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Room A

ORAL Session: TU1A

EuMA: Microwave Research in Europe (Special Session)

Co-Chairs: Huei Wang and Herbert Zirath

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09:10 - 09:45	Characterization and modeling of Large Signal Dynamics of GaN HEMTs <i>Raymond Quere, J C Nallatamby, S Laurent, A Benvegna, D Barataud</i> (France)	483

ORAL Session: TU2A

Integrated Circuits and Packaging for Millimeter Wave and Sub-Millimeter Wave Sensor and Communication Systems (Special Session)

Co-Chairs: Herbert Zirath and Bing Zhang

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10:50 - 11:10	Cryogenic Low Noise Amplifiers in an InP HEMT MMIC Process <i>Per Ake Nilsson, Arsalan Pourkabirian, Joel Schlee, Niklas Wadefalk, Piotr Starski, Goran Alestig, John Halonen, Bengt Nilsson, Herbert Zirath, Jan Grahn</i> (Sweden)	489
11:10 - 11:30	A 40 Gbps DQPSK Modem for Millimeter-wave Communications <i>Sining An, Jingjing Chen, Zhongxia He, Shuai Wang, Herbert Zirath</i> (Sweden)	492
11:30 - 11:50	SiGe BiCMOS VCO with 27% Tuning Range for 5G Communications <i>Fabio Padovan, Marc Tiebout, Franz Dielacher, Andrea Bevilacqua, Andrea Neviani</i> (Italy)	495
11:50 - 12:10	Heterogeneous Integration of Terahertz Diode Circuits <i>Aleksandra Malko, Huan Zhao, Vladimir Drakinskiy, Tomas Bryllert, Josip Vukusic, Peter Sobis, Jan Stake</i> (Sweden)	498

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Room B

ORAL Session: TU1B
THz Circuits and Systems

Co-Chairs: Wenbin Dou and Tahsin Akalin

08:00 - 08:30	Terahertz Metasurfaces(<i>invited</i>) <i>Tahsin Akalin</i> (France)	N/A
08:30 - 08:50	Packaging of THz Circuits using a HDPE Lens and an Impedance-Matched Carrier Substrate <i>Sebastian Diebold, Shunsuke Nakai, Kousuke Nishio, Kazuisao Tsuruda, Toshikazu Mukai, Masayuki Fujita, Tadao Nagatsuma</i> (Japan)	503
08:50 - 09:10	A 0.66THz Subharmonic Mixer Using Planar Schottky Diodes <i>Zhongqian Niu, Bo Zhang, Li Sen Zhang, Dong Xing, Jun Long Wang, Yong Fan</i> (Mainland China)	506
09:10 - 09:30	Performance of a 1.3-THz Twin-Slot Antenna Superconducting HEB Mixer Integrated with Different Elliptical Lenses <i>Kangmin Zhou, Wei Miao, Jie Hu, Shaoliang Li, Roland Lefevre, Yan Delorme, Shengcai Shi</i> (Mainland China)	509
09:30 - 09:50	An Investigation on Diffractive Micro-Lens Array used in THz Imaging <i>Wenbin Dou, Xuecou Tu, Lin Kang</i> (Mainland China)	512

ORAL Session: TU2B
THz/MW/RF ICS in Nanoscale Silicon Technology (Special Session)

Co-Chairs: Kenneth K. O and Jixin Chen

10:30 - 10:55	Terahertz Imaging Circuits in CMOS <i>Hua Wang</i> (United States)	516
10:55 - 11:20	A Scalable Active THz Frequency Multiplier Chain in Silicon with Multi-Phase Sub-Harmonic Injection Locking for Bandwidth Extension <i>Kenneth K. O</i> (United States)	519
11:20 - 11:40	Modeling of Si Schottky Diodes and its application in THz imaging <i>Yan Wang</i> (Mainland China)	522
11:40 - 12:00	Development of Millimeter-wave Power Amplifier Using CMOS Process <i>Kai Kang</i> (Mainland China)	525
12:00 - 12:20	A Fully Integrated 60GHz Dual-Chip Wireless Solution for IEEE802.11ad Applications <i>Francois Chin</i> (Singapore)	528

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ORAL Session: TU1C
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Co-Chairs: Kin-Lu Wong and Zhi Ning Chen

08:00 - 08:30	Metamaterial-based Antennas: Engineering Designs. <i>(invited)</i> <i>Zhi Ning Chen, Xianming Qing, Jin Shi, Nassimuddin Nassimuddin, Wei Liu</i> (Singapore)	532
08:30 - 08:50	16-Antenna Array in the Smartphone for the 3.5-GHz MIMO Operation <i>Kin-Lu Wong, Jun-Yu Lu, Li-Yu Chen, Wei-Yu Li, Yong-Ling Ban, Chuan Li</i> (Taiwan)	535
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09:10 - 09:30	Effects of Metallic Caps for Liquid Metal in Substrate Integrated Waveguide Antenna <i>Muhammad Usman Memon, Sungjoon Lim</i> (South Korea)	541
09:30 - 09:50	Differentially T-Shape Slot Antenna With High Common-mode Suppression for 2.4/5.2/5.8 GHz WLAN MIMO Systems <i>Yan-Yan Liu, Zhi-Hong Tu, Qing-Xin Chu</i> (Mainland China)	544

ORAL Session: TU2C
Antennas for Wireless Communications - II

Co-Chairs: Xianmin Zhang and Junhong Wang

10:30 - 11:00	Radiation Characteristic of the Periodic Leaky Wave Structure and Its Application to Leaky Wave Antenna Design. <i>(invited)</i> <i>Junhong Wang, Yunjie Geng, Chong Zhang, Xingying Huo</i> (Mainland China)	548
11:00 - 11:20	Planar Three-Band Antenna for LTE/GSM/UMTS /WLAN/WIMAX Mobile Device Applications <i>Hui-Fen Huang, Shu-Guang Xiao</i> (Mainland China)	549
11:20 - 11:40	Radiation Characteristics of the Lossy Traveling-wave Circular Antenna <i>Yanru Li, Shilie Zheng, Xiaofeng Jin, Hao Chi, Xianmin Zhang</i> (Mainland China)	552
11:40 - 12:00	A Random Demodulation Based Reduced Sampling Rate Method for Wideband Digital Predistortion <i>Wei Tao, Haoyu Wang, Chongbin Zhou, Gang Li, Falin Liu</i> (Mainland China)	555
12:00 - 12:20	Development of an ASM2.0 RF System for Maritime Communications of High-Data-Rate in the VHF Band <i>Sung Jun Lee, Heon Kook Kwon, Gi Yoon Park, Hyungu Hwang, Daeho Kim,</i> <i>Bonghyuk Park</i> (South Korea)	558

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Room D

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Planar Antennas and Arrays

Co-Chairs: Steven Gao and Sang-Min Han

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08:20 - 08:40	Microstrip Array Antenna for X-Band Radar Application <i>Eko T Rahardjo, Derry P Yusuf, Basari Basari, Fitri Y Zulkifli</i> (Indonesia)	565
08:40 - 09:00	An Impedance-agile Microstrip Patch Antenna with Loading of a Shorting Pin <i>Xiao Zhang, Lei Zhu</i> (Macau)	567
09:00 - 09:20	Planar ESPAR Antenna Based on Yagi-Uda Array Design for Space Diversity Applications <i>Seok-Jae Lee, Kyungdong Kim, Sang-Min Han</i> (South Korea)	570
09:20 - 09:40	Dual-Band Digital Beamforming Synthetic Aperture Radar for Earth Observation <i>Steven Gao, Chunxu Mao, Fan Qin, Anton Patyuchenko, Carolina Tienda, M. Younis, G. Krieger, S. Glisic, W. Debski, L. Boccia</i> (United Kingdom)	573

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Millimeter Wave Antennas and Arrays

Co-Chairs: Wenquan Che and Zhang-Cheng Hao

10:30 - 11:00	Investigations on Millimeter-wave Conformal Antennas (<i>invited</i>) <i>Zhang-Cheng Hao, Kuikui Fan, Muxin He</i> (Mainland China)	577
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Co-Chairs: Xianqi Lin and Ke-Li Wu

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08:30 - 08:50	Low-Profile Dual-Polarized Antenna with Bandpass Filter for WiFi Application <i>Liyang Nie, Xianqi Lin, Yuan Jiang, Jin Zhang</i> (Mainland China)	594
08:50 - 09:10	Design of Multi-Band Antenna Using Zeroth Order Resonator Loaded with SRR and Modified Ground Plane <i>Krishnamoorthy Kandasamy, Basudev Majumder, Jayanta Mukherjee, Kamla PrasanRay</i> (India)	597
09:10 - 09:30	Dual Band Dual Polarized Frequency Reconfigurable Antenna Using Meta-surface <i>Basudev Majumder, Krishnamoorthy Kandasamy, Jayanta Mukherjee, Kamla PrasanRay</i> (India)	600
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ORAL Session: TU2E
Planar Passive Filters

Co-Chairs: Sungtek Kahng and Qing-Xin Chu

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11:00 - 11:20	Tunable Filter Design by Using a Sequential Method <i>Huayong Jia, Paul Laforge</i> (Canada)	N/A
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12:00 - 12:20	Wilkinson Power Divider with Band-pass Filter Response and Easy Structure <i>Xiaolong Wang, Zhewang Ma, Iwata Sakagami, Masayuki Yoshikawa, Atsushi Mase</i> (Japan)	619

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Room F

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EM Algorithms and Techniques - III

Co-Chairs: Qunsheng Cao and Jun Hu

08:00 - 08:30	Integral Equation Domain Decomposition Method for Dielectric Objects (<i>invited</i>) <i>Jun Hu, Ran Zhao, Ming Jiang, Zaiping Nie</i> (Mainland China)	623
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ORAL Session: TU2F
EM Algorithms and Techniques - IV

Co-Chairs: Yijun Feng and Wenyan Yin

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11:00 - 11:20	Study on Projection Error of Equivalence Principle Algorithm <i>Xunwang Dang, Maokun Li, Fan yang, Shenheng Xu</i> (Mainland China)	640
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12:00 - 12:20	A Large Scale of Fine to Coarse Cell Transformation for FDTD Simulation <i>Kui SongZheng, Huan Luo, Zong MinMu</i> (Mainland China)	648

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Room G

ORAL Session: TU1G
Si-Based Integrated Circuits

Co-Chairs: Lianming Li and Ryo Ishikawa

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08:20 - 08:40	A W-Band LO-Chain with Injection-Locked Frequency Sextupler and Medium Power Amplifier Using 65-nm CMOS Technology for Automotive Radar Applications <i>Yu-Chuan Chang, Yuan-Hung Hsiao, Yu-Hsuan Lin, Huei Wang</i> (Taiwan)	655
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ORAL Session: TU2G
Power Amplifiers & DPD Technologies

Co-Chairs: Wenhua Chen and Donald Kimball

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11:30 - 11:50	Low Computational Complexity Digital Pre-Distortion for Broadband Power Amplifiers <i>Wang Zonghao, Chen Wenhua, Su Gongzhe</i> (Mainland China)	677
11:50 - 12:10	A Ka-band power-combined amplifier based on a six-way power divider/combiner <i>Jie Xu, Yinjie Cui, Cheng Qian, Wenyuan Li</i> (Mainland China)	680

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Room H, 09:50 - 10:30

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P.2	Mode Matching Analysis of Dimension for Single-Mode Operation of Shielded Microstrip Lines <i>Cheng Zhao, Christophe Fumeaux, Thomas Kaufmann, Yingbo Zhu, Cheng-Chew Lim</i> (Australia)	687
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P.4	Direct Solution of MoM Matrix Equation Using Sherman-Morrison-Woodbury Formula-Based Algorithm With ACA-SVD <i>Xinlei Chen, Chang Qing Gu, Zhenyi Niu, Zhuo Li</i> (Mainland China)	693
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P.6	Analysis of EM Scattering from Multiscale Conducting Structures in a Half Space <i>Min Meng, Yongpin P.Chen, Wan Luo, Zaiping Nie, Jun Hu</i> (Mainland China)	699
P.7	Analysis of Periodic Structures at Oblique Incidence by Iterated Finite-Difference Time-Domain Method <i>Chen Yang Shen, Ming Fang, Zhi xiangHuang, Xianliang Wu</i> (Mainland China)	701
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P.9	Comparison of SIMO-Based Wavenumber Domain and Back-Projection Imaging Algorithms <i>Shuang Liu, Shiyong Li, Guoqiang Zhao, Houjun Sun</i> (Mainland China)	707
P.10	Comparison of Lumped-parameter Circuit Models for On-Chip Spiral Inductors <i>Bo Han, Ruxia Yue, Jun Li, Xiaofeng Shi, Daimu Wang</i> (Mainland China)	710
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P.15	A GaN HEMT Nonlinear Large-Signal Statistical Model based on Empirical Equivalent Circuit Model <i>Zhikai Chen, Yuehang Xu, Xuming Yu, Changsi Wang, Zhang Wen, Chuicai Rong, Ruimin Xu</i> (Mainland China)	N/A
P.16	A tunable wideband absorber based on periodic resistive patterned graphene <i>Dongke Zhu, Er-Ping Li</i> (Mainland China)	728

P.17	A 6-bit Phase Shifter with Low RMS Phase Error and Flat Gain Across 1.9-2.6GHz <i>Pengfei Zhang, Yu Zhu, Sha Deng, Cen Chen, Rong Zhang, Fujiang Lin</i> (Mainland China)	731
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P.61	Sparse Circular Array Pattern Optimization Based on MOPSO and Convex Optimization <i>Aihua Cao, Hailin Li, Shoulei Ma, Jing Tan, Jian Jiang Zhou</i> (Mainland China)	864
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P.63	Study of a Complementary Antenna for Wearable Applications <i>Dan-Yang Zhang, Qing-Nian Zhang, Wen-Jun Lu, Hong-Bo Zhu</i> (Mainland China)	870
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P.65	A Wideband Antenna with Two Controllable Notched Bands <i>Yingjiang Guo, Xiaohong Tang, Kai Da Xu</i> (Mainland China)	876
P.66	A Switchable Dual-band Monopole Antenna Using PIN Diode <i>Yingjiang Guo, Xiaohong Tang, Kai Da Xu</i> (Mainland China)	879
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P.70	A Novel Dual-band Frequency Tunable Slot Antenna with Constant Frequency Ratio <i>Jie Yang, Wai-Wa Choi, Kam-Weng Tam</i> (Macau)	890
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P.73	Automatic Feature Extraction from Insufficient JEM signals Based on Compressed Sensing Method <i>Wooyong Yang, Hyungju Kim, Jonghae Lee, Sungjun Yang, Nohhoon Myung</i> (South Korea)	899
P.74	A Triple-Band Multi-functional Antenna for LTE/ GSM/ UMTS/ WiMAX Handsets <i>Hui-Fen Huang, Wei Zhao</i> (Mainland China)	902
P.75	A Dual-Band 2.45/5.25 GHz, Multi-standard, Concurrent LNA Using a Dual-Resonant Matching Network <i>Ahmed Mohamedgamal, Hesham Nabilahmed, Magdy Abd El _Rahmanel _Kfady</i> (Egypt)	N/A
P.76	A Variable Gain Envelope Modulator with Hybrid Topology for High Linearity/Efficiency Polar Transmitter Application <i>Wei-Ping Hung, Chia-Hung Chang</i> (Taiwan)	908
P.77	Design and Implementation of Microstrip Patch Antenna for RFID Tag Applications <i>Ehab K. I.Hamad</i> (Egypt)	N/A

P.78	Alumina Ceramic Slot Antenna for UHF RFID Tag embedded in Vehicles <i>Li Deng, Weijun Hong, Shufang Li, Botao Feng, Jianfeng Zhu, Biao Peng</i> (Mainland China)	914
P.79	Attempt of the Metallic 3D Printing Technology for Millimeter-Wave Antenna Implementations <i>Bing Zhang, Peter Linnér, Camilla Kärfelt, Pui LamTam, Ulf Södervall, Herbert Zirath</i> (Sweden)	917
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P.81	A Broadband Random Metasurface for Radar Cross Section Reduction <i>Pei Su, Yongjiu Zhao, Shengli Jia, Wenwen Shi, Hongli Wang</i> (Mainland China)	923
P.82	Circularly Polarized Reflectarray Realized by Anisotropic Metasurface <i>Y.Q. L, H.F. M</i> (Mainland China)	926
P.83	A Broadband Polarization-insensitive Metamaterial Absorber Loaded with Lumped Resistances <i>Hua Yang, Shaobin Liu, Junyi Xu</i> (Mainland China)	N/A
P.84	Deconvolution technique for Spatial Resolution Enhancement of MWRI <i>Weidong Hu, Jinjia Ji, Xiangxin Meng, Xin Lv</i> (Mainland China)	932
P.85	Dual Band-Notched Ultra-Wideband Antenna Based on U-Shaped Slit and Split Ring Slot <i>Bo Tong, Xianliang Wu, Long Xiao, Zhixiang Huang</i> (Mainland China)	935
P.86	Motion Feature of Impact Analysis on Aircraft Dynamic RCS <i>Wang Da-Peng, Zhang Chen-Xin, Zhuang Ya-Qiang, Zhang Xue-Li</i> (Mainland China)	N/A
P.87	Wideband Printed Fresnel Reflectarray Antennas Using Dual-printed-Dipole Elements <i>Yinyan Chen, Yuehe Ge</i> (Mainland China)	941

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Room A

ORAL Session: TU3A
Wireless Power Transmission - I

Co-Chairs: Mauro Mongiardo and Arokiaswami Alphones

13:30 - 14:00	Metamaterial Assisted Wireless Power Transfer System (<i>invited</i>) <i>Arokiaswami Alphones, JPK Sampath</i> (Singapore)	945
14:00 - 14:20	Wireless Power Transfer Between One Transmitter and Two Receivers: Optimal Analytical Solution <i>Mauro Mongiardo, Qinghua Wang, Wenquan Che, Marco Dionigi, Renzo Perfetti, Yumei Chang, Giuseppina Monti</i> (Italy)	948
14:20 - 14:40	A Dual-Frequency Rectifier with Adaptive Power <i>Jia-Jun Lu, Xue-Xia Yang, Chong Tan</i> (Mainland China)	951
14:40 - 15:00	Log-Periodic Antenna with Interdigital Structure for Energy Harvesting from TV Broadcast Tower <i>Yijun Liu, Xueguan Liu, Xinmi Yang, Danpeng Xie</i> (Mainland China)	954
15:00 - 15:20	A Dual-Band Rectifier for Low-Power Wireless Power Transmission System <i>Xiaobin Huang, Junjun Wang, Xuyue Wu, Mengxi Liu</i> (Mainland China)	957

ORAL Session: TU4A
Wireless Power Transmission - II

Co-Chairs: Hsin-Chia Lu and Qun Wu

16:10 – 16:40	Frequency Splitting Elimination in Wireless Power Transfer Using Nonidentical Resonant Coils (<i>invited</i>) <i>Qun Wu, Yue-Long Lyu, Fan-Yi Meng</i> (Mainland China)	961
16:40 – 17:00	Design of Rectifier for Rectenna Application <i>Fitri Yuli Zulkifli, Yorashaki Martha Leza, Basari Basari, Eko Tjipto Rahardjo</i> (Indonesia)	964
17:00 – 17:20	Phase and Time Switching Modulations for Multi-point Wireless Power Grid to Realize Stable Power Reception under Rotational Misalignment <i>Yu-Chia Chang, Chung-Hung Hong, Kae-An Liu, Hsin-Chia Lu</i> (Taiwan)	967
17:20 - 17:40	Development of High-Efficiency Rectification Circuit for RF Energy Harvesting <i>Minjing Zhang, Xueguan Liu, Huiping Guo, Xinmi Yang, Danpeng Xie</i> (Mainland China)	970
17:40 – 18:00	Transfer Efficiency Control Using Switching Devices in Resonant Magnetic Coupling <i>Satoshi Shimokawa, Akiyoshi Uchida, Hirotaka Oshima</i> (Japan)	973

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Room B

ORAL Session: TU3B
THz Systems and Applications

Co-Chairs: Cèsar Miquel Espanya and Stepan Lucyszyn

13:30 - 14:00	Banknote Characterization using a Thermal Infrared ‘THz Torch’ Spectrometer (<i>invited</i>) <i>Jingye Sun, Fangjing Hu, Zhengwei Wang, Stepan Lucyszyn</i> (United Kingdom)	977
14:00 - 14:20	CMOS THz On-chip Surface Plasmon Polariton T-lines and Converter <i>Yuan Liang, Hao Yu, Hao Chi Zhang, Tie Jun Cui</i> (Singapore)	980
14:20 - 14:40	Study of the Input RF Noise of a THz Superconductor-Insulator-Superconductor Receiver <i>Ming Yao, Dong Liu, Jie Hu, Jing Li, Shengcai Shi</i> (Mainland China)	983
14:40 - 15:00	Sub-THz OOK Receiver for Chip to Chip Data Link <i>Seungwan Chai, Songcheol Hong</i> (South Korea)	986
15:00 - 15:20	A quasi-optical antenna of passive THz imaging system for concealed-object identification <i>Congjing Hao, Xiang Gao, Zhuo Wang, Qing Ding, Weiqian Duan, Jun He</i> (Mainland China)	989

ORAL Session: TU4B
CMOS Integrated Circuits and Devices

Co-Chairs: Hsien-Chin Chiu and Kaixue Ma

16:10 – 16:40	Generalized Multiple Coupled Tanks for Silicon Based RF/mm-wave IC (<i>invited</i>) <i>Kaixue Ma, Qiong Zou, Fanyi Meng, Shouxian Mou, Kiat Seng Yeo</i> (Mainland China)	993
16:40 – 17:00	A W-band CMOS Low power Wideband Low Noise Amplifier With 22 dB Gain and 3 dB bandwidth of 20 GHz <i>Chae Jun Lee, Hae Jin Lee, Joong Geun Lee, Tae Hwan Jang, Chul Soon Park</i> (South Korea)	996
17:00 – 17:20	A 216GHz 0.5mW Transmitter with A Compact Power Combiner in 65nm CMOS <i>Sriram Muralidharan, Kefei Wu, Mona Hella</i> (United States)	999
17:20 - 17:40	265 GHz, 10 dB Gain Amplifier in 65nm CMOS Using On-wafer TRL Calibration <i>Yohei Yagishita, Yoichi Kawano, Hiroshi Matsumura, Ikuo Soga, Toshihide Suzuki, Taisuke Iwai</i> (Japan)	1002
17:40 – 18:00	150-GHz SPDT Switch with Rat-Race Coupler Topology in 0.13- μ m SiGe BiCMOS <i>Pengwei Cheng, Jin He, Debin Hou, Jiang Luo, Hao Wang, Sheng Chang, Qijun Huang, Yong-Zhong Xiong, Yueping Zhang</i> (Mainland China)	1005

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Room C

ORAL Session: TU3C
RFID Technologies - I

Co-Chairs: Igor B. Shirokov and Yilong Lu

13:30 - 14:00	Chipless RFID Tag Design and Detection with Adaptive Direct Path Cancellation (<i>invited</i>) <i>Yilong Lu, Lingyu Liu, Wei Liu</i> (Singapore)	1009
14:00 - 14:20	A 6-bit Phase Shifter for UHF RFID Application <i>Yunzhen Wang, Shengxi Diao, Yu Zhu, Sha Deng, Fujiang Lin</i> (Mainland China)	1012
14:20 - 14:40	The Increasing of Positioning Accuracy of Microwave RFID System <i>Igor B. Shirokov, Yuri B. Gimpilevich</i> (Russian Federation)	1015
14:40 - 15:00	Novel Optically Transparent Antenna for RFID Smart Fitting Room Application <i>Yuan Yao, Naixiao He, Wanzhong Chen, Junsheng Yu, Xiaodong Chen</i> (Mainland China)	1018
15:00 - 15:20	Investigation of Wirelessly Powered Circuit for Low-Power Adiabatic Logic Circuits <i>Masashi Sakai, Toshikazu Sekine, Yasuhiro Takahashi</i> (Japan)	1021

ORAL Session: TU4C
RFID Technologies - II

Co-Chairs: Guo-Min Yang and Tian-Wei Huang

16:10 - 16:40	Smart RFIC: Millimeter-wave Gigabit Transceivers with Digitally-enabled Built-in Self-calibration and Auto-switching Functions. (<i>invited</i>) <i>Tian-Wei Huang</i> (Taiwan)	1025
16:40 - 17:00	A Compact 433 MHz Antenna with Enhanced Performance by Using Multi-Resonant Meander Line Structure <i>Xiao-Yi Wang, Yu Fu, Haowen Wang, Yunsong Gui, Guo-Min Yang</i> (Mainland China)	1026
17:00 - 17:20	A Compact Platform-Tolerant Antenna for RFID Tag With Stable Gain <i>Weijun Hong, Qing Chen, Li Deng, Yang Fu, Zhentao Zhao, Xiong Xiong</i> (Mainland China)	1029
17:20 - 17:40	Design of A Broadband Circularly Polarized UHF RFID Tag Antenna for Metallic Objects <i>Xin Qian, Guangqiu Zhang, Xue Lei, Lei Hou, Shenghua Ma</i> (Mainland China)	1032
17:40 - 18:00	Anti-Collision Methods for Chipless RFID Systems <i>Rubayet EAzim, Nemaï CKarmakar</i> (Australia)	1035

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Room D

ORAL Session: TU3D

Antennas

Co-Chairs: Martin Ding and Yujian Cheng

13:30 - 14:00	Millimeter-wave Planar High-Gain Antennas (<i>invited</i>) <i>Yujian Cheng</i> (Mainland China)	1039
14:00 - 14:20	A Research for Miniaturized Cavity Slot Antenna and Wide-angle Scanning <i>Zhou Weihua</i> (Mainland China)	1041
14:20 - 14:40	Differential Dual Polarization Dielectric Resonator Antenna with Higher Mode Suppression, High Isolation and Low Cross-Polarization <i>Hui Tang, Jian-Xin Chen, Qing-Yuan Lu, Yang Zhan, Jiang Li</i> (Mainland China)	1044
14:40 - 15:00	Dual-Band Wearable Antenna on Liquid Crystalline Polymer Based1 Metasurface <i>Fuheng Zhang, Guo-Min Yang, Ya-Qiu Jin</i> (Mainland China)	1047
15:00 - 15:20	Advanced acceleration techniques for full-wave analysis of electrically large arrays based on Method of Moments <i>Mauro Bandinelli, Mirko Bercigli, Martin Ding, Giancarlo Guida</i> (Mainland China)	1050

Special Session on “Women in Microwave Engineering”: TU4D
The Challenges and Chances for Women in Microwave Engineering 1054

Organizers: Sherry Hess and Wenquan Che

16:10 – 17:30

Abstract

As reported by the statistics from the Society of Women Engineering, there are significantly more women in engineering in China than in Europe or the USA, saying, approximately 43 percent of engineers in China are women, and there are also a significant number of women students and professors. How about the situation in microwave engineering in China, especially in Universities?

A report extracted from statistics and internet survey will be delivered in the special session, in which the percent of women graduate students and professors will be given. Meanwhile, the possible difficulties and some challenges for the women when choosing the engineering fields will be discussed in the panel session.

Through the talk and discussions in this special session, we hope our women students and young female scholars can have more confidences on their current studies and future career development, which is important not only for themselves, but also for their families and social development. Furthermore, with the growing number of women in science and technology, it is thus quite necessary and important for the society to change cultural perceptions on women's roles, and government to change some policies and laws that promote gender equality. Being half of the populations in the world, the attendance and roles for the women in engineering will definitely contribute a lot for the development of the science and technology in many countries.

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Room E

ORAL Session: TU3E
Couplers and Power Dividers

Co-Chair: Jorge A. Ruiz-Cruz and Kamran Ghorbani

13:30 - 14:00	Advances Aerospace Multifunctional Structures with Integrated Antenna Structures (<i>invited</i>) <i>Kamran Ghorbani, T Baum, K Nicholson, J Ahamed</i> (Australia)	1056
14:00 - 14:20	Wideband Substrate Integrated Waveguide Power Divider <i>Hao Zhou, Wei Hong</i> (Mainland China)	1059
14:20 - 14:40	Development of Folded Dual-Polarization Dividers for Broadband Ortho-Mode Transducers <i>Jorge A. Ruiz-Cruz, Jose R Montejo-Garai, Carlos A Leal-Sevillano, Jesus M Rebolgar</i> (Spain)	1062
14:40 - 15:00	A Compact Patch Coupler with an Arbitrary Phase Difference for Millimeter-Wave Applications <i>Bowei Xu, Xiaofeng Ye, Shaoyong Zheng</i> (Mainland China)	1065
15:00 - 15:20	A Novel Method to Design Wilkinson kind Power Divider <i>Tian Qi, Songbai He</i> (Mainland China)	1068

ORAL Session: TU4E
Planar Integrated Filters and Multiplexers - I

Co-Chairs: Yasushi Yamao and Ming Yu

16:10 – 16:40	The Recent Advances of High Performance Filters and Multiplexers (<i>invited</i>) <i>Ming Yu</i> (Canada)	1072
16:40 – 17:00	A X-band Digitally Controlled 5-bit Phase Shifter in 0.18- μ m CMOS Technology <i>Hamed Alsuraistry, Jen-Hao Cheng, Huei-Wen Wang, Jie-Ying Zhong, Jeng-Han Tsai, Tian-Wei Huang</i> (Taiwan)	1073
17:00 – 17:20	Bandwidth Deviation Controlled Reconfigurable Bandpass Filter Using LC Parallel Coupling Circuit <i>Takumi Kato, Ryosuke Kobayashi, Tetsunari Saito, Yasushi Yamao</i> (Japan)	1076
17:20 – 17:40	A Substrate Integrated Magic-T Based on Higher Order Mode Cavity and Slotline <i>Peng Wu, Shaowei Liao, Quan Xue</i> (Hong Kong)	1079
17:40 – 18:00	Ridge Substrate Integrated Waveguide Filter with Planar Mixed Electric and Magnetic Coupling <i>Liwen Huang, Hao Cha</i> (Mainland China)	N/A

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Room F

ORAL Session: TU3F
Instrumentation & Measurement Techniques

Co-Chairs: Houjun Sun and Tah-Hsiung Chu

13:30 - 13:50	High Resolution Radar Imaging with Undersampled Data <i>Haitao Zheng, Shiyong Li, Guoqiang Zhao, Hang Cheng, Houjun Sun</i> (Mainland China)	1086
13:50 - 14:10	Using AFR to improve antenna system's measurement accuracy <i>Chengcheng xie, Ruimin Xu</i> (Mainland China)	1089
14:10 - 14:30	Reconstructing scattering matrix of a three-port nonreciprocal network from one-port measurements <i>Yen-Chung Lin, Tah-Hsiung Chu</i> (Taiwan)	1092
14:30 - 14:50	W-band Three-Dimensional Surveillance Imaging System <i>Hang Cheng, Haitao Zheng, Liechen Yu, Shuang Liu, Shiyong Li, Houjun Sun</i> (Mainland China)	1095
14:50 - 15:10	The Study of Phase Noise Measurement System of Two-port Device <i>Xiaoguang Zheng, Fei Yang</i> (Mainland China)	1098

ORAL Session: TU4F
Biomedical and Health Care Applications

Co-Chairs: Cheng-Hsing Hsu and Yongxin Guo

16:10 – 16:30	Terahertz spectral signature of DNA macromolecules <i>Fang Wang, Miao Li, Ling Jiang, Yunfei Liu</i> (Mainland China)	1102
16:30 – 16:50	Technique to Assess the Compatibility of Medical Implants to the RF Field in MRI <i>Steven McCabe, Jonathan Scott</i> (New Zealand)	1105
16:50 – 17:10	Early Breast Cancer Detection via UWB Based on MRI-derived Model <i>Xia Xiao</i> (Mainland China)	1108
17:10 – 17:30	Analysis of the Body Proximity Cross-Polarization Power Ratio in a Human Walking Motion <i>Kun Li, Kazuhiro Honda, Koichi Ogawa</i> (Japan)	1109
17:30 – 17:50	A Compact CSRR Loaded Circularly Polarized Implanted Antenna for Biomedical Applications <i>ZeTao Wu, XiongYing Liu, Yi Fan, YunHui Di</i> (Mainland China)	1112

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Room G

ORAL Session: TU3G
Millimeter Wave Devices and Applications

Co-Chairs: Hongfu Meng and Hairui Liu

13:30 - 13:50	W-Band Substrate Integrated Waveguide Filter with Cross-Coupling <i>Liyuan Wang, Chuanfang Zhang, Mengjia Luo, Chun Chun Ma, Cheng Jin</i> (Mainland China)	1116
13:50 - 14:10	Millimeter-wave Band-pass Filter Based on Complementary Split Ring and SIW Resonators <i>Yueyue Zhu, Jixin Chen</i> (Mainland China)	1119
14:10 - 14:30	A 20% Locking Range and -125dBc/Hz Phase Noise Quotient Frequency Synthesizer Suitable for Multiband Millimeter-Wave Applications <i>Runxi Zhang, Chunqi Shi, Tianye He</i> (Mainland China)	1122
14:30 - 14:50	Studies on Novel Terahertz Electronic Sources Based on Doubly-corrugated Metasurfaces <i>Yong-Qiang Liu, Ling-Bao Kong, Pu-Kun Liu</i> (Mainland China)	1125
14:50 - 15:10	A 332GHz Frequency Doubler using Flip-chip Mounted Planar Schottky diodes <i>Hairui Liu, Jeff Powell, Colin Viegas, Angus Adams Cairns, Byron Alderman</i> (Mainland China)	1128

ORAL Session: TU4G
Planar Antennas

Co-Chairs: Zhengwei Du and Zhenguo Liu

16:10 – 16:30	A Bandwidth Enhancement Method for a Proximity Coupled Microstrip Patch Antenna <i>Eun-Hyuk Kwak, Boo-Gyoun Kim</i> (South Korea)	1132
16:30 – 16:50	A Novel Digital Data Encoding and Decoding Method Using Orbital Angular Momentum of Electromagnetic Fields <i>BaiYang Liu, YueHui Cui, RongLin Li</i> (Mainland China)	1135
16:50 – 17:10	Experience on Plasma Antenna Technology <i>Jian Sun, Yuemin Xu, Hailong Sun</i> (Mainland China)	1137
17:10 – 17:30	Reconfigurable Ferrite-Loaded SIW Antenna <i>Rui-Xin Wu, Li-Rong Tan, Qun Lou</i> (Mainland China)	1140
17:30 – 17:50	Design of a Planar Broadband Capacitive-Loaded Antenna with Bow-tie Section <i>Yiran Wang, Zhengwei Du</i> (Mainland China)	1143

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Room H, 15:20 - 16:10

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Poster Session - 3

P.1	Research on Aircraft Detection over the Sea <i>Bin Chen, Chuangming Tong, Ximin Li</i> (Mainland China)	N/A
P.2	Radiated Emission Study of the Cost Effective Folded Flexible Printed Circuit Cable <i>BoonPing Koh, ChunTong Chiang</i> (Malaysia)	1150
P.3	A Variable Range Step Technique for Propagation Predictions over Large Irregular Terrain using the Fourier Split-Step Parabolic Equation <i>Weiping Qin, Ying Chen</i> (Mainland China)	1153
P.4	Performance Analysis of Distorted Reflector Antennas Basing on Interval Method <i>Liwei Song, Hongbo Ma, Thomas Baum, Kamran Ghorbani</i> (Mainland China)	1156
P.5	A Near-Field Spherical Layered Human Head Model for Stroke Detections <i>Dong Huang, Hong LiPeng, Xing Li, Wei qingJin, Jun FaMao</i> (Mainland China)	1159
P.6	Flat Lens achieved by All-dielectric Photonic Crystal with Near-zero Refractive Index <i>Yichi Zhang, Qun Lou, Yin Poo, Ruixin Wu</i> (Mainland China)	1162
P.7	A Physical Optics Model of Two Dimensional Scattering from Two-Layered Rough Surfaces <i>Rui Wang, Zhi-bin Zhang, Li-xin Guo</i> (Mainland China)	N/A
P.8	Leapfrog ADI-FDTD Method for Isotropic Plasma Based on Laplace Transform Principle <i>Dan Cheng, Hongcheng Yin, Hongxing Zheng, Liying Feng</i> (Mainland China)	1168
P.9	An Implementation of the ACA on GPU Platform <i>Xing Mu, Hou-Xing Zhou, Zhe Song, Wei-Bin Kong, Wei Hong</i> (Mainland China)	1171
P.10	DOA Estimation Based on Cross Terms of Spatial Time-frequency Distribution Matrices <i>Aijun Lliu, Fen Li, Changjun Yu</i> (Mainland China)	1174
P.11	Electromagnetic Scattering of 1-D Sea Surface by Iterative Physical Optics Algorithm <i>Juan Li, Li-Xin Guo, Ke Li, Shui-Rong Chai</i> (Mainland China)	N/A
P.12	Study on Coupling Scattering from A Complex Target above Sea Surface by A Hybrid PO-MEC-SSA Method <i>Guang-Hui Wu, Chuang-Ming Tong, Peng Peng, Xi-Min Li</i> (Mainland China)	N/A
P.13	Compressed Sensing Based on FE-BI for Solving Electromagnetic Scattering Problems <i>Hou Dayou, Chen Mingsheng, Kong Meng, Cao Xinyuan, Zhang Liang, Wu Xianliang</i> (Mainland China)	1183
P.14	15 GHz Propagation Channel Measurement at a University Campus for the 5G Spectrum <i>Wei-Chung Cheng, Tsung-Hsin Liu, Miao-Lin Hsu, Zuo-Min Tsai, Wern-Ho Sheen</i> (Taiwan)	1186
P.15	Improved Design of an Ultra-Broadband Probe for Multiprobe Reflectometers <i>Kamil Staszek, Slawomir Gruszczynski, Krzysztof Wincza</i> (Poland)	1189
P.16	Design of a 1-D Sparse UWB MIMO Array for Near Field RCS Imaging System <i>Jiawen Sun, Liuge Du, Wanshun Jiang</i> (Mainland China)	1192

P.17	Study on Suppression of Aperture-Cavity Resonance by Nested Square Rings Absorber <i>Jiepei Shi, Juan Chen, wei fu</i> (Mainland China)	1195
P.18	K-band Tunable Phase Shifter with Microstrip Line Structure Using BST Technology <i>Zhang Meng, Peng Chen, Xiaowei Zhu, Xutao yu, Mingya Liu, Senyin Ling</i> (Mainland China)	1198
P.19	K-Band Tunable CPW Phase Shifters Unit Using Ba _{0.5} Sr _{0.5} TiO ₃ Thin Films <i>Haitao Zhan, Mingyang Liu, Senyin Ling, Hui Zhang, Xutao Yu</i> (Mainland China)	1201
P.20	In-Phase Power Divider with Three Octaves Band Using Microstrip to Slotline Transitions and Loosely Coupled Microstrip Lines <i>Ummee TaniaAhmed, Amin Abbosh</i> (Australia)	1204
P.21	An Ultra-thin and broadband Metamaterial absorber using slotted metal loops with multi-layers <i>Ze Yu, Gui ZhenLu</i> (Mainland China)	N/A
P.22	Improved Zeroth-Order Resonator Used in Microwave Oscillator <i>Juanjuan Gao, Guizhen Lu</i> (Mainland China)	1210
P.23	A Novel Approach to Design an Antenna Aperture Tuning Circuit <i>Sameer Akhtar Shah, Qianyun Liu</i> (Germany)	1213
P.24	A New Slotted Waveguide Using a Resin Hose with Metallic Coating <i>Shotaro Ishino, Tetsuya Miyagawa, Naoki Shinohara</i> (Japan)	1216
P.25	Numerical Short-Open-Load (SOL) De-Embedding of Effective Wave Impedances of Substrate Integrated Waveguide with Square or Circular Vias <i>Qiongsen Wu, Lei Zhu</i> (Macau)	1219
P.26	A Design of Modified Circular Slot Antenna with Fork-like Tuning Stub for UWB Operations <i>Kwang-Yun Mok, Joong-Han Yoon, Young-Chul Rhee</i> (South Korea)	N/A
P.27	Compact Coaxial Dielectric Bandpass Filter with load-source coupling <i>Liangzu Cao, Jian Hu, Lixia Yin</i> (Mainland China)	1225
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P.29	Wideband Vertical Microstrip-to-Microstrip Transition Designed with Cross-Coupled Microstrip/Slotline Resonators <i>Li Yang, Lei Zhu, Wai Wa Choi, Kam Weng Tam</i> (Macau)	1231
P.30	Design of a Flower-shaped Monopole Antenna for UWB Applications <i>Kwang-Min Joung, Sung-Jae Ha, Woo-Su Kim, Joong-Han Yoon</i> (South Korea)	N/A
P.31	Planar UWB Phase Shifter Using Parallel Coupled Lines Combined with Short-Ended Stubs and Impedance Transformer <i>Lei Guo, Amin Abbosh</i> (Australia)	1237
P.32	Design of a Polygon Slot Antenna with Polygon tuning stub for UWB Applications <i>Ju-Ho Lee, Yeong-Sung Lee, Joong-Han Yoon</i> (South Korea)	N/A
P.33	A Planar Antenna Having Two Realizable Circular Polarizations <i>Hong-Hui Wang, Zhang-Cheng Hao, Xiao-Ming Liu</i> (Mainland China)	1243
P.34	Dual-band Impedance Transformer using Coupled Line for Arbitrary Complex Loads <i>Siyue Zhou, Yuanan Liu, Xiaochuan Shen, Weimin Wang, Yongle Wu</i> (Mainland China)	1246
P.35	Implementation of an X band Leakage Cancellation Network for Bandwidth Improvement <i>Xuekun Du, Zhenhai Shao, Chang Jiang You</i> (Mainland China)	1249

P.36	Reconfigurable Dual-mode Bandpass Filter with Tunable Center Frequency and Bandwidth <i>Wei Wen, Wei ChaoYang, Kai Yang, Yang XiangRen</i> (Mainland China)	N/A
P.37	A Circular Ring-shape Monopole On-chip Antenna with Artificial Magnetic Conductor <i>Hao Tian Huang, Bo Yuan, Xiao Hong Zhang, Zhi Fang Hu, Guo Qing Luo</i> (Mainland China)	1255
P.38	A Low Cost W-Band SIW Bandpass Filter <i>Qi Wen Ding, Zhang Cheng Hao, Bin Qi Yang</i> (Mainland China)	1258
P.39	A novel dual-band bandpass filter with C-section loaded resonators <i>Yun-Long Lu, Chang-Zhou Hua, Tai-Jun Liu</i> (Mainland China)	1261
P.40	A Novel UWB Bandpass Filter Based on Double Interdigital Structure <i>Chao Fang, Senshen Deng, Feng Xu</i> (Mainland China)	1264
P.41	Dual-Wideband Bandpass Filter Based on a Dual-Stubs Loaded Half-wavelength Resonator <i>Daotong Li, Yonghong Zhang, Fan Zhang, Kaijun Song, Yong Fan</i> (Mainland China)	1267
P.42	Design of a Ultra-wideband Filter based on Defected Ground Structure <i>Xu Li Qin, Zhu Teng</i> (Mainland China)	1270
P.43	Losses in Substrate Integrated Waveguide Band-Pass Post Filters <i>Cheng Zhao, Christophe Fumeaux, Cheng-Chew Lim</i> (Australia)	1273
P.44	A New Balanced Dual-Band SIW Bandpass Filter With High Common-Mode Suppression <i>Gang Zhang, Jian PengWang, Sheng Ge, Wen Wu</i> (Mainland China)	1276
P.45	Reconfigurable Electromagnetic Band Gap Structure <i>Zhao Wu, Na Kou, Haixia Liu, Long Li</i> (Mainland China)	1279
P.46	Design of 80-120 GHz Broadband Monolithic Amplifier Using Self-devised InP PHEMT <i>Zhuobin Zhao, Zhiming Wang, Jun Liu, Xin Lv</i> (Mainland China)	1281
P.47	Low Temperature Si-Si Bonding Process Design Based on Plasma Surface Treatment <i>Xiaoguang Wang, Yuling Li, Hong Qi</i> (Mainland China)	1284
P.48	Design of a Compact Ultra Wideband Quadrature Digital MMIC Phase Shifter <i>Jing Du, Guang Hua, Xin Jiang, Le Jiang, Ying Wang</i> (Mainland China)	1287
P.49	A Novel Two-stage Chaotic Colpitts Oscillator with Enhanced Negative Resistance <i>Wenlan Chen, Linhua Zheng, Xiaoxia Song</i> (Mainland China)	N/A
P.50	A 5.8-GHz CMOS Low-Power Active Mixer Featuring High Conversion Gain and Low LO Driving Power <i>Shih-Hsin Chang, Jyun-Kai Huang, Chao-Hsiung Tseng</i> (Taiwan)	1293
P.51	The Research of Cascaded Band-pass Filter With High Performance Based on LTCC <i>Maoya Yang, Xiangzhi Chen, Yongsheng Dai</i> (Mainland China)	1296
P.52	The Atmospheric Attenuation of THz Wave in Different Heights and Different City Region <i>Xiaofan Yang, Peng Mei, Xianqi Lin</i> (Mainland China)	1299
P.53	Millimeter Wave CMOS Power Amplifier Using Slow-wave Transmission Lines <i>Xiao-Lan Tang, Emmanuel Pistono, Jean-Michel Fournier, Philippe Ferrari, Zongming Duan, Qiang Ma, Yuefei Dai</i> (Mainland China)	1302
P.54	Design of Power Amplifier MMICs Based on GaN HEMTs at 110GHz <i>Yanfei Hou, Weihua Yu, Xiaobin Luo, Yuanjie Lv, Shaobo Dun, Zhihong Feng</i> (Mainland China)	1305

P.55	Temperature Rising of Human Skin Phantom: Parametric Numerical Study, Measurement and Uncertainty Evaluation in mm-Wave Domain <i>Alireza Kazemipour, Thomas Kleine-Ostmann, Djamel Allal, Michele Borsero, Luca Zilberti, Oriano Bottauscio, Thorsten Schrader</i> (Germany)	N/A
P.56	Terahertz Propagation and Radiation Characteristics of Metal Plate with Periodic Grooves <i>Jiangqiao Ding, Shengcai Shi, Wen Wu</i> (Mainland China)	1310
P.57	A Type of E-plane Filter Using Folded Split Ring Resonators (FSRRs) <i>Jun Ye Jin, Quan Xue</i> (Mainland China)	1313
P.58	CAD Modeling of Optically Loaded Microwave Power Attenuator <i>Raghebendra Singhtomar, Avnish Bhadauria, Enakshi KhularSharma, A KVerma</i> (India)	N/A
P.59	Design of Traveling Wave Electrode for Elec-tro-optic polymer/TiO ₂ multilayer slot waveguide modulators <i>Dan Zhang, Yunfei Liu</i> (Mainland China)	1319
P.60	Image Reconstruction Based on Iteration under Compressed Sensing Domain <i>Muhammad Sameer Sheikh, Qunsheng Cao, Caiyun Wang</i> (Mainland China)	1321
P.61	Partial Response Maximum Likelihood Equalization for High Speed Serial Link Systems <i>Chen hao, Hu Qingsheng</i> (Mainland China)	1324
P.62	Beam Cutting Effect on Jamming Efficiency of Chaff Corridor <i>Hongwei wang, Hongwei Wang, Chao Wang</i> (Mainland China)	1327
P.63	Electrically Steerable Leaky-Wave Antenna Capable of Both Forward and Backward Radiation Based on Liquid Crystal <i>Yan Gao, Yue-Long Lyu, Fan-Yi Meng, Qun Wu</i> (Mainland China)	1330
P.64	RCS Reduction of Antipodal Vivaldi Antenna <i>Tao Luo, Zaiping Nie</i> (Mainland China)	1333
P.65	Wide-Angle Phased Array Antenna with Partially Dielectric-Filled Open-Ended Rectangular Waveguide <i>Bo Ren, Yanfang Wang, Fuguo Zhu</i> (Mainland China)	1336
P.66	Miniaturization feeding network Design Based on Shield Cavity-Microstrip Hybrid Technique for Active Phased Array Applications <i>Qing-Qiang He, Xu Wei</i> (Mainland China)	1339
P.67	Wideband Microstrip Reflectarray Using Dual-Resonance Unit Cells <i>Xiaoyue Xia, Qi Wu, Haiming Wang, Chen Yu, Wei Hong</i> (Mainland China)	1342
P.68	Research on High Efficiency Silicon-based Plasma Antenna <i>Huigang Liu, Da Liang, Liru Ren, Fuhai Zhang, Weidong Geng, Bo Liu</i> (Mainland China)	1345
P.69	Prime Focus Reflector Antenna with Stacked Disks for Impedance Matching and Wide Band Feeder <i>Wan Lae Roh, In Hee Han</i> (South Korea)	1348
P.70	C-Band Dual-Polarized Dielectric Resonator Antenna With Balanced Feed <i>Peng-Kai Gong, Rong-Cang Han</i> (Mainland China)	1350
P.71	The Miniaturization Design of Tapered Slot Antenna for wideband Applications <i>Gao Ping, Dou Wen Bin, Wang Feng Ying, Chen Xu Qi</i> (Mainland China)	1353
P.72	Propagation Model and Channel Simulator under Indoor Stair Environment for Machine-to-Machine Applications <i>Yu Yu, Yang Liu, Wen-Jun Lu, Hong-Bo Zhu</i> (Mainland China)	1356
P.73	Design of Broadband Circularly-Polarized Monopole Antenna for Wireless Communication <i>Ru-Ying Sun, Shu-Yan Diao</i> (Mainland China)	1359
P.74	Frequency-Switchable LTE Antenna for Tablet Application <i>Chia-Lun Tang, Chi-Ming Chiang, Chun-Hua Chen</i> (Taiwan)	1362

P.75	On Probe Weighting for MIMO OTA testing in Anechoic Chamber Setups <i>Wei Fan, Pekka Kyösti, Jukka-Pekka Nuutinen, Jesper Ø.Nielsen, Gert F.Pedersen</i> (Denmark)	1365
P.76	A Compact Design of Antenna Feed for 6 M S/X-Bands Mono-Pulse Auto-Tracking Ground Station <i>Yun-Jui Lee, Vincent Huang, Ru-Muh Yang, Ti-Hsiang Hsu, Ming-Hui Chen, Chin-Yi Chu, Shyh-Jong Chung</i> (Taiwan)	1368
P.77	Digital Predistortion of RF Power Amplifiers with Zhu's General Sampling Theorem <i>Jianfeng Zhai, Lei Zhang, Zhiqiang Yu, Jianyi Zhou, Xiaowei Zhu</i> (Mainland China)	1371
P.78	An energy-efficient Vcm-based split capacitor switching scheme for high speed SAR ADCs <i>Dong Li, Qiao Meng</i> (Mainland China)	1374
P.79	Analysis of Electromagnetic Field Distribution Leaked from Wireless Power Transfer System at MHz / GHz bands in Case-study House <i>Tatsunori Yui, Hiroyuki Uno, Takashi Izumi, Hironobu Watanabe, Kazuhiko Ikeda, Yutaka Saito</i> (Japan)	1377
P.80	A Series-parallel Rectifier with an Inductance Loaded for Wireless Power Transfer <i>Zhanyu Kang, Xianqi Lin, Yuan Jiang, Zhe Chen, Guiyun Jiang</i> (Mainland China)	1380
P.81	A Novel Radome Material with Lower Reflectivity <i>Hao Li, Chao Meng, Rui XinWu</i> (Mainland China)	1383
P.82	Broadband wave transparent material by layered frequency selective surface with miniaturized elements <i>Cheng Xu, Digang Fan, Cheng Ju, Ruixin Wu</i> (Mainland China)	1386
P.83	Broadband Circularly Polarized Fabry-Perot Resonator Antenna by Array Thinning Technique <i>Zhen-guo Liu, Zhen-Xin Cao, Le-Nan Wu, Tian-Zhong Zhu</i> (Mainland China)	1389
P.84	Performance analysis of Parallel Interference Cancellation receiver applied to Hybrid OCDMA/WDM System for high-speed optical access <i>Younes Zouine, Zhour Madini, Kaoutar Saidialoui, Jaouad Foshi</i> (Morocco)	1392
P.85	A Dual-Functional Microstrip Antenna for Compass and WLAN Applications <i>Meng Zou, Zhongxiang Shen, Jin Pan</i> (Mainland China)	1395
P.86	A Flexible UWB CPW-fed Antenna on Liquid Crystal Polymer Substrate <i>Ying Yu, Pingping Jin, Keke Ding, Ming Zhang</i> (Mainland China)	1398
P.87	Circularly Polarized Slot antennas with Wideband Performance <i>N Nasimuddin, Arokiaswami Alphones, N Jeevanandham</i> (Singapore)	1401
P.88	Microwave Technique for Brain Stroke Localization and Classification Using Block Sparse Bayesian Learning with Wavelet Transform <i>Lei Guo, Amin Abbosh</i> (Australia)	1404

ORAL Session: WE1A
Miniature Filters - I (Special Session)

Co-Chairs: Lei Zhu and Amin Abbosh

08:00 – 08:25	Numerical Short-Open Calibration (SOC) Technique for De-embedding of Periodic Planar Transmission Line Structures: Effective Propagation Constant and Characteristic Impedance <i>Lei Zhu, Sheng Sun, Jing Gao (Macau)</i>	1408
08:25 – 08:50	Developing Compact Wideband Filters Using Multilayer Liquid Crystal Polymer Technology <i>Zhang-Cheng Hao (Mainland China)</i>	1411
08:50 – 09:15	Miniaturized LTCC Bandpass Filter with Extended Stopband <i>Xiuyin Zhang (Mainland China)</i>	1414
09:15 – 09:40	Compact Dual-Band Bandpass Filter Using Multi-Mode Resonator of Short-Ended and Open Ended Coupled Lines <i>Amin Abbosh, He Zhu, E Ahmed (Australia)</i>	1417

ORAL Session: WE2A
Miniature Filter – II (Special Session)

Co-Chairs: Sai-Wai Wong and Ching-Wen Tang

10:30 - 10:55	Compact Triple-Middle filter based on quarter-mode substrate integrated waveguide <i>Cheng Jin (Mainland China)</i>	1421
10:55 - 11:20	Multi-mode Wideband Bandpass Filters Using Waveguide cavities <i>Sai-Wai Wong, Shi-Fen Feng, Lei Zhu (Mainland China)</i>	1424
11:20 - 11:45	Design of A Compact Dual-Band Bandpass Filter With DGS-SIR Resonators <i>Ching-Wen Tang (Taiwan)</i>	1427
11:45 - 12:10	Compact Bandpass Filter with Multiple Harmonics Suppression Using Folded Parallel-Coupled Microstrip Lines <i>J Marimuthu (Australia)</i>	1430

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Room B

ORAL Session: WE1B
Millimeter Wave & THz Antennas and Systems

Co-Chairs: Mehmet Kaynak and Yong-Zhong Xiong

08:00 – 08:30	A W-band Single-Pole Single-Throw Switch Using On-Chip Rectangular Coaxial Transmission Line in 0.13- μ m CMOS Technology (<i>invited</i>) <i>Xiaodong Deng, Yihu Li, Wen Wu, Yong-Zhong Xiong</i> (Mainland China)	1434
08:30 – 08:50	Dual-beam Scanning using Graphene-based Reflectarray <i>Xiaobing Li, Weibing Lu, Jian Wang, Baohu Huang, Hao Chen</i> (Mainland China)	1437
08:50 – 09:10	Low-Profile Wideband E-shaped Patch Antenna for 60GHz Communication <i>Tae Hwan Jang, Hong Yi Kim, In Sang Song, Chae Jun Lee, Chul Soon Park</i> (South Korea)	1440
09:10 – 09:30	A 200 GHz driver amplifier in metamorphic HEMT technology <i>Ana Belén Amado Rey, Yolanda Campos Roca, Stephan Maroldt, Axel Tessmann, Hermann Massler, Arnulf Leuther, Michael Schlechtweg, Oliver Ambacher</i> (Germany)	1443
09:30 – 09:50	Orthogonally Polarized Terahertz Wave Imaging with Real-Time Capability for Food Inspection <i>Yu Xiongbin, Endo Masao, Ishibashi Tadao, Shimizu Makoto, Kusanagi Satomi, Nozokido Tatsuo, Bae Jongsuck</i> (Japan)	1446

ORAL Session: WE2B
Millimeter Wave & THz Antennas and Devices

Co-Chairs: Dan Neculoiu and Hao Xin

10:30 - 11:00	3D Printed Microwave and THz Components (<i>invited</i>) <i>Min Liang, Hao Xin</i> (United States)	1450
11:00 - 11:20	Design of a 24-GHz VCO Using Magnetic Coupling of Gate-Drain Through a Transformer <i>Milim Lee, Changhyun Lee, Changkun Park</i> (South Korea)	1452
11:20 - 11:40	Broadband Ultra-Low-Voltage Terahertz Gyrotron <i>Xiang-Bo Qi, Chao-Hai Du, Pu-Kun Liu</i> (Mainland China)	1455
11:40 - 12:00	Experimental Characterization of a 94 GHz LTCC 1x4 Microstrip Patch Antenna Array <i>Alina-Cristina Bunea, Dan Neculoiu</i> (Romania)	1458
12:00 - 12:20	220 GHz Wideband Distributed Active Power Combiner <i>Paolo Valerio Testa, Corrado Carta, Frank Ellinger</i> (Germany)	1461

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Room C

ORAL Session: WE1C
Low Noise Components & Receivers

Co-Chairs: Hiroaki Ikeuchi and Jianyi Zhou

08:00 – 08:20	Microwave and Millimeter-Wave Cryogenic Wideband LNA Design and Characterization <i>Ying Chen, Zheng-Kai Li, Kun-Long Wu, Bin Li, Robert Hu</i> (Mainland China)	1465
08:20 – 08:40	0.05-2.5GHz Wideband RF Front-End Exploiting Noise Cancellation and Multi-gated Transistors <i>Lanqi Liu, Kefeng Zhang, Zhixiong Ren, Zhaojing Lu, Xuecheng Zou</i> (Mainland China)	1468
08:40 – 09:00	5.8 GHz 4.7 mA Zero-IF Passive Mixer Receiver Using a Step-Down Transformer for Gain Enhancement <i>Wei Ling Chang, Chinchun Meng, Chung-Yo Lin, Guo-Wei Huang</i> (Taiwan)	1471
09:00 – 09:20	A 0.2-5 GHz LNA With Linearity Enhancement Using Double Capacitive Cross-Coupling Technique <i>Yunzhen Wang, Lu Yang, Fujiang Lin</i> (Mainland China)	1474
09:20 – 09:40	L-band Small High-Sensitivity Microwave Receiver Module using perconducting Filter <i>Hiroaki Ikeuchi, Tamio Kawaguchi, Noritsugu Shiokawa, Hiroyuki Kayano</i> (Japan)	1477

ORAL Session: WE2C
Mixed Model and Digital Signal Processing Systems

Co-Chairs: Satoshi Denno and Leilei Liu

10:30 - 10:50	Adaptive Side-Band Cancellation of Electromagnetic Interference in Electric Vehicles <i>Satoshi Denno, Yuichiro Sato, Toshikazu Karube</i> (Japan)	1481
10:50 - 11:10	A Frequency Agile Synthesizer Using DDS and PLL Techniques for FMCW Radar <i>Yingshen Zhu, Hui Zhang, Wei Hong</i> (Mainland China)	1484
11:10 - 11:30	Compensation of Imperfections Caused by Digital Pulse Width Modulation Using Baseband Injection <i>Xin Yu, Daniel Markert</i> (Germany)	1487
11:30 - 11:50	Radar Emitter Recognition Based on Second Order Degree of Cyclostationarity Separation Criterion <i>Xiangyu Fan, Hongwei wang, Yuanzhi Yang</i> (Mainland China)	1490
11:50 - 12:10	Application of Time Sequence Phased Weighting Method for Low Cost BeiDou Anti-jamming Antenna Array <i>Yuqian Yang, Shuhao Lu, Hao Wang, Yong Huang</i> (Mainland China)	1493

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Room D

ORAL Session: WE1D
Microwave Device Modeling - I

Co-Chairs: David Hendry and Zheng Zhong

08:00 – 08:20	A Novel Hybrid Parameter Extraction Method for GaAs/GaN HEMT Modeling with Electromagnetic Analysis <i>Ye Yuan, Zheng Zhong, Yongxin Guo, Shanxiang Mu</i> (Mainland China)	1497
08:20 – 08:40	Analysis and Design of Compact Triple-Mode Ceramic Cavity Filters Using Parallel Coupled Resonators Approach <i>David Hendry, Amin Abbosh</i> (Australia)	1500
08:40 – 09:00	A New Extraction Method of Nonlinear Behavioral Model for RF Power Transistor <i>Jialin Cai, Chao Yu</i> (Portugal)	1503
09:00 – 09:20	An Enhanced AlGaN/GaN HEMTs Large-Signal Model with Parameter Extraction Methodology <i>Lei Li, Fujiang Lin, Weiqiang Qian, Mehdi Khan, Yi Pei</i> (Mainland China)	1506
09:20 – 09:40	Device level model for trapping effects in GaN and GaAs devices for broadband data communication <i>Guillermo Rafael-Valdivia, Zighuo Su, Anthony Urquizo, Thalia Mendoza</i> (Peru)	1509

ORAL Session: WE2D
Microwave Device Modeling - II

Co-Chairs: Xing-Chang Wei and Xiao-Chun Li

10:30 - 10:50	Optimization and Design of Wideband Antenna with Adaptive Differential Evolution Algorithm Based on Dual Population <i>Han Liu, Cheng-You Yin, Wei-Dong Gao</i> (Mainland China)	1513
10:50 - 11:10	Wideband Out-of-Phase Power Divider Using Coupled Lines and Microstrip to Slotline Transitions <i>Ummee Tania Ahmed, Amin Abbosh</i> (Australia)	1516
11:10 - 11:30	3D Momentum Modeling Technique and Measurements of CPW Compact GaAs Multilayer MMICs <i>Emerson P Sinulingga, Ali A Rezazadeh, Peter K Kyabaggu</i> (Indonesia)	1519
11:30 - 11:50	Electrically Controlled Leaky Wave Antenna with Wide-Angle Scanning Based on Liquid Crystal <i>Shuang Ma, Peng YuanWang, Yue LongLyu, Fan YiMeng, Qun Wu</i> (Mainland China)	N/A
11:50 - 12:10	Design and Modeling of Low-Loss Symmetric Slow-Wave Transmission Lines <i>Amin Kianinejad, Zhi Ning Chen, Cheng-Wei Qiu</i> (Singapore)	1525

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Room E

ORAL Session: WE1E
Recent Advances in Antennas

Co-Chairs: Chi Hou Chan and Yan Zhang

08:00 – 08:30	Higher-Order Mode Microstrip Antennas for WiGig Applications (<i>invited</i>) <i>Dian Wang, Kung BoNg, Chi Hou Chan</i> (Hong Kong)	1529
08:30 – 08:50	A Dual Polarization Multi-layer Array Antenna Used By Digital System <i>Yuan JingHu, Guoqiang Zhao, Houjun Sun</i> (Mainland China)	1532
08:50 – 09:10	Ka-Band Orbital Angular Momentum Folded Reflectarray Antenna <i>Xingyu Lei, Yujian Cheng</i> (Mainland China)	1535
09:10 – 09:30	Application of improved particle swarm optimization (PSO) algorithm on the conformal antenna array <i>Jun Li, Yan Zhang, Fei-ming Wei, Ke Song</i> (Mainland China)	N/A
09:30 – 09:50	Generation of OAM Radio Waves Using Slot Antenna Array <i>Dandan Liu, Liangqi Gui, Muhammad Rizwan Akram</i> (Mainland China)	1541

ORAL Session: WE2E
Antenna Arrays

Co-Chairs: Sangwook Nam and Min-Hua Ho

10:30 - 11:00	Millimeter-Wave Slot Array Antenna Using SIW and Electroforming Techniques (<i>invited</i>) <i>Sangwook Nam, Youngjoon Lim, Dong-Yeon Kim</i> (Korea)	1545
11:00 - 11:20	A Novel Wideband Grid Array Antenna with Vertical Radiation Elements <i>Guanghua Sun, Sai-Wai Wong, Qi-Kai Huang, Lei Zhu, Qing-Xin Chu</i> (Mainland China)	1548
11:20 - 11:40	Shaped beam synthesis with 4-element conformal array for a semi-smart Picocell sector antenna <i>Zhijiao Chen, Junsheng Yu, Xiaodong Chen, Clive Parini</i> (Mainland China)	1551
11:40 - 12:00	L-shaped Shorted-end Probe Fed Broadband Slot Antenna and Its Dual-Polarized Array for LTE Applications <i>Weiwei Liao, Qingfeng Zhang, Sai-Wai Wong, Qikai Huang, Yifan Chen, Rui Wang</i> (Mainland China)	1553
12:00 – 12:20	Circularly Polarized Electrically Small Radiators on Substrate Integrated Waveguide <i>Zhaolong Li, Rushan Chen</i> (Mainland China)	1556

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Room F

ORAL Session: WE1F
MEMS and RF Nanotechnologies

Co-Chairs: Er-Ping Li and Matroni Koutsourelis

08:00 – 08:20	Cutoff Frequency of Substrate Integrated Waveguide with Single-Walled Carbon Nanotube Bundle Vias <i>Lin-Sheng Wu, Min Tang, Jun-Fa Mao</i> (Mainland China)	1560
08:20 – 08:40	Exploring Graphene Loaded Antenna for GHz Potential Applications by Experiment <i>Da Li, Xing-Chang Wei, Nan Meng, Yi-Li Xu, Yang Xu, Gao-Le Dai, Er-Ping Li</i> (Mainland China)	1563
08:40 – 09:00	Transparent Microwave Absorber based on Single Layer Graphene Film <i>Da Yi, Xing-Chang Wei, Shi-Sheng Lin, Zhi-Qian Wu, Yi-Li Xu</i> (Mainland China)	1566
09:00 – 09:20	D-Band MEMS Switch in Standard BiCMOS Technology <i>Y. J. Du, W. Su, Yihu Li, S. Tolunay, M. Kaynak, R. Scholz, Yong-Zhong Xiong</i> (Mainland China)	1569
09:20 – 09:40	Asymmetric dielectric charging phenomena on SiN films used in RF MEMS capacitive switches <i>Matroni Koutsourelis, Loukas Michalas, Eleni Papandreou, George Papaioannou</i> (Greece)	1572

ORAL Session: WE2F
Novel Guided Wave Structures

Co-Chairs: Kimberley W. Eccleston and Peng Chen

10:30 - 10:50	Effect of microstrip feeds on half-mode SIW distributed amplifier performance <i>Kimberley W. Eccleston</i> (New Zealand)	1576
10:50 - 11:10	A Novel Monopulse Antenna Using an Artificial Magnetic Conductor in Metallic Corner Reflectors <i>Yuehlin Tsai, Rueybing Hwang</i> (Taiwan)	1579
11:10 - 11:30	Analysis of Structural Anechoic Chamber Design for Improvement of Anechoic Chamber Performance <i>Jonghae Lee, Hyungju Kim, Nohhoon Myung</i> (South Korea)	1582
11:30 – 11:50	Omnidirectional Antenna Based on Modulated Spoof Surface Plasmon Polaritons Waveguide <i>Gusheng Kong, Huifeng Ma</i> (Mainland China)	1585

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Room G

ORAL Session: WE1G
Passive Circuit Elements

Co-Chair: Chi-Yang Chang and Chen-Te Chiu

08:00 – 08:20	New Triple-Passband Bandpass Filter with Compact Size <i>Zih-Jyun Dai, Yung-Wei Chen, Hung-Wei Wu, Yan-Kuin Su, Chen-Te Chiu</i> (Taiwan)	1589
08:20 – 08:40	Compact Butler Matrix based on Patch Element for X band Applications <i>Qiuping Chen, Songlin Lai, Zhiyong Peng, Shaoyong Zheng</i> (Mainland China)	1592
08:40 – 09:00	A W-band Quadrature Hybrid Coupled Substrate Integrated Waveguide Diplexer <i>Chi-Yang Chang, Yu-Liang Cheng, Hung-Wei Chen, Peng-Da Huang</i> (Taiwan)	1595
09:00 – 09:20	Diplexer with Trisections Synthesized by Frequency-Dependent Coupling <i>Jen-Tsai Kuo, Ying-Chun Wang, Jer-Wei Kuo</i> (Taiwan)	1598
09:20 – 09:40	An Effective Method of Near to Far Field Transformation Based on Dipoles Model <i>Jianwei Wang, Zhaowen Yan, Wei Zhang, Ting Kang, Mengze Zhang</i> (Mainland China)	1601

ORAL Session: WE2G
Microwave Photonics

Co-Chair: Yaming Bo and Wataru Chujo

10:30 - 10:50	Generation of an Ultra Low Phase Noise and Highly Stable Optoelectronic Oscillator signal Using an Injection-locked Technique <i>Zheng Hua Zhou, Chun Yang, Zhe Wei Cao, Yu Hua Chong, Zhi Zhong Zhang</i> (Mainland China)	1605
10:50 - 11:10	Incoherent, Spatial Power Synthesis of Two Continuous Microwave Signals Generated by Two Different Optical Beats <i>Wataru Chujo</i> (Japan)	1608
11:10 - 11:30	An Improved Method for Microwave Radiant Brightness Temperature Imaging <i>Chuan Yin, Ju Qian, Ming Zhang, Yaming Bo</i> (Mainland China)	1611
11:30 - 11:50	Study on a Fractal Electromagnetic Bandgap Structure <i>Youlin Guan, Kai Zhou, Chuansheng Tian</i> (Mainland China)	1614
11:50 - 12:10	Design of a novel compact quadrifilar helix EBG structure <i>Ling-yu Kong, Yan Zhang, Lu-peng Zhang, Jun-bo Jiang, Peng-ju Liu</i> (Mainland China)	N/A



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Room H, 09:50 - 10:30

POSTER Session: WE1H
Poster Session - 4

P.1	Beam Refraction with an Isotropic and Ultrathin Huygens' Metasurface <i>Zhengbin Wang, Yin Zhang, Yijun Feng, Zhining Chen</i> (Mainland China)	1621
P.2	Analysis of Focusing Performance of Conical Horn Antenna Loaded with Dielectric <i>di wu, Zhenghe Feng, Yong Zheng</i> (Mainland China)	N/A
P.3	Greene Second-Order Approximation of the Wide-Angle Equation for Terrain <i>Ci Zhou, Qinglong Zeng, Wenwan Ding, YunLiang Long</i> (Mainland China)	1627
P.4	Comparison between the New Discretized Schemes of 1st Mur's ABC and the MEI method <i>Huan Wang, Lianyou Sun, Wei Hong</i> (Mainland China)	1630
P.5	Upgrading LOD-FDTD to Efficient Method with Second-Order Accuracy <i>Zaifeng Yang, Eng Leong Tan, Li-lian Wang</i> (Singapore)	1633
P.6	Research on Localization of Emitter Source in Forest Environment Using Inverse Diffraction Parabolic Equation Based on Finite Difference Method <i>Qinglong Zeng, Ci Zhou, YunLiang Long, Hong Sun</i> (Mainland China)	1636
P.7	Neural Space Mapping Optimization for EM Design <i>Feng Feng, Qi-Jun Zhang</i> (Canada)	1639
P.8	Calculation of Weakly Nonlinear Distortions Using the Moments of Practical Communication Signals <i>Zhiqiang Yu, Jianfeng Zhai, Wenwen Yang, Jianyi Zhou</i> (Mainland China)	1642
P.9	An Improved Coplanar Waveguide to Slotline Transition for Multi-layer Circuit Structures <i>Dandan Li, Feng Xu, Jiaojiao Xu</i> (Mainland China)	1645
P.10	Miniaturized Dual-ring Resonators and Filters <i>Yi-Hsin Pang, Jian-Siang Hong</i> (Taiwan)	1648
P.11	Dual-Band Quadrature Coupler With High Frequency Ratio Using Cascaded Coupled-Line Structures <i>Chih-Chun Chang, Yu-Chung Wang, Yi-Chen Lin, Kuo-Sheng Chin</i> (Taiwan)	1651
P.12	Design of 2-in-1 Bandpass Filter Using Common Dual Mode Resonators <i>Yi-Wen Su, Ting-Yi Huang, Han-Yun Tsai, Yu-Chien Chiu, Ruey-Beei Wu</i> (Taiwan)	1654
P.13	Design of the Broadband Balun With the Compensated Coupled Line at Balanced Ports <i>Po-Lin Huang, Chiang-Lin Yen, Ching-Wen Tang</i> (Taiwan)	1657
P.14	Extraction of the Q Factor of Dielectric Resonators From S-Parameters Using the Cauchy Method <i>Dajun Lei, Feng Qiu, Hui Dong, Zhenghua Tang, Jian-Quan Huang, Min Yao</i> (Mainland China)	1660
P.15	Wide Frequency Range Four-bit Reconfigurable Resonator Employing $\lambda/2$ and $\lambda/4$ Resonant Modes <i>Tetsunari Saito, Takumi Kato, Yasushi Yamao</i> (Japan)	1663

P.16	A Ka/K Band Planar Antenna for Dual Circular Polarizations <i>Wei Shi, Zuping Qian</i> (Mainland China)	N/A
P.17	Directional Coupler with Two Octaves Band and High Directivity Using Stepped-Impedance Coupled Structure <i>He Zhu, Amin Abbosh</i> (Australia)	1669
P.18	A Gysel Power Divider With Enhanced Isolation Bandwidth <i>He Jianzhong, Luo Weikang, Chen Shiyong</i> (Mainland China)	1672
P.19	A Compact Dual-band Passband Filter <i>Huang Heping, Yuan Yongshi, Chen shiyong</i> (Mainland China)	1675
P.20	A Novel Application of UC-PBG and Interdigital Structure Based on CPW <i>Yanyan Peng, Feng Xu</i> (Mainland China)	1678
P.21	Compact Branch-Line Coupler Filter With Transmission Zeros <i>Tsu-Wei Lin, Chun-Hung Lin, Kai-Chun Huang, Jen-Tsai Kuo</i> (Taiwan)	1681
P.22	Bandpass Frequency Selective Structure Using Stacked Strip Lines With Shorted Via Holes <i>Bo Li, Maolin Pan, Feng Xu, Mingxuan Cai, Sunli Shen, Wanping Zhang</i> (Mainland China)	1684
P.23	A Miniaturized Bandpass Filter Using Double Folded Dual- Mode Cavity Resonators in LTCC <i>Ming-Hsuan Kuo, Ting-Yi Huang, Han-Yun Tsai, Chang-Xian Chen, Ruey-Beei Wu</i> (Taiwan)	1687
P.24	Compact Microstrip Quad-Band Bandpass Filter Using Stub-Loaded SIRs <i>Kai Da Xu, Jing Ai</i> (Mainland China)	1690
P.25	A 20-Gb/s Half-Rate 4:1 Multiplexer with Multiphase Clock Architecture in 40-nm CMOS Technology <i>Yaping Liu, Yao Li, Lin He, Yu-Kai Chou, Dengbao Liu, Sen Huang</i> (Mainland China)	1693
P.26	Design and Implementation of a Compact Quarter-Wavelength Stepped-Impedance Resonator Bandpass Filter with Good Harmonic Suppression Performance <i>Jun Xu, Wei Hong, Hui Zhang</i> (Mainland China)	1696
P.27	Compact Wide-Stopband Tri-mode Microstrip Filter using Asymmetric Stub Loaded Resonators <i>Shuai Yang, Bian Wu, Kun Deng, Chang HongLiang</i> (Mainland China)	N/A
P.28	A Wideband Bandpass Filter Based on Stepped Impedance Stubs and Substrate Integrated Coaxial Line <i>Xiang Li, Chang JiangYou, Zhen HaiShao, Zhao ShengHe</i> (Mainland China)	1702
P.29	Stub-Loaded Resonator and Asymmetric Parallel-Coupled Lines for Dual Notched-Band Implementation in Wideband Bandpass Filter <i>Yunxiu wang, Li Liu</i> (Mainland China)	1705
P.30	A Flexible Bandpass Filter Based on Liquid Crystal Polymer Substrate <i>Ying Yu, Ping Gao, Keke Ding, Ming Zhang</i> (Mainland China)	1708
P.31	A Novel Compact Multilayer Wideband Bandpass Filter with Lumped Elements <i>Yong Cheng, Xiao-Lu Yin, Wen-Jun Lu</i> (Mainland China)	1711
P.32	A Co-designed Wideband Circularly Polarized Integrated Filtering Antenna <i>Zhi Hao Jiang, Douglas H. Werner</i> (United States)	1714

P.33	A Dual-Band Bandpass Filter With Substrate Integrated Waveguide-to-Folded Defected Ground Structure Split Ring Resonator Unit <i>Yuhao Lu, Mingkang Li, Chang Chen, Lingyun Zhou</i> (Mainland China)	1717
P.34	A Multiple-Band Matching Network Using Bypass Circuits Concept Applying on Active Filter <i>Chung Ping Lin, Beng Meng Chen, Zuo Min Tsai</i> (Taiwan)	1720
P.35	A novel Dual Gap MEMS varactor manufactured in a fully integrated BiCMOS-MEMS process <i>Alessandro Cazzorla, Mehmet Kaynak, Paola Farinelli, Roberto Sorrentino</i> (Italy)	1723
P.36	Design of a 94 GHz Balanced Resistive Mixer using a 0.1 μ m GaAs pHEMT Technology <i>Xiaoxi Ning, Liang Xu, Zhi Jin</i> (Mainland China)	1726
P.37	Generation of Coherent and Flat Frequency-Locked Optical Multi-Carriers <i>Rahat Ullah, Liu Bo, Zhang Lijia, Zhang Qi, Tian Qinhua, Muhammad Saadkhan, Xin Xiangjun</i> (Mainland China)	1729
P.38	Offset Phase-Locked Loop Analysis for Millimeter-wave Local Oscillator Source <i>Yue-Fang Kuo, Chau-Ching Chiong, Yuh-Jing Hwang</i> (Taiwan)	1732
P.39	RF LDMOS with Excellent Robustness for Wideband Application <i>Zhengdong Liu, Yuanxin Liu, Dajie Zeng, Weichang Xue, Yaohui Zhang</i> (Mainland China)	1735
P.40	A 65 nm CMOS +14 dBm-Psat and 10%-PAE 81-86 GHz Power Amplifier with Parallel Combiner <i>guang zhong, Yong Huang, Runxi Zhang, Chunqi Shi</i> (Mainland China)	1737
P.41	Millimeter Wave Power-Combined Amplifier Using Traveling-Wave Power Divider-Combiner <i>Kang Yin</i> (Mainland China)	1740
P.42	A Low-power 50-GHz LC-VCO in a 65-nm CMOS Technology <i>Hui Dong Lee, Sunwoo Kong, Moon-Sik Lee, Bonghyuk Park</i> (South Korea)	1743
P.43	Wideband E-Shaped Element of THz Metamaterial Absorber and Equivalent-Circuit Analysis <i>WEIPING QIN, Xiaobo Liu</i> (Mainland China)	1746
P.44	Millimeter-wave Wideband Band-pass Filter Using Novel-slotted Substrate Integrated Waveguide (SIW) Cavity <i>Kaida Dong, Yuhong He, Xuexia Yang, Zhewang Ma</i> (Mainland China)	1749
P.45	Terahertz Full-Band Zero-Biased Frequency Tripler Using Method of Adhesion by Spin-on-dielectric Temperature Enhanced Reflow Technology <i>Fei yang, Ke Zhang</i> (Mainland China)	1752
P.46	Aspheric Dielectric Lens Antenna for Millimeter-Wave Imaging System <i>Jingshi zhou, Qike Chen, Yonghong Zhang, Yong Fan, Kai Da Xu</i> (Mainland China)	1755
P.47	Monostatic RCS Reduction at mmWaves <i>Mustafa Al-Nuaimi, Wei Hong</i> (Mainland China)	1758
P.48	PRS Based Antenna Compatible with Multiple Satellite Navigation Systems <i>Xue-Shi Li, Fu-Min Lin, Duo-Long Wu, Kun-Hua Wen, Fei Du</i> (Mainland China)	N/A
P.49	18-40GHz Broadband Limiter Based on Schottky Diode <i>Qiang Dong, XingYuan Ma, haoquan hu, Xuejiao Wang</i> (Mainland China)	1764

P.50	Compact, Broadband Waveguide-to-CPWG Transition Operating Around 300GHz <i>Liang Xu, Hongfei Yao, Peng Ding, Xiaoxi Ning, Kewei Qian, Long Jin, Zhong Tian, Zhi Jin</i> (Mainland China)	1767
P.51	Virtual MIMO Blind Detection Clustered WSN System <i>Chaodi Jin, Yun Zhang, Shujuan Yu, Rong Hu, Cheng Chen</i> (Mainland China)	1770
P.52	IR-drop and Signal-integrity Measurement of BGA by A Broadband push-push VCO <i>Cheng Dao Li, Sin Jie Lin, Yu Yung Wu, Sung Mao Wu</i> (Taiwan)	1773
P.53	An 8-channel Phased Array for Carotid Artery Magnetic Resonance Imaging at 3T <i>Chao Luo, Xiaoqing Hu, Xiao Chen, Lei Zhang, Shengping Liu, Xin Liu, Hairong Zheng, Ye Li</i> (Mainland China)	1776
P.54	A Planar Millimeter-wave Antenna with a Cosecant Squared Pattern <i>Muxin He, Zhang-Cheng Hao, Kuikui Fan</i> (Mainland China)	1779
P.55	Design of a Single-Layer Dual-Band Reflectarray Using Phoenix Elements <i>Ruyuan Deng, Fan yang, Shenheng Xu, Maokun Li</i> (Mainland China)	1782
P.56	A Pattern Reconfigurable High-Gain Wide-Angle Antenna Using GaAs MESFET Switch <i>Bin Yuan, Jun Xiong, Shaobo Lang, Chong Li, Yun Fu, Pengfei Liang</i> (Mainland China)	1785
P.57	Wideband Dual-sleeve Antenna With End-loaded Technology For 2G/3G/4G Mobile Communications <i>Bin Yuan, Jun Xiong, Chong Li, Shaobo Lang, Pengfei Liang, Yun Fu</i> (Mainland China)	1788
P.58	An X-Band Power Divider/Combiner Based on E-Plane Waveguide T-Junction <i>Wenwen Shi, Yongjiu Zhao</i> (Mainland China)	1791
P.59	Design of Broadband Circularly Polarized Reflectarrays with Novel Ring-Stub Elements <i>Jiaying Guo, Fan Wu, Junhong Wang</i> (Mainland China)	1794
P.60	A Hybrid Solution for Mutual Coupling Reduction between Closely Spaced Microstrip Antennas <i>Hongye Qi, Xiaoxing Yin, Hongxin Zhao</i> (Mainland China)	1797
P.61	Phase and Group delay Analysis for Patch Antenna <i>Lixun Li, Yingxue Su, Baiyu Li, Feixue Wang</i> (Mainland China)	1800
P.62	Implementation of a Low-loss Wide-band Flat-topped Beam-forming Network Based on Butler Matrix <i>Chunhong Chen, XinPeng Zhang, Juan Xu</i> (Mainland China)	1803
P.63	A Very low IF 2.2GHz Receiver for Satellite Communication <i>Chaoxian Zhu, Wei Wan, Minhan Zou, Riyan Wang, Hanxion Lin, Mingzhao Wang</i> (Mainland China)	1806
P.64	Study on Propagation Characteristics for typical outdoor environment <i>Feng Chen, Yuan-Jian Liu</i> (Mainland China)	1809
P.65	Study on the Propagation Characteristics of 28GHz Radio Wave in Outdoor Microcellular <i>Guanyun Wang, Yuanjian Liu, Xingyu Qi</i> (Mainland China)	1812
P.66	Broadband Dual-Polarized Planar Antenna and Array for Mobile Communication Base Station <i>Haijian Xu, Xiaowei Zhu, Zhenqi Kuai</i> (Mainland China)	1815

P.67	SDR testbed for analyzing frequency interference between unlicensed devices <i>Jin-Soo Park, Hyungoo Yoon, Byung-Jun Jang</i> (South Korea)	1818
P.68	High Spurious Suppression 60GHz Transceiver <i>Jinyi Ding, Pengfei Sun, Liang Wu, Xiaowei Sun, Yun Sun, Rui Tong</i> (Mainland China)	1821
P.69	Dual Band Printed Folded Dipole Antenna for Wireless Communication at 2.4 GHz and 3.5 GHz Applications <i>Badrul Hisham Ahmad, Nornikman Hassan</i> (Malaysia)	1824
P.70	Parametric Study on Microstrip Bow-tie Patch Antenna with Complementary Split Ring Resonator <i>Badrul Hisham Ahmad, Nornikman Hassan</i> (Malaysia)	1827
P.71	Design and Implementation of a Smart mini-Base Station for the Internet of Things <i>Xingdong Pang, Wei Hong, Xiongsheng Yao, Mingming Miao</i> (Mainland China)	1830
P.72	An Implanted Antenna Design for Biomedical Applications Operating in MICS and ISM bands <i>Ching-Fang Tseng, Shun-Yu Chang, Po-Jen Chang, Wen-Shiush Chen, Jenn-Sen Lin, Cheng-Hsing Hsu</i> (Taiwan)	1833
P.73	High-Resolution Microwave Stroke DetectionSystem based on Signal Similarity Algorithm <i>Yizhi Wu, Yuyan Zhou, Yifan Wang, Youtao Zhang</i> (Mainland China)	1836
P.74	Does Anyone Need a Coffee? Online Microwave Moisture Measurement of Roasting Beans <i>Cameron Kelly, Jonathan Scott</i> (New Zealand)	1839
P.75	Radiation Pattern Reconfigurable Antenna Using Double Layer Tunable Graphene Superstrate <i>Zhenglong Zhang, Bian Wu</i> (Mainland China)	1842
P.76	Simulation and Analysis of Indoor Propagation Characteristics for UWB based on TD-UTD <i>Shuangde Li, Yuanjian Liu, Qinjian Shi, Xiaojun Zhang</i> (Mainland China)	1845
P.77	Solid State Sub Millimeter-Wave Frequency Doubler Using Intergrated Schottky Membrane Technology <i>Fei Yang, Kun Wang, Jeanne Treuttel, Alain Maestrini, Lina Gatilova</i> (Mainland China)	1848
P.78	Orbital Angular Momentum Antenna Using Dielectric Resonator <i>Yu Pan, Shilie Zheng, Jiayu Zheng, Xiaofeng Jin, Hao Chi, Xianmin Zhang</i> (Mainland China)	1851
P.79	Frequency Diverse Phase-Conjugating Retrodirective Array with Simultaneous Range-Focusing Capability for Multi-Targets <i>A-Min Yao, Wen Wu, Da-Gang Fang</i> (Mainland China)	1854
P.80	Plane Spiral Orbital Angular Momentum Electromagnetic Wave <i>Shilie Zheng, Zhuofan Zhang, Yu Pan, Xiaofeng Jin, Hao Chi, Xianmin Zhang</i> (Mainland China)	1857
P.81	Terahertz Transmission Properties of Metallic Checkerboard Patterns with Additional Elements <i>Tahsin Akalin</i> (France)	N/A
P.82	Perfect dual-band metamaterial absorber based on octangle-shaped structure <i>Shuai Wang, Xiaosong Wang, Ping Wang, Yu Yang</i> (Mainland China)	1862

P.83	Research on Pyramidal Horn Antenna Using Integrated Optical E-Field Probe <i>Deqiang Yang, Sihao Liu, Bao Sun, Jin Pan</i> (Mainland China)	1865
P.84	Enhancement of Multi-channel heat transfer by using microparticle suspension for high power digital broadcast fliters <i>Jiuyang Zhu, Thomas Baum, Khashayar Khoshmanesh, Kamran Ghorbani</i> (Australia)	1868
P.85	Simulation and Analysis of the Clutter from Time Varying Sea with Breaking Waves <i>Wei Yiwen, Guo Lixin</i> (Mainland China)	1871
P.86	Design of a 60GHz Antenna-on-Chip with Cross-shape Artificial Magnetic conductor <i>Xiuzhi Liao, Bo Yuan, Xiaohong Zhang, Zhifang Hu, Guo Qing Luo</i> (Mainland China)	1874
P.87	Determination of dielectric properties and humidity of vermiculite using S-parameters <i>Ivson F.dos Anjos, G. Boeck, Silvio Ernesto Barbin</i> (Brazil)	1877

ORAL Session: WE3A
High Efficiency Power Amplifiers
 Co-Chairs: Raymond Quere and Rui Ma

13:30 - 14:00	Recent Advances in Power Encoding and GaN Switching Technologies for Digital Transmitters (<i>invited</i>) <i>Rui Ma</i> (United States)	1881
14:00 - 14:20	Design of A High-efficiency Dual-band Harmonic-tuned Power Amplifier via Simplified Real Frequency Technique <i>Ma Liang, Zhou Jianyi, Yu Zhiqiang</i> (Mainland China)	1884
14:20 - 14:40	Design of 3.5GHz Linear High-Efficiency Doherty Power Amplifier with Pre-matching <i>Qiang-An Liu, Song-Bai He, Wei-Min Shi, Xu-Liang Zhang</i> (Mainland China)	1887
14:40 - 15:00	4 W Highly Linear and Reliable GaN Power Amplifier for C-Band Applications <i>Oliver Silva Barrera, Iltcho Angelov, Herbert Zirath</i> (Sweden)	1890
15:00 - 15:20	Digitally- Controlled High-Efficiency Series Form Switch-Linear Hybrid Supply Modulator for Envelope Tracking Power Amplifiers <i>Fan Meng, Xiao-Wei Zhu, Qian Jin, Yazhou Wang, Xinbo Ruan</i> (Mainland China)	1893

ORAL Session: WE4A
Si-Based Power Amplifier
 Co-Chairs: Manuel Bejarano Carmona and Songcheol Hong

16:10 - 16:40	Digital Polar CMOS Power Amplifier Researches in KAIST (<i>invited</i>) <i>Songcheol Hong, Hyunseok Choi, Yumi Lee, Jinseok Park</i> (South Korea)	1897
16:40 - 17:00	A 24-GHz Transformer-Based Stacked-FET Power Amplifier in 90-nm CMOS Technology <i>Hamed Alsuraisry, Jen Hao Cheng, Shih-Jyun Luo, Wen-Jie Lin, Jeng-Han Tsai, Tian-Wei Huang</i> (Taiwan)	1900
17:00 - 17:20	A Broadband SiGe Power Amplifier for E-Band Communication Applications <i>Manuel Bejarano Carmona, Tobias Tired</i> (Sweden)	1903
17:20 - 17:40	X-band 11.7-W, 29-dB Gain, 42% PAE Three-Stage pHEMT MMIC Power Amplifier <i>Hongfei Yao, Tingting Yuan, Guoguo Liu, Xiaoxi Ning, Zhi Jin, Xinyu Liu</i> (Mainland China)	1906
17:40 - 18:00	A CMOS Switching Mode Amplifier with 3V Output Swing for Continuous-Wave Frequencies up to 4GHz <i>Robert Bieg, Martin Schmidt, Manfred Berroth</i> (Germany)	1909

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Room B

ORAL Session: WE3B

Millimeter Wave Antennas and Devices

Co-Chairs: Bo Zhang and Sanming Hu

13:30 - 14:00	Millimeter-Wave/Terahertz Chips for High-Speed Communication and Biomedical Imaging (<i>invited</i>) <i>Sanming Hu</i> (United Kingdom)	1913
14:00 - 14:20	A Novel W-band E-plane Bandpass Filter with Compact Size <i>Junye Jin, Quan Xue</i> (Mainland China)	1916
14:20 - 14:40	Design of a 340GHz GaAs Monolithic Integrated Sub-harmonic Mixer <i>Ge Liu, Bo Zhang, Lisen Zhang, Dong Xing, Junlong Wang, Yong Fan</i> (Mainland China)	1919
14:40 - 15:00	Ground Speed Doppler Sensor with a Micromachined Double Folded Slot Antenna <i>Dan Neculoiu, Alina-Cristina Bunea, Alexandru Muller</i> (Romania)	1921
15:00 - 15:20	A Novel mm-wave SIS mixer Comprising Series-Connected Junction Array and On-chip Bias-T <i>Wentao Wu, Wenlei Shan</i> (Mainland China)	1924

ORAL Session: WE4B

Semiconductor Devices and Monolithic ICs

Co-Chairs: Kai Kang and Thierry Taris

16:10 - 16:30	DC–50GHz Wideband Phase-Compensated 90nm-CMOS Active Balun Design <i>Kun-Long Wu, Kuan-Ting Lai, Robert Hu, Chi-Yang Chang</i> (Taiwan)	1928
16:30 - 16:50	Low Phase Noise, Image Rejected Direct-Conversion Transmitter in 0.18 μm CMOS <i>Haiwei Zhang, Quan Xue</i> (Hong Kong)	1931
16:50 - 17:10	A GaAs Planar Schottky Barrier Diode (PSBD) and Its Application in Terahertz Integrated Mixers <i>Qian Li, Xiaodong Tong, Wenjie Wang, Xiaodong Deng, Haitao Liu, Hailin Tang, Yong-Zhong Xiong</i> (Mainland China)	1934
17:10 - 17:30	High Voltage SOI Stacked Switch with Varying Periphery FETs <i>Yu Zhu, Oleksiy Klimashov, Ambarish Roy, Guillaume Blin, David Whitefield, Dylan Bartle</i> (United States)	1937
17:30 - 17:50	A 14-Bit Two-segment Column-level ADC for Remote Sensing Imaging <i>Guannan Wang, Wengao Lu, Dahe Liu, Yacong Zhang, Zhongjian Chen</i> (Mainland China)	1940

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Room C

ORAL Session: WE3C

Radar and Broadband Communication Systems - I

Co-Chairs: Hui Zhang and Sung Jun Yang

13:30 - 13:50	Mitigation of Weak Targets' Masking due to Nonlinearities in Chirp Sequence FMCW Automotive Radar at 77 GHz <i>Felix Müller, Sebastian Benesch, Dirk Steinbuch, Thomas Walter, Robert Weigel (Germany)</i>	1944
13:50 - 14:10	Antenna Pattern Synthesis based on Discrete-Artificial Bee Colony Algorithm for Digital Environment <i>Sung Jun Yang, Dong Woo Yi, Young Dam Kim, Noh Hoon Myung (South Korea)</i>	1947
14:10 - 14:30	Investigation of Linear Displacement Noise in Ultra-Wideband Doppler Tomography <i>Brent Crawley, Thomas Baum, Kelvin Nicholson, Kamran Ghorbani (Australia)</i>	1950
14:30 - 14:50	Design of Miniaturized Monopole UWB Antenna for System in Package <i>Zafar Bedar Khan, Huiling Zhao (Mainland China)</i>	1953
14:50 - 15:10	Research on Automotive Windshield Impact on the W-Band Millimeter Wave Transmission <i>Hui Zhang, Wei Hong, Jun Xu, Yingshen Zhu (Mainland China)</i>	1956

ORAL Session: WE4C

Radar & Broadband Communication Systems - II

Co-Chairs: Haejin Kim and Xiuping Li

16:10 – 16:30	Orthogonal Complementary Codes with Doppler-offset for MIMO Radar Waveforms <i>Hidekuni Yomo, Takaaki Kishigami, Naoya Yosoku, Akihiko Matsuoka, Junji Satou (Japan)</i>	1960
16:30 – 16:50	Research on the Bastatic RCS Characteristics of Stealth Aircraft <i>Xiaoyan Fan, Yufeng Qin, She Shang, Dawei Song, Wenfeng Sun, Dong Li, Xi Luo (Mainland China)</i>	1963
16:50 – 17:10	Accurate and Fast ISAR Image Formation for Complex CAD Using the Shooting and Bouncing Ray <i>Dal-Jae Yun, Jae-In Lee, Ky-Ung Bae, Ho Lim, Noh-Hoon Myung (South Korea)</i>	1966
17:10 – 17:30	Study on the Multipath Propagation Model of UWB Signal in the Indoor Environment Based on TD-UTD <i>Shuangde Li, Yuanjian Liu, Xiaojun Zhang, Furong Yin (Mainland China)</i>	1969
17:30 – 17:50	Multilayer Passive Network Integrated with Antennas for Phased Array Applications <i>Jun Wang, Yu Jian Cheng (Mainland China)</i>	1972

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Room D

ORAL Session: WE3D
Microwave Device Modeling - III

Co-Chairs: Yasushi Horii and Jean-Michel Le Floch

13:30 - 13:50	Investigation on the microwave cryogenic sapphire clocks <i>Chenhao Feng, Yunlong Sun, Wei Wu, Jie Zhang, Jean-Michel Le Floch, Zehuang Lu</i> (Mainland China)	1976
13:50 - 14:10	Research on the Equivalent Circuit Model of the Cross-Junction <i>Yuan Qiu, Jin-Ping Yang, Chen Miao, Di Zhu, Bo Li</i> (Mainland China)	1979
14:10 - 14:30	Theoretical Study on Operational-Amplifier-Based Negative Impedance Converters with Symmetrically Allocated Impedance Elements <i>Shoji Yamanaka, Kenichi Matsumoto, Yasushi Horii</i> (Japan)	1982
14:30 - 14:50	A two-stage percolation process in random networks <i>Xiao Jia, Jinsong Hong, Chun Yang, Chuanji Fu, Jianquan Hu</i> (Mainland China)	1985
14:50 - 15:10	Analysis, Estimation and Mitigation of Common Mode to Differential Mode Noise Conversion in Multiconductor Ribbon Cables <i>Shreyata Sharma, Pawan Sehgal, Mohammad S Hashmi</i> (India)	1988

ORAL Session: WE4D
New Technologies and Innovation System Applications

Co-Chairs: Atsushi Sanada and Xiong Wang

16:10 - 16:30	Joining of Aluminum Waveguides using Pulsed Laser Radiation <i>Sirko Pamin, Emma Chorlton, Jörg Hermsdorf, Stefan Kaierle</i> (Germany)	1992
16:30 - 16:50	Thermoacoustic Applications in Breast Cancer Imaging, Non-contact Explosive Detection and Communications <i>Xiong Wang, Russell S. Witte, Hao Xin</i> (Mainland China)	1995
16:50 - 17:10	Planar Bi-Isotropic Chiral Metamaterial Composed of Helical Meta-Atoms <i>Jinglan Wang, Atsushi Sanada</i> (Mainland China)	1997
17:10 - 17:30	A Novel Band Pass Frequency Selective Surface For The Augmentation In The Performance Of Wi-Max 2.5 / 3.5 GHz <i>Sanjeev Yadav, Kiran Aseri, M.M Sharma, Monika Kunwal</i> (India)	N/A
17:30 - 17:50	An Ultra-Compact VHF CRLH-Line Bandpass Filter Less Than $(\lambda_g/19)^2$ With a Broad Stopband <i>Sungtek Kahng, J. Ju, M.K. Khattak</i> (South Korea)	2003

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Room E

ORAL Session: WE3E

Field Analysis and Guided Waves

Co-Chairs: Jan Machac and Tetsuya Ueda

13:30 - 13:50	Analysis and Experimental Verification of the HE ₁₁ Mode in Hollow PTFE Fibers <i>Alexander Standaert, Mohadig Rousstia, Saoer Sinaga, Patrick Reynaert</i> (Belgium)	2007
13:50 - 14:10	A System of Split Ring Resonators with Randomly Dispersed Resonance Frequencies <i>Jan Machac, Hukas Jelinek</i> (Czech Republic)	2010
14:10 - 14:30	Mode Analysis in Cylindrical Waveguide Loaded with Spoof Surface Plasmon <i>Heng-He Tang, Ling-Bao Kong, Pu-Kun Liu</i> (Mainland China)	2013
14:30 - 14:50	Unit Cell Block Including Dielectric Cube Wrapped With Metallic Wire Mesh for 3-D Isotropic CRLH Metamaterials <i>Takumi Ishiyama, Tetsuya Ueda, Yoshiaki Sato, Tatsuo Itoh</i> (Japan)	2016
14:50 - 15:10	Generation of Radio Orbital Angular Momentum (OAM) Waves with Circular Metallic Waveguide <i>Wenlong Wei, Kourosh Mahdjoubi, Christian Brousseau, Olivier Emile</i> (France)	2019

ORAL Session: WE4E

Signal Generation

Co-Chairs: Nobuyuki Itoh and Xiaowei Sun

16:10 - 16:30	A Study of Flicker Noise Suppression of K-Band VCO using Striped Inductor <i>Hiroki Tsuji, Yuka Itano, Kiyotaka Komoku, Takayuki Morishita, Sadayuki Yoshitomi, Nobuyuki Itoh</i> (Japan)	2023
16:30 - 16:50	A 6-GHz Integer Frequency Synthesizer for SATA III Applications in 0.18- μ m CMOS Technology <i>Jen Hao Cheng, Jian-An Lin, Ming-Hang Wu, Jeng-Han Tsai, Tian-Wei Huang</i> (Taiwan)	2026
16:50 - 17:10	2.4-GHz Band Low-Power PMOS VCO IC with Adaptive Bias Control Loop <i>Xu Xiao, Xin Yang, Yoshimasu Toshihiko</i> (Japan)	2029
17:10 - 17:30	A Real Time Closed-Loop Source Power Calibration Technology for 0.3 to 0.4THz Solid-State Active Multiplier Chain using at THz Imaging System <i>Liang Wu, Minghui Yang, Yukun Zhu, Rong Qian, Rui Tong, Xiaowei Sun</i> (Mainland China)	2032
17:30 - 17:50	A X-band Frequency Synthesizer for FMCW radar in 180-nm CMOS <i>Hamed Alsuraishry, Chun-Hin Yim, Jen-Hao Cheng, Jeng-Han Tsai, Tian-Wei Huang</i> (Taiwan)	2034

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Room F

ORAL Session: WE3F

Planar Integrated Filters and Multiplexers – II

Co-Chairs: Songbai Zhang and Xiuyin Zhang

13:30 - 13:50	Fully Canonical Bandpass Filter with Planar Quarter-Wavelength Stepped Impedance Resonators <i>Lei Zhu, Songbai Zhang</i> (Singapore)	2038
13:50 - 14:10	Wideband Balanced Filter Using T-shaped Multi-mode Resonators <i>Xin Gao, Wenjie Feng, Wenquan Che</i> (Mainland China)	2041
14:10 - 14:30	A Wideband Balanced Filter With $3/4\lambda$ Stepped-Impedance Resonator <i>Zhao-An Ouyang, Qing-Xin Chu</i> (Mainland China)	2044
14:30 - 14:50	New Modeling of Three-Coupled-lines and Its Application to Wideband Filters <i>Chun-Ping Chen, Takaharu Hiraoka, Noriki Kato, Tetsuo Anada, Shigeki Takeda, Zhewang Ma</i> (Japan)	2047
14:50 - 15:10	Reconfigurable Phaser using Gain-Loss C-sections for Radio Analog Signal Processing (R-ASP) <i>Lianeng Zou, Shulabh Gupta, Christophe Caloz</i> (Canada)	2050

ORAL Session: WE4F

Active, Tunable and Integrated Filters - I

Co-Chairs: Feng Xu and Jun-Xiang Ge

16:10 - 16:30	A Compact Bandpass Filter with SIW Triangular Cavities <i>Shujie Qiu, Feng Xu, Jingjing Pu</i> (Mainland China)	2054
16:30 - 16:50	A Miniaturized Ultra-Wideband Band-Pass Filter with Narrowband Anti-Interference Characteristics <i>Yanyan Wang, Tao Jiang, Yingsong Li</i> (Mainland China)	2057
16:50 - 17:10	A Novel Design Method of Wideband Differential Bandpass Filters on the Multimode Slotline Resonator <i>Xin Guo, Lei Zhu, Wen Wu</i> (Mainland China)	2059
17:10 - 17:30	Compact Wideband Bandpass Filter with Sharp Selectivity Using Short-Ended Parallel-Coupled-Line-Stub Resonator <i>Xiaohu Wu, Junxiang Ge</i> (Mainland China)	2062
17:30 - 17:50	Synthesis of Dual-Band Filters With an Arbitrary Load and Asymmetric Responses <i>Xi Yu, Zhao-Xu Xu, Yi-Yao Hu, Joshua Le-Wei Li, Sheng Sun</i> (Mainland China)	2065

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Room G

ORAL Session: WE3G
Signal Generation and Applications

Co-Chairs: Yi-Hsin Pang and Joaquin Portilla

13:30 - 13:50	Acceleration of Multiplicative Regularized Contrast Source Inversion Algorithm using Paralleled Computing Device <i>Xue Yang Wang, Maokun Li, Aria Abubakar</i> (Mainland China)	2069
13:50 - 14:10	A Leakage Tolerant True Single-Phase Clock Dual-Modulus Prescaler Scheme <i>Song Jia, Ziyi Wang, Shilin Yan, Yuan Wang</i> (Mainland China)	2072
14:10 - 14:30	A Self-Oscillating Active Filtering Antenna with Second and Third HarmonicSuppressions <i>Yi-Hsin Pang, Li-Yuan Liu, Hsiang-Cheh Huang</i> (Taiwan)	2075
14:30 - 14:50	Design of Microwave Heating Continuous Belt System for Palm Fruit <i>Kritsada Puangsuwan, Chakrit Tongurai, Mitchai Chongcheawchamnan</i> (Thailand)	2078
14:50 - 15:10	Time Reversal Imaging of 3-D Objects Based on Time Focusing Conception <i>Yuanqi Li, Mingyao Xia</i> (Mainland China)	2081

ORAL Session: WE4G
Active, Tunable and Integrated Filters - II

Co-Chairs: Yo-Shen Lin and Bing Liu

16:10 - 16:30	A Novel Reconfigurable Bandpass Filter With Compensable Coupling Based on Microstrip-to-CPW Structure <i>Zhi-Han Chen, Shi-Xuan Zhang, Qing-Xin Chu</i> (Mainland China)	2085
16:30 - 16:50	Design of Bandpass Low-Noise Amplifier with Good Selectivity and Stopband Rejection <i>Yu-Hsuan Chung, Yo-Shen Lin</i> (Taiwan)	2088
16:50 - 17:10	Wideband Bandpass Filter with Tunable Passband <i>Cong Tang, Xianqi Lin, Yong Fan, Kaijun Song</i> (Mainland China)	2091
17:10 - 17:30	Miniature Dual-Mode Bandpass Filter Based on Meander Loop Resonator with Source-Load Coupling <i>Tianyu Xiang, Tao Lei, Man Peng</i> (Mainland China)	2094
17:30 - 17:50	A Multilayer Triplexer with Wideband Passbands for Compact Wireless LTCC Modules <i>Shinpei Oshima, Takana Kaho, Yo Yamaguchi, Tadao Nakagawa</i> (Japan)	2097

POSTER Session: WE3H

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P.1	Development of the SIW Horn Antenna with Partially Detached Broad-walls <i>Yang Cai, Zuping Qian, Yingsong Zhang, Wenquan Cao, Nan Jing</i> (Mainland China)	2101
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P.3	Beam Transformation using Reflectarray at Millimeter Wave Length <i>Hongfu Meng, Long Wang, Bing Li, Wenbin Dou, Bo Xiang, Yanzhong Yu</i> (Mainland China)	2107
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P.5	Electromagnetic Modeling for Chiral Material Coated Conducting Object above a Lossy Half Space <i>Yunqin Hu, Jian Zhu, Quanquan Wang, Ting Wan</i> (Mainland China)	2113
P.6	On the Model of Function Approximation for a Class of FFT-Based Methods <i>Jia-Ye Xie, Ping Wang, Li-Li Pang</i> (Mainland China)	2116
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P.8	A Marching-On-in-Degree Solution of Time-Domain Combined Field Integral Equation with Nyström Scheme <i>Jun Cao, Zhenhong Fan, Dazhi Ding, Rushan Chen</i> (Mainland China)	2122
P.9	An Efficient Fast Algorithm for Accelerating the Marching-on-in-Time based Time Domain Integral Equation Method <i>Guangshang Cheng, Zhenhong Fan, Dazhi Ding, Rushan Chen</i> (Mainland China)	2125
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P.13	Modeling and Analysis of Doubly-Curved Frequency Selective Surface <i>Min Han, Mang He, Houjun Sun</i> (Mainland China)	2135
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P.18	Design of a Microstrip Out-of-Phase Power Divider Using Shorted-Coupled-Line Transformer <i>Yu-Ta Chen, Pu-Hua Deng, Bo-Lin Chen, Wei Lo, Tsung-Han Hsieh</i> (Taiwan)	2150
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P.28	An Equivalent Circuit Perturbation Method for Machining Deviation and Yield Analysis of Substrate Integrated Waveguide Filters <i>Binqi Yang, Jianyi Zhou, Wenqi Ding, Weichen Huang, Zhiqiang Yu</i> (Mainland China)	2180
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