

Session Title: [P1] Interactive Forum I (Poster)

Session Date: December 3 (Wed.), 2025

Session Time: 15:00-16:40
Session Room: 3F Lobby

Session Chair: Yu-Hsiang Cheng (National Taiwan University, Taiwan)

## [P1-001]

# Extrapolation of the Avalanche Frequency in Noise-Source Diodes from Conventional 130 nm SiGe HBT Test Structures

Luca Menicucci Salamanca (IHP – Leibniz Institute for High Performance Microelectronics, Germany); Giacomo Schiavolini (Department of Engineering, University of Perugia, Italy); Seyyid Dilek (IHP – Leibniz Institute for High Performance Microelectronics, Germany); Giulia Orecchini (Department of Engineering, University of Perugia, Italy); Gunter Fischer (IHP – Leibniz Institute for High Performance Microelectronics, Germany); Federico Alimenti (Department of Engineering, University of Perugia, Italy); Corrado Carta (IHP – Leibniz Institute for High Performance Microelectronics & Camp; Technische Universität Berlin, Germany)

## [P1-002]

# High Fmax $\times$ Lg of AlGaN/GaN HEMTs with a Micro Field-Plate T-Shape Gate of Lg = 0.6 $\mu$ m

Xuejing Yang and Yongsik Jeong (Korea Advanced Institute of Science and Technology (KAIST), Korea (South)); Kiwon Lee (Won Kwang University, Korea (South)); Wan-Soo Park, SuMin Choi and Dae-Hyun Kim (Kyungpook National University, Korea (South)); Kyounghoon Yang (KAIST, Korea (South))

#### [P1-003]

# Fmax of 411 GHz in $Al_{0.4}Ga_{0.6}N/GaN$ HEMTs with $Al_{0.08}Ga_{0.92}N$ Back-Barrier for Future RF Applications

Wan-Soo Park and Hyeok-Jun Lee (Kyungpook National University, Korea (South)); Tae-Woo Kim (Texas Tech University, USA); Jae-Hak Lee (Kyungpook National University, Korea (South)); Kyounghoon Yang (KAIST, Korea (South)); Dae-Hyun Kim (Kyungpook National University, Korea (South))

### [P1-004]

# A Bidirectional Programmable Metasurface Unit with Switchable Transmission and Reflection Modes

Sen Zheng and Hui Feng Ma (Southeast University, China)



# [P1-005]

# A Highly Linear GaN LNA with 0.89 dB Noise Figure for 5G Networks

Siddharth Thakur (Indian Institute of Technology Kanpur, India); Md Hasnain Ansari (Indian Institute of Technology, India); Nagaditya Poluri (Indian Institute of Technology Kanpur, India & The University of Sheffield, United Kingdom (Great Britain)); Yogesh Chauhan (Indian Institute of Technology, India)

# [P1-006]

#### Fast-Switching Infinite Phase Shifter Using Dual Complementary Folding Circuits

Anji Miura, Yotaro Mune, Asaka Kobayashi and Hideyuki Nosaka (Ritsumeikan University, Japan)

## [P1-007]

# A 180º Phase-Shifting CMOS Reflection Amplifier for 6G Active Reconfigurable Intelligent Surface

Euiseong Kim, Seokgyu Lee, Yaehoon Roh, Hae-Won Son, Jung-Mu Kim (Jeonbuk National University, Korea (South)); Ilku Nam (Pusan National University, Korea (South)); Donggu Im (Jeonbuk National University, Korea (South))

# [P1-008]

# An Ultra-Wideband Rectifier Based on a Novel Broadband Impedance Self-Resonant Network

Haoxuan Long (Guangdong University of Technology, China); Jinlin Yang (Guangdong Polytechnic Normal University, China); Jian Liu (Guangdong University of Technology, China)

#### [P1-009]

# 60 Gb/s Transimpedance Amplifiers with Emitter–Follower and Folded–Cascode Interstage Configurations in 22–nm FDSOI

Mesut Inac, Volkan Erturk, Arzu Minareci Ergintav, Aniello Franzese and Batuhan Sutbas (IHP-Leibniz-Institut für innovative Mikroelektronik, Germany); Corrado Carta(IHP- Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)



# [P1-010]

### A 2-6 GHz 10 W High-Power GaN Power Amplifier Using Extended Matching Technique

Yu-Chun Lin (National Taiwn University, Taiwan); Chun-Wei Lin and Kun-You Lin (National Taiwan University, Taiwan)

#### [P1-011]

#### A Low-Power TSPC-PRBS Generator in 12 nm FinFET Bulk CMOS

Kai Scheller, Konstantin Vilyuk, Philip Hetterle, Jonas Weninger, Andre Engelmann, Robert Weigel, Albert-Marcel Schrotz and Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

#### [P1-012]

# An X-Band LNA with High-Linearity and Improved Gain Flatness in 0.15 $\mu m$ GaAs pHEMT Process

Leyi Ka (Southeast University, China); Yao Li (South China University of Technology, China)

## [P1-013]

#### An X-Band GaAs Low Noise Amplifier

Jiyoung Lee (DS Navcours, Korea (South)); Hewa Maddumage Ishath Harshika and Gwanghyeon Jeong (Hanbat National University, Korea (South)); Minjae Kim (RFcore, Korea (South)); Dong-Ho Lee (Hanbat National University, Korea (South))

#### [P1-014]

A Tunable Multi-Inductor Coupling 2.0-6.6 GHz Compact CMOS Ultra-Wideband Fourth-Order Bandpass Filter Based on Q-Enhanced Technique

Lei Zhang, Qian Zhang, Xiaoxian Liu and Zhangming Zhu (Xidian University, China)

#### [P1-015]

#### Direct Wideband Matching Technique for Nonlinear Multistage Power Amplifiers

Alexander Deublein, Michael Loose and David Riess (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Christian Musolff (Infineon Technologies AG, Germany); Robert Weigel and Georg Fischer (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Christof Pfannenmüller (Otto von Guericke University Magdeburg, Germany); Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

۰



# [P1-016]

# Fractional-N Sampling Phase-Locked Loop with Time Domain Sign Generation Using Aux-DTC and Fast Locking AFC

Juwon Choi, Ibrar ali Wahla, Seunghyun Kang and Jonghoon Park (Kangwon National University, Korea (South)); Shinwoong Kim (Handong Global University, Korea (South)); In-Chul Hwang (Kangwon National University, Korea (South))

# [P1-017]

#### 1,75-43,75 GHz N-Path Harmonic Mixer with Folded Noise Cancellation

Yuki Tsukui, Yoshiaki Morino and Kazutomi Mori (Mitsubishi Electric Corporation, Japan); Takuma Torii (Mitsubishi Electric, Japan); Akihito Hirai and Koji Yamanaka (Mitsubishi Electric Corporation, Japan); Tomoyuki Furuichi and Noriharu Suematsu (Tohoku University, Japan)

### [P1-018]

#### D-Band ×8 Beamforming Frequency Multiplier Chain with GM-Boosting Doubler and PCPP

Kangseop Lee (POSTECH, Korea (South) & Institute of Artificial Intelligence, Korea (South)); Junhyeong Kim (Samsung Electronics, Korea (South)); Youngseo Du and Ho-Jin Song (POSTECH, Korea (South))

### [P1-019]

#### A 57 µW Logarithmic RF Voltage Detector Integrated with High-Voltage RF Switch

Ting-Li Hsu (Technical University of Munich, Germany); Valentyn Solomko (Infineon Technologies, Germany); Amelie Hagelauer (Technical University of Munich, Germany)

### [P1-020]

# A Digitally Calibrated Two-Point Modulator with on-Chip Gain Calibration for BLE Applications

HoWon Kim, Yeon Jae Jeong, Seok Kee Kim and Kang-Yoon Lee (Sungkyunkwan University, Korea (South))

### [P1-021]

#### A 50mW Low Power 2-Channel 15-17GHz Receiver with 6.0 dB NF for Ku Band FMCW Radar

Junyeon Won, Yoseong Nam, Chanho Jung, Su-bin Choi and Donghyun Baek (Chung-Ang University, Korea (South))



# [P1-022]

#### A Highly Integrated CMOS Dicke Radiometer IC for Remote Thermometer Applications

JIN MO Kim (Kwangwoon University, Korea (South))

## [P1-023]

### **Enhanced RF Performance of Dual-Gate GaN HEMTs**

Sanghoon Park (Kumamoto University, Japan); Debaleen Biswas (University of Chicago, USA); Yuji Ando and Hidemasa Takahashi (Nagoya University, Japan); Akio Wakejima (Kumamoto University, Japan)

## [P1-024]

### 6–18 GHz GaN High Power Amplifier MMIC for Multi-Function Radar Application

Moongyu Kim, Kyungdong Bae, Yoonjung Lee and Youngoo Yang (Sungkyunkwan University, Korea (South))

## [P1-025]

# Optimization of Ohmic Contact for AlGaN/GaN HEMTs Using Dielectric Passivation

Hyeon-Bhin Jo, Iju Kim and Ki-Jin Kim (Korea Electronics Technology Institute, Korea (South))

## [P1-026]

# A 2.4 GHz-Band Amplifier with $\beta$ -Ga<sub>2</sub>O<sub>3</sub> MESFET Fabricated by Mist CVD Method

Hikaru Ikeda, Shizuo Fujita, Katsuhisa Tanaka and Takeru Wakamatsu (Kyoto University, Japan); Yuji Ando, Hidemasa Takahashi, Ryutaro Makisako and Jun Suda (Nagoya University, Japan); Tetsuzo Ueda and Hidetaka Sugaya (Panasonic, Japan)

#### [P1-027]

## Novel Dual-Modulation Out-Phasing Power Amplifier with Arbitrary Loop Network

Yixi Tang (South China University of Technology, China); Wenjie Feng (Nanjing University of Science and Technology, China); Weiwei Wang (Hangzhou Dianzi University, China); Wenquan Che (South China University of Technology, China)



# [P1-028]

#### Reflective Analog Predistorter with Independent Tunable Gain and Improved Insertion Loss

Pengyu Yu and Kwok-keung (Michael) Cheng (The Chinese University of Hong Kong, Hong Kong); Pengde Wu (Hangzhou Dianzi University, China); Jieen Xie (The Chinese University of Hong Kong, Hong Kong)

## [P1-029]

#### A 10W QFN Packaged CCF GaN MMIC Power Amplifier for UAV Applications

Avinash Singh, Machavaram V. Kartikeyan and Karun Rawat (Indian Institute of Technology Roorkee, India)

#### [P1-030]

# 2-Stage GaN MMIC Amplifier in General Purpose Power Transistor Package for 4,25GHz 20W Microwave Power Source

Sei Mizojiri and Kazuya Yaginuma (Pale Blue Inc., Japan); Kohei Fujiwara and Takashi Kondo (Tokyo Metropolitan Industrial Technology Research Institute, Japan); Shinji Hara and Noriyuki Tanba (Nagoya University, Japan)

# [P1-031]

#### Enhanced Performance of AIN/GaN HEMTs via Novel LPCVD-Based Sub-Gate Oxidation

Zhiyong Liu, Jiejie Zhu, Lingjie Qin, Bowen Zhang, Mengdi Li, Boxuan Gao and Xiaohua Ma (Xidian University, China)

#### [P1-032]

# Design and Bias Network Optimization of a Ka-Band CMOS Power Amplifier with 32.5% Modulation PAE Supporting 64-QAM

En-Lin Hong, Ji-Hao Huang, Kai-Jie Chuang, Yi-Wen Wang, Ting-Yu Chang and Tian-Wei Huang (National Taiwan University, Taiwan)

#### [P1-033]

# W-Band Mixer-First Receiver Using Floating Body Switches in 28-nm CMOS

Kyubin Choi, Younghan Lee, Seungmo Noh, Sungjun Lee, Junyeop Kim and Wooyeol Choi (Seoul National University, Korea (South))



# [P1-034]

# Nonlinear Modeling and Frequency Multiplication Characteristic of Quasi-Vertical Diamond SBD in L-Band

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

### [P1-035]

#### A Coupled Oscillator Arrays for D-Band Scalable Phased Arrays

Xiangao Meng (University of Electronic Science and Technology of China, China); Yinian Feng (UESTC, China & ESE, China); Jun Yuan, Bingli Dai, Bo Zhang and Cheng Wang (University of Electronic Science and Technology of China, China)

## [P1-036]

# A 56~81 GHz Frequency Quadrupler with 19.4 dB Conversion Gain and 8.07 dBm Output Power Using Harmonic Trap in 28nm CMOS

Yuchi Liu, Jiacheng Guo and Yuan Du (Nanjing University, China)

# [P1-037]

# A Power-Efficient mm-Wave Divide-by-16 Frequency Divider in SiGe BiCMOS Technology

Matthias Moeck, Benedict Baschang and Ahmet Cagri Ulusoy (KIT - Karlsruhe Institute of Technology, Germany)

#### [P1-038]

## A Q-Band -4 dBm Output Power Passive Frequency Tripler Using Stacked APDNP

Ryunosuke Saito, Ryosei Miyagawa, Yuki Fujiya, Tomoyuki Furuichi and Noriharu Suematsu (Tohoku University, Japan)

#### [P1-039]

# A V-Band Four-Channel Phased-Array Beamforming Transmitter with Integrated Antenna Array

Hyun-Sik Hwang (Korea Advanced Institute of Science and Technology, Korea (South)); Cheol So (University of California, Santa Barbara, USA); Songcheol Hong (Korea Advanced Institute of Science and Technology, Korea (South))



# [P1-040]

Design of a 135–GHz Single–Ended Amplifier Using Coupled–Line and Capacitive Neutralization for Improved Stability and Gain

Taewon Kim, Jeongho Jang and Munkyo Seo (Sungkyunkwan University, Korea (South))

#### [P1-041]

#### An Investigation of the Low-Power Capability of SiGe HBTs in V-Band LNA Design

Xin Xu (TU Dresden, Germany); Jens Wagner (Technische Universität Dresden & Chair for Circuit Design and Network Theory, Germany); Frank Ellinger (Technische Universität Dresden, Germany)

#### [P1-042]

A 300-GHz Voltage-Controlled Oscillator Using a Coupled-Line Resonator with 177.6-dBc/Hz FoM and 5.6-dBm Peak Output Power

Hyunjoon Kim (Korea University, Korea (South)); Dongkyo Kim (Dong-A University, Korea (South)); Sanggeun Jeon (Korea University, Korea (South))

#### [P1-043]

# A 120–230 GHz Low Phase Imbalance Asymmetric Marchand Balun in a SiGe BiCMOS Technology

Daniele Ursini and Batuhan Sütbaş (IHP – Leibniz Institute for High Performance Microelectronics, Germany); Habeeb Bello (Ahmadu Bello University, Nigeria); Leonardo Pantoli (University of Laquila, Italy); Giorgio Leuzzi (University of L'Aquila, Italy); Corrado Carta (IHP – Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

#### [P1-044]

# A 36 Gbit/s 15.6 fJ/Bit FoM TSPC 2:1 Multiplexer for High-Speed Serial Links in 22 nm FDSOI

Jonas Weninger, Florian Probst, Alexander Spielberger, Andre Engelmann, Albert-Marcel Schrotz, Robert Weigel and Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

# [P1-045]

#### A 600-GHz Heterodyne Receiver Based on 28-nm CMOS Technology

Jaewon Jang, Jaeman Lee, Minseok Choi, Youngkyu Lee and Jae-Sung Rieh (Korea University, Korea (South))



# [P1-046]

Doherty Power Amplifier and Patch Antenna on-Chip Integration on GaN-HEMT at Ka-Band

Zi-Jian Li, Qiu Yuan, Qing Luo and Xiaowei Zhu (Southeast University, China)

#### [P1-047]

A 22,6–28,3–GHz LNA with 22,1–dB Gain and 1,94–dB Noise Figure Using 90–nm CMOS Technology

Yi-Chi Li, Yunshan Wang and Yu-Hsiang Cheng (National Taiwan University, Taiwan)

#### [P1-048]

A Compact D-Band Power Amplifier with Reverse- Phase Coupling Transformer in 28nm CMOS

Jizhao Li, Jiacheng Guo and Yuan Du (Nanjing University, China)

#### [P1-049]

Validation of an Open-Source RFIC Design Flow Using a 130 GHz Low-Noise Amplifier

Gianluca Simone, Martin Grund, Manuel Koch, Sascha Breun, Robert Weigel and Norman Franchi (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

#### [P1-050]

A Wideband 0.103mm2 Edge Combining Based Frequency Quintupler Covering 10-60GHz

Han Huang, Haoyu Bai, Jiazheng Zhou, Dong Wang, Jiaqi He, Sihao Zhang, Junhua Liu and Huailin Liao (Peking University, China)

#### [P1-052]

A 323,2 GHz Detector Using Harmonic Injection Locking with Polarization Diversity in 40nm CMOS

Jiacheng Xie, Yiyang Shu and Xun Luo (University of Electronic Science and Technology of China, China)

#### [P1-053]

Design of D-Band Active SIW Slot Array Transceiver System Based on HDI Technology

Shijie Xiang, Xiaoyi Liu, Yihui Wang and Hongfu Meng (Southeast University, China)



# [P1-054]

#### Planar Pattern Reconfigurable Complementary Antenna for 5G-NR Communication

Jiawen You, Zhan Wang and Yuandan Dong (University of Electronic Science and Technology of China, China)

#### [P1-055]

#### **Active Reflection Coefficient Cancellation Method for Phased Arrays**

Yongzheng Li (South China University of Technology, China); Wanchen Yang (Nanjing University of Aeronautics and Astronautics, China); Quan Xue and Wenquan Che (South China University of Technology, China)

#### [P1-056]

# A $\Delta\Sigma$ Frequency-to-Digital Converter Based Sub-Sampling DPLL Without Extra Modules in Auxiliary Loop

Jonghoon Park, Juwon Choi, Seunghyun Kang, Young ryul Yun, Ibrar ali Wahla and In-Chul Hwang (Kangwon National University, Korea (South))

#### [P1-057]

# A High-Tolerance and Thickness-Adjustable PCB-Based Microstrip-to-Waveguide Transition Design

Jianhan Zhang, Xiaohe Cheng and Yuan Yao (Beijing University of Posts and Telecommunications, China)

#### [P1-058]

## Digital-Assisted Canceler for MIMO in-Band Full-Duplex Radio

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

# [P1-059]

# Unified Compact Load Network for Broadband Doherty Power Amplifier with Enhanced Back-off

Yoonjung Lee (Sungkyunkwan University, Korea (South)); Woojin Choi, Yifei Chen and Jaekyung Shin (Samsung Electronics Company Ltd., Korea (South)); Youngoo Yang (Sungkyunkwan University, Korea (South))



# [P1-060]

# Multi-VT In $_{0.14}$ Al $_{0.86}$ N/AlN/GaN HEMTs with Damage-Free and Reproducible Gate Recess Process

SuMin Choi, Hyeok-Jun Lee, Wan-Soo Park and In-Geun Lee (Kyungpook National University, Korea (South)); Hyeok-Min Kwon (Hankyong National University, Korea (South)); Tae-Woo Kim (Texas Tech University, USA); Jae-Hak Lee (Kyungpook National University, Korea (South)); Kyounghoon Yang (KAIST, Korea (South)); Dae-Hyun Kim (Kyungpook National University, Germany)

## [P1-061]

### Robust Hybrid Beamforming with Mutual Coupling Compensation for mmWave MIMO

Mengyu Zhang, Robert Weigel, Norman Franchi and Torsten Reissland (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

## [P1-062]

# Measurement Method of High Time-Resolution Power Delay Profile Using in-Band and Outof-Band Spectrums Under Local 5G System Operation

Takashi Shiba and Tori Inoue (Tohoku University, Japan); Gustavo Pedroso Cainelli (Institut Fur Automation Und Kommunikation, Germany); Sven Müller (Demag Cranes and Components GmbH, Germany); Tomoyuki Furuichi (Tohoku University, Japan); Nils Kranefeld (Demag Cranes and Components GmbH, Germany); Fumiko Ohori and Taketoshi Nakajima (National Institute of Information and Communications Technology, Japan); Giuliano Persico (Demag Cranes & Components GmbH, Germany); Lisa Underberg (Ifak, Germany); Satoko Itaya (National Institute of Information and Communications Technology, Japan); Noriharu Suematsu (Tohoku University, Japan)

## [P1-064]

Affordable Non-Contact Respiration Monitoring Using Wi-Fi CSI and Doppler Radar: a Performance-Cost Trade-off for Resource-Limited Settings

Abrar Zarif, Hasin Rayhan, Sourav Kumar Pramanik and Shekh Md Mahmudul Islam (University of Dhaka, Bangladesh)

## [P1-065]

#### Indoor Localization Using Extended Kalman Filter with Time-of-Arrival Measurements

Lang Zhang, Ze Li, Zengshan Tian and Yu Zhang (Chongqing University of Posts and Telecommunications, China)



# [P1-066]

# Millimeter-Wave Radar Super-Resolution Forward-Looking Imaging via Low-Rank Sparse Optimization

Yanjun Zhang, Jun Tao and Jiang Liu (Southeast University, China); Jie Li (Nanjing University of Aeronautics and Astronautics, China); Zhanye Chen and Yan Huang (Southeast University, China)

## [P1-067]

# Optimal Estimation of Adjacent Waves Based on Observed Wave Data Using a Kalman Filter

SeungJun Kim (National Korea Maritime & Ocean University, Korea (South)); Jang Ju Su (MOASOFT, Korea (South)); You Seok Yeoh (Korea Maritime & Ocean University, Korea (South)); Min Cheol Paek and Seong Been Jang (National Korea Maritime & Ocean University, Korea (South)); Kyeong-sik Min (Korea Maritime and Ocean University, Korea (South))

## [P1-068]

# Ego Vehicle Speed Estimation Using Temporal Regularization on Sequential Range-Doppler Maps

Soyun Lee, Byungkwan Kim, Sun-Ji Oh and Seo-Hyun Park (Chungnam National University, Korea (South))

# [P1-069]

#### Impact of 5G Adjacent Band Emissions on FSS Downlink Performance

Hyo-Won Lee, Ga-Yeong Park, Ji-Young Kim, Sungjun Cho and Jong-Won Yu (Korea Advanced Institute of Science and Technology (KAIST), Korea (South))

## [P1-070]

# Development of V-Band Direct-Digital RF Rx-Antenna for Digital Beamforming

Yoshiaki Morino, Akihito Hirai, Yuki Tsukui and Kazutomi Mori (Mitsubishi Electric Corporation, Japan); Tomoyuki Furuichi, Satoshi Tsukamoto and Noriharu Suematsu (Tohoku University, Japan); Koji Yamanaka (Mitsubishi Electric Corporation, Japan)



# [P1-071]

#### Spaceborne SAR Interference Suppression Based on a Digital Subband Filter Model

Xuezhi Chen (Southeast University, China); Xutao Yu (Southest University National Mobile Communication Research Laboratory, China); Yuan Mao, Xinyu Guan, Jiale Chen and Yan Huang (Southeast University, China)

## [P1-072]

# Proton Irradiation Enhanced and Degraded Performance of GaN Power Amplifier Circuits

Shao-Chun Huang, Yi-Lun Huang, Yuan-Hung Huang and Chao-Hsin Wu (National Taiwan University, Taiwan)

#### [P1-073]

# System-Level Throughput of Multi-UAV Wireless Networks Considering Altitude and Density

Kosuke Asai, Shota Muroki and Fumiaki Maehara (Waseda University, Japan)

## [P1-074]

# Thermal Diffusion Effect by Increasing Gate-Pitch for 4,25GHz 50W Microwave Power Source

Noriyuki Tanba and Shinji Hara (Nagoya University, Japan); Sei Mizojiri and Kazuya Yaginuma (Pale Blue Inc., Japan); Kohei Fujiwara and Takashi Kondo (Tokyo Metropolitan Industrial Technology Research Institute, Japan)

#### •

### [P1-075]

#### Analysis on GNSS Microwave Scattering Signals from Surface in Snow-Covered

Jie Li, Feng Wang and Dongkai Yang (Beihang University, China)

## [P1-076]

#### A High-Tolerance Planar Coupler Based on BGA Process for Low-Cost Phased Array

Chao Tang, Zongrui He and Wei Nie (Chongqing University of Posts and Telecommunications, China)



# [P1-077]

## Evaluation of Ku-Band Geostationary Satellite Link Latency Under Tropical Rainfall

Yasser Asrul Ahmad, Hazrul Hafiz Abdul Shukur, Yousif Dafa Alla, Anis Hannai Razman and Khairayu Badron (IIUM, Malaysia)

#### [P1-078]

#### Predicting Amplifier Intermodulation Distortion from Single-Tone Measurement/Simulation

Ryoko Kishikawa (National Institute of Advanced Industrial Science and Technology & The Graduate University of Advanced Studies, Japan); Korkut K Tokgöz (Sabanci University, Türkiye & Evrim Co. Ltd., Japan); Hiroyuki Ito (Tokyo Institute of Technology, Japan); Shuhei Amakawa (Hiroshima University, Japan)

## [P1-079]

## A Study of Wireless Signal Connection Between Microstrip Lines with Open Ends

Atsushi Oyama, Teruo Tobana and Kohei Akimoto (Akita Prefectural University, Japan)

### [P1-080]

# State Transfer Adaptive Matching Network Architecture (STA-MNA) Based on Deep Learning Used in RF Systems

Kun Wang, Jin Jiao and Cheng Zhou (Southeast University, China); Hongxin Zhao (State Key Laboratory of Millimeter Waves, Southeast University, China)

#### [P1-081]

# Common– and Differential–Mode Loop Gains by Two Wave Probes for Closed–Loop Stability Analysis

Robert (Shu-I) Hu (National Chiao Tung University, Taiwan); Ying Chen (University of California at Davis, USA); Chih-Cheng Chang (National Yang Ming Chiao Tung University, Taiwan)

#### [P1-082]

# Responses of Voltage and Current Excitations from the Eight-Port Wave Probe's Perspective for 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 Chih-Cheng Chang (National Yang Ming Chiao Tung University, Taiwan)



# [P1-083]

#### Medium-Power Amplifier for the 17-22 GHz Band Designed for High oIP3

Giovanni Di Pietrantonio and Andrea Malignaggi (IHP – Leibniz Institute for High Performance Microelectronics, Germany); Corrado Carta (IHP – Leibniz Institut für Innovative Mikroelektronik, Germany & Technische Universität Berlin, Germany)

## [P1-084]

Research on the CARL-RTDETR Model for Lightweight Object Detection in Complex SAR Scenarios

Zhaoyu Liu, Wei Chen and Yang Lixia (Anhui University, China)

## [P1-085]

Theoretical Analysis of High Efficiency Power Amplifier with Double Injected Envelope Components

Yasunori Suzuki, Kiyotaka Komoku, Jun Furuta and Nobuyuki Itoh (Okayama Prefectural University, Japan)

#### [P1-086]

Sheet Beam Focusing Simulation of Cold Cathode Field Emitter for Planar TWT Applications

Si Eun Han, EunMi Choi and Mincheal Kim (Ulsan National Institute of Science and Technology (UNIST), Korea (South))

#### [P1-087]

Comparative Study of E-Mode HEMTs Based on Single-Stack and Multi-Stack Charge-Trap Layers

Dogyun An and Hyeon-Bhin Jo (Korea Electronics Technology Institute (KETI), Korea (South))

#### [P1-088]

A Study on Quasi-Vertical GaN SBD for Dependence of Schottky Metal and Drift Layer Thickness

Seongmin Kang (Korea Electronics Technology Institute (KETI), Korea (South))



# [P1-089]

#### Two-Level Beam Selection Algorithm for mmWave Wireless Power Transfer Systems

Seungsu Chung, Jaeyeon Ha and Jaehyun Park (Pukyong National University, Korea (South)); Jae Cheol Park and Jung Ick Moon (Electronics and Telecommunications Research Institute (ETRI), Korea (South))

## [P1-090]

# A Low-Complexity Reconfigurable Rectifier Optimized for DC-DC Converter Integrated RF Energy Harvesting Systems

Prakash Gundabathina (National Yang Ming Chiao Tung University, Taiwan); Haruichi Kanaya (Kyushu University, Japan); Maryam Shojaei Baghini (IITB, India); Po-Hung Chen (National Yang Ming Chiao Tung University, Taiwan)

#### [P1-091]

## Comparison of Omni PDP and Synthesized Directional PDP at 415 GHz

Jinhyung Oh and Jong Ho Kim (Electronics and Telecommunications Research Institute (ETRI), Korea (South))

# [P1-092]

## Microwave-Assisted Carbothermal Synthesis of ZrC Nanosheets from ZrOx/rGO Precursor

Motohiro Shimizu and Dai Mochizuki (Tokyo Denki University, Japan)

#### [P1-093]

## A Reconfigurable Dual-Band Asymmetrical Doherty Power Amplifier Using PIN Diodes

Gongxu He and Cuiping Yu and Yuanan Liu (Beijing University of Posts and Telecommunications, China)

# [P1-094]

#### Compact Microwave Circuit Using Aerosol Jet Printing Method

Jiyeon Lee, Dal Ahn, Kye-Si Kwon, Hyeonsu Kim, Jongsik Lim and Sang-Min Han (Soonchunhyang University, Korea (South))