

TUESDAY - APRIL 16, 2024

TRACK 1

TRACK 2

TRACK 3

7:00 AM

Breakfast (Longboat Key)

8:00 AM

T1A: Heterogeneous Integration (Bellaire)

Session chairs: Daniel Ramirez (L3Harris) and Jing Wang (University of South Florida, USA)

T2A: Sub-THz and THz Systems and Measurements (Reddington)

Session chairs: Ke Wu (Polytechnique Montréal, Canada) and Jerome Cheron (NIST, USA)

T3A: Invited Session: Space Technologies (Siesta Key)

Session chair: Eduardo Rojas (Embry-Riddle Aeronautical University, USA)

8:00 AM

Invited Abstract: Heterogeneous Integration of III-V Devices in Commercial Silicon Wafers for mm-wave amplifiers

Florian Herrault, Mark R. Soler, Justin K. Kim, Michael D. Hodge, Daniel S. Green and James F. Buckwalter (PseudolithiC Inc., USA)

Invited Paper: Multichannel and Multifunction Interferometric Receiver Architectures for Multistandard Millimeter-Wave and Terahertz Applications

Jie Deng (École Polytechnique de Montréal, Canada); Pascal Burasa (Ecole Polytechnique, Canada); Ke Wu (Polytechnique Montréal, Canada)

Invited Abstract: Uncertainty Quantification of the Gain Budget for INCUS

Paolo Focardi (NASA JPL, USA)

8:20 AM

Invited Abstract: Heterogeneous Integration Innovations Enabled by Glass-Core Packaging

Muhannad Bakir (Georgia Institute of Technology, USA)

Invited Abstract: Submillimeter Solar Observation Lunar Volatiles Experiment (SSOLVE) Optics and Front- end Spectrometer

Berhanu T Bulcha (NASA Goddard Space Flight Center, USA); Timothy A. Livengood (UNIV OF MARYLAND COLLEGE PARK, USA); Paul Racette (NASA GSFC, USA); Mohamed M Abdin (NASA, USA); Negar Ehsan (NASA Goddard Space Flight Center, USA); Tilak Hewagama, Gordon Chin and Carrie M. Anderson (NASA Goddard Space Flight Center, USA); Kevin Horgan (NASA's Goddard Space Flight Center, USA)

Invited Abstract: Innovative Antennas for Satellite Telecom, Radar Systems and Radio Telescope

Gaurangi Gupta (NASA JPL, USA)

8:40 AM

Invited Paper: Advanced 3D Heterogenous Integration (3DHI) for High Frequency RF Applications

Augusto Gutierrez-Aitken (Northrop Grumman Aerospace Systems, USA)

Invited Paper: A 0.1 GHz to 1.1 THz Inverted Grounded-CPW mTRL Calibration Kit Characterization in an InP HBT Process

Jerome Cheron, Rob D Jones and Dylan Williams (NIST, USA); Miguel Urteaga (Teledyne Scientific & Imaging LLC, USA); Bryan T Bosworth and Nicholas R Jungwirth (NIST, USA); Jeffrey Jargon (National Institute of Standards and Technology, USA); Benjamin F Jamroz (NIST, USA); Christian Long and Nathan Orloff (National Institute of Standards and Technology, USA); Ari Feldman (NIST, USA); Peter Aaen (Colorado School of Mines, USA)

Invited Abstract: Advanced Composite Antennas in JPL Missions

Juan M Mejia-Ariza (NASA JPL, USA)

9:00 AM

Towards Dielectric Chip-to-Chip Interconnects for THz Applications
Tobias Bader (Friedrich-Alexander-Universität Erlangen Nürnberg, Germany); Gerald Gold (FAU Erlangen-Nürnberg, Germany)

A 290-359 GHz Push-Push Signal Source with 1.7 dBm Pmax using Variable Inductance in SiGe BiCMOS Technology

Sascha Breun, Albert-Marcel Schrotz and Manuel Koch (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Vadim Issakov (Technische Universität Braunschweig, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany)

Invited Paper: Empirical Analysis of Coherent and Incoherent Signal Propagation Loss from a Free Space Optical Communication System

Chengtao Xu, Lucien Hammond and Eduardo Rojas (Embry-Riddle Aeronautical University, USA)

9:20 AM

Multi Glass-Wafer Stacked Technology for 3D Heterogeneously-Integrated Scalable 6G Arrays

Shah Zaib Aslam (University of Florida, USA); Boomhover Oliver (General Electric, USA); Jeremy Popp (Meta Incorporation, USA); Najme Ebrahimi (Northeastern University, USA)

A Digitally Controlled D-Band Phase Shifter for FMCW Radar and RadCom in SiGe BiCMOS

Albert-Marcel Schrotz, Sascha Breun and Stefan Schönhärl (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany)

9:40 AM

Break - Coffee with Exhibitors (Madeira / Indian Shores)

10:00 AM

(Bellaire / Reddington)

Plenary Address #2

Antenna Systems for Space Applications at NASA Jet Propulsion Laboratory

Paolo Focardi (NASA JPL, USA)

Student Day Activities (Siesta Key)

Chair: Prof. Satheesh Bojja (Florida International University)

10:40 AM

Henning and WAMICON 2024 Award Announcements

11:00 AM

Plenary Address #3

	RF Plasma Circuits and Antennas Dimitrios Peroulis (Purdue University, USA)		
11:40 AM	Break (Grab Boxed Lunch)		
12:00 PM	Lunch Keynote Address #2 Trends in Classical and Quantum Optical Communications for Space Harry Shaw (NASA/GSFC)		
12:45 PM	Break		
1:10 PM	T1B: Additively Manufactured Components (Bellaire) Session chairs: Eduardo Rojas (Embry-Riddle Aeronautical University, USA) and Hjalti Sigmarsson (University of Oklahoma, USA)	T2B: Innovations in Electromagnetic Systems (Reddington) Session chairs: Steve Lardizabal (RTX, USA) and Jim Culver (Collins Aerospace, USA)	
1:10 PM	Tight Non-Radiating Bends of 3D-Printed Dielectric Image Lines Based on Electromagnetic Bandgap Mirrors Leonhard Hahn (Friedrich-Alexander Universität Erlangen-Nürnberg & Institute of Microwaves and Photonics, Germany); Tobias Bader (Friedrich-Alexander-Universität Erlangen Nürnberg, Germany); Christian Carlowitz (University of Erlangen-Nuremberg, Germany); Martin Vossiek (LHFT, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Gerald Gold (FAU Erlangen-Nürnberg, Germany)	Electromagnetic Design of Excitation Coils for an Inductively-Coupled Plasma Etching System Jack A Molles (University of Colorado Boulder, USA); Zoya Popovic (University of Colorado at Boulder, USA); Shen Peng (Lam Research, USA); Prasoon Shukla (Lam Research, India)	Student Day Activities (Siesta Key) Chair: Prof. Satheesh Bojja (Florida International University)
1:30 PM	Inverse Design A 3D Printed Four-Port Power Splitter Leveraging Gradient Optimization and Adjoint Method Saeed Zolfaghary pour (Florida A&M University, USA); Hanxiang Zhang, Powei Liu, Hao Yan and Jonathan Casamayor (Florida State University, USA); Mitch E Plaisir (Florida A&M University, USA); Bayaner Arigong (Florida State University, USA)	A High-Linear PLL-based FMCW Frequency Synthesizer with 42-kHz rms FM Error and 1.2-GHz Chirp Bandwidth Zitong Zhang, Yuri Lu and Xiaoyuan Wu (East China Normal University, China); Hao Deng (University of Houston, USA); Chunqi Shi and Leilei Huang (East China Normal University, China); JingHong Chen (University of Houston, USA); Runxi Zhang (East China Normal University, China)	
1:50 PM	Towards Additive Manufacturing Based Packaging of Mm-Wave Antenna Arrays and Beamformer Ics Ruoke Liu, Gokhan Mumcu and Jing Wang (University of South Florida, USA)	High-Reliability Envelope-Based Automatic Modulation Classification Using Deep Learning Mohammad Abu Khater (Philowave, USA); Dimitrios Peroulis (Purdue University, USA)	
2:10 PM	The Limit of Downsizing Dielectric-Filled Slotted Waveguide Antennas Felix Bachbauer (Friedrich Alexander Universität Erlangen-Nürnberg, Germany); Gerald Gold (FAU Erlangen-Nürnberg, Germany); Mark Sippel and Konstantin Lomakin (Friedrich-Alexander University, Germany)	Boosting Estimation Accuracy of Low-Cost Monopulse Receiver Via Deep Neural Network Hanxiang Zhang (Florida State University, USA); Saeed Zolfaghary pour (Florida A&M University, USA); Powei Liu, Hao Yan and Jonathan Casamayor (Florida State University, USA); Mitch E Plaisir (Florida A&M University, USA); Bayaner Arigong (Florida State University, USA)	
2:30 PM	Exhibitor Showcase (Longboat Key)		
3:00 PM	Women in Microwaves and Young Professionals Event (Bellaire / Reddington)		
4:30 PM	WiM / YP Reception (Veranda)		
6:00 PM			

