

Program at a Glance

Nov. 8 (Sun)

	Room 401	Room 402	Room 403	Room 404	Room 405	Room 409	Room 410	Room 411	Room 412
9:30-12:30	SC1-R1	SC1-R2	WS1-R3	WS1-R4	WS1-R5	WS1-R6	WS1-R7	WS1-R8	WS1-R9
	Lunch 12:30-14:00								
14:00-17:00	SC2-R1	SC2-R2	WS2-R3	WS2-R4	WS1-R5	WS1-R6	WS1-R7	WS1-R8	WS1-R9

Nov. 9 (Mon)

	Main Hall	Room 401-403	Room 404-406	Room 409	Room 410	Room 411	Room 412	Room 413	2F-Hall
9:00-11:00	Opening Session Opening Ceremony Keynote Address 1 Keynote Address 2								
	Lunch 11:00-12:30								
11:30-13:00									Interactive Forum1
13:00-14:40		MO1-R1	MO1-R2	MO1-R3	MO1-R4	MO1-R5	MO1-R6	MO1-R7	
	Break 14:40-15:10								
15:10-16:50		MO2-R1	MO2-R2	MO2-R3	MO2-R4	MO2-R5	MO2-R6	MO2-R7	

Nov. 10 (Tus)

	Room 401-403	Room 404-406	Room 409	Room 410	Room 411	Room 412	Room 413	2F-Hall	5F-501
9:00-11:00	TU1-R1	TU1-R2	TU1-R3	TU1-R4	TU1-R5	TU1-R6	TU1-R7		Student and Young Engineer Design Competition
	Lunch 11:00-12:30								
11:30-13:00								Interactive Forum2	
13:00-14:40	TU2-R1	TU2-R2	TU2-R3	TU2-R4	TU2-R5	TU2-R6	TU2-R7		
	Break 14:40-15:10								
15:10-16:50	TU3-R1	TU3-R2	TU3-R3	TU3-R4	TU3-R5	TU3-R6	TU3-R7		

Nov. 11 (Wed)

	Room 401-403	Room 404-406	Room 409	Room 410	Room 411	Room 412	Room 413	2F-Hall
9:00-11:00	WE1-R1	WE1-R2	WE1-R3	WE1-R4	WE1-R5	WE1-R6	WE1-R7	
	Lunch 11:00-12:30							
11:30-13:00								Interactive Forum3
13:00-14:40	WE2-R1	WE2-R2	WE2-R3	WE2-R4	WE2-R5	WE2-R6	WE2-R7	
	Break 14:40-15:10							
15:10-16:50	WE3-R1	WE3-R2	WE3-R3	WE3-R4	WE3-R5	WE3-R6	WE3-R7	

Monday, November 9 11:30 - 13:00

IF1: Interactive Forum 1

Room: 2F-Hall

A Low Power V-Band LNA Using Transformer Feedback and Double-Transformer-Coupling Technique in 65-nm CMOS Process

Jian-Hao Hsu, Chun-Yu Su, Yunshan Wang and Huei Wang (National Taiwan University, Taiwan)

A High Gain K/Ka Band Current-Reuse LNA with Ultra-Low Power Consumption for Portable Devices

Shao-Chun Huang, Shan-Yin Yang and Chao-Hsin Wu (National Taiwan University, Taiwan)

A Compact D-Band Quadrature down-Conversion Mixer in 130-nm SiGe BiCMOS

Marzieh Mollaalipouramiri and Herbert Zirath (Chalmers University of Technology, Sweden); Mingquan Bao (Ericsson AB, Sweden)

A Ka-Band Low-Noise Amplifier with 26.2 dB Gain Using Current-Reused Technique in 90-nm CMOS Process

Chun-Yu Su, Yunshan Wang and Huei Wang (National Taiwan University, Taiwan)

A 15 GHz DDS-Based Waveform Synthesizer Using a Programmable DAC in 28 nm Bulk CMOS

Enis Smajlovic (Friedrich-Alexander-University Erlangen-Nuremberg, Germany); Alexander Schönecker, Tianzhu Huang and Konstantin Vilyuk (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Yi-Wen Wang (National Taiwan University, Taiwan); Kai Scheller (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Tian-Wei Huang (National Taiwan University, Taiwan); Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

Amplitude-Controlled Ku-Band Voltage-Controlled Oscillator Using LDO-Regulated Supply and Voltage Distribution Network

Shu-Che Chang (Taipei University, Taiwan); Ting-Wen Chen and Yue-Fang Kuo (Yuan Ze University, Taiwan)

A 28 nm CMOS D-Band Up-Conversion Mixer with 3 dB Conversion Gain and 25 GHz RF Bandwidth

Alexander Schönecker, Tianzhu Huang, Kai Scheller and Albert-Marcel Schrotz (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

Low Power Consumption Cryogenic GaAs MMIC LNA for Quantum Computers

Ken Kudara, Hirokata Sato, Shuichi Sakata and Akira Inoue (Mitsubishi Electric Corporation, Japan); Toshiaki Inada (University of Tokyo, Japan)

A 24-33 GHz Receiver Front-End MMIC Using 0.1- μ m GaAs pHEMT Process

Qu Zhang, Kai Li and Yunxv Zhao (Xidian University, China); Jiawei Zhou (Xi'an University of Electronic Science and Technology, China); Hanghai Du and Weichuan Xing (Xidian University, China); Hong Zhou (Xidian University, Xi'an, China); Zhihong Liu, Jincheng Zhang and Hao Yue (Xidian University, China)

Design and Validation of a Planar 26 to 30 GHz Dual Channel Front End

Jose A. De Souza Melo (Instituto Tecnológico de Aeronáutica, Brazil); Lucas Compassi Severo (Instituto tecnológico de Aeronáutica, Brazil); Olympio Coutinho (Instituto Tecnológico de Aeronáutica, Brazil)

A V-Band Low-Noise Switched-Gm Mixer with Trifilar Transformer and Bulk Effect Control in 65-nm CMOS

Benqing Guo (Chengdu University of Information Technology, China); Jing Gong (Sichuan unvi, China); Huifen Wang (Henan University of Technology, China); Haishi Wang (Cuit, China); Tianbao Wang (Chengdu University of Information and Technology, China)

A 13 GHz 2.25 mW Complementary Cross-Coupled VCO for Hand-Held Wireline Communication

Alexander Berwald (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Konstantin Vilyuk, Jonas Wenfnger and Kai Scheller (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

Extraction of Large-Signal InP HBT Models with 220 GHz Load-Pull Verification

Rob Jones (Colorado School of Mines & National Institute of Standards and Technology, USA); Jerome Cheron (NIST, USA); Jack Molles (National Institute of Standards and Technology, USA); Peter Aaen (Colorado School of Mines, USA)

High Speed and High Efficiency Envelope Amplifier with GaN Switching Mode Amplifier and 4.3Vpp Output Voltage SOI-CMOS Driver

Kento Saiki (Mitsubishi Electric, Japan); Yoshiaki Morino, Wataru Yamamoto and Shuichi Sakata (Mitsubishi Electric Corporation, Japan)

E-Mode Recessed-Schottky-Gate GaN-on-Si HEMTs with Low off-State Leakage Current for Low Voltage Mobile-End RF Applications

Jiawei Zhou (Xidian University, China); Xiaojin Chen, Jiaqi He, Guangjie Gao, Ziqian Qin, Jin Zhou, Hanghai Du and Weichuan Xing (Xidian University, China); Hong Zhou (Xidian University, Xi'an, China); Zhihong Liu, Jincheng Zhang and Hao Yue (Xidian University, China)

A Stability Enhancement 0.15 μ m GaAs p-HEMT Power Amplifier for Ka-Band Satellite Communication

Tian-Wei Huang, Tzu-Yi Huang, En-Lin Hong, Ho-Ching Yen and Kai-Jie Chuang (National Taiwan University, Taiwan); Jeng-Han Tsai (National Taiwan Normal University, Taiwan)

A 5.8 GHz EDMOS Power Amplifier Achieving 27 dBm Psat, 48% PAE, and Robust Reliability for Wi-Fi Applications

Santosh Kumar Gedela (GlobalFoundries, India); Purushothaman Srinivasan (Globalfoundries, USA); Kishore Bantupalli (GlobalFoundries, India); Rui Tze Toh (Globalfoundries, Singapore); Neelanjan Sarmah (GlobalFoundries, India)

Proof-of-Concept of a Reflection-Controlled Switching-Mode GaN Power Amplifier Using a Loaded Transmission Line

Toshio Ishizaki and Hikaru Ikeda (Ryukoku University, Japan); Hirotaka Asami and Takashi Maehata (Sumitomo Electric Industries, Ltd., Japan)

Finger-Width Scaling for RF Feedthrough Suppression and Load-Optimized 25-GHz RF-to-DC Rectification in AlGaIn/GaN Gated-Anode Diodes

Sanghoon Park (Kumamoto University, Japan); Yuji Ando and Hidemasa Takahashi (Nagoya University, Japan); Akio Wakejima (Kumamoto University, Japan)

Design Space Analysis of Multioctave CCF Power Amplifier in the Presence of Cds Non-Linearity

Kamini Singh (Indian Institute of Technology, Roorkee, India & IITR, India); Tarun Kumar Suretia, Ganesh Bargaje and Karun Rawat (Indian Institute of Technology Roorkee, India)

Effects of Lateral and Vertical Dimensions on the Electrical Characteristics of Quasi-Vertical GaN Schottky Barrier Diodes

Seongmin Kang (Korea Electronics Technology Institute (KETI), Korea (South)); Soo-Chang Chae, Jin-Sup Kim and Hyeon-Bhin Jo (Korea Electronics Technology Institute, Korea (South))

Investigation of Emitter Geometry Scaling Effects on the DC and RF Characteristics of GaAs HBTs

Min Su Kang (ICT Device and Packaging Research Center Korea Electronics Technology Institute (KETI), Korea (South)); Hyeon-Bhin Jo (Korea Electronics Technology Institute, Korea (South))

Architecture Elements for 6G FR3 RF Front-End Modules

Florinel Balteanu (Skyworks Solutions, USA)

Bias-Dependent Investigation on the Performance Degradation of Short-Channel AlGaIn/GaN HEMTs Stressed Under Constant DC Power

Yi-Fan Tsao (National Yang Ming Chiao Tung University, Taiwan); Cheng-Ling Chiang and Tien-Han Yu (Taiwan); Heng-Tung Hsu (National Yang Ming Chiao Tung University, Taiwan)

A 28-GHz CMOS Linear Power Amplifier with Effective Second-Harmonic Control Networks

Dong-Jun Shin (Korea Advanced Institute of Science and Technology, Korea (South)); Jinseok Park (Ulsan National Institute of Science and Technology, Korea (South)); Songcheol Hong (Korea Advanced Institute of Science and Technology, Korea (South))

Design Methodology of Transistor Rectifier Using Load Matching Circuit of High-Efficiency GaN HEMT Power Amplifier

Ryutaro Fukagawa, Kazuhiko Honjo and Ryo Ishikawa (The University of Electro-Communications, Japan)

W-Band GaAs MMIC Power Amplifier Designed Through a Simplified Approach

Rocco Giofrè (University of Roma Tor Vergata, Italy); Walter Ciccognani (Università of Roma Tor Vergata, Italy); Antonio Serino (University of Roma Tor Vergata, Italy); Paolo Colantonio (University of Roma Tor Vergata, Italy); Ernesto Limiti (University of Roma Tor Vergata, Italy)

A Differential D-Band Power Amplifier in 90-nm SiGe BiCMOS for Doubler-Last J-Band Transmitters

Dingan Wang (Friedrich Alexander Universität Erlangen Nürnberg, Germany); Tianzhu Huang, Alexander Schönecker and Manuel Koch (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

Analog Predistorter Compensating Frequency Dependent IMD Components

Haruto Baba, Kiyotaka Komoku, Jun Furuta, Nobuyuki Itoh and Yasunori Suzuki (Okayama Prefectural University, Japan); Hirotaka Asami, Yoshitaka Niida and Takashi Maehata (Sumitomo Electric Industries, Ltd., Japan)

A PAE 4.24% 158 GHz Two-Way Power Combining Power Amplifier with Gmax-Core in 40-nm CMOS Technology

Po-Chen Hu, Chen-Ping Hung and Chien-Nan Kuo (National Yang Ming Chiao Tung University, Taiwan)

Comparative Analysis of GaN PAs in Class E, F, and Inverse F for VHF Space-Borne Radar Systems

Francesco Manni (University of Rome "Tor Vergata", Italy); Paolo Colantonio (University of Roma Tor Vergata, Italy); Gianni Bosi (University of Milan Bicocca, Italy); Francisco De Arriba, Lorena Cabria and Reinel Marante (TTI, Spain); Antonio Raffo and Giorgio Vannini (University of Ferrara, Italy); Rocco Giofrè (University of Roma Tor Vergata, Italy)

An Efficient W-/D-Band Power Amplifier in a 130 nm SiGe BiCMOS Process

Han Zhou (Tampere University); Yu Yan, Haojie Chang and Herbert Zirath (Chalmers University of Technology, Sweden)

A Class J/F Power Amplifier in SiGe at 60 GHz and Comparison to Its CMOS Counterpart

Mengqi Cui (Technische Universität Dresden, Germany); Xin Xu (TU Dresden, Germany); Jens Wagner (Technische Universität Dresden & Chair for Circuit Design and Network Theory, Germany); Frank Ellinger (Technische Universität Dresden, Germany); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

Ultra-Low-Power Half-Rate Clock and Data Recovery for Optical Receivers

Joanne Chiang (National Tsinghua University, Taiwan); Yi-Chun Liu (National Tsing Hua University, Taiwan)

A 24-GHz 36-dB-Gain Transmitter Using PMOS and NMOS Cross-Coupled Pairs for Low-LO-Power Operation in 180-nm CMOS

Qiuxi Jiang (Southeast University, Purple Mountain Laboratories, China); Yicheng Sang (Southeast University, China); Kaibo Zhang, Yuanlong Shan, Qiuyu Luo and Sanming Hu (Southeast University, Purple Mountain Laboratories, China)

A Low-Power G-Band Receiver Front-End with 16.2 dB Gain in 130-nm SiGe BiCMOS for High Resolution Imaging Applications

Xun Chen (Rheinisch Westfälische Technische Hochschule Aachen, Germany); Jonas Winkelhake (RWTH Aachen University, Germany); Muh-Dey Wei (RWTH Aachen University & High Frequency Electronics, Germany); Renato Negra (RWTH Aachen University, Germany)

A Compact D-Band Transmitter Frontend Achieving 8.8dBm OP1dB with Adaptive Back-Gate Bias in 22nm FDSOI

Tianzhu Huang, Philip Hetterle, Andre Engelmann, Florian Probst, Albert-Marcel Schrotz and Kai Scheller (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

A 26-31 GHz GaN Doherty Power Amplifier Using a Hybrid Combiner for Wideband Operation

Moise Safari Mugisho and Christian Friesicke (Fraunhofer IAF, Germany); Fouad Benkhelifa (IAF Fraunhofer, Germany); Rüdiger Quay (Fraunhofer IAF, Germany)

Wide X-Band FMCW Signal Generator with Cap Control Unit

Sang-Jun An, Bo-geun Jung, Joong-Gi Yeo and Geonho Park (Korea Aerospace University, Korea (South)); Young-jin Kim (Korea Aerospace University, Korea (south))

A Dual-Band 94-/220-GHz Amplitude Modulator with 15 dB Range and < 2.5° RMS Phase Variations Using Asymmetric Dual-Mode Transformer

Xianhu Luo, Zhuoheng Chen, Xu Cheng, Yunbo Rao, Jiangnan Han, Liang Zhang and Meng Jia (Microsystems&Terahertz Research Center, CAEP, P.R.China); Yun Fang (Southeast University, P.R.China, China); Bo Wei (Hangzhou Dianzi University, P.R.China, China); Jinbo Du (Tianjin University, P.R.China, China); Binbin Cheng and Xianjin Deng (Microsystems&Terahertz Research Center, CAEP, P.R.China); Hao Gao (Southeast University, P.R.China, China)

Area-Optimized Integrated GaN Power Amplifier with High-Q Air-Bridge Inductors at C-Band

Robert Krämer (Technische Universität Dresden, Germany); Philipp Neining (Fraunhofer IAF, Germany); Jens Wagner (Technische Universität Dresden & Chair for Circuit Design and Network Theory, Germany); Frank Ellinger (Technische Universität Dresden, Germany)

A Stacked-Layer Spiral Inductor for Miniaturization of the High-Isolation Wilkinson Power Divider

Yamato Takahashi, Kenji Itoh and Naoki Sakai (Kanazawa Institute of Technology, Japan); Masaomi Tsuru (Mitsubishi Electric Corporation, Japan); Koji Yamanaka (Kanazawa Institute of Technology, Japan)

A 22FDX® EDMOS Two Stage PA for 28GHz Frequency Band with 34.5% Peak PAE and Output Power of 23dBm

Zaid Al-Husseini (GlobalFoundries, Germany); Ming-Cheng Chang (Globalfoundries Dresden, Germany); Arul Balasubramanian, Chi Zhang and Elan Veeramani (Globalfoundries, USA); Shafi Syed (GlobalFoundries, USA); Stephen Moss and Andreas Knorr (Globalfoundries, USA)

Evaluation of Real-Time Digital Predistortion (DPD) for Design and Optimization of a Broadband Millimeter-Wave 40 nm GaN PA

Clint Sweeney (Texas Tech University, USA); Donald Y Lie (Texas Tech University, USA & National Yangming Chiao Tung University, USA); Amr Haj-Omar (Morgan State, USA); Jerry Lopez (Texas Tech University & NoiseFigure Research Inc., USA)

A Single Stage 22 FDX® Differential Power Amplifier for 5G Applications with 21.5 dBm Psat and 40% Peak PAE

Zaid Al-Husseini (GlobalFoundries, Germany); Arul Balasubramanian (Globalfoundries); Shafi Syed (GlobalFoundries, USA); Chi Zhang, Elan Veeramani and Abdellatif Bellaouar (Globalfoundries, USA)

Design and Characterization of a Wideband High-Efficiency Ka-Band GaN MMIC Power Amplifier for 5G NR FR2 Massive MIMO Applications

Gobezie Nigussie Molla and Mohammad Moussa (University of Limoges, France); Ahmad Al Hajjar, Sebastian Diebold and Julien Poulain (MACOM, France); Philippe Bouysse and Audrey Martin (XLIM, France)

A Crystal-Less Clock Generation Circuit Using a Dual-Tone RF Signal for BLE Tag Applications

Sangwon Yoon (SKAIChips, Korea (South)); Jeong Gyu Cho (Sungkyunkwan University, Korea (South), Korea (South)); Sungjin Kim and Yeon-Jae Jung (SKAIChips, Korea (South))

An Electro-Optical Dual-Input LO Distribution Chain with Frequency Quadrupler for ePIC D-Band Radar Systems

Deniz Tas (Fraunhofer EMFT, Germany); Manuel Koch (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Huber and Felix Wiedenmann (University of Ulm, Germany); Amelie Hagelauer (Fraunhofer, Germany); Marco Dietz (Fraunhofer EMFT, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany)

A Ka-Band Bidirectional Variable-Gain Amplifier with $0/\pi$ Phase Reversal Using LC SPDT and Gilbert-Cell VGA

Yu-Teng Chang and Yu-Hsiang Chuang (National Taiwan Normal University, Taiwan)

A 24 GHz Band Segmented WPT Reception System with a High Overall Efficiency of 60.6 % at a Stabilized DC Output Power of 9.6 W

Nobuyori Yaeo, Ryosuke Sato, Kazuki Ishizuka, Keiji Nishikawa, Naoki Sakai and Kenji Itoh (Kanazawa Institute of Technology, Japan)

Design of a CMOS RF Energy Harvester with -25 dBm Sensitivity and 73% Peak Efficiency

Heng-Ming Hsu (National Chung-Hsing University, Taiwan); Chung-Kai Chen (National Chung Hsing University, Taiwan); Hsiang-Che Sun (National Chung Hsing University, Taichung, Taiwan)

Access Resistance-Mobility Interaction in GaN HEMTs: Analysis and Modeling Within ASM

Mir Mohammad Shayoub (Indian Institute of Technology, Kanpur, India); Yogesh Chauhan (Indian Institute Of Technology, India)

Monday, November 9 13:00 - 14:40

MO1-R1: Device Modeling, Substrate Effects, and CMOS Analog Circuits (TBD)

Room: 401-403

A Compact LS Model for N and P Channel SOI FET

Iltcho Angelov, Yu Yan, Lars Svensson and Niklas Rorsman (Chalmers University of Technology, Sweden)

A Low-Noise Instrumentation Amplifier with 104-dB Gain and 2.6- μ V DC Offset Using Gain Enhancement Technique for ECG Applications

Yu-Ting Chou (National Central University, Taiwan); Po-Yuan Chen (National Central University, Taiwan); Hong-Yeh Chang (National Central University, Taiwan)

Cold Pinch-off FET Parameter Extraction Beyond Low-Frequency Capacitance Approximation

Sergio Colangeli (University of Rome Tor Vergata, Italy); Alessandro Boi (University of Roma Tor Vergata, Italy); Antonio Serino (University of Rome Tor Vergata, Italy); Walter Ciccognani (Università of Rome Tor Vergata, Italy); Patrick Ettore Longhi (University of Roma Tor Vergata, Italy); Ernesto Limiti (University of Rome Tor Vergata, Italy)

Analysis and Modeling of Back-Gate/Substrate Coupling in 28 nm FD-SOI MOSFETs on Standard and High-Resistivity Substrates

Martin Vanbrabant and Martin Rack (Université Catholique de Louvain, Belgium); Andreia Cathelin (ST Microelectronics, France); Valeriya Kilchytska and Jean-Pierre Raskin (Université Catholique de Louvain, Belgium)

Ku/Ka Band Tx and Rx Front-End Components in a Cost Effective 130 nm Bulk CMOS Technology

Santosh Kumar Gedela, Avinash Singh and Kishore Bantupalli (GlobalFoundries, India); Raghuram Tattamangalam Raman and Sergiton David (Globalfoundries, India); Neelanjan Sarmah (GlobalFoundries, India); Alexandros Margomenos (GlobalFoundries, USA)

Monday, November 9 13:00 - 14:40

MO1-R2: AI-Assisted Filter Synthesis and Topology Optimization (TBD)

Room: 404-406

A Latent-Diffusion-Based Inverse Model for Generating High-Resolution BPF Geometry Images

Ryota Maezaki, Masataka Ohira and Hiroyuki Deguchi (Doshisha University, Japan)

Response-Guided Latent Topology Exploration of Stud-Loaded Compact Microwave Cavities

Amit Kumar, Clément Mailhé and Dominique Baillargeat (CNRS CREATE, Singapore); Francisco Chinesta (ENSAM ParisTech, France)

Multi-Agent Deep Reinforcement Learning for Scalable Design Automation of Nth-Order Microwave Bandpass Filters

Yujiro Ono (Saitama University, Japan); Ryota Tsuge and Masataka Ohira (Doshisha University, Japan); Zhewang Ma (Saitama University, Japan); Hiroyuki Deguchi (Doshisha University, Japan)

Length-Compensated Geometry Mapping for Cylindrical Combline Filters Using Center-Post Height Adjustment

Yen-Che Ting and Hao-Hui Chen (National Kaohsiung University of Science and Technology, Taiwan); Yusuke Kusama (Toyo University, Japan); Yao-Wen Hsu (National Kaohsiung University of Science and Technology, Taiwan)

Attachable Non-Resonating-Node Module for Rectangular Waveguide Filters with a Tunable Transmission Zero

Ping-Yuan Su and Hao-Hui Chen (National Kaohsiung University of Science and Technology, Taiwan); Yusuke Kusama (Toyo University, Japan); Yao-Wen Hsu (National Kaohsiung University of Science and Technology, Taiwan)

Monday, November 9 13:00 - 14:40

MO1-R3: Lens, Horn, and Leaky-Wave Antennas (TBD)

Room: 409

Investigation of on-Feed Focusing Dielectric Lens Antennas for Arbitrary Focusing, Multi-Beam and on-Axis Multi-Focusing Applications

Ali Al-Tayar (Institute of Microwave Systems, Ruhr-University Bochum, Bochum, Germany); Javagar Mahendran (Ruhr-University Bochum, Germany); Robin J. Schmitz and Irwin Barengolts (Ruhr University Bochum, Germany); Christian Schulz, Jan Barowski and Ilona Rolfes (Ruhr-Universität Bochum, Germany)

Design and Fast Dispersion Analysis of a Valley Topological Leaky-Wave Antenna

Jie Chang (Southeast University, China); Hongliang Zhu (Ningbo Sodo Measurement and Control Technology Co Ltd, China); Zhixia Xu (Southeast University, China); Xiaoxing Yin (State Key Laboratory of Millimeter Waves, China)

Gain and Fidelity Enhanced Printed Log-Periodic Dipole Antenna Utilizing Corrugated Twin-Line

Zhe Zhang (Southeast University, China); Tianyu Dong (Nanjing Guobo Electronics Co Ltd, China); Hongliang Zhu (Ningbo Sodo Measurement and Control Technology Co Ltd, China); Zihao Yang and Shunli Li (Southeast University, China)

Surface Wave-Inspired Line Wave-Based Leaky-Wave Antenna for Simultaneous Dual-Beam Scanning

Rakesh Prasad and Ravi Anand (Indian Institute of Technology Mandi, India); Anirban Sarkar (IIT Bombay, India); Animesh Biswas (IIT Mandi, India)

Design of a Feed Horn Antenna with a Dielectric Lens for Improved Reflector Aperture Efficiency

Jiseok Park and Changhyeon Im (Hongik University, Korea (South)); Wongu Seo (Hanwhasystems Company, Korea (South)); Hosung Choo (Hongik University, Korea (South))

Monday, November 9 13:00 - 14:40

MO1-R4: Wireless Power Transfer and Energy Harvesting Systems (TBD)

Room: 410

Managing Expectations in Microwave WPT: Practical Limitations from Aperture to DC Combining

Neil Buchanan and Raymond Dickie (Queens University Belfast, United Kingdom (Great Britain))

Experimental Demonstration of Microwave Wireless Power Transfer Based on Fully Passive Multi-Rectenna Channel Estimation

Shunto Arai, Kentaro Murata and Naoki Honma (Iwate University, Japan)

Enhanced Long Distance 24 GHz Wireless Power Transmission Using a Wideband Low Loss Transmit Array

Shailendra Kaushal and Yuki Suto (Fujikura Ltd., Japan); Naoki Sakai and Kenji Itoh (Kanazawa Institute of Technology, Japan); Ning Guan (Fujikura, Ltd., Japan); Yo Yamaguchi (Fujikura Ltd., Japan)

Design of a Simplified Vagus Nerve Stimulator Using Switching-Controlled WPT and Multi-Line Spiral Coils

Takeo Kobashi and Masaya Tamura (Toyohashi University of Technology, Japan)

Free-Running-Oscillator-Based Dynamic Wireless Power Transfer for Compact Biomedical Receivers

Adel Barakat (eSync SSB, Inc., Japan); Ramesh K. Pokharel (Binghamton University, USA)

Monday, November 9 13:00 - 14:40

MO1-R5: Rate News1: Passive Components and Metamaterials

Room: 411

Compact D-Band Duplexer Based on Substrate-Integrated Waveguides in 50- μ m-Thick GaAs

Xinghao Tong, Tianze Li and Xiaopeng Wang (Cornell University, USA); Lei Li (Cornell University, USA); Yunjiang Ding and James Hwang (Cornell University, USA)

Low-Crosstalk Dual-Mode SSPP Transmission Based on Mode-Selective Coupling

Zihua You and Hui Feng Ma (Southeast University, China)

Diplexer-Structured Bias-Tee Design for Wideband Active Baseband Impedance Control in Load-Pull Measurement Setups

Ayşe Koçak, Türker Türkyılmaz and Emre Çalışan (Istanbul Technical University, Turkey); Osman Ceylan (Maury Microwave Inc, USA); Hasan Yagci (Istanbul Technical University, Turkey)

Design Method of Multiphysics Carpet Cloaks for Hiding Larger Objects than the Wavelength

Haruka Ueno, Tsutomu Nagayama, Seiji Fukushima and Toshio Watanabe (Kagoshima University, Japan)

Monday, November 9 13:00 - 14:40

MO1-R6: Metamaterial, Metasurface, and RIS Research in Taiwan

Room: 412

Chairs: Yu-Hsiang Cheng (National Taiwan University, Taiwan), Chung-Tse Michael Wu (National Taiwan University, Taiwan)

One-Dimensional Beamwidth-Reconfigurable Fabry-Perot Cavity Antenna for 77 GHz Radars

Zhao-Hong Tu and Yu-Hsiang Cheng (National Taiwan University, Taiwan)

Digitally Programmable Metamaterial Antenna for Reconfigurable Harmonic Beamforming

Minh Quang Nguyen and Yi-En Kao (National Taiwan University, Taiwan); Shuping Li (Rutgers University, USA); Chung-Tse Michael Wu (National Taiwan University, Taiwan)

Ku-Band Filtering and Beam-Scanning Transmitarray

Pei-Ling Chi (National Yang Ming Chiao Tung University, Taiwan); Chih-An Tsai (Taiwan); Tao Yang (IEEE, USA)

Wavelength-Tunable Mid-Infrared Absorber Based on Gratings on Distributed Bragg Reflectors

Hui-Hsin Hsiao (National Taiwan University, Taiwan)

Multi-Functional Reconfigurable Intelligent Surfaces for 6G: From Autonomous Sensing to O-RAN Integrated Network Nodes

Wei-Lun Hsu, Ting-Hao Shih, Kun-Leng Yang and Shih-Cheng Lin (National Chung Cheng University, Taiwan); Chia-Chan Chang (National Chung-Cheng University, Taiwan); Chih-Cheng Tseng (National Taiwan Ocean University, Taiwan); Shao-Yu Lien (National Yang Ming Chiao Tung University, Taiwan); Sheng-Fuh Chang (National Chung Cheng University, Taiwan)

Monday, November 9 15:10 - 16:50

MO2-R1: Doherty and Efficiency-Enhanced Power Amplifiers (TBD)

Room: 401-403

Balancing Deep Back-off and Wideband Operation in Doherty Power Amplifiers: Load Modulation Bottlenecks and Split-Auxiliary Combining

Hanchao Chen, Anna Piacibello and Vittorio Camarchia (Politecnico di Torino, Italy)

A 5 W V-Band GaN Doherty Power Amplifier with 22% PAE at 6-dB Back-off

Moise Safari Mugisho, Christian Friesicke, Sandrine Wagner, Peter Brückner and Rüdiger Quay (Fraunhofer IAF, Germany)

Gate-Voltage IMD Control for Current-Shaped Concurrent Dual-Band PAs

Sayedmohammad Daneshvar Farzanegan and Luis Nunes (Instituto de Telecomunicações & University of Aveiro, Portugal); Filipe M Barradas (Instituto de Telecomunicações, Portugal & University of Aveiro, Portugal); Pedro Cabral and Jose Pedro (Instituto de Telecomunicações & University of Aveiro, Portugal)

Broadband Two-Stage GaN Doherty Power Amplifier Multi-Chip Module with an Integrated Wilkinson Power Divider for 5G NR Applications

Yunhyung Ju (Sungkyunkwan University, Korea (South)); Sooncheol Bae (Hanwha Systems Co. Ltd., Korea (South)); Woojin Choi and Hyungmo Koo (Samsung Electronics Company Ltd., Korea (South)); Youngoo Yang (Sungkyunkwan University, Korea (South))

A 3.3-5GHz Broadband Doherty Power Amplifier with SMD-Free Transformer and Guanella Matching for 5G NR Handsets

Shihai He (Beijing Onmicro Electronics Co. Ltd., China); Linjian Xu, Huan Chen, Qingyang Dong and Hao Meng (Beijing Onmicro Electronics Co., Ltd., China); Simin He (Beijing University of Posts and Telecommunications, China)

Monday, November 9 15:10 - 16:50

MO2-R2: Microwave and Millimeter-Wave Filters (TBD)

Room: 404-406

Low-Loss and Miniaturized Bandpass Filter Utilizing Quarter-Mode Patch Resonator Based on Hybrid Integrated Suspended Line Platform

Shuangxu Li and Kaixue Ma (Tianjin University, China); Yi WU (Tianjin University, China & Yi WU, China); Weiqi Liu and Zhan Yu (Tianjin University, China)

Design and Fabrication of the Dual-Mode Dual-Level J-Inverter for Dual-Band Filters

Koma Kikuya, Taiyo Ushiyama and Satoshi Ono (The University of Electro-Communications, Japan); Naoki Miyata (Tokyo Metropolitan College of Industrial Technology, Japan)

Low-Loss, Low-Cost Filter and Filtering Crossover for Millimeter-Wave Application Based on MISL Technology

Weiqi Liu (Tianjin University, China); Yi WU (Tianjin University, China & Yi WU, China); Zhan Yu, Shuangxu Li and Ziji Tao (Tianjin University, China); Siqiao Lu (Tianjin university, China); Liu Tianshuo and Kaixue Ma (Tianjin University, China)

A Dual-Band Switchable Filtering Balun with Integrated SPDT Functionality

Mind-Ze Wu, Chi-Feng Chen, Chung-Ting Liu, Kuan-Chih Chen, Ming-Wei Hsiao and Yi-Jou Wu (Tunghai University, Taiwan)

High-Figure-of-Merit 60-GHz CMOS Bandpass Filters with Three Designable Transmission Zeros

Adel Barakat (eSync SSB, Inc., Japan); Samundra K. Thapa (Qorvo, inc, USA); Ramesh K. Pokharel (Binghamton University, USA); Mohamed Habashy Mubarak Ramadan (NICT, Japan); Shinsuke Hara (National Institute of Information and Communications Technology, Japan); Issei Watanabe (National Institute of Information and Communications Technology, Japan); Akifumi Kasamatsu (National Institute of Information and Communications Technology, Japan)

Monday, November 9 15:10 - 16:50

MO2-R3: Reconfigurable Reflectarrays, Metasurfaces, and Intelligent Arrays (TBD)

Room: 409

Origami Deployable Reflectarray Antennas for Small Satellites

Takashi Tomura (Institute of Science Tokyo, Japan)

A Compact Low-Cost Metasurface-Enabled Programmable Transmitter for Simultaneous Frequency Filtering and Dynamic Beam Scanning

Chao Song, Han Wei Tian and Qian Zhu (Southeast University, China); Wei-Xiang Jiang (SEU, China)

Hybrid Neural Network Surrogate Modeling for Circularly-Polarized Aperiodic Antenna Arrays

Rongsheng Xu, Weimin Zeng, Zhi Hao Jiang and Wei Hong (Southeast University, China)

A Wideband Mechanically Reconfigurable Reflectarray for Continuous Independent Dual-CP

Yixuan Ma, Di Xie, Weihong Zang and Xicheng Zhang (Southeast University, China)

Side Lobes Suppression of Large-Spacing Array Using Deep Reinforcement Learning

Haowen Cai and Wei Lin (The Hong Kong Polytechnic University, Hong Kong)

Monday, November 9 15:10 - 16:50

MO2-R4: Microwave/Millimeter-Wave Systems for Wireless Links, Radar, and WPT (TBD)

Room: 410

Flight Demonstration of HAPS Feeder-Link Wireless Relay System Using Non-Regenerative Architecture

Yuki Takagi (SoftBank Corp, Japan); Kazuki Matsuura and Mitsukuni Konishi (SoftBank Corp., Japan); Yoshichika Ohta (Softbank Corp., Japan)

SNR and Power Comparison of Electronic and Optoelectronic Millimeter-Wave Transmitters

Yalin Zhou, Zichuan Zhou and Izzat Darwazeh (University College London, United Kingdom (Great Britain)); Zhixin Liu (University College Londo, United Kingdom (Great Britain))

Simulation of Wind-Induced Vibrations in Millimeter-Wave Antennas Mounted on Power Transmission Towers and Poles

Kensuke Ikeda (Central Research Institute of Electric Power Industry, Japan)

Helicopter Flight Evaluation of a Novel Phased-Array MIMO Radar for 3D Obstacle Detection

Siyang Wang, Ram Kishore Arumugam, Alex Shoykhetbrod, Stefan Wickmann, Vignesh Gopalan Jeyaraman, Christopher Schwäbig, Jan Wessel and Patrick Wallrath (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR, Germany)

Ku-Band Hybrid Phased Array MIMO FMCW Radar Hardware Architecture for Airborne Safety and Navigation

Alex Shoykhetbrod (Fraunhofer FHR, Germany); Ram Kishore Arumugam (Fraunhofer Institute for High Frequency Physics and Radar Technology & Ruhr University of Bochum, Germany); Siying Wang (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR, Germany); Stefan Wickmann (Fraunhofer FHR, Germany); Samuel Hayden (Fraunhofer Institute for High Frequency Physics and Radar Technology, Germany); Christian Bredendiek, Riana H. Geschke, Ralf Brauns, Nowok Sandra, Sven Leuchs and Christian Krebs (Fraunhofer FHR, Germany); Jan Wessel (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR, Germany); Reinhold Herschel (Wavesense Dresden GmbH, Germany)

Monday, November 9 15:10 - 16:50

MO2-R5: Computational Electromagnetics and High-Frequency Measurement Techniques (TBD)

Room: 411

Machine-Learning-Based Causality Error-Correction Model for the Impedance-Corrected 2X-Thru de-Embedding

Hirofumi Yoshinaga and Hiroshi Sato (Nissinbo Micro Devices Inc., Japan)

A Structure-Adaptive Physics-Informed Neural Network for Complex Multimodal Scattering Scenarios Governed by Maxwell's Equations

Zhirui Fu, Yanni Wang, Yifan Xue, Jun Ding, Chenjiang Guo and Xiaoyan Pang (Northwestern Polytechnical University, China)

Efficient Simulation of SAW Devices Based on Direct Electrode Response Method and Dynamic Compression Technique

Longfei Li and Min Tang (Shanghai Jiao Tong University, China)

Enhancing Simulation Accuracy of High-Frequency Transmission Line Loss by Surface Conductivity Measurement

Yasumichi Takase, Naoto Oota, Hideyuki Nagano and Kazuhiko Niwano (AGC Inc., Japan)

Monday, November 9 15:10 - 16:50

MO2-R6: Systematic Design, Material Development, and Evaluation of Electromagnetic Absorbers

Room: 412

Chair: Sho Muroga (Tohoku University, Japan)

Leakage EM Suppression from Enclosure Apertures Using Ultra-Lightweight CNT-Cellulose Aerogels

Kishio Hidaka (Tohoku University & Graduate School of Engineering, Japan); Dan Suzuki (Tohoku University, Japan); Motoshi Tanaka (Akita University, Japan); Yugo Koishikawa (Tohoku University, Japan); Eriko Kijima and Tomonaga Ueno (Nagoya University, Japan); Saijian Ajia, Yasushi Endo and Sho Muroga (Tohoku University, Japan); Shotaro Takahashi (Akita University, Japan)

Characteristics Evaluation of Microwave EM Wave Absorbers and Shielding Materials Using Periodically Arranged Metal Pattern Sheets

Kohki Okuno, Shinichiro Yamamoto and Satoru Aikawa (University of Hyogo, Japan); Teruhiro Kasagi (Sanyo-Onoda City University, Japan)

Analytical Study on a Single-Layer Dual-Polarized Active Frequency Selective Surface with Reflection/Transmission Response Inversion

Koshiro Nashimoto and Ryosuke Suga (Aoyama Gakuin University, Japan)

Design of a Metamaterial-Based Electromagnetic Scattering Sheet for Reducing Dead Zones

Yasutaka Murakami (UEC, Japan); Jerdvisanop Chakarothai and Katsumi Fujii (National Institute of Information and Communications Technology, Japan)

Inorganic Fiber/Carbon-Nanotube Based Lightweight and Flame-Retardant Composites for Broadband Electromagnetic Wave Absorbers

Dan Suzuki (Tohoku University, Japan); Kishio Hidaka (Japan Aerospace Exploration Agency); Junji Nemoto and Shota Fukushima (Hokuetsu Corporation, Japan); Yoshikuni Shimokawa, Kiyohide Wada and Toshiaki Katsuya (Tatsuta Electric Wire & Cable Co. LTD, Japan); Atsushi Sakai and Osamu Kawasaki (Japan Aerospace Exploration Agency, Japan); Sho Muroga (Tohoku University, Japan)

Tuesday, November 10

Tuesday, November 10 9:00 - 11:00

TU1-R1: Millimeter-Wave High-Efficiency and Broadband Power Amplifiers (TBD)

Room: 401-403

A 24-31 GHz Continuous Class-F Power Amplifier with Improved AM-AM Distortion Achieving 17.1% Modulation PAE in 65nm CMOS

Xuanxuan Yang, Qin Chen and Yuchen Liang (Southeast University, China); Ximing Gao (China); Qiancheng Lv (Southern Power Grid Digital Grid Research Institute, China); Lianming Li (National Mobile Communications Research Lab., China)

20-57 GHz Ultra-Wideband MMIC Power Amplifier

Jiyong Park, Carlo Poledrelli and Michael Ciardullo (Mini-Circuits, USA)

A 36-44 GHz Broadband Ultra-Compact 3-Way Doherty Power Amplifier Using a Triple-Coil-Based Combiner in 65-nm Bulk CMOS

Yuchen Liang, Qin Chen, Xuanxuan Yang, Ziang Zhang and Rui Cao (Southeast University, China); Changbao Xu (Electric Power Research Institute of Guizhou Power Grid Corporation, China); Lianming Li (National Mobile Communications Research Lab., China)

A 26-38.1 GHz Radiation-Hardened Power Amplifier with <1 dB OP1dB Variation Under 1 Mrad TID Using Dynamic-Biased MGTR Technique

Shize Duan (Northwest Polytechnical University Xi'an, China); Zhen Li, Xiaodong Zhao and Yuanyuan Cui (Northwestern Polytechnical University, China); Xiaofeng Yang (Xi an University of Posts and Telecommunications, China); Xunying Zhang (Northwestern Polytechnical University, China)

An Ultra-Compact Differential V-Band Power Amplifier Using EDMOS Transistors with 18.1 dBm P1dB and 21% PAE in 22nm FD-SOI CMOS

Han Zhou (Tampere University); Torgil Kjellberg (Sivers Semiconductors AB, Sweden); Haojie Chang and Christian Fager (Chalmers University of Technology, Sweden)

A 1.15-W 72-80 GHz Power Amplifier with 21% PAE Using 100nm GaAs pHEMT Technology

Zhiyi Liu and Gregor Lasser (Chalmers University of Technology, Sweden)

Tuesday, November 10 9:00 - 11:00

TU1-R2: Power Dividers and Multifunctional Passive Networks (TBD)

Room: 404-406

Design of the CRLH-Based Dual-Band Power Dividers and MIMO Antenna

Sungtek Kahng and Seonguk Kim (Incheon National University, Korea (South)); Sejin Lee (Incheon National University, Korea (South), Korea (South)); Dongyun Kim and Seongwoo Park (Incheon National University, Korea (South))

A Wideband Reconfigurable Power Divider Using a Coupled-Line Coupler for Array Antennas

Jo Tamura and Kazuki Ishimoto (Nihon University, Japan); Hiroyasu Ishikawa (Nihon University & College of Engineering, Japan)

A Compact Filtering Power Divider with High Selectivity and Wide Stopband Performance Using Eighth-Mode FSIW Cavities

Rong Jie Ke (University of Electronic Science and Technology of China, China); Hong Bin Wang and Yu Jian Cheng (UESTC, China)

Wideband Wilkinson Power Divider Using Two-Section Lumped-Element Synthesis

Aniello Franzese and Batuhan Sütbaşı (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Falk Korndorfer (IHP microelectronics, Germany); Rakesh Sinha (National Institute of Technology, Rourkela, India); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

Nonreciprocal Filtering Power Divider Using Mixed Static and Time-Modulated Resonators

Girdhari Chaudhary, Suyeon Kim, Palaystint Thorng, Md Abu Sufian and Yongchae Jeong (Jeonbuk National University, Korea (South))

Design Method of Compact Broadband Arbitrary N-Way in-Phase Power Dividers Utilizing LC-Ladder Circuits

Tadashi Kawai and Kakeru Ishida (University of Hyogo, Japan)

Tuesday, November 10 9:00 - 11:00

TU1-R3: Array Antennas and Phased-Array Beamforming (TBD)

Room: 409

A Novel Filter-Theory-Based Design Approach for Feed and Inter-Element Transmission Lines in Standing-Wave-Excited Strip Array Antennas

Kenichi Iio (Furuno Electric & university of Hyogo Doctoral Program in Engineering, Japan); Tadashi Kawai (University of Hyogo, Japan); Isao Ohta (University of Hyogo, Japan)

A Degree-of-Freedom Sidelobe Aperture Product Framework for Average-SLL Assessment of Uniform and Sparse Phased Arrays

Jeffrey P. Massman (USA)

Conformal Load-Bearing Antenna Array with a Re-Entrant Hexagonal Honeycomb Structure

Jinglong Zhao (Southeast University, China); Yanbin Li (Southeast University, China); Lixin Yang and Qingguo Fei (Southeast University, China)

A Conformal PUMA Phased Array with 3:1 Bandwidth and Wide-Angle Scanning

Zi Jian Hu and Zhi Hao Jiang (Southeast University, China); Bei Run Ma (Southeast University, China); Fan Wu (Southeast University, China)

Spectrally Efficient Single-Sideband PWM Timed Arrays Using Digitally Controlled I/Q Signals

Kathu Sudevan (IIST, India); Gopika R (Indian Institute of Space Science & Technology, India); Chinmoy Saha (Indian Institute of Space Science and Technology, India & Royal Military College of Canada, Canada)

Circularly Polarized Beamforming via Dual Directional and Omnidirectional Elements in Volumetric Random Arrays

Shihyuan Yeh (Asia Eastern University of Science and Technology, Taiwan)

Tuesday, November 10 9:00 - 11:00

TU1-R4: Microwave and Millimeter-Wave Sensing for Detection and Monitoring (TBD)

Room: 410

In-Cabin Short-Time Child Presence Detection Using Radar with GLRT-Based Statistical Weighting

Ming-Huan Hsu and Iou-Heng Chen (National Sun Yat-sen University, Taiwan); Ji-Xun Zhong (National Sun Yat-sen University, Taiwan); Fu-Kang Wang and Ju-Yin Shih (National Sun Yat-sen University, Taiwan)

Multi-Point Measurement of Bridge Displacement Using a Single mmWave Sensor

Yudai Matsue (Kyocera Corporation, Japan); Katsutoshi Kawai and Yuu Kashima (KYOCERA Corporation, Japan); Jun Kuroda (Kyocera Corporation, Japan); Kai Xue, Sota Taniguchi and Tomonori Nagayama (University of Tokyo, Japan)

A Four-Port Coupler-Based 24-GHz Radar for Noncontact Liquid-Surface Ripple Monitoring

Sung-Nien Hsieh and Tzu-Shen Wang (National Taiwan University of Science and Technology, Taiwan)

Ground Coil Reduction in near-Field Inductive Sensing for LSM-Driven Transportation Systems

Hyeon-Chang Seong and JeHeon Lee (Korea University of Technology and Education, Korea (South)); Jeong-Min Jo and Chang Young Lee (Korea Railroad Research Institute, Korea (South)); Jae Hee Kim (KOREATECH, Korea (South))

Statistical Modeling and Sensor Fusion for SPAD-Based Time-of-Flight LiDAR

Eleonora L. Zich (Politecnico di Milano, Italy); Francesco Pace Napoleone (Université de Toulouse - Paul Sabatier, France); Nikolai Simonov (Università di Pisa, Italy); Mattia Cera, Simone Amoruso, Riccardo Bufano, Alessandro Cacciola, Gabriel Felipe Martinez and Riccardo Enrico Zich (Politecnico di Milano, Italy)

Tuesday, November 10 9:00 - 11:00

TU1-R5: Microwave/Millimeter-Wave Measurement, Sensing, and Characterization (TBD)

Room: 411

Detection of Water Contamination in Organic Solvents Using a Phase Variation Microwave Sensor

Umesha Sandarenu, Amir Ebrahimi, Kamran Ghorbani and Wayne Rowe (RMIT University, Australia)

Adaptive Angular Sampling for Azimuth-Scanning Radar Cross Section Measurements

Seyeon Lee, Seulgi Koh, Cheongmin Lee and Youngjae Yu (Yonsei University, Korea (South)); Ic-Pyo Hong (Kongju National University, Korea (South)); Jong-Gwan Yook (Yonsei University, Korea (South))

A Pulsed Amplifier Method for 35-dB ENR in 110-GHz on-Wafer Noise Figure Measurement

Yu-Shao Jerry Shiao (Taiwan Semiconductor Research Institute, Taiwan); Zhi-Xiang Chen (Taiwan Semiconductor Research Institute, National Institutes of Applied Research, Taiwan); Wen-Lin Chen and Kun-Ming Chen (Taiwan Semiconductor Research Institute, Taiwan); Guo-Wei Huang (Taiwan Semiconductor Research Institute & National Yang Ming Chiao Tung University, Taiwan)

W-Band Imaging System Based on ± 6 th-Order Optical Comb Sideband Extraction as an Optical Local Oscillator Source

Ryoma Okada (Nara Institute of Science and Technology, Japan); Maya Mizuno (National Institute of Information and Communications Technology, Japan); Hironari Takehara, Makito Haruta, Hiroyuki Tashiro, Jun Ohta and Kiyotaka Sasagawa (Nara Institute of Science and Technology, Japan)

Lumped Equivalent-Circuit Extraction of a GSG Copper-Pillar/Underfill Flip-Chip Interconnect

Melik Yazici (IHP, Germany); Falk Korndoerfer (IHP microelectronics, Germany); Jan Schäffner, Mauricio Montanares, Yegappan Sethu and Farabi Ibne Jamal (IHP, Germany)

Temperature-Controlled OTA D-Band Measurement Without Thermal Enclosure

Lieke AM Geubbels and Jordi Cornelis Franciscus Zandboer (Eindhoven University of Technology, The Netherlands); Natsumi Minamitani (Murata Manufacturing Co., Ltd., Japan); A. B. (Bart) Smolders, Elmine Meyer and Ad Reniers (Eindhoven University of Technology, The Netherlands)

Tuesday, November 10 9:00 - 11:00

TU1-R6: EuMA Special Session at APMC 2026: Microwave Measurement and Applications in Europe

Room: 412

Talk 1

Title: Microwave-Assisted Reactor for Syngas and Biochar Production

Authors: Luca Perregrini (University of Pavia, Italy), Gianluigi Bruni (Endeavour s.r.l., Italy), Alessandro Leona (TRG s.r.l., Italy), Piero Rosina (TRG s.r.l., Italy)

Talk 2

Title: New Developments in Microwave Instrumentation

Authors: Kamel Haddadi, Clément Lenoir and Mohamed Sebbache (University of Lille, CNRS, France)

Talk 3

Title: Comparison of SOLR and SRM for On-Wafer Three-Port VNA Calibration

Authors: Lukas Ebner and Michael Gadringer (Graz University of Technology, Graz, Austria)

Tuesday, November 10 11:30 - 13:00

IF2: Interactive Forum 2

Room: 2F-Hall

Concurrent 0°/180° Phase-Difference Circuits Using Independent Signal-Routing Control

Ching-Wen Tang and Chieh Lee (National Chung Cheng University, Taiwan)

Tapered Balun Based on SICL for Ultra-Wideband Balanced Twin-Line Transition

Jinlin Yang and Shunli Li (Southeast University, China); Wenzhen Yu (14th Research Institute of China Electronics Technology Group Corporation, China); Xiaoxing Yin (Southeast University, China)

A Compact Reconfigurable Filtering Power Divider with Integrated SPDT Switching Using Varactor-Loaded Dual-Mode Resonators

Shu-kuang Lin, Chi-Feng Chen, Chung-Ting Liu, Yu-Hsuan Chuang, Quoc Viet Lam and Shu-Hung Tsai (Tunghai University, Taiwan)

Hot-Switching of PCM-Based RF-Switches

Lucas Yuri Henrique de Araujo (University of Limoges, France); Julien Lintignat (XLIM UMR 7252 Université de Limoges/CNRS, France); Damien Passerieux (University of Limoges, France); Pierre Blondy (XLIM - University of Limoges, France)

Symmetrical Equal Power Division Gysel Power Divider/Combiner with Wideband Performance and Second-Harmonic Suppression

Taehwan Jeong, Yeonsu Kim, Seonbeen Kim, Huijun Woo, Youna Jang and Dal Ahn (Soonchunhyang University, Korea (South))

Variable Coupler Design for a 900 MHz Band Pinching Antenna Emulator System

Charleston Dale M Ambatali (University of the Philippines, Philippines)

Design of a Bandpass Diplexer Featuring Equal Power Dividing Functions

Ching-Wen Tang and Tao-An Xie (National Chung Cheng University, Taiwan)

A Layout-Friendly Rat-Race-Equivalent Hybrid Using a Schiffman Phase Shifter and Branch-Line Coupler for Antenna Feeding Networks

Jian-Yu Li and Kai-Long Lin (Yuan Ze University, Taiwan)

Design a Compact Coupler with Bondwire for a Small-Packaged Power Amplifier Module

Lok Ki Ho (The Education University of Hong Kong, Hong Kong); Steve W. Y. Mung (The Hong Kong Polytechnic University, Hong Kong)

An Area-Efficient Wideband Transformer-Based Coupler with Arbitrary Phase Difference for 5G Applications

Yujia Wang, Xiaoyu Liu and Shunli Ma (Fudan university, China); Junyan Ren (Fudan University, China)

Directly Coupled Waveguide Bandpass Filter with Transmission Zeros Using Bent E-Plane Stubs

Hao-Hui Chen and De-Yu Cao (National Kaohsiung University of Science and Technology, Taiwan); Yusuke Kusama (Toyo University, Japan); Yao-Wen Hsu (National Kaohsiung University of Science and Technology, Taiwan)

Compact and Highly Selective Coupled Line Filters in SiGe BiCMOS for D-Band 6G Applications

Timo Schwall (Friedrich-Alexander-University Erlangen-Nuremberg, Germany); Michael Loose, Gianluca Simone and Manuel Koch (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Robert Weigel (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Norman Franchi and Andre Engelmann (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

Hybrid Pole-Residue Surrogate with Trust-Aware Inverse Design for Folded Coupled-Line Dual-Bandpass Microstrip Filters

Yuxin Zhang and Shan Luo (Panzhuhua University, China)

A Compact Resonator-Loaded SSPP-SIW Hybrid Bandpass Filter with Enhanced Selectivity for Ka-Band Millimeter-Wave Applications

Ashish Kumar (IIT Guwahati, India); Sachin Kumar (Indian Institute of Technology, Guwahati, India); Sarita Raj and Ashwini Sawant (Indian Institute of Technology Guwahati, India)

Novel Synthesis of a Compact Wideband Filter with a Wide Stopband

Riku Inoue, Chun-Ping Chen, Takaharu Hiraoka and Tetsuo Anada (Kanagawa University, Japan); Zhewang Ma (Saitama University, Japan)

Compact 8-Bit Chipless RFID Tags Using Defected Ground Structures for Improved Notch Performance

Shreyas Nilesh Chaudhari (Birla Institute of Technology and Science, Pilani, Rajasthan, India); Ameya Mukul Karnik, Krishna Pradeep Athreya and Somesh Pradeep Huljute (BITS Pilani, India); Dinesh Rano (Birla Institute of Technology and Science, Pilani, Rajasthan, India & BITS Pilani, India)

An Investigation into the Effect of Convex Physical Bending on the Performance of Four Microstrip Low-Pass Filter Topologies

Temiloluwa Oshundiya (University College Dublin, Ireland)

Ka-Band Output Filter Assembly for Feeder Link of LEO Communication Satellites

Changsoo Kwak (ETRI, Korea (South)); Naeun Shin (Electronics and Telecommunications Research Institute (ETRI), Korea (South)); Dong-pil Chang (ETRI, Korea (South))

Experimental Characterization of Curvature-Insensitive Resonance in Inkjet-Printed Open-Stub CPWs

Shin Yokomura (University of Kagoshima, Japan); Hiroto Sakaki (Mitsubishi Electric Corporation, Japan); Kenjiro Nishikawa (Kagoshima University, Japan)

Design of Waveguide BPFs with Multiple Transmission Zeros Using Composite Series Resonators

Bingqing Miao, Zhewang Ma and Xinlei Liu (Saitama University, Japan); Fan Liu (Changsha University of Science and Technology, China)

Analytical Model of Microstrip-Line Bends for Reflection and Phase Control in 300-GHz Array Antenna Feed Lines

Yutaka Mimino and Takuichi Hirano (Tokyo City University, Japan)

Additive Manufacturing of Monolithic Metal RF-Components Using Metal-Binder-Jetting

David Panusch (Friedrich Alexander Universität Erlangen-Nueremberg, Germany); Jing Shi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Gerald Gold (FAU Erlangen-Nürnberg, Germany)

Designing a Waveguide-to-Microstrip Feed Structure for a PCB-Based ME Dipole Antenna at D-Band

Adnan Ali, Kimmo Rasilainen, Marko E Leinonen and Aarno Pärssinen (University of Oulu, Finland); Nuutti Tervo (University of Oulu, 6G Flagship, Finland)

Improving the Performance of High-Speed Connectors

Nai Syuan Chen, Chang-Yan Li, Yong Han Qiu and Wen Chieh Liang (National Taipei University of Technology, Taiwan); Jeih-Weih Hung (National Chi Nan University, Taiwan); Eric S. Li (National Taipei University of Technology, Taiwan)

A Study on the Measurement of Conductor Loss Using Standard Waveguide

Yusuke Kusama (Toyo University, Japan); Hao-Hui Chen and Yao-Wen Hsu (National Kaohsiung University of Science and Technology, Taiwan); Makoto Yoshida (CDEX, Co., Ltd., Japan)

Finite-Length Behavior of Nonreciprocal CRLH Transmission Lines with Even/Odd Unit Cells

Kensuke Okubo, Mitsuyoshi Kishihara and Koichiro Sakaguchi (Okayama Prefectural University, Japan)

Experimental Demonstration of a Dual-Band Four-Port Circulator Based on Nonreciprocal Metamaterial Coupled Lines

Kotomi Takeuchi and Tetsuya Ueda (Kyoto Institute of Technology, Japan)

Physics-Informed Hybrid Network Assisted Inverse Design of Conformal Frequency Selective Surface

Meng-Zi Li and Zhen-Guo Liu (Southeast University, China); Xin-zhi Bo (IT - Instituto de Telecomunicações, Portugal & It, Portugal); Heng Wang (Southeast University, China)

Physics-Inspired Local Residual Learning for Beam Direction Prediction and Capacitance Configuration Inference in Finite-Size Reconfigurable Reflectarrays

Zhuoyue Zhao, Yinghui Chen, Bingbing Song, Wenzhe Song, Zijun Hu, Jiaqi Li, Wu Yang and Wei Bing Lu (Southeast University, China)

Dual-Band Terahertz Metasurfaces Based on Localized and Non-Localized Resonances via Finite-Lattice Grouping

Zhen Liu and Yoshiaki Kanamori (Tohoku University, Japan)

Design of Cylindrical Mantle Cloaks Using Quadratic-Optimization Annealing Based Quantum Black-Box Optimization

Daichi Ito (The University of Osaka, Japan); Michitaka Ameya (AIST, Japan); Yuto Kato (National Institute of Advanced Industrial Science and Technology, Japan); Atsushi Sanada (The University of Osaka, Japan)

A Harmonic Beam Optimization Method Based on Taylor Weighting for 2-Bit Space-Time-Coding Metasurface

Yi Fei Huang, Pei Hang He and Hao Chi Zhang (Southeast University, China)

Broadband Infrared Integrated Phase Gradient Metasurface for Multi-Physics Stealth

Himansu Sekhar Senapati (Indian Institute of Technology Mandi, India); Anirban Sarkar (IIT Bombay, India); Animesh Biswas (IIT Mandi, India)

A Broadband Ultra-Wide-Angle Scattering Metasurface Based on Phoenix Cells

Sun-Gyu Lee, Jung Ick Moon and Jung-Nam Lee (Electronics and Telecommunications Research Institute, Korea (South))

A Co-Simulation Method for Analyzing PIN-Based Metasurfaces Under Different Conduction States

Guichen Wang (Southeast University, China)

Thin-Film-Based Dual-Polarized Transmission-Type Metasurface

Masamichi Yonehara, Hiromichi Yoshikawa and Takafumi Uehama (Kyocera Corporation, Japan); Hisamatsu Nakano (Hosei University, Japan)

Design of Sub-THz MMIC-to-Waveguide Transitions in SiGe Process with Reduced Loss

Haojie Chang, Vessen Vassilev and Omid Habibpour (Chalmers University of Technology, Sweden); Han Zhou (Tampere University, Finland & Chalmers University of Technology, Sweden); Herbert Zirath (Chalmers University of Technology, Sweden)

Vibration Mode Visualization of Objects Using a Millimeter-Wave Sensor

Jun Kuroda and Yudai Matsue (Kyocera Corporation, Japan); Yuu Kashima (KYOCERA Corporation, Japan); Satoshi Yamada, Jun Iyama and Tomonori Nagayama (University of Tokyo, Japan)

A Fast HPM Coupling Analysis Method of Platform-Mounted Antennas Under Arbitrary Incidence

Ruxin Zheng, Yongzhe Wei, Shikuan Liu, Chengjie Li and Zhongyuan Zhou (Southeast University, China)

Physics-Informed Neural Network Method Based on the Electric Field Integral Equation for Modeling Plasmonic Metasurfaces

Kazuhiro Fujita (Saitama Institute of Technology, Japan)

Power Balance of Infrared Antenna Made of Graphene Coated Nanowire Grating Fed by Modulated Electron Beam

Dariia O. Herasymova (Institute of Radio-Physics and Electronics NASU, Ukraine); Sergii V. Dukhopelnykov (University of Rennes & Institute of Radio-Physics and Electronics NAS Ukraine, Kharkiv, France); Alexander I. Nosich (IRE NASU, Ukraine)

Error Estimation of Unequal-Interval Modeling for Split-Step Parabolic Equation

Xin Du (Kagoshima University, Japan); Jun-ichi Takada (Institute of Science Tokyo, Japan)

Efficient Matrix Square Root Computation for Propagation Operators in Optical Waveguide Analysis

Taiki Matsuzaki and Akito Iguchi (Muran Institute of Technology, Japan); Keita Morimoto (University of Hyogo, Japan); Yasuhide Tsuji (Muran Institute of Technology, Japan)

A Fast Optimization Method for Full-Space Pencil Beam with Low Sidelobes of Planar Array Antennas

Youji Cong (Southeast University, China); Zhihao Huang (Nanjing Marine Radar Research Institute, China); Rui Wang and Teng Li (Southeast University, China)

Sketch-to-Layout: A Unified Geometric Prior for Cross-Topology on-Chip Inductors with EM Prediction

Han Na (Fraunhofer Institute for Electronic Microsystems and Solid State Technologies EMFT, Germany); Abderahim Zerbane (Fraunhofer Institute for Electronic Microsystems and Solid State Technologies, Germany); Deniz Tas (Fraunhofer EMFT, Germany); Stefan Punzet (Fraunhofer Institute for Electronic Microsystems and Solid State Technologies, Germany); Marco Dietz (Fraunhofer EMFT, Germany)

Experimental Investigation of Local Backside Etching Patterns for Passive Thermal Management in TSV-Free RF Silicon Interposers

Melik Yazici, Jakub Jablonski, Yegappan Sethu, Mauricio Montanares and Farabi Ibne Jamal (IHP, Germany)

A Domain-Decomposition Neumann-Series Approach for Simulating FMCW Radar in Large Lens-Based Systems

Lukas Furtmüller and Reinhard Feger (Johannes Kepler University Linz, Austria)

High-Power AlN Fluid-Metasurface Multi-Layer Output Window for Ka-Band Gyro-TWTs

Jianwei Zhou (University of Electronic Science and Technology of China, China); Wei Jiang (UESTC, China); Guo Liu, Ran Yan and JianXun Wang (University of Electronic Science and Technology of China, China); Yong Luo (UESTC, China)

Enhancement of Heating Uniformity of Food in Microwave Oven with Waveguide Triplexer

Kaito Fujiwara, Hayato Iijima, Sho Hoshino, Takanobu Ohno, Kosei Tanii and Satoko Iida (National Institute of Technology, Kisarazu College, Japan)

Dual Wave Probes for Common- and Differential-Mode Bi-Directional Reflection Coefficients in Closed-Loop Circuit Stability Analysis

Robert (Shu-I) Hu (National Chiao Tung University, Taiwan); Ying Chen (University of California at Davis, USA); Chin-Chi Lin and Cih-Cheng Chang (National Yang Ming Chiao Tung University, Taiwan); Ting Yuan Li (National Yang Ming Chiao Tung University, Taiwan); Chia-Chun Huang (National Yang Ming Chiao Tung University, Taiwan)

Suppression of Localized Overheating of Food in Microwave Oven Using Waveguide Diplexer

Hayato Iijima, Kaito Fujiwara, Sho Hoshino, Takanobu Ohno, Kosei Tanii and Satoko Iida (National Institute of Technology, Kisarazu College, Japan)

A Cross-Platform Workflow for EM Simulation Using Open-Source Solvers

Anton Datsuk (IHP, Germany)

Evaluation of Induced Electric Fields in the Human Body for Wireless Power Transfer Systems Considering Phase Difference of Coil Currents

Masane Wakahara and Akimasa Hirata (Nagoya Institute of Technology, Japan)

Measurement Method for Material Loss Properties in Substrate with Through-Hole Conductors Using SIW Resonators

Momoka Tahira, Hiromichi Yoshikawa and Naoki Hirayama (Kyocera Corporation, Japan)

An Improved Gerchberg-Saxton Algorithm Based on Equivalent Phase Center Optimization for Phaseless near-Field Measurement

Shuyuan Chu, Kaiyue Huang and Teng Li (Southeast University, China)

Fabrication and mmWave Dielectric Characterization of Polyimide Packages Using Microstrip Ring Resonators

Muhammad Umar (Barkhausen Institute, Germany); Adil Shehzad (Fraunhofer Institute for Reliability and Microintegration, Germany); Shahanawaz Kamal and Armen Harutyunyan (Barkhausen Institut, Germany); Juliana Panchenko (TU Dresden, Germany); Padmanava Sen (Research Group Leader, Barkhausen Institut gGmbH, Germany & Barkhausen Institut gGmbH, Germany)

Electromagnetic Performance Analysis of Segmented Diverters for Lightning Protection of Streamlined Airborne Radomes

Rudra Narayan Barik (Birla Institute of Technology and Science, Pilani, Goa Campus, India & BITS, India); Hrishikesh Sonalikar (BITS, Pilani, India)

EMF Exposure Analysis of 6.78 MHz Wireless Power Transfer Device

Hyeokjin Ko, Donghoon Kim, Haneul Jeong and Chi-Hyung Ahn (Korea University of Technology and Education, Korea (South))

Modeling of Long-Duration Electromagnetic Noise Induced on a Floating Electronic Device by the Potential Drop of a Charged Proximity Object

Teppei Nagai and Takahiro Yoshida (Tokyo University of Science, Japan)

A Nonplanar Microwave Sensor for Surface and Embedded Dielectric Crack Detection

Chien-Hao Liu and Chieh-Pei Li (National Taiwan University, Taiwan)

Design of a Bidirectional Printed Yagi-Uda Array

Hiroki Shinohara and Takuichi Hirano (Tokyo City University, Japan)

Design and Numerical Analysis of PTFE Based Dielectric Transition with Reduced Transmission Ripples for E-Band Application

Manojkumar Agrawal (IIT Roorkee, India); Krati Tiwari (Medicaps University, India); Devendra Kumar (IIT Roorkee, India); Nagendra P Pathak (Indian Institute of Technology Roorkee, India)

A 1 kHz-18 GHz Resonance-Free Conical Inductor-Based Bias Tee Design for UWB Applications

Chiranjit Majumder (Indian Institute of Technology Kanpur, India); Basudev Majumder (IIST, India); Nagaditya Poluri (Indian Institute of Technology Kanpur, India & The University of Sheffield, United Kingdom (Great Britain))

Tuesday, November 10 13:00 - 14:40

TU2-R1: RF System Circuits, Frequency Control, Modeling, and Power Conversion (TBD)

Room: 401-403

High Power Rectenna Techniques in K-Band

Kenji Itoh (Kanazawa Institute of Technology, Japan)

A 2.5 W Rectified DC Output Power with 73% RF-DC Conversion Efficiency Diamond SBD Operating at 200 Degrees Celsius in 2.45 GHz-Band

Kosuke Saito and Tomoyuki Furuichi (Tohoku University, Japan); Yuji Kato (OOKUMA DIAMOND DEVICE, Japan); Hitoshi Umezawa (Ookuma Diamond Device Co., Ltd., Japan); Noriharu Suematsu (Tohoku University, Japan)

A BLE Transceiver with TRX Co-Matching Achieving over -96.5 dBm Sensitivity and Dual 6/0- dBm Power Mode

Ji Sung Jang, Minjun Suh, Hui Rak Choi and Kang-Yoon Lee (Sungkyunkwan University, Korea (South))

Small- and Large-Signal Stability Analysis Through Parameterization of Fixed Solutions

Sergio Colangeli (University of Rome Tor Vergata, Italy); Walter Ciccognani (Università of Rome Tor Vergata, Italy); Patrick Ettore Longhi (University of Roma Tor Vergata, Italy); Ernesto Limiti (University of Rome Tor Vergata, Italy)

A 2 GHz CMOS Tracking PLL with Phase Margin Compensation Maintaining a 0.8μ s Response Speed over the Dynamic Range

Kaibo Zhang (Southeast University, Purple Mountain Laboratories, China); Liming Gu and Lijuan Wang (Southeast University, China); Qiuxi Jiang (Southeast University, Purple Mountain Laboratories, China); Sanming Hu (Southeast University, China)

Tuesday, November 10 13:00 - 14:40

TU2-R2: Tunable, Miniaturized, and Millimeter-/Terahertz Bandpass Filters (TBD)

Room: 404-406

Terahertz Dielectric Filter with Tunable Passband

Linxi Chen and Daniel Headland (The University of Adelaide, Australia); Yuma Kawamoto (Optoelectronics and Laser Technology Group, Universidad Carlos III de Madrid, Spain); Tadao Nagatsuma and Weijie Gao (Osaka University, Japan); Christophe Fumeaux (University of Queensland, Australia); Withawat Withayachumnankul (The University of Adelaide, Australia)

Miniaturized Dual-Band Filter with High Selectivity Based on Multilayer PCB Technology

Lin Gu (University of Electronic Science and Technology of China, China); Yuandan Dong (University of Electronic Science and Technology of China, China)

A Low-Loss D-Band SIW Bandpass Filter with Measurement-Oriented Transition Design

Yin-Cheng Chang, Ta-Yeh Lin and Da-Chiang Chang (Taiwan Semiconductor Research Institute, National Institutes of Applied Research, Taiwan); Kun-Ming Chen (Taiwan Semiconductor Research Institute, Taiwan); Guo-Wei Huang (Taiwan Semiconductor Research Institute & National Yang Ming Chiao Tung University, Taiwan); Shawn S. H. Hsu (National Tsing Hua University, Taiwan)

An Innovative Miniaturized Band Pass Filter Using Planar Parallel Plate Waveguide Technology

Rushiraj Sunil Jawale, Neema S Joseph and Gowrish Basavarajappa (Indian Institute of Technology Roorkee, India); Amalendu Patnaik (IIT Roorkee, India)

Miniaturized Superconducting Ultra-Narrow Dual-Band Bandpass Filter Using Capacitively Loaded Hairpin Ring Resonators

Xinlei Liu and Zhewang Ma (Saitama University, Japan); Baoping Ren (East China Jiaotong University, China); Bingqing Miao (Saitama University, Japan)

Tuesday, November 10 13:00 - 14:40

TU2-R3: Millimeter-Wave Antennas, Arrays, and Rectennas (TBD)

Room: 409

Wideband Millimeter-Wave Endfire Multibeam Antenna Based on 12×16 Three-Layer Ridge Gap Waveguide Butler Matrix
Chuhan Wei (Nanjing University of Science and Technology, China)

An Antenna Unit Integrated with a Band Rejection Filter Based on LTCC for 26GHz Band

Kota Arai, Kaoru Sudo, Yuto Katsura, Ryo Komura, Kazushige Sato and Hisao Hayafuji (Murata Manufacturing Co., Ltd., Japan)

Miniaturized Omnidirectional Circularly Polarized Antenna for Satellite Navigation

Qiyun Xiao and Yuandan Dong (University of Electronic Science and Technology of China, China)

A 3D-Printed Integrated Elliptical Lens Antenna with a Tapered Base for Increased Gain

Heinrich E. A. Laue, Tinus Stander and Archibald W. Rohde (University of Pretoria, South Africa)

A Vivaldi Radar Antenna for Detecting Fine Cracks Beneath Reinforcing Bars in Concrete

Shunsuke Takahashi, Takafumi Fujimoto, Chai-Eu Guan and Toshiyuki Tanaka (Nagasaki University, Japan)

Tuesday, November 10 13:00 - 14:40

TU2-R4: Advanced Wireless Sensing and Signal Processing Techniques (TBD)

Room: 410

Deep Learning-Enabled Inverse Design of Dual-Resonance Terahertz Metasurface Sensors Multiplexing SP-BIC and FW-BIC
Baofei Wan, Yusha Zhang, Yuxuan Dong and Zhixia Xu (Southeast University, China)

Life-Emulating Intelligent Electromagnetic Phantom for Reproducible OTA Testing of Human-Sensing MIMO-Doppler Radar: Experimental Demonstration

Kentaro Murata, Motoki Narusawa, Haruki Shibasaki, Yuto Ozawa and Naoki Honma (Iwate University, Japan); Takashi Tomura (Institute of Science Tokyo, Japan)

Hybrid Phase-Amplitude Angle of Arrival (AoA) Estimation Combining a Double Channel X-Band Front-End with Software Defined Radio

Rafael dos Santos Souza da Cruz and Jose A. De Souza Melo (Instituto Tecnológico de Aeronáutica, Brazil); Valéria Cristina Maria Nascimento Leite (Aeronautics Institute of Technology (ITA), Brazil); Lucas Compassi Severo (Instituto tecnológico de Aeronáutica, Brazil); Felix Antreich (Aeronautics Institute of Technology (ITA), Brazil); Olympio Coutinho (Instituto Tecnológico de Aeronáutica, Brazil)

Rotating-Polarization Multiplexing Beyond Dual Polarization for Single-Antenna Systems

Takashi Maehata and Eiji Mochida (Sumitomo Electric Industries, Ltd., Japan)

Design & Implementation of a Lead-Lag Generalised Memory Polynomial-Based DPD System on an Embedded SOC Platform

Amrit Kumar Panigrahi (Indian Institute of Technology, Roorkee, India); Karun Rawat (Indian Institute of Technology Roorkee, India)

Tuesday, November 10 13:00 - 14:40

TU2-R5: Emerging RF and Microwave Technologies for Communications, Sensing, and Quantum Systems (TBD)

Room: 411

Effects of Josephson Junction Non-Idealities on Adiabatic Quantum Flux Parametron Circuits

Daryoush Shiri (Keysight Technologies, Singapore); Likai Yang, Mohamed A. Hassan, Philip Krantz and Eric T. Holland (Keysight Technologies, USA)

A 7GHz GaN Doherty Power Amplifier Module for 5G Massive MIMO Base Stations for Upper FR1 and Lower FR3 Bands

Nagito Ishida (Mitsubishi Electric Corporation, Japan); Kento Saiki (Mitsubishi Electric, Japan); Katsuya Kato (Mitsubishi Electric Corporation, Japan); Yutaro Yamaguchi (Mitsubishi Electric Corporation, Japan); Shuichi Sakata (Mitsubishi Electric Corporation, Japan)

A Dual-Output Energy Harvester for Self-Powered Wireless Monitoring of Marine Propulsion Shaft Systems

Ai Van Hoang and Young Chul Lee (Mokpo National Maritime University, Korea (South))

Near-Field in Vivo Microwave Wideband Dielectric Characterization of Tumors Based on an Open-Ended Coaxial Probe

Wentao Li and Yusha Zhang (Southeast University, China); Yaoqi Song (Dalian Maritime University, China); Zhe Zhang (Southeast University, China); Haotian Wu (East China Normal University, China); Yang Shen and Zhixia Xu (Southeast University, China)

A Non-Invasive Glucose Monitoring Sensor Using Multi-Band Antenna Combined with Dielectric Impedance Matching Layer

Bingyi Zhang, Ryo Natsuaki and Akira Hirose (The University of Tokyo, Japan)

Tuesday, November 10 13:00 - 14:40

TU2-R6: Quantum Computing Systems: Requirements & Device Perspective

Room: 412

Chair: Hidehisa Shiomi (Osaka University, Japan)

Qubit Control with Broadband RF and Microwave Electronics: A Perspective from Nuclear-Spin Testbeds to Scalable Superconducting Quantum Computers

Makoto Negoro (QIQB Osaka Univ, QuEL, Inc., Japan)

Microwave Interface Design for Superconducting Quantum Computers

Yutaka Tabuchi (RIKEN RQC, Japan)

Design and Fabrication of Superconductor-Insulator-Superconductor Mixer-Based Amplifier Circuits

Yoshinori Uzawa (National Astronomical Observatory of Japan, Japan & The Graduate University for Advanced Studies, Japan); Akira Kawakami (NICT, Japan); Yosuke Murayama and Wenlei Shan (National Astronomical Observatory of Japan, Japan)

Optical Delivery of Microwave Control for Scalable Superconducting Quantum Processors

Hidehisa Shiomi (Osaka University, Japan)

Tuesday, November 10 15:10 - 16:50

TU3-R1: Millimeter-Wave and Sub-THz Power Amplifiers (TBD)

Room: 401-403

A 0.1 W D-Band 4-Way Power-Combined Common-Gate Power Amplifier Using ADN-FETs in 45-nm RFSOI

Syed Mohammad Ashab Uddin (Penn State University, USA); Wooram Lee (University of Illinois Urbana-Champaign, USA)

A 46% PAE, 7 W, 24 GHz GaN Power Amplifier for Millimeter Wave Band Wireless Power Transfer

Eitaro Noda, Keigo Nakatani, Akihito Hirai and Hideyuki Nakamizo (Mitsubishi Electric Corporation, Japan)

A 220-GHz 3.7-dBm-Psat Power Amplifier with Transistor Layout Modification in 40-nm CMOS

Chun-Hsing Li, Chi-Tien Chang and Cheng-Xuan Tsai (National Taiwan University, Taiwan)

An Efficient D-Band GaN HEMT Power Amplifier with Microstrip-Based Matching Networks

Daje Weber-Trebesch and Christian Friesicke (Fraunhofer IAF, Germany); Dirk Schwantuschke (Fraunhofer Institute for Applied Solid State Physics, Germany); Cristina Elena Maurette Blasini (University of Freiburg & INATECH Institute for Sustainable Systems Engineering, Germany); Leon Hertle, Thomas Zieciak, Sandrine Wagner and Peter Brückner (Fraunhofer IAF, Germany); Huei Wang (National Taiwan University, Taiwan); Rüdiger Quay (Fraunhofer IAF, Germany)

Development of a 10-Watt Power Amplifier in GaN/SiC Technology for Ka-Band Applications

Yi-Fan Tsao and Heng-Tung Hsu (National Yang Ming Chiao Tung University, Taiwan)

Tuesday, November 10 15:10 - 16:50

TU3-R2: Metamaterials and Transmission-Line Waveguide Theory (TBD)

Room: 404-406

Design Method for Multiphysics Illusion Media Based on Transformation Physics

Koki Sakasegawa, Tsutomu Nagayama, Seiji Fukushima and Toshio Watanabe (Kagoshima University, Japan)

Subwavelength Unit Cell Structures Based on Meandered Microstrip Lines for Topological Waveguides

Soma Nagano, Tsutomu Nagayama, Seiji Fukushima and Toshio Watanabe (Kagoshima University, Japan)

Downsizing of Thermal Insulated Transmission Line for Scalable Superconducting Quantum Computers

Maria Fuwa (National Institute of Advanced Industrial Science and Technology (AIST), Japan); Tomonori Arakawa (National Institute of Advanced Industrial Science and Technology, Japan); Noriyoshi Hashimoto, Junta Igarashi, Shota Norimoto and Makoto Minohara (National Institute of Advanced Industrial Science and Technology (AIST), Japan); Hiroyuki Kayano (National Institute of Advanced Industrial Science and Technology, Japan)

Design Method for Multiphysics Negative Refractive Index Lenses Based on Transmission Line Theory

Kosei Isomoto, Tsutomu Nagayama, Seiji Fukushima and Toshio Watanabe (Kagoshima University, Japan)

Tuesday, November 10 15:10 - 16:50

TU3-R3: Reconfigurable Metasurfaces and RISs for Beam Steering (TBD)

Room: 409

Two-Dimensionally Stretchable RIS with Reflection Beam Width Control and Elevation Beam Tilting Functionalities at 140 GHz Band

Sonoa Oe (The University of Osaka, Japan); Yosuke Nakata (Osaka University, Japan); Atsushi Sanada (The University of Osaka, Japan)

Wideband High-Order Vortex Mode Generation Using a Transmitarray for Next-Generation High-Data-Rate Wireless Systems

Mohammad Ishfaq (Lanzhou University of Technology, China); Hajra Khan (Comsats University Islamabad Abbottabad Campus, Pakistan); Weiqiang Tang (Lanzhou University of Technology, China); Samir Salem Al-Bawri (Universiti Kebangsaan Malaysia (UKM), Malaysia); Syed Muzahir Abbas (Macquarie University, Australia)

Asymmetric Moiré Metasurfaces Enabling Unidirectional Dynamic Beamforming

Yu Chen and Shuo Liu (Southeast University, China)

Broadband Design of D-Band Anomalous Reflective Stretchable RISs with Dynamic Beam Steering

Eiru Morimoto and Atsushi Sanada (The University of Osaka, Japan); Yosuke Nakata (Osaka University, Japan)

Ka-Band Metasurface Antenna with Mechano-electrical Beam Steering

Konstantin Lemberg, Dmitriy Shabanov and Mark Feoktistov (Kirensky Institute of Physics, Russia)

Tuesday, November 10 15:10 - 16:50

TU3-R4: Advanced Radar Imaging and Doppler Sensing (TBD)

Room: 410

Integrated Sensing and Communications (ISAC) for Monitoring Cardiopulmonary Vital Signs

Victor Manuel Lubecke, Jon H Itokazu, Mohammad Shadman Ishrak and Olga Boric-Lubecke (University of Hawaii at Manoa, USA)

Efficient Differentiable ISAR Image Rendering of Space Targets with 3D Gaussian Splatting

Hao Pei, Peishuang Ni, Bingshen Hou, Yiguo Qiao and Gang Xu (Southeast University, China)

Impact of Increased Full Duplex Tx/Rx Isolation on CW Doppler Radar Range

Jon H Itokazu (University of Hawaii at Manoa, USA); Marija Milijic (University of Nis, Serbia); Branka Jokanovic (University of Belgrade, Serbia); Olga Boric-Lubecke and Victor Manuel Lubecke (University of Hawaii at Manoa, USA)

De-Embedding of Nonlinear Phase Components in a VNA-Based Harmonic Stepped-Frequency Radar

Moritz Landwehr and Jörg Schöbel (Technische Universität Braunschweig, Germany)

A Part-Aware Temporal Regression Network for Dense mmWave Radar Point-Cloud Human Pose Estimation

Jiang Liu, Chengchang Tian and Yanjun Zhang (Southeast University, China); Jie Li (Nanjing University of Aeronautics and Astronautics, China); Hui Zhang (Southeast University, China); Yan Huang (Southeast University, Nanjing, China)

Tuesday, November 10 15:10 - 16:50

TU3-R5: Millimeter-Wave/Sub-THz Signal Generation and Frequency Conversion (TBD)

Room: 411

A Sub-3.2-mW 203-GHz GaAs pHEMT Push-Push Oscillator with 194 dBc/Hz FoM

Chih-Ju Wu and Xu Jiang (National Taiwan University, Taiwan); Jung-Tao Chung (Win Semiconductors, Taiwan); Cheng-Kuo Lin (Win Semiconductors Corporation, Taiwan); Austin Chen (University of California, Santa Cruz, USA); Chung-Tse Michael Wu (National Taiwan University, Taiwan)

Broadband V-Band Frequency Doubler with Resonant Mode-Filter in 130 nm SiGe BiCMOS

Jonas Winkelhake (RWTH Aachen University, Germany); Xun Chen (Rheinisch Westfälische Technische Hochschule Aachen, Germany); Muh-Dey Wei (RWTH Aachen University & High Frequency Electronics, Germany); Renato Negra (RWTH Aachen University, Germany)

Wideband Compact G-Band Upconversion Gilbert Micromixer in 130-nm SiGe BiCMOS

Xun Chen (Rheinisch Westfälische Technische Hochschule Aachen, Germany); Jonas Winkelhake (RWTH Aachen University, Germany); Muh-Dey Wei (RWTH Aachen University & High Frequency Electronics, Germany); Renato Negra (RWTH Aachen University, Germany)

A D-Band 5th Subharmonic Injection-Locked Oscillator in 40-nm Bulk CMOS Technology

Jui-Ting Yen and Jeng-Han Tsai (National Taiwan Normal University, Taiwan)

Arbitrary Cycle Direct Digital Synthesizer Using Folding Circuit with Full Scale Adjuster

Toa Yamagiwa (University of Ritsumeikan, Japan); Hideyuki Nosaka (Ritsumeikan University, Japan)

Tuesday, November 10 15:10 - 16:50

TU3-R6: Quantum Computing Systems: Control Instrumentation & Implementation

Room: 412

Chair: Hidehisa Shiomi (Osaka University, Japan)

Microwave Control Architectures for Scalable Quantum Computing

Takefumi Miyoshi (QuEL, Inc. / e-trees.Japan, Inc. / QIQB The Univ. of Osaka)

Modeling of Passive Devices in Cryo-CMOS for Qubit Controller RF-Frontend

Akira Tsuchiya (Kansai University, Japan)

Charge-Coupled Device-Based Arbitrary Waveform Generation for Qubit Control

Shinichi Morisaka and Ryutaro Ohira (QuEL, Inc., Japan)

Wednesday, November 11 9:00 - 11:00

WE1-R1: Microwave, Millimeter-Wave, and Sub-THz Low-Noise Amplifiers (TBD)

Room: 401-403

A W-Band GaAs LNA Utilizing Ultra-Compact Vertically-Coupled Input Matching Achieving 4-dB NF

Haitang Dong (Shanghai Jiaotong University, China); Zhiyuan Guo and Tianyu Cheng (Shanghai Jiao Tong University, China); Yifu Li (Shanghai Jiao Tong University, China); 志成 祝 (Shanghai Jiao Tong University, China & 上海交通大学, China); Yuchao Mei (Shanghai Jiao Tong University, China); Huijie Huang (Shanghai Jiao Tong University, China); Jian Pang and Lin-Sheng Wu (Shanghai Jiao Tong University, China)

A Ku-Band GaAs MMIC Low Noise Amplifier with 1.4 dB Noise Figure Utilizing Optimum Stabilization Circuits

Hiroataka Sato, Kunihiro Sato, Nobuyuki Ogawa and Takahiro Unno (Mitsubishi Electric Corporation, Japan); Yutaro Yamaguchi (Mitsubishi Electric Corporation, Japan)

SiGe BiCMOS D-and G-Band Low Power Wideband Low Noise Amplifiers Based on Broadside Folded Coupled Line Interstage Matching

Herbert Zirath, Yu Yan, Vessen Vassilev and Frida Strömbeck (Chalmers University of Technology, Sweden)

A K/Ka-Band Linearity-Enhanced Low-Noise Amplifier Using Hybrid Linearization Techniques

Pei-Ling Chi and Shao-Wei Huang (National Yang Ming Chiao Tung University, Taiwan); Tao Yang (IEEE, USA)

A D-Band LNA with 26.3-GHz Bandwidth Using Segmented Triple-Coupled Transformers in 65-nm CMOS Technology

Zhe-Xuan Lin, Yunshan Wang and Yu-Hsiang Cheng (National Taiwan University, Taiwan)

A D-Band LNA with 22.3-dB Gain 7.2-dB NF and Analysis of Lossy Substrate Effect in 40-nm CMOS

Jyh-Chyurn Guo and Che-Han Hsu (National Yang Ming Chiao Tung University, Taiwan)

Wednesday, November 11 9:00 - 11:00

WE1-R2: Advanced Antenna, Waveguide, and Interconnect Components (TBD)

Room: 404-406

Guided-Wave and Antenna Applications of Non-Foster Elements

Dmitry Kholodnyak (Saint Petersburg Electrotechnical University LETI, Russia); Nikita Kalmykov (Saint Petersburg Electrotechnical University, Russia); Alexander Leontyev (Saint Petersburg Electrotechnical University LETI, Russia)

A Waveguide-Fed Wideband D-Band GaAs IPD Antenna with Inter-Substrate Vertical SIW Interconnects

Ta-Yeh Lin, Shuw-Guann Lin, Yin-Cheng Chang, Ping-Yeh Yin and Da-Chiang Chang (Taiwan Semiconductor Research Institute, National Institutes of Applied Research, Taiwan)

A Fully Integrated Suspended-Stripline Filter in a Six-Layer PCB for 5G mmWave Applications

Arezoo Abdi (Technische Universität Graz, Austria); Behrooz Rezaee and Michael Gadringer (Graz University of Technology, Austria); Wolfgang Bosch (Graz University of Technology & Institute of Microwave and Photonic Engineering, Austria); Stefan Wögerbauer (Graz University of Technology, Austria)

High-Speed Channel Analysis of Staggered Microvia Interconnects in HDI PCBs

Arezoo Abdi (Technische Universität Graz, Austria); Hiroaki Takahashi (AT&S AG, Austria); Behrooz Rezaee (Graz University of Technology, Austria); Martin Medebach (TU Graz, Austria); Michael Gadringer (Graz University of Technology, Austria); Wolfgang Bosch (Graz University of Technology & Institute of Microwave and Photonic Engineering, Austria)

Hollow Waveguides for the Terahertz Transmission Through Additive Manufacturing

Muhammad Zain Siddiqui (Bilkent University, Turkey); Kohei Chiba and Yoshiaki Kanamori (Tohoku University, Japan); Mustafa Ordu (Bilkent University, Turkey)

Compact Terahertz Microelectromechanical Phase Shifters Based on Slot-Variable Silicon Waveguides

Kohei Chiba and Yoshiaki Kanamori (Tohoku University, Japan)

Wednesday, November 11 9:00 - 11:00

WE1-R3: Distributed and Array Radar Localization Techniques (TBD)

Room: 409

A Study on Signal Processing for Separating Large and Small Targets Closely Spaced in Ranges and Angles Using Distributed Millimeter-Wave Radars

Taisei Komukai, Shigeki Takeda and Ran Sun (Ibaraki University, Japan); Zequn Song (Kagawa University, Japan)

Tomographic SAR Imaging for Large-Scale Urban Scenes Using LuTan-1 Twin Satellites

Honghao Zhou and Fangzheng Xu (Southeast University, China); Yanyang Liu (Shanghai Institute of Satellite Engineering, China); Junli Chen (Shanghai Academy of Spaceflight Technology, China); Gang Xu (Southeast University, China)

Study on High-Resolution DoA Estimation in a 5G NR SSB-Based Sensing System Using a Real Antenna Array

Shujiro Hatada, Kazuma Tomimoto, Toshiki Hozen and Shumpei Tabuchi (Softbank Corp., Japan); Ryo Yamaguchi (SOFTBANK Corp., Japan)

Modified Virtual Element Technique to Improve Spatial Localization Discrimination Using MIMO FMCW Radar

Fu-Kang Wang and Ju-Yin Shih (National Sun Yat-sen University, Taiwan); Ji-Xun Zhong (National Sun Yat-Sen University, Taiwan); Ming-Huan Hsu and Iou-Heng Chen (National Sun Yat-sen University, Taiwan)

Auto-Calibration of Indoor Multi-Site Radar Systems

Wenting Song (Southern University of Science and Technology, China); Lang Qin (The Hong Kong University of Science and Technology, China); Mandong Zhang (Southern University of Science and Technology, China); Zhiqiang Huang (The Hong Kong University of Science and Technology, China); Xiaohu G Wu (Broadband Communication, Pengcheng Laboratory, Shenzhen, China); Xiaoguang Liu (Southern University of Science and Technology (SUSTech), China)

Estimator-Routed Amplitude-Only Jammer Direction-Finding Using a Four-Section Antenna Array

Minsang Yoon and Hosung Choo (Hongik University, Korea (South))

Wednesday, November 11 9:00 - 11:00

WE1-R4: Advanced Antennas, Metasurfaces, and Beam-Control Technologies (TBD)

Room: 410

Terahertz Metasurface Technologies for Reflection, Transmission, and Scattering Manipulations

Atsushi Sanada, Eiru Morimoto, Sonoa Oe and Daichi Ito (The University of Osaka, Japan); Michitaka Ameya and Yuto Kato (National Institute of Advanced Industrial Science and Technology, Japan); Yosuke Nakata (The University of Osaka, Japan)

An Online Multi-Fidelity Surrogate-Assisted Reinforcement Learning Framework for UWB Antenna Optimization

Bingjie Zhang (Southeast University, China); Yifan Yin (Nanjing University of Posts and Telecommunications, Canada); Shunli Li (Southeast University, China); Xiaoxing Yin (State Key Laboratory of Millimeter Waves, China)

Quasi-Optical Spatial Power-Combining Beam-Switching Antenna System Using a Rotman Lens

Koki Shikano, Soma Saito, Yoshiki Sugimoto, Yuji Tanaka, Kunio Sakakibara and Nobuyoshi Kikuma (Nagoya Institute of Technology, Japan)

Cavity-Backed Slot Antenna Made of Soft Material on a Concrete Block Fed from the Side Wall

Takumi Nishiguchi and Hitoshi Shimasaki (Kyoto Institute of Technology, Japan)

Radiation Characteristics of a D-Band 2×1 Vivaldi Antenna Array with Passive Dummy Elements

Muhammad Ibrahim, Kimmo Rasilainen, Aarno Pärssinen and Marko E Leinonen (University of Oulu, Finland)

A W-Band Low-Sidelobe Circularly Polarized Array with Sparsely Dual-Ridge Horn Elements

Kai Wang, Yang Chen, Lianwei Zhang and Hongfu Meng (Southeast University, China)

Wednesday, November 11 9:00 - 11:00

WE1-R5: Millimeter-Wave and Sub-THz Transceiver and Front-End Circuits (TBD)

Room: 411

A 236-311 GHz SiGe BiCMOS Receiver for High Data Rate Communication

Frida Strömbeck, Yu Yan and Herbert Zirath (Chalmers University of Technology, Sweden)

A D-Band I/Q Transmitter with 21.5-dB Gain and 10.5-dBm Output Power in 40-nm CMOS

Chun-Hsing Li, Yen-You Li and Chi-Tien Chang (National Taiwan University, Taiwan)

A 220 GHz Direct-Conversion Mixer-First Receiver in 40 nm Bulk CMOS

Lijuan Wang, Yizhu Shen and Yifan Ding (Southeast University, China); Kaibo Zhang (Southeast University, Purple Mountain Laboratories, China); Zhenghuan Wei (Southeast University, China & Purple Mountain Laboratories, China); Sanming Hu (Southeast University, China)

An 8-Element K-Band Beamforming Chip for SATCOM Featuring Linearity-Boosting Current-Reuse and Triple-Coil Trapping Techniques

Ming Zhai, Jian Zhang, Han Zhang, Keqing Qiu and Yan Wang (Tsinghua University, China)

Characterization of Avalanche Noise Diodes at 1-110 GHz

Luca Menicucci Salamanca (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Giacomo Schiavolini (University of Perugia, Italy); Guendalina Simoncini (University of Delft, The Netherlands); Seyyid Dilek and Giovanni Pinchi (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Falk Korndorfer (IHP - Leibniz Institute for High Performance Microelectronics); Giulia Orecchini (University of Perugia, Italy); Gunter Fischer (IHP - Leibniz Institute for High Performance Microelectronics); Federico Alimenti (University of Perugia, Italy); Corrado Carta (IHP - Leibniz Institute for High Performance Microelectronics & Technische Universität Berlin, Germany)

A 40-67 GHz Compact and Load-Insensitive Hybrid Quadrature Generator with $<3.1^\circ$ Phase Error and <0.15 dB Amplitude Error

Rui Cao and Qin Chen (Southeast University, China); Qingsheng Hu (Southeast University in China, China); Lianming Li (National Mobile Communications Research Lab., China)

Wednesday, November 11 9:00 - 11:00

WE1-R6: Programmable Metasurfaces for Sustainable IoT: Sensing, Connectivity, Localization, and Wireless Power Transfer

Room: 412

Chair: Yufei Zhao (Nanyang Technological University, Singapore)

Deep Learning-Enhanced Multi-Modal Sensor Fusion for Drone Detection and Tracking

Yuan Song and Gaohua Ju (Nanyang Technological University, Singapore); Zi Yang Wang (Beihang University, China)

A Depth-Camera-Assisted Track-by-Detection MOT Framework for Predictive Beam Tracking in RIS-Enabled Wireless Links

Haoshi Bian, Zhongzhong Wang, Yule Lei and Yufei Zhao (Nanyang Technological University, Singapore)

Passive Millimeter-Wave Wavefront Control Based on a Frequency-Selective Phase-Engineered Metasurface

Haoyang Shi (Shanghai Jiaotong University, China); Yufei Zhao (Nanyang Technological University, Singapore); Guangwei Hu (Nanyang Technological University, Singapore); Weiren Zhu (Shanghai Jiao Tong University, China)

Capacity Investigation of Multi-User MIMO System Using Mobile RIS Device over Indoor Environment

Tohma Funao (Okayama University, Japan); Hayato Yamasaki (Okayama University & Graduate School of Environmental, Life, Natural Science and Technology, Japan); Yu Yasufuku, Ren Nakaya, Yafei Hou and Satoshi Denno (Okayama University, Japan)

High-Resolution Staring Radar Imaging Based on Orbital-Angular-Momentum Vortex Waves

Zi Yang Wang and Chengcheng Han (Beihang University, China); Gaohua Ju (Nanyang Technological University, Singapore)

Blink-Event-Gated Lightweight in-Vehicle BCI for Single-Channel EEG Intent Recognition

Fang Xu, Xiyang Zhang and Yan Wang (Anhui University of Science and Technology, China)

Wednesday, November 11 9:00 - 11:00

WE1-R7: ESD / Transient Measurements & Countermeasures

Room: 413

Chair: Takahiro Yoshida (Tokyo University of Science, Japan)

Characterization of a GTEM Cell in Time and Frequency Domains Using Broadband Antenna

Yuma Otomo (Tohoku Gakuin University & Graduate School, Japan); Shinobu Ishigami and Ken Kawamata (Tohoku Gakuin University, Japan); Shingo Inori (Elena Electronics Co. Ltd., Japan)

Potential Rise and Electrostatic Discharge of Moving Charged Bodies

Takayoshi Ohtsu (National Institute of Technology, Numazu College, Japan)

Measurement of Magnetic near-Field Distribution Above Horizontal Coupling Plane in the Latest IEC Standard for Indirect ESD Immunity Testing

Takeshi Ishida (Noise Laboratory Co., Ltd., Japan); Osamu Fujiwara (Nagoya Institute of Technology, Japan)

Development of a Visualization Technology for 50V CDM Discharges in Electronic Device Assembly Processes

Masanori Sawada (Hanwa Electronic Ind. Co., Ltd., Japan); Hiroshi Onomae (Kagoshima Prefectural Institute of Industrial Technology, Japan); Takashi Naka, Yohei Shimada and Takuya Shioji (Hanwa Electronic Ind. Co., Ltd., Japan)

Improving Key Recovery in EM Side-Channel Analysis Using Complex-Valued Signals

Taiki Kitazawa and Yuichi Hayashi (Nara Institute of Science and Technology, Japan)

Development of an Immunity Test Method for Long-Duration Induced Noise Caused by ESD-Induced Potential Drop of Nearby Charged Object

Ayato Kakizaki, Takehiro Hagimoto and Takahiro Yoshida (Tokyo University of Science, Japan)

Wednesday, November 11 11:30 - 13:00

IF3: Interactive Forum 3

Room: 2F-Hall

Study on Transmission Characteristics to Multiple Receivers via a Relay Resonator in a 3D Free-Access WPT System

Kazuya Murakawa and Toshio Ishizaki (Ryukoku University, Japan)

Field-Shaping Self-Resonant Dual-Helical Structure for Omnidirectional Wireless Power Transfer

Zubair Bashir, Amir Ebrahimi, Md Rokunuzzaman Robel and Wayne Rowe (RMIT University, Australia)

Dual-Band Resonant Circuit Design for Underwater Simultaneous Wireless Power and Data Transfer

Ruey Seong Chong, Urara Tsuchiya, Naoki Koike and Mamiko Inamori (Tokai University, Japan)

Matching Network Design for Parallel-Plate U-WPT over a Wide Range of Water Conductivities

Kitaru Hara and Masaya Tamura (Toyoashi University of Technology, Japan)

Demonstration of the Bidirectional Retrodirective Antenna Array with Dual CP Antennas

Jonathan Paul Rabang, Ivan Dominic Garcia and Charleston Dale M Ambatali (University of the Philippines, Philippines)

High-Power Energy Harvester Using Flexible-PCB Coils and Magnetic Flux Concentrators for Low-Speed Rotating Shaft Systems

Min So Park (Mokpo National Maritime University, Korea (South)); Won Jang (Sunchon National University, Korea (South)); Ai Van Hoang and Young Chul Lee (Mokpo National Maritime University, Korea (South))

Exploration of Novel Ba-Based High-Entropy Perovskite Oxides via Rapid Microwave Processing

Yasuhiro Hanada, Jun Fukushima and Hirotsugu Takizawa (Tohoku University, Japan)

Design and Optimization of Probe Coupling in a TE₁₀₀ Microwave Resonator for Efficient Ceramic Processing

Satoshi Fujii (National Institute of Technology, Okinawa College, Japan); Murakami Nagisa (Toyoashi University of Technology, Japan); Hanae Yoshida (National Institute of Technology, Okinawa College, Japan); Wai Kian Tan and Hiroyuki Muto (Toyoashi University of Technology, Japan)

Exploration of Formation Conditions for Novel Sn-Ge-O Oxides by High-Throughput Microwave Synthesis

Jun Fukushima and Hirotsugu Takizawa (Tohoku University, Japan)

Microwave Magnetic Field Excitation for Plasma Generation and Its Application

Hanae Yoshida (National Institute of Technology, Okinawa College, Japan); Satoshi Fujii (National Institute of Technology, Okinawa College, Japan)

Microwave Synthesis of Al₄C₃ Methane Carriers from CO₂ and Aluminum

Daisei Jin, Jun Fukushima and Hirotsugu Takizawa (Tohoku University, Japan)

Pulsed-Field Electro-Microwave Signatures of Avian Tissue Electroporation: A Multimodal Microstructural-Dielectric Correlation Study

Uttaran Bhattacharjee (Indian Institute of Technology, Kharagpur, India); Nitish Das Kashyap (Indian Institute of Technology Kharagpur, India)

Observation-Based Comprehensive Validation of Multi-Parameter Phased Array Weather Radar Using a UAV-Borne Reflector

Yoshiyuki Kawatani, Hiroshi Hanado, Masanori Gocho, Shinsuke Satoh and Seiji Kawamura (National Institute of Information and Communications Technology, Japan)

A 920-MHz COSY Antenna for Operation near a Metal Plate

Suguru Kojima and Ryo Ishikawa (The University of Electro-Communications, Japan)

Wide-Angle Beam-Switching Dielectric Lens Antenna Based on Quadratic Phase Compensation

Junping Zhu, Wei Zheng, Fan Wu and Zhengbo Jiang (Southeast University, China)

A Machine-Learning-Assisted Sparse Ferrite Loading Method for Low-Profile Wideband Bow-Tie Antenna

Yurong Sun (Southwest Jiaotong University, China); feng Quanyuan (Southwest JiaoTong University, China); Yan Wen and Yongwei Li (Southwest Jiaotong University, China)

A Dual-Polarized 2-Bit Radiation-Type Metasurface Unit Cell for Reconfigurable Beam Steering

Ke Sheng (Southeast University, China); H. L. Wang (Southeast University, Afghanistan)

Effect of Probe Type on Axial Ratio Measurement of an Antenna Array Using Planar Scanning

Stanislav V. Polenga, Roman M. Krylov, Alexander S. Ivanov and Lev S. Serbulov (Siberian Federal University, Russia); Konstantin Lemberg (Kirensky Institute of Physics, Russia)

A CPW-Fed C-Shaped Broadband Antenna for C-, X-, and Ku-Band Applications

Lu Chang and Chao Wang (East China Normal University, China)

Wideband Planar Monocone Array Antenna for High-Isolation Ground-Coupled GPR Systems

Dongok Yu (University of Seoul, Korea (South)); Sangwook Kim and Jongsung Choi (Isung, Korea (South)); Seongwoog Oh (University of Seoul, Korea (South))

Wideband and Multiband Orthogonal Printed Dipole for Wi-Fi 7 and 6G Communications

Saou-Wen Su, Chang-Yu Lu and Jui-Han Lu (National Kaohsiung University of Science and Technology, Taiwan)

Additively Manufactured Dielectric-Loaded Metallized Frequency-Scanning Antenna for 24 GHz Radar Systems

Victor Sulzbach (Rheinisch Westfälische Technische Hochschule Aachen, Germany); Alex Shoykhetbrod and Peter Knott (Fraunhofer FHR, Germany)

Dual-Channel K/Ka-Band OAM Vortex-Beam Manipulation Using a 1-Bit Programmable Reflective Metasurface

Rui Wang (Southeast University, China); Jiandong Zhu (Beijing Institute of Remote Sensing Equipment, China); Teng Li (Southeast University, China)

A Differentially-Fed Dual-Polarized Antenna with Double-Layer SICL Feed for Ka-Band Phased Arrays

Shiang Li, Zhiqiang Yu and Jianyi Zhou (Southeast University, China)

Design and Evaluation of near Field Communication Antennas Located Around a Rotating Axis

Yuta Sugiyama, Akimichi Hirota and Nagahiro Abe (Mitsubishi Electric Corporation, Japan)

Circularly Polarized Polymer-Based Fresnel Zone Plate Lens for 300 GHz Frequency Band

Umair Rafique, Rajib Karmaker, Kimmo Rasilainen, Mourad Elkailech, Aarno Pärssinen and Ping Jack Soh (University of Oulu, Finland)

Lens Design for Gain Enhancement in Terahertz Leaky-Wave Antennas

Jing Kong (University of New South Wales, Australia); Dominik Walter Vogt and Housheng Che (UNSW, Australia); Deepak Mishra (University of New South Wales (UNSW) Sydney, Australia); Shaghik Atakaramians (University of New South Wales Sydney, Australia)

An Antenna Sensor for Radio-Wave-Type Endoscope

Satoru Shiraishi, Takafumi Fujimoto, Itsuki Fukushima, Chai-Eu Guan and Toshiyuki Tanaka (Nagasaki University, Japan); Yoko Maemura (University of Nagasaki, Japan)

Characterization of an E-Band Monopulse Multimode Antenna for Satellite Link Alignment

Maximilian Hecke, Mark Johannes Neff and Simon Haussmann (University of Stuttgart, Institute of Robust Power Semiconductor Systems, Germany); Keizo Inagaki (Network Research Institute, National Institute of Information and Communications Technology, Japan); Hugh Gibson (Gibson Microwave Design EURL, France); Ralf Henneberger (Radiometer Physics GmbH, Germany); Ogaki Arata and Tetsuya Kawanishi (Waseda University, Japan); Shintaro Hisatake (Gifu University, Japan); Ingmar Kallfass (University of Stuttgart, Institute of Robust Power Semiconductor Systems, Germany)

A Coverage-Reconfigurable Single-Layer Patch Antenna Using Switchable Parasitic Patch Elements

Maodudul Hasan and Masaya Tamura (Toyohashi University of Technology, Japan)

Millimeter-Wave Wideband Dual-Polarized Plane Wave Generator Using Planar Discrete Lens

Wei Deng (Southeast University, China); Jingxue Wang (Hohai University, China); Fan Wu (Southeast University, China)

Ku-Band Dual-Polarization Phased Array Antenna for LEO Satellite Communication Systems

Jiacheng Sun, Kun Wang and Shunjie Yu (Southeast University, China); Chengcheng Yu (Sunway Communication, China); Hongxin Zhao (State Key Laboratory of Millimeter Waves, Southeast University, China)

Design of Millimeter-Wave Wide-Angle Scanning Phased Array Based on Widebeam Element

Junyi Lv and Fan Wu (Southeast University, China)

Conformal Dual-Polarized L-Band Phased Array with Integrated T/R Modules and RFSoc-Based Beam Steering and Phase Compensation

Mohammad Ameen and Peizhuo Yang (National University of Singapore, Singapore); Koen Mouthaan (NUS, Singapore)

Electrically Steerable V-Band Communication Module

Simon Pietschmann (Friedrich-Alexander-Universität Erlangen Nürnberg, Germany); Jing Shi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Fedir Schuldt (Otto-von-Guericke-Universität Magdeburg, Germany); Veeranjaneyulu Akula (Otto-Von-Guericke-University Madeburg, Germany); Holger Maune (Technische Universität Darmstadt, Germany); Gerald Gold (FAU Erlangen-Nürnberg, Germany)

Mechatronic Control of Sparse Large Intelligent Surface for Millimeter Wave Applications

Abubakar Hamza and Ying Sun (Aalborg University, Denmark); Peng Mei (Huazhong University of Science and Technology, China); Shuai Zhang (Aalborg University, Denmark)

Printed VICTS Array with Wide-Angle Beam Scanning

Stanislav V. Polenga, Elena A. Strigova, Egor E. Ustyugov, Anastasiya D. Poligina and Andrey V. Stankovskiy (Siberian Federal University, Russia)

A Millimeter Wave Diffusive Reflection Surface Using Backside Microstrip Line for Phase Tuning

Tsu-Chen Huang, Jhao-Fu Luo, Ming-Jun Weng and Hsin-Chia Lu (National Taiwan University, Taiwan)

Transmission Enhancement of Orbital Angular Momentum (OAM) Beams at ISM Frequencies for Biomedical Applications

Manshree Mishra (Indian Institute of Technology, Guwahati, India); Ashish Kumar (IIT Guwahati, India); Sarita Raj and Ashwini Sawant (Indian Institute of Technology Guwahati, India)

Design of Transmitarray for Simultaneous Wi-Fi Transmission and Energy Harvesting

Hodaka Fuke and Taisei Urakami (National Institute of Technology, Kagawa College, Japan); Tamami Maruyama (Hiroshima Institute of Technology, Japan); Akira Ono (National Institute of Technology (KOSEN), Kagawa College, Japan); Na Chen (University of Science and Technology Beijing, China); Minoru Okada (Nara Institute of Science and Technology, Japan)

Coverage Analysis of Wireless Communication in a Multi-Floor Ship Engine Room Environment

Won Jang (Sunchon National University, Korea (South)); Seongwon Oh, Min So Park, Sreyrong Chhit and Young Chul Lee (Mokpo National Maritime University, Korea (South))

A Hybrid 3D Geometry-Based Stochastic Channel Model for 6G 28 GHz Fixed-to-in-Vehicle Propagation with Hollow-IP and vMF Distributions

Rishab Rao (Indian Institute of Technology, Bombay, India); Jayanta Mukherjee (Indian Institute of Technology Bombay, India)

On Misalignment Margins in Link Budgets for Short-Range Sub-THz Wireless Communication

Jordi Cornelis Franciscus Zandboer, Gabriele Federico, Ulf Johannsen and A. B. (Bart) Smolders (Eindhoven University of Technology, The Netherlands)

Measurement of Dynamic Human Body Blocking Width During Walking for Inter-WBAN Interference at 60 GHz

Kenshin Suzuki, Kohei Akimoto and Teruo Tobana (Akita Prefectural University, Japan); Noriharu Suematsu (Tohoku University, Japan)

Design and Thermal Expansion Analysis of a Ka-Band CUSP Electron Gun

Boxin Dai (University of Electronic Science and Technology of China, China); Wei Jiang (UESTC, China); Guo Liu and JianXun Wang (University of Electronic Science and Technology of China, China); Yong Luo (UESTC, China)

Communication Area Formation Using a Particle-Attached Dielectric Waveguide with Polarization-Multiplex Transmission

Atsushi Fukuda (NTT DOCOMO, INC., Japan); Junya Matsudaira, Atsushi Kaji and Yasuhiro Kido (NTT DOCOMO, Japan); Satoshi Suyama (NTT DOCOMO, INC, Japan)

Dual-Frequency Phase- and Self-Injection-Locked (DFPSIL) Radar with Phase Compensation for Predictive Maintenance

Iou-Heng Chen and Ming-Huan Hsu (National Sun Yat-sen University, Taiwan); Ji-Xun Zhong (National Sun Yat-Sen University, Taiwan); Zong-You Wu, Fu-Kang Wang, Ju-Yin Shih and Min-Yan Tsai (National Sun Yat-sen University, Taiwan)

Performance Evaluation of Massive MIMO-OFDM with Peak Cancellation and in-Band Distortion Compensation Using Distortion-Aware Precoding in Uniform Planar Arrays

Kiyoaki Inada, Zhuoran Li and Osamu Muta (Kyushu University, Japan)

Periodic Event Detection Using Wi-Fi RSSI: Toward Long-Term Environmental Monitoring

Koichiro Sakaguchi, Mitsuyoshi Kishihara and Kensuke Okubo (Okayama Prefectural University, Japan)

Virtual Anchor-Assisted Indoor Localization via Specular Reflection Multipath

Sijia Zhang (Chongqing University of Posts and Telecommunications, China); Ze Li (CQUPT, China; Key Lab of Industrial Internet of Things Networked Control, Ministry of Education, China); Yu Zhang and Zengshan Tian (Chongqing University of Posts and Telecommunications, China)

UWB SFCW Radar System for Inspection of Composition Conformity for Powder Mixtures

Aloysius Adya Pramudita (Telkom University, Indonesia); Wahyu Primadia Kusumaningrum (Telkom University, Indonesia & The University Center of Excellence for Intelligent Sensing-IoT, Indonesia); Suisbiyanto Prasetya (The National Research and Innovation Agency, Indonesia)

Over-Water Vital-Sign Detection of a Human on a Surfboard Using a UAV-Mounted 24-GHz Doppler Radar

Khaldoon M Ishmael (Naval Information Warfare Center Pacific, USA); Olga Boric-Lubecke and Victor Manuel Lubecke (University of Hawaii at Manoa, USA); Ethan W Chee and Sean Tadekawa (Naval Information Warfare Center Pacific, USA); Sean Maika A Harding (Naval Information Warfare Center Pacific, USA)

Learning-Based Doppler Ridge Separation for Multi-Target Indoor Localization Using Distributed 24-GHz CW Radar

Yuting Zhou, Ruoxi Cai, Jiangtao Huangfu and Lixin Ran (Zhejiang University, China)

PAPR Reduction Algorithm Based on Multi-Order Phase Perturbation in SOCDM Systems

Jingqi Wang, Mengqing Xu and Manman Yu (Nanjing University of Science and Technology, China); Wen Wu (Nanjing University of Science & Technology, China)

Self-Calibrating Data Driven RDA for High Squint Spaceborne SAR

Abdul Hadee, Choon Sik Cho and Sohom Bhattacharjee (Korea Aerospace University, Korea (South)); Pathipati Srihari (National Institute of Technology Karnataka, India); Md Sultanul Arafin (Korea Aerospace University, Korea (South))

Tensor Ring Decomposition Enhanced 4D Differential Tomographic SAR

Fangzheng Xu and Honghao Zhou (Southeast University, China); Yanyang Liu (Shanghai Institute of Satellite Engineering, China); Zhenji Tao (Shanghai Electric, China); Gang Xu (Southeast University, China)

Radar Backscatter Analysis of Emperor Penguin Colonies

Rifat Afroz, Rose Foster-Dyer, Rodrigo Gomez Fell, Wolfgang Rack, Carolynne Hultquist and Michelle Larue (University of Canterbury, New Zealand)

Development of Superheterodyne Aliasing-Free PWM Polar Transmitters

Kuan-Ping Hsieh and Yi-Jan Emery Chen (National Taiwan University, Taiwan)

Photonic Generation of High-Fidelity AMCW Signals for F-Band Ranging

Jiarong Zhang, Rongna Su, Xinpu Li and Yihan Li (Beihang University, China)

Radar Collar: A 24-GHz near-Field Bioradar System for Continuous Canine Pulse Monitoring

Shuqin Dong, Han Wang, Kai Liu and Yongxin Guo (City University of Hong Kong, Hong Kong)

From Prompt to Prototype: Towards a Frontier LLM Driven RF Engineering Workflow

Markus Heinrichs (Ruhr-University Bochum, Germany); Oscar Moschner (TH Cologne University of Applied Sciences, Germany); Simon Tewes (Ruhr-University Bochum, Germany); Volker Wienstroer (TH Cologne University of Applied Sciences, Germany); Aydin Sezgin (RUB, Germany); Rainer Kronberger (TH Cologne University of Applied Sciences, Germany)

Numerical Feasibility of a Skin-Mounted 5.8 GHz Printed Monopole for Skin-Thickness Sensing

Qingzhou Wang and Yun-Jae Jung (Kwangwoon University, Korea (South)); Kyujin Cho (Kwangwoon University, Korea (South), Korea (South)); Eun-Ah Kim, Shibo Xu, Yao Yihao, Hyunsoo Kim and Eun-Seong Kim (Kwangwoon University, Korea (South)); Nam-Young Kim (Kwangwoon University & RFIC Center, Korea (South))

Wednesday, November 11 13:00 - 14:40

WE2-R1: GaN Devices, Packaging, and Reconfigurable RF Front Ends (TBD)

Room: 401-403

Over 38 W/mm S-Band GaN HEMT with Pre-Ohmic Surface Treatment for Improved on-Resistance

Arda Eren (Bilkent University, Turkey); Mehmet Taha Haliloğlu, Mahmut Can Soydan and Ahmet Serhat Dinçer (Nanotechnology Research Center, Turkey); Erdem Aras (Bilkent University, Turkey); Ekmelel Ozbay (Nanotam; Bilkent University, Turkey)

Stability Analysis of Photonic-Assisted RF Phased Arrays with Linearization Through over-the-Air

Siqi Wang (Sorbonne University, France); Minghan Liu (Sorbonne University, France & GeePs, CentraleSupélec, University Paris-Saclay, France); Jacopo Nanni (University of Bologna, Italy); Aziz Benlarbi-Delāi (Sorbonne University, Paris, France)

A 0.8-18-GHz Frequency-Reconfigurable Ultra-Wideband GaN Power Amplifier

Yizhen Xu, Dongcheng Hun and Xu Zhu (University of Electronic Science and Technology of China, China); Pei-Ling Chi (National Yang Ming Chiao Tung University, Taiwan); Tao Yang (University of Electronic Science and Technology of China, China)

Packaged GaN HEMT Characterization Under Different Fixture-Package Interface Impedances

Mohammadamin Kamali and Arezoo Abdi (Technische Universität Graz, Austria); Ioannis Peppas (Infineon Technologies Austria AG, Austria); Arash Arsanjani (Graz University of Technology, Austria); Martin Medebach (TU Graz, Austria); Helmut Paulitsch and Michael Gadringer (Graz University of Technology, Austria); Wolfgang Bosch (Graz University of Technology & Institute of Microwave and Photonic Engineering, Austria)

Wednesday, November 11 13:00 - 14:40

WE2-R2: RF and Millimeter-Wave Transitions, Measurement, and Passive Signal Processing

Room: 404-406

Design of a Surface-Mounted PCB to Waveguide Transition in V-Band for Radar Applications

Carlos Sempere Chaves (Fraunhofer FHR, Germany); Dirk Nüßler (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR, Germany); Nils Pohl (Ruhr-University Bochum & Fraunhofer FHR, Germany)

Miniature 2.45/5.8-GHz Dual-Band Six-Port Network in IPD Technology Using Bridged T-Coils

Qing-Yi Jiang (Richwave Technology Corp., Taiwan); Yo-Shen Lin (National Central University, Taiwan)

Sensitivity Evaluation of a 100 GHz Band NRD-to-Rectangular Waveguide Transition Horn

Takashi Shimizu (Utsunomiya University, Japan)

A Broadband Three-Stage Cascaded Reflective Group Delay Controller with Widely Tunable Delay and Low Ripple

Yiqiu Liang, Zhiqiang Yu and Jianyi Zhou (Southeast University, China)

Uncertainty Analysis of on-Wafer Measurements Using TUG-mTRL with Probe-Position Effects

Ryo Sakamaki (Hiroshima University, Japan); Ziad Hatab (Keysight Technologies, USA); Lukas Ebner and Arash Arsanjani (Graz University of Technology, Austria); Shuhei Amakawa (Hiroshima University, Japan); Michael Gadringer (Graz University of Technology, Austria); Wolfgang Bosch (Graz University of Technology & Institute of Microwave and Photonic Engineering, Austria)

Wednesday, November 11 13:00 - 14:40

WE2-R3: Patch, Shared-Aperture, and Circularly Polarized Antennas (TBD)

Room: 409

A Dual-Band Circular Patch Antenna with Slot-Loaded Parasitic Resonators

Yuan-Chang Hou, Hsin-Jung Tsai and Yu-Yu Fan (National Ilan University, Taiwan)

Statistical Analysis for Air Cavity Backed Patch Antenna Using Rigorous Transmission Line Model

Hiroaki Takahashi and Claudia Ebner (AT&S AG, Austria); Erich Schlaffer (AT&S AG, Germany); Helmut Paulitsch (Graz University of Technology, Austria); Wolfgang Bosch (Graz University of Technology & Institute of Microwave and Photonic Engineering, Austria)

Coplanar Gain-Enhancing Surface-Integrated Dual-Band Shared-Aperture Array for 5G Base Stations

Donghao Li, Yufei Fan and Yuandan Dong (University of Electronic Science and Technology of China, China)

A W-Band Dual Circularly Polarized Antenna Based on Groove Gap Waveguide Orthomode Transducer

Zhenhao Wang and Hongfu Meng (Southeast University, China)

Wednesday, November 11 13:00 - 14:40

WE2-R4: AI/ML-Assisted RF and Microwave Design (TBD)

Room: 410

Boundary-Completed and Physically Constrained Neural Surrogate for Wideband on-Chip Transformers

Mingyang Liu, Wei Jiang and Xiao Liu (Nanjing University, China); Yuting Ye (Hunan University, China); Li Du, Jiacheng Guo and Yuan Du (Nanjing University, China)

MPO-Based Weight Matrix Parameter Reduction for Low-Complexity Neural Network Digital Predistortion of Power Amplifiers

Yudai Shiota (Kagoshima University, Japan); Hiroto Sakaki (Mitsubishi Electric Corporation, Japan); Kenjiro Nishikawa (Kagoshima University, Japan)

Neural Inverse Synthesis of Substrate-Adaptive Pixelated Bandpass Filtering Networks for Arbitrary Termination Impedances

Palaystint Thorng and Keunhoe Lee (Jeonbuk National University, Korea (South)); Dowon Lee (Jeonbuk national University, Korea (South)); Suyeon Kim (Jeonbuk National University, Korea (South)); Phanam Pech (National Polytechnic Institute of Cambodia, Cambodia & NPIC, Cambodia); Yongchae Jeong (Jeonbuk National University, Korea (South))

Deep Learning-Driven RF Metamaterial Design for Creation of OAM Beam

Sarita Raj (Indian Institute of Technology Guwahati, India); Ashish Kumar (IIT Guwahati, India); Ashwini Sawant (Indian Institute of Technology Guwahati, India)

Inverse Design of Pixelated Microstrip Filters Using a Conditional Binary Diffusion Model

Xi Wang, Panyu Kuang and Pinpin Yan (Southeast University, China)

Wednesday, November 11 13:00 - 14:40

WE2-R5: Millimeter-Wave and Sub-THz Frequency Generation and Power Amplification (TBD)

Room: 411

D-Band Power Amplifier with 21.2% PAE and 16.2 dBm Psat in 130-nm SiGe BiCMOS

Hüseyin Kaya (Sabanci University,, Turkey); Aniello Franzese (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Volkan Erturk (IHP-Leibniz-Institut für innovative Mikroelektronik, Germany); Seyyid Dilek and Batuhan Sütbaşı (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany); Yasar Gurbuz (Sabanci University, Turkey)

Broadband Millimeter-Wave CMOS Frequency Doubler and Tripler Design

Ting Yuan Li (Nation Yang Ming Chiao Tung University, Taiwan); Chia-Chun Huang and Yuan-Tzu Lee (National Yang Ming Chiao Tung University, Taiwan); Ying Chen (University of California at Davis, USA); Robert (Shu-I) Hu (National Chiao Tung University, Taiwan); Yen-Lin Chen (National Tsing Hua University, Engineering and System Science, Taiwan)

A 92-144 GHz Travelling Wave Frequency Quadrupler in Advanced 130-nm SiGe BiCMOS

Volkan Erturk (IHP-Leibniz-Institut für innovative Mikroelektronik, Germany); Seyyid Dilek and Batuhan Sütbaşı (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

300GHz Quadruple-Push Frequency Quadrupler Using the Optimization of the 2nd Harmonic Load Impedance

Yuki Tsukui, Ichiro Somada and Akihito Hirai (Mitsubishi Electric Corporation, Japan)

A 36GHz TSPC Frequency Divider-by-32 in 22-nm FD-SOI CMOS

Arzu Ergintav (IHP GmbH, Germany); Mesut Inac (IHP - Leibniz-Institute Für Innovative MikroElektronik, Germany); Aniello Franzese (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Volkan Erturk (IHP-Leibniz-Institut für innovative Mikroelektronik, Germany); Seyyid Dilek and Batuhan Sütbaşı (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Dietmar Kissinger (Ulm University, Germany); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

Wednesday, November 11 13:00 - 14:40

WE2-R6: Emerging Device Technologies for Millimeter-Wave and Terahertz Circuits

Room: 412

Chairs: Mo Li (University of Electronic Science and Technology of China, China); Mohammad Samizadeh Nikoo (NTU Singapore, Singapore)

GaN Metadevices for High-Performance Reconfigurable Microwave Circuits

Abdallah Abushawish, Haoru Xing, Ziwen Huang and Bolin Ji (Nanyang Technological University, Singapore); Mohammad Samizadeh Nikoo (NTU Singapore, Singapore)

Micro/Nanoscale Air-Channel Devices: From Ballistic Transport to Plasma-Based Microwave/Millimeter-Wave Generation

Haiquan Zhao (University of Electronic Science and Technology of China, China); Junxiang Yang (University of Science and Technology of China, China); Ruihan Huang, Yuzhe Zheng, Jian Zhang and Mo Li (University of Electronic Science and Technology of China, China)

5-THz GaN Quasi-1D Metadevice Switches with High Linearity and Enhanced Dynamic Performance

Ziwen Huang, Abdallah Abushawish and Mohammad Samizadeh Nikoo (Nanyang Technological University, Singapore)

W-Band Wideband Radiator with Wide Beamwidth in Both E- and H-Planes Using Connected via-Loaded Parasitic Patches

Hao Jiang (University of Electronic Science and Technology of China, China)

Wednesday, November 11 15:10 - 16:50

WE3-R1: RF/MM-Wave Components and System Techniques for Communications and WPT (TBD)

Room: 401-403

Broadband (15-40 GHz) GaN SPDT MMICs with Low Insertion Loss and High-Power Handling

Erdin Ture, Munir Erdem Erdeve, Emirhan Urfali and Erdem Aras (Bilkent University, Turkey); Ekmel Ozbay (Nanotam; Bilkent University, Turkey)

Design of an 8 MHz ASK-OOK Demodulator for a Single-Link Wireless Downlink Data Transfer System

Naqeeb Ullah (Kyushu University, Japan); Adel Barakat (eSync SSB, Inc., Japan); Haruichi Kanaya (Kyushu University, Japan)

Low-Loss DPDT-Based D-Band True-Time-Delay Element for Squint-Free Phased Arrays

Nicolò Moroni (IHP GmbH, Germany); Andrea Malignaggi (IHP, Germany); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

Design of a Qualification Model Local Oscillator for GEO Communication Payloads

Jaehyuk Lee (University of Science and Technology (UST) & Electronics and Telecommunications Research Institute (ETRI), Korea (South)); Changyub Lee (University of Science and Technology, Korea (South)); Dong Hwan Shin, Dong-pil Chang and Seong-Mo Moon (ETRI, Korea (South))

Sub-Mode Suppression in a Phase-Conjugate Loop Using Startup CW Pulse Injection

Takayuki Matsumuro (ATR, Japan); Akio Wakejima (Kumamoto University, Japan)

Wednesday, November 11 15:10 - 16:50

WE3-R2: Rate News2: RF/Microwave Circuits and System Techniques

Room: 404-406

A 175 μ W 12 GHz to 25 GHz Cryogenic SiGe-HBT Low-Noise Amplifier for Spin-Qubit Frequency-Multiplexed Quantum Computing

Eren Vardarli (IHP, Germany); Xiaodi Jin (Beihang University, China); Michael Schroter (Technical University Dresden, Germany)

A PAPR Reduction Scheme for Ultra-Wideband Single Carrier Channel Bonding Transmission

Yudai Shiraishi (NTT DOCOMO, INC, Japan); Atsushi Fukuda (NTT DOCOMO, INC., Japan); Yasuhiro Kido (NTT DOCOMO, Japan); Satoshi Suyama (NTT DOCOMO, INC, Japan)

A Compact Octave Bandwidth Bare-Die PA with Parasitic-Aware Matching Network for Small Cells

Qufei Qian and Jiteng Ma (University of Bristol, United Kingdom (Great Britain)); Alex Pitt (Compound Semiconductor Applications Catapult Limited, United Kingdom (Great Britain)); Ruipeng Zhang, Xiaoqiang Gu and Shuping Dang (University of Bristol, United Kingdom (Great Britain)); Jonathan Lees (Cardiff University, United Kingdom (Great Britain)); Mark Beach (University of Bristol, United Kingdom (Great Britain))

A 0.13- μ m SiGe BiCMOS Technology-Based 50-dBc Harmonic Rejection Frequency Quadrupler for Automotive Radar Applications

Tarun Kumar Suretia (Indian Institute of Technology Roorkee, India); Kamini Singh (Indian Institute of Technology, Roorkee, India & IITR, India); Karun Rawat (Indian Institute of Technology Roorkee, India)

A 2.4-GHz GaAs HBT Power Amplifier with Class-F Harmonic Control and Active Bias Linearization for Advanced WLAN Applications

Wednesday, November 11 15:10 - 16:50

WE3-R3: Data-Driven Propagation, Antenna Arrays, and EM Simulation (TBD)

Room: 409

FPGA-Efficient Weight-Aware DPD Precision Allocation for Digital Transmit Phased Arrays

Peizhuo Yang, Haoze Luan and Michael Dellaiera (National University of Singapore, Singapore); Koen Mouthaan (NUS, Singapore)

Prediction of Received Power of 300 GHz Band Fronthaul Links Using Deep Learning

Akihiko Hirata (Chiba Institute of Technology, Japan)

A Coupling Transformation Based Compact Decoupling Method for Closely Spaced Antennas

Uma Mandal (Indian Institute of Technology, Kharagpur, India); Sarang Pendharker (IIT Kharagpur, India); Arijit De (Indian Institute of Technology Kharagpur, India)

Unlock Full Physics EM Simulations of Large & Complex Scenarios with the GPU Accelerated Shooting and Bouncing Rays Method

Tung Nguyen (Synopsis, USA); Stefano M. Canta (Synopsis Inc, USA)

Wednesday, November 11 15:10 - 16:50

WE3-R4: Metamaterial and Metasurface Design for Wireless Applications (TBD)

Room: 410

Metasurface Coated Metamaterial Lens

Kimberley W. Eccleston (Lincoln Agritech Ltd, New Zealand)

A Fourier Neural Operator Framework for Rapid Design of Pixelated Frequency Selective Surface

Qi Cao (Southeast University, China); Qipeng Wang (AVIC Research Institute for Special Structures of Aeronautical Composites, Jinan, China); Shunli Li (Southeast University, China); Hongliang Zhu (Ningbo Sodo Measurement and Control Technology Co Ltd, China); Yifan Yin (Nanjing University of Posts and Telecommunications, Canada)

Design of SWIPT System with Enhanced Data Rate Using Metamaterial-Inspired Absorber for Biomedical Implant-Based Systems

ZhengChen Dong (Kyushu University, Japan); Xin Jiang (SHARP Corporation, Japan); Shima Alshhawky (Kyushu University, Japan); Adel Barakat (eSync SSB, Inc., Japan); Ramesh K. Pokharel (Binghamton University, USA); Takeaki Yajima (Kyushu University, Japan)

Space-Time Coding Metasurface for Arbitrary Polarization Synthesis

Hao Tian Shi, Yi Ning Zheng and Shi He (Southeast University, China); Rui Yuan Wu (Hohai University, China); Lei Zhang (Southeast University, China)

Direct 256-QAM Transmission Enabled by an Amplitude-Phase Independent Transmissive Metasurface

Jiachen Wang, Qun Yan Zhou, Zhengrui Li, Jun Yan Dai and Qiang Cheng (Southeast University, China)

Wednesday, November 11 15:10 - 16:50

WE3-R5: Phase Shifters, Attenuators, and RF Front-End Control Components (TBD)

Room: 411

A Ka-Band 0-mW 10-Bit 360° CMOS Phase Shifter Utilizing Multifunctional Inductively-Coupled Resonators for 5G/6G Applications

Chun-Hsing Li, Pin-Chun Chiu and Chun-Sheng Lin (National Taiwan University, Taiwan)

Metal-Insulator-Graphene Diode-Based Compact Differential Distributed Phase Shifter

Eyyub Baskent (RWTH Aachen University, Germany); Burak Uzlu, Kun-Ta Wang and Zhenxing Wang (AMO GmbH, Germany); Max C Lemme and Renato Negra (RWTH Aachen University, Germany)

Integration of Active Baluns for High-Gain Vector-Sum Phase Shifters at mm-Wave Frequencies

Aniello Franzese and Batuhan Sütbaşı (IHP - Leibniz Institute for High Performance Microelectronics, Germany); Andrea Malignaggi (IHP, Germany); Nebojsa Maletic (IHP - Leibniz-Institute for High Performance Microelectronics, Germany); Corrado Carta (IHP - Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

A Physics-Based PDK Model Calibration Method for Improving Simulation-to-Measurement Correlation of a 6-Bit Digital Step Attenuator

Yi Zhou, Jiankui Gao and Xiaohu Fang (Southern University of Science and Technology, China)

Wideband Directional Coupler with Phase Shifters in Standard Bulk CMOS for RF Front-End Modules

Sota Takigawa (Osaka Institute of Technology, Japan); Yoshimori Ryangsu Kaneshiro (Osaka Institute of Technology, Japan & OIT, Japan)

Wednesday, November 11 15:10 - 16:30

WE3-R6: The Wireless Power Transmission (WPT) from the space

Room: 412

Chair: Koichi Ijichi (Japan Space Systems, Japan)

Ground-Based Experiment Plan Using the OHISAMA Satellite

Yoshiyuki Fujino (Toyo University, Japan); Koji Tanaka (Japan Aerospace Exploration Agency, Japan); Hiroki Yanagawa, Hidetoshi Kitabatake, Kouki Yanagi and Koichi Ijichi (Japan Space Systems, Japan)

Introduction of the Current Development Activities of the Space Solar Power Station and the Transmission

Koichi Ijichi, Kouki Yanagi, Hiroki Yanagawa, Hitomi Inada, Hidetoshi Kitabatake and Osamu Kashimura (Japan Space Systems, Japan); Yoshiyuki Fujino (Toyo University, Japan); Koji Tanaka (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, Japan)

Measurement and Electromagnetic Analysis of Wireless Power Transmission System in the OHISAMA Project

Naoki Warigai (Tokyo University of Science, Japan); Ryohei Orii and Takeru Nakamura (cosmobloom Inc., Japan); Hitomi Inada (Japan Space Systems, Japan); Tomohiko Saitoh (Tokyo University of Science, Japan); Koji Tanaka (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, Japan)

Direction Finding and Retrodirective Beam Control in the OHISAMA Solar Power Satellite Demonstrator

Simon Maillot (The Graduate University for Advanced Studies, Japan); Koji Tanaka (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, Japan)

Wednesday, November 11 15:10 - 16:30

WE3-R7: Rate News3: Electromagnetic Analysis, Measurement, and Antennas

Room: 413

Electromagnetic Analysis of Parasitic Effects in Material Characterization Measurements at D-Band

Gia Ngoc Phung and Uwe Arz (Physikalisch-Technische Bundesanstalt, Germany)

Unlocking Sub-THz Optics: Homogeneous 3D Printed Dielectric Lenses for D-Band and Beyond

Oscar Moschner (TH Cologne University of Applied Sciences, Germany); Markus Heinrichs (Ruhr-University Bochum, Germany); Rainer Kronberger (TH Cologne University of Applied Sciences, Germany)

Statistically Independent Field States Across Operating Modes in a Large Automotive Reverberation Chamber

Bilal Bares and Johannes Hippeli (BMW AG, Germany); Holger Hirsch (University of Duisburg-Essen, Germany)

Dual-Cavity SIW-Based Antenna with Controlled Electromagnetic Mode Coupling Through via Perturbation

Yadvendra Prasad Dwivedi (ABV-IIITM Gwalior, India); Rakesh Chowdhury (ABV IIITM Gwalior, India); Somesh Kumar (ABV IIITM Gwalior India, India)