

THURSDAY - APRIL 28, 2022

TRACK 1

TRACK 2

TRACK 3

7:00 AM	Breakfast (Room: Exhibitors Foyer)		
8:00 AM	T1A: Special Session: Novel Techniques in Beam-Steering/Multi-Beam Antenna Design & Manufacturing (Chairs: Thomas Weller and Gokhan Mumcu) (Room: Bellaire)	T2A: Localization and Detection for Internet of Everything (Chairs: Steven Lardizabal and Jing Wang) (Room: Reddington)	T3A: Advanced Filters and Passive Components (Chairs: Hjalti Sigmarsson and Michael Grady) (Room: Siesta Key)
8:00 AM	SIW based Packaging Technique for Gain Improvement and Coupling Reduction in mmWave Antenna-in-Package (AIP) solutions, Aditya Manoj Dave and Rhonda Franklin (University of Minnesota, USA)	Unanticipated Hardware Trojan Detection Technique Based on Antenna Reflection Coefficient Features Outside of its Operation Frequency, Noemí Miguélez-Gómez and Eduardo Rojas (Embry-Riddle Aeronautical University, USA)	Design of a Symmetric Lumped-Element Bandpass Filtering Attenuator (Filtenuator), Jonathan M Knowles, Hjalti Sigmarsson, and Jay W McDaniel (University of Oklahoma, USA)
8:20 AM	(INVITED PAPER) Graded Index Superstrate Layer for Large Scan Angle Phased Arrays, Patrick Bluem and Roberto Rojas (MIT Lincoln Laboratory, USA)	The Rasmussen Cognition Model for Cognitive Radar, James A Crowder (Cobham Advance Electronic Solutions (CAES) Advanced Technology and Engineering (AT&E), USA)	Miniaturization of Multi-Functional Filters Using Spiral Resonators Coupled to Their Scaled Negative Images, Zahra Manzoor and Mohammad Abu Khater (Purdue University, USA); Mattias Thorsell and Sten Gunnarsson (Chalmers University of Technology, Sweden); Brian Edward (Saab Inc., USA); Dimitrios Peroulis (Purdue University, USA)
8:40 AM	(INVITED PAPER) Additive Manufacture of a Luneburg Lens with a Conformal Feed Array for Ultrawide Scan Angle Passive Beamforming, Mark Mirotznik, Kyle McParland, and Colin Bonner (University of Delaware, USA)	UHF RFID tag localization using pattern reconfigurable reader antenna, Md Shakir Hossain, Md Abu Saleh Tajin, and Kapil Dandekar (Drexel University, USA)	Novel X-Band Phase Shifter using Reconfigurable Bandstop Filter, Georgiy Brussenskiy and Xun Gong (University of Central Florida, USA)
9:00 AM	Low Complexity Beam Steering Antenna Array Using Beamforming Network Subarrays, Santhi Swaroop Madeti, Stephen E Sadow, and Gokhan Mumcu (University of South Florida, USA)	(INVITED PAPER) UAV-based Localization of Mobile Phones for Search and Rescue Applications, Christian Dorn (Technical University of Munich & Chair of Micro- and Nanosystems Technology, Germany); Andreas Depold (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Fabian Lurz (Hamburg University of Technology, Germany); Stefan Erhardt (Friedrich-Alexander University Erlangen-Nuremberg, Germany); Amelie Hagelauer (Technical University of Munich, Germany)	Design of a Frequency-Agile and Surface Mountable Suspended Integrated Strip-Line Bandpass Filter Using Castellated Vias, Eric W Wells, Hjalti Sigmarsson, and Jay W McDaniel (University of Oklahoma, USA)
9:20 AM	(INVITED PAPER) UWB Future G Transceivers & Wearable Electronics, John L. Volakis (Florida International University, USA)	A Semi-Empirical Model for Predicting the Effects of Moisture on Microwave Signal Attenuation in Fouled Railroad Ballast, Ismail H Uluer (Oregon State University, USA); Jeff Frolik (University of Vermont, USA); Thomas Weller (Oregon State University, USA)	Synthesis of Filters Comprising Cascaded Quadruplets With Both Single and Mixed Couplings, Wael M Fathelbab (Northrop Grumman Corporation, USA)
9:40 AM	Break - Exhibitors (Room: Mediera/Indian Shores)		
10:00 AM	Keynote Speaker (Room: Bellaire/Reddington) Faster and Farther: MTO in the EM Spectrum, Dev Palmer, DARPA MTO		Student Day Activities and Presentations (Room: Siesta Key)
11.10 AM	Award Announcements (Room: Ballaire/Reddington)		
11:50 AM	Lunch (Room: Watercolour)		

12:50 PM **T1B: Special Session: Advanced RF Power Amplifiers and Front-Ends** (Chairs: Patrick Roblin and Kenle Chen) (Room: Bellaire)

12:50 PM (INVITED PAPER) **Bias and Bias Line Effects on Wideband RF Power Amplifier Performance**, William Sear, Devon Donahue, Michelle Pirrone, and Taylor Barton (University of Colorado Boulder, USA)

1:10 PM **GaN MMIC RF Switches for In-Band Full-Duplex Phased Array Calibration**, Seth J Johannes (University of Colorado Boulder, USA); Kenneth E. Kolodziej (MIT Lincoln Laboratory, USA); Zoya Popović (University of Colorado Boulder, USA)

1:30 PM (INVITED PAPER) **The Analytic Doherty-Outphasing Power Amplifiers Continuum Theory**, Chenyu Liang (Qorvo. Inc, USA) and Patrick Roblin (The Ohio State University, USA)

1:50 PM (INVITED PAPER) **Periodically Switched Acoustic-Filtering RF Front-Ends Using Commutated-LC Circuits for Wireless Receivers**, Hyungjoo Seo and Jin Zhou (University of Illinois at Urbana-Champaign, USA)

2:10 PM **Modular Design and Characterization of a Reconfigurable Sequential Power Amplifier**, Sarmad Ozan, Manish Nair, Mark Beach, and Tommaso Cappello (University of Bristol, United Kingdom)

2:30 PM **Exhibitor Showcase** (Room: Maderia/Indian Shores)

3:00 PM

3:00 PM

3:20 PM

3:40 PM

4:00 PM

4:20 PM

4:40 PM

Young Professionals (YP) and Women in Microwaves (WiM) Event (Room: Bellaire/Reddington)

YP and WiM Reception (Room: Veranda)

T2B: Advances in Antennas and Feed Networks (Chairs: Michael Grady and Gokhan Mumcu) (Room: Reddington)

A K-band Resonant Impedance Tuner with a Solid-State Hybrid Tuning, Mohammad Abu Khater, Muna Awajan, and Dimitrios Peroulis (Purdue University, USA)

Design and Optimization of Broadband Matching Networks for Wide-Scanning Phased Arrays, Patrick D. O'Connor-Lynch and Hjalti Sigmarsson (University of Oklahoma, USA)

Element-Level Microwave Filter Integration in Fully-Digital Phased Array Radar Systems, Gokhan Arıturk, Nawaf Almuqati, and Hjalti Sigmarsson (University of Oklahoma, USA)

Phase-Controlled Beamforming Network applied to Linear Arrays, Valentina Palazzi, Federico Alimenti, Paolo Mezzanotte, and Luca Roselli (University of Perugia, Italy)

Transversely Slotted Leaky-Wave Antenna with Purer Linear Polarization, Yunhao Fu, King Yuk Chan, and Rodica Ramer (University of New South Wales, Australia)

Student Day Activities, Presentations, Exhibitors (Room: Siesta Key)

T3C: Sensors and Waveguides (Chairs: Jing Wang and Joshua Kovitz) (Room: Siesta Key)

Laser-Assisted and Additively Manufactured Multilayer Metal-Insulator-Metal Capacitors, Omer Faruk Firat (Oregon State University, USA); Jing Wang (University of South Florida, USA); Thomas Weller (Oregon State University, USA)

3D-Printed Compact Full-E-Band Wavemode Transitions for Direct Launching from IC to Waveguides with minimal Line Length on PCB, Konstantin Lomakin (Friedrich-Alexander University, Germany); Saif Alhasson (NXP Semiconductors Germany GmbH, Germany); Gerald Gold (FAU Erlangen-Nürnberg, Germany)

Improved Bandwidth using a 3D Printed Quasi-Ideal Grounded Coplanar Waveguide Transmission Line, Michael Grady (Georgia Tech Research Institute, USA); Aviram Iancovici and Yaakov Borenstein (Nano Dimension, USA)

ASK Modulator Design for Passive RFID Tags in Backscatter Communication Systems, Amus Chee Yuen Goay, Deepak Mishra, and Aruna Seneviratne (University of New South Wales, Australia)

Integrated Compact-Size Rectenna with Enhanced RF to DC Power Conversion Efficiency and High-Gain Antenna, Rawaa Maher, Adel Bedair, and Ahmed Sayed Ahmed Abdelhamid Allam (Egypt-Japan University of Science and Technology (E-JUST), Egypt); Haruichi Kanaya (Kyushu University, Japan)