Evanescent-Mode Diplexer and a Self-Interference-Cancelling Receiver Mohammad Abu Khater; <i>Purdue University</i> ; Jin Zhou; <i>Columbia University</i> ; Yu-Chen Wu; <i>Purdue University</i> ; Harish Krishnaswamy; <i>Columbia University</i> ; Dimitrios Peroulis; <i>Purdue University</i>	TU4D-2: Recent RF/Microwave Achievements in Flight on Deep-Space Missions Christopher DeBoy; <i>Johns Hopkins University</i>
16:20-16:40	TU4A-3: Performance Improvement of an Electrically-Small Loop Antenna Matched With Non-Foster Negative Inductance Nikolay Ivanov; <i>St. Petersburg Electrotechnical University 'LETI'</i> ; Viacheslav Turgaliev; <i>St. Petersburg Electrotechnical University 'LETI'</i> ; Dmitry Kholodnyak; <i>St. Petersburg Electrotechnical University 'LETI'</i>	TU4B-3: A Sequentially Coupled Filter Design Approach Using the Reflected Group Delay Method and the Implicit Space Mapping Technique Xiaolin Fan; <i>University of Regina</i> ; Song Li; <i>University of Regina</i> ; Paul Laforge; <i>University of Regina</i> ; Qingsha Cheng; <i>South University of Science and Technology of China</i>	TU4C-3: Waveguide Multimode Directional Coupler for Harvesting Harmonic Power From the Output of Traveling-Wave Tube Amplifiers Raine Simons; <i>NASA</i> ; Edwin Wintucky; <i>NASA</i>	TU4D-3: Telecommunications Systems for the NASA Europa Missions Dipak Srinivasan; <i>Johns Hopkins University</i> ; Colin Sheldon; <i>Johns Hopkins University</i> ; Matthew Bray; <i>Johns Hopkins University</i>
16:40-17:00	TU4A-4: Non-Foster Circuit for Wideband Matching of High Frequency Helical Antenna Qi Tang; <i>University of Arizona</i> ; Hao Xin; <i>University of Arizona</i>	TU4B-4: Dual-Passband Filters and Extended-Stopband Wide-Band Bandpass Filters Based on Generalized Stub-Loaded Planar Circuits Roberto Gomez-Garcia; <i>University of Alcalá</i> ; Raul Loeches-Sanchez; <i>University of Alcalá</i> ; Dimitra Psychogiou; <i>University of Colorado</i> ; Jose-Maria Munoz-Ferreras; <i>University of Alcalá</i> ; Dimitrios Peroulis; <i>Purdue University</i>	TU4C-4: Differential Magnetless Circulator Using Modulated Bandstop Filters Ahmed Kord; <i>University of Texas at Austin</i> ; Dimitrios Sounas; <i>University of Texas at Austin</i> ; Andrea Alu; <i>University of Texas at Austin</i>	TU4D-4: Advances in Deep Space Radios Michael O'Neill; <i>Johns Hopkins University</i> ; Christopher Haskins; <i>Johns Hopkins University Applied Physics Lab</i> ; Brian Bubnash; <i>Johns Hopkins University Applied Physics Lab</i>

TECHNICAL SESSIONS

15:40–17:00 | Tuesday, 6 June 2017 | Hawai'i Convention Center



Room: 314	Room: 315	Room: 316A	Room: 316B	
<p>TU4E: Novel Radiating and Waveguiding Structures and Phenomena Chair: David Jackson, <i>University of Houston</i> Co-Chair: Tapan Sarkar, <i>Syracuse University</i></p>	<p>TU4F: Power Dividers Chair: Guoan Wang, <i>University of South Carolina</i> Co-Chair: Bayaner Arigong, <i>Infinion Technologies Americas</i></p>	<p>TU4G: Advances in Photonic Signal Generation and Wireless Communication Chair: Jeffrey Nanzer, <i>Michigan State University</i> Co-Chair: Mona Jarrahi, <i>University of California, Los Angeles</i></p>	<p>TU4H: Control of High Power Microwave Processes Chair: Steven Stitzer, <i>Northrop Grumman Mission Systems</i> Co-Chair: Cheng Wen, <i>Peking University</i></p>	
<p>TU4E-1: Artificial Gradient-Index Lens Based on Single Unit Cell Layer Fishnet Metamaterial for Phase Correction of a Horn Antenna Matthias Maasch; <i>Technische Universität Darmstadt</i>; Bruno Evaristo; <i>Technische Universität Darmstadt</i>; Mario Mueh; <i>Technische Universität Darmstadt</i>; Christian Damm; <i>Technische Universität Darmstadt</i></p>	<p>TU4F-1: Ultra-Wideband (UWB) Wilkinson Power Divider With Ultra-Narrow Dual-Notched Bands Using Embedded CPW Resonators Jie Zhou; <i>University of Electronic Science and Technology of China</i>; Huizhen Qian; <i>University of Electronic Science and Technology of China</i>; Darong Huang; <i>University of Electronic Science and Technology of China</i>; Xun Luo; <i>University of Electronic Science and Technology of China</i></p>	<p>TU4G-1: Silicon Photonics Enabled Hyper-Wideband Wireless Communication Link Michael Eggleston; <i>Nokia Bell Labs</i>; Chia-Ming Chang; <i>Nokia Bell Labs</i>; Noriaki Kaneda; <i>Nokia Bell Labs</i>; Kwangwoong Kim; <i>Nokia Bell Labs</i>; Jeffrey Sinsky; <i>Nokia Bell Labs</i>; Guilhem de Valicourt; <i>Nokia Bell Labs</i>; Po Dong; <i>Nokia Bell Labs</i>; Nicolas Chimot; <i>III-V Labs, Bell Labs France</i>; Francois Lelarge; <i>III-V Lab, Bell Labs France</i>; Tatsuo Itoh; <i>University of California, Los Angeles EE Dept</i>; Ming Wu; <i>University of California, Berkeley EECS Dept</i>; Young-Kai Chen; <i>Nokia Bell Labs</i></p>	<p>TU4H-1: 2.4 GHz-Band High Power and High Efficiency Solid-State Injection-Locked Oscillator Using Imbalanced Coupling Resonator in Feedback Circuit Hikaru Ikeda; <i>Panasonic Corporation</i>; Yasushi Itoh; <i>Shonan Institute of Technology</i></p>	15:40-16:00
<p>TU4E-2: An Exposé of Zenneck Waves and Surface Plasmon Polaritons Mohammad Abdallah; <i>Syracuse University</i>; Dojana Salama; <i>Syracuse University</i>; Tapan Sarkar; <i>Syracuse University</i>; Magdalena Salazar-Palma; <i>Universidad Carlos III de Madrid</i></p>	<p>TU4F-2: A 6-Way Ring Combiner/Divider Kyle Holzer; <i>University of Utah</i>; Jeffrey Walling; <i>University of Utah</i></p>	<p>TU4G-2: Significant Efficiency Enhancement in Photoconductive Terahertz Emitters through Three-Dimensional Light Confinement Nezih Yardimci; <i>University of California, Los Angeles</i>; Semih Cakmakyapan; <i>University of California, Los Angeles</i>; Soroosh Hemmati; <i>Stanford University</i>; Mona Jarrahi; <i>University of California, Los Angeles</i></p>	<p>TU4H-2: Experimental Studies on a Low Power Injection-Locked Continuous Wave Magnetron Zhenlong Liu; <i>Sichuan University</i>; Xiaojie Chen; <i>Sichuan University</i>; Menglin Yang; <i>Sichuan University</i>; Changjun Liu; <i>Sichuan University</i></p>	16:00-16:20
<p>TU4E-3: Discrete Dipole Approximation for Simulation of Unusually Tapered Leaky Wave Antennas Laura Pulido Mancera; <i>Duke University</i>; Mohammadreza Imani; <i>Duke University</i>; David Smith; <i>Duke University</i></p>	<p>TU4F-3: A Novel Wilkinson Power Divider Based on Slotted Microstrip Cross-Junction Abdelhamid Nasr; <i>Ain Shams University</i>; Amr Safwat; <i>Ain Shams University</i></p>	<p>TU4G-3: A DC–90 GHz 4-Vpp Differential Linear Driver in a 0.13 μm SiGe:C BiCMOS Technology for Optical Modulators Pedro Rito; <i>IHP Microelectronics</i>; Iria Garcia Lopez; <i>IHP Microelectronics</i>; Ahmed Awany; <i>IHP Microelectronics</i>; Ahmet Cagri Ulusoy; <i>Michigan State University</i>; Dietmar Kissinger; <i>IHP Microelectronics</i></p>	<p>TU4H-3: Design of an Airline Coax Radial Power Combiner With Enhanced Isolation Spencer Erekson; <i>Harris Corporation</i>; W. Joel Johnson; <i>Harris Corporation</i>; Dimitrios Peroulis; <i>Purdue University</i></p>	16:20-16:40
<p>TU4E-4: Propagation Characteristics of Leaky Waves on a 2D Periodic Leaky-Wave Antenna Sohini Sengupta; <i>University of Houston</i>; David Jackson; <i>University of Houston</i>; Stuart Long; <i>University of Houston</i></p>	<p>TU4F-4: Ultra-Wideband Multi-Section Power Divider on Suspended Stripline In Bok Kim; <i>LIG Nex1 Co. Ltd</i>; Ki Hyuk Kwon; <i>LIG Nex1 Co. Ltd</i>; Seung Bok Kwon; <i>LIG Nex1 Co. Ltd</i>; Wahab Mohyuddin; <i>Kyungpook National University</i>; Hyun Chul Choi; <i>Kyungpook National University</i>; Kang Wook Kim; <i>Kyungpook National University</i></p>	<p>TU4G-4: Ring Resonator Based Integrated Optical Beam Forming Network With True Time Delay for mmW Communications Yuan Liu; <i>University of California, Santa Barbara</i>; Adam Wichman; <i>Brown University</i>; Brandon Isaac; <i>University of California, Santa Barbara</i>; Jean Kalkavage; <i>The Johns Hopkins University Applied Physics Laboratory</i>; Eric Adles; <i>The Johns Hopkins University Applied Physics Laboratory</i>; Thomas Clark; <i>The Johns Hopkins University Applied Physics Laboratory</i>; Jonathan Klamkin; <i>University of California, Santa Barbara</i></p>	<p>TU4H-4: Permittivity-Based Control of Thermal Runaway in a Triple-Layer Laminate Joseph Gaone; <i>Worcester Polytechnic Institute</i>; Burt Tilley; <i>Worcester Polytechnic Institute</i>; Vadim Yakovlev; <i>Worcester Polytechnic Institute</i></p>	16:40-17:00

TUESDAY



YOUNG PROFESSIONALS PANEL SESSION AND NETWORKING EVENT: CATCHING THE RIGHT WAVE FOR YOUR CAREER



IEEE
youngprofessionals



17:00–19:00 | Tuesday, 6 June 2017

Hawai'i Convention Center, Ala Halawai Concourse

Organizers: Katie Allen, *The Aerospace Corporation*; Alex Zamora, *Northrop Grumman Aerospace Systems*

Abstract:

Traditionally, IMS has a panel session focused on Young Professional engineers, in which leading industry experts come to inspire the next generation of microwave engineers. In the days of IMS past, a laid-back networking event would follow at a different venue in which Young Professionals would get the opportunity to network and further exchange ideas. For IMS2017, we are merging both the panel session and networking event...inspiration in one hand, and a beer in the other. Young Professionals will be able to participate in a dynamic forum to interact with heavy hitters from the aerospace industry, academia, science, and private enterprise. There are many different paths a young microwave engineer can choose in his or her career, and IMS2017's Young Professionals panel session aims to shed light on the success that can be mined on each of the different avenues our field has to offer. It aims to help Young Professionals learn from anecdotal success stories, to "Catch the Right Wave for Their Careers".

Moderator: Katie Allen, *The Aerospace Corporation*

Panelists:

Young Professionals Event
Catch the Right Wave for Your Career

MTT-S | IEEE youngprofessionals

Katie Allen The Aerospace Corporation	Adrian Tang Jet Propulsion Laboratory	Mona Jarrahi UCLA	Bill Deal Northrop Grumman	Rashaunda Henderson University of Texas at Dallas	Tom Crowe Virginia Diodes Inc.
---	---	---------------------------------	--	---	--

**"The best surfer out there is the one having the most fun."
-- Duke Kahanamoku**



5G EXECUTIVE FORUM AND RECEPTION: AN INSIDER'S VIEW OF 5G



17:00–19:00 | Tuesday, 6 June 2017
Hawai'i Convention Center: 311



Organizers: Debabani Choudhury, *Intel Labs*; Doug Zuckerman, *Vencore Labs*; Ashutosh Dutta, *AT&T*; Tim LaRocca, *Northrop Grumman Aerospace Systems*; Joy Laskar, *Maja Systems*

Abstract:

The 5G Executive Forum is a two-hour fireside chat with executive leaders in the 5G field that will be open to all conference attendees. Executives will provide their vision of the 5G market while fielding questions from both a moderator and audience. The panelists will cover all areas within the 5G market.

More importantly, a reception including complimentary beer, wine, and appetizers will be included! This will be a great time to network and meet the executives!

Reception sponsored by  **anokiwave**
mmW Solutions. Enabling a new world

All attendees are invited to get an insider's view of 5G and ask their 5G-related questions

TUESDAY

Moderators: Sanjay Raman, *Virginia Tech*;
Tim LaRocca, *Northrop Grumman Aerospace Systems*

Executive Panel:



Dr. Vida Ilderem
*Vice President, Intel Labs;
Director, Wireless
Communications Research*



Dr. Bami Bastani
*Senior Vice President for the
RF Business Unit at
GLOBALFOUNDRIES*



Dr. Khurram P. Sheikh
CEO of Kwikbit



Mr. Michael Stewart
*CEO and Co-Founder of
Escape Communications,
Inc.*



Dr. Mark Pierpoint
*Vice President and General
Manager, Internet Infra-
structure Solutions Group,
Keysight Technologies, Inc.*