

# **2020 9th Asia-Pacific Conference on Antennas and Propagation (APCAP 2020)**

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Date / Time: 2020-08-05 AM / 09:30 - 11:00

Room A (ZOOM Conference ID: 67337072573 / Password: 123456)

### ORAL Session: WA1A

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Huayan Jin (Hangzhou Dianzi University)

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**Wave Propagation**

Session Chairs: Feng Xu (Nanjing University of Posts and Telecommunications),  
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Session Chairs: Xingchang Wei (Zhejiang University),  
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Session Chairs: Weixiang Jiang (Southeast University),  
Yong Jin Zhou (Shanghai University)

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Antennas

Session Chairs: Huayan Jin (Hangzhou Dianzi University),  
Zuping Qian (Army Engineering University of PLA)

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Wave Propagation  
Session Chairs: Yuehe Ge (Huaqiao University),  
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Session Chairs: Longzhu Cai (Southeast University),  
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**Microwaves, Millimeter Waves, and THz Technology**  
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Antennas

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Session Chairs: Yu Jian Cheng  
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**Wave Propagation**

Session Chairs: Qingfeng Zhang (Southern University of Science and Technology),  
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Session Chairs: Qi Wu (Southeast University),  
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**ORAL Session: WP1D**

**Electromagnetics**

Session Chairs: Alex M. H. Wong (City University of Hong Kong),  
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Date / Time: 2020-08-05 PM / 13:30 - 15:00  
Room E (ZOOM Conference ID: 68934417342 / Password: 123456)

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ORAL Session: WP1E  
Microwaves, Millimeter Waves, and THz Technology  
Session Chairs: Wanchun Tang (Nanjing Normal University),  
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ORAL Session: WP2A  
Antennas

Session Chairs: Zilong Ma (South China University of Technology),  
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Date / Time: 2020-08-05 PM / 16:10 - 17:30  
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Session Chairs: Jun Xiao (Jimei University),  
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**ORAL Session: WP2D**

**Electromagnetics**

Session Chairs: Kaida Xu (Xi'an Jiaotong University),  
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ORAL Session: WP2E  
Microwaves, Millimeter Waves, and THz Technology  
Session Chairs: Yuehui Cui (South China University of Technology),  
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ORAL Session: TA1A

Antennas

Session Chairs: Xuexia Yang (Shanghai University),  
Ruimin Huang (Huaqiao University)

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- 09:30 - 10:00 Planar Lens Fed SIW-CTS Array with Continuous Beam Scanning (invited).....N/A  
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**Wave Propagation**

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ORAL Session: TA1C  
Antennas

Session Chairs: Qi Wu (Beihang University),  
Sen Yan (Xi'an Jiaotong University)

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09:30 - 10:00 Design of a Dual-polarized Aperture Array for 6–18 GHz Applications  
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Session Chairs: Yue Li (Tsinghua University),  
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- 09:30 - 10:00 Photonic doping implemented in a substrate-integrated platform (invited).....N/A  
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- 10:00 - 10:20 A Novel Unconditionally 3-D WLP-FDTD Method with Isotropic  
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Session Chairs: Xudong Chen (National University of Singapore),  
Fan Wu (Southeast University)

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- 09:30 - 10:00 Quantitative Inversion for Near-field Scanning Microwave Impedance  
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Session Chairs: Xiuyin Zhang (South China University of Technology),  
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- 09:30 - 10:00 Dual-band Dual-Polarized Aperture-shared Base Station Array Antennas for 5G Applications (invited).....N/A  
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Session Chairs: Ruimin Huang (Huaqiao University),  
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**Wave Propagation**

Session Chairs: Hongyu Shi (Xi'an Jiaotong University),  
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ORAL Session: TA2D  
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Session Chairs: Jianjia Yi (Xi'an Jiaotong University),  
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ORAL Session: TP1A  
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Session Chairs: Yijun Feng (Nanjing University),  
Guanlong Huang (Shenzhen University)

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- 13:30 - 14:00 Multifunctional Metasurface for Enhancing Antenna Performance (invited).....N/A  
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Session Chairs: Haiming Wang (Southeast University),  
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Session Chairs: Jiangtao Huangfu (Zhejiang University),  
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ORAL Session: TP1E  
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Session Chairs: Xiong Wang (ShanghaiTech University),  
Changrong Liu (Soochow University)

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13:30 - 14:00 A Preclinical System Prototype and Experimental Validation for Focused Microwave Breast Hyperthermia Guided by Thermoacoustic Tomography (invited).....N/A

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14:00 - 14:20 S-Band High Performance 300W GaN Power HEMT For Satellite Applications.....N/A

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Antenna Designs, Solutions, and Trends for 5G and Beyond  
- Organizers: Huan-Chu Huang (Etheta Communication Technology Co., Ltd),  
Xiao Zhang (Shenzhen University)  
Session Chairs: Xiao Zhang (Shenzhen University),  
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Session Chairs: Guanlong Huang (Shenzhen University),  
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ORAL Session: TP2B  
Antennas

Session Chairs: Wenjie Feng (Nanjing University of Science and Technology),  
Haiming Wang (Southeast University)

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- 16:10 - 16:40 Innovative MIMO Antenna Design for Mobile Communications Using Characteristic Modes (invited).....N/A  
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- 16:40 - 17:00 Synthesis of 2-D Planar Sparse Array with Constraints of Minimum Spacing and Maximum Array Aperture.....N/A  
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ORAL Session: TP2C  
Antennas

Session Chairs: Wenquan Che (South China University of Technology),  
Jiangtao Huangfu (Zhejiang University)

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- 16:10 - 16:40 Sub-THz Wideband High-Gain Antennas for 6G Wireless Communications  
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ORAL Session: TP2D  
Antennas

Session Chairs: Jin Shi (Nantong University),  
Ming-Chun Tang (Chongqing University)

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16:10 - 16:40 Metamaterial Engineered, Wideband, Efficient, Electrically Small Antennas  
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16:40 - 17:00 Integration of mm-Wave Frequency Selective Surface for 5G Smartphone  
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ORAL Session: TP2E  
Antennas

Session Chairs: Changrong Liu (Soochow University),  
Xiong Wang (ShanghaiTech University)

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- 16:10 - 16:40 Millimeter Wave Antennas for 5G and Beyond (invited).....N/A  
Vedaprabhu Basavarajappa, Chunxu Mao, Mohsen Khalily, Pei  
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(University of Surrey)
- 16:40 - 17:00 Dual-band high-efficiency transmission polarization converter based on  
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- 17:00 - 17:20 A High-Gain Low-Cross-Polarization Ka-Band Planar Grid Array Antenna.....270  
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- 17:20 - 17:40  $\pm 45^\circ$  Linearly Polarized Slot-Coupled Patch Antenna for Millimeter-Wave  
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Date / Time: 2020-08-06 PM / 16:10 - 17:30  
Room F (ZOOM Conference ID: 61061002906 / Password: 123456)

**ORAL Session: TP2F (Special Session)**

**Antenna Designs, Solutions, and Trends for 5G and Beyond**

- Organizers: Huan-Chu Huang (Etheta Communication Technology Co., Ltd),  
Xiao Zhang (Shenzhen University)

Session Chairs: Huan-Chu Huang (Etheta Communication Technology Co., Ltd), Xiao  
Zhang (Shenzhen University)

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- 16:10 - 16:30 A Low Profile 5G Slot Antenna for Microwave Reactor Communication.....274  
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- 16:30 - 16:50 Retrospect and Prospect on the Trend of mm-Wave Antenna Solutions to  
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(Etheta Communication Technology Co., Ltd.)
- 16:50 - 17:10 A Low-Profile Wideband Dual-Polarized Microstrip Patch Antenna under  
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(School of Electronic Engineering, Xidian University)
- 17:10 - 17:30 Compact Hybrid Energy Harvester Based on Transparent Dielectric  
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Date / Time: 2020-08-07 AM / 09:30 - 10:30  
Room A (ZOOM Conference ID: 67337072573 / Password: 123456)

ORAL Session: FA1A  
Antennas

Session Chairs: Yanhui Liu  
(University of Electronic Science and Technology of China),  
Yunfei Cao (South China University of Technology)

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- 09:30 - 10:00 Novel Phased Array Antennas for B5G/6G Wireless Communications (invited).....N/A  
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(Tsinghua University)
- 10:00 - 10:20 A Broadband Microstrip-Slot Coupled Radiating Structure with I-Shaped Resonators (ISRs).....282  
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- 10:20 - 10:40 A Design of Wideband High Gain Blade Antenna.....N/A  
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(Jiangnan Electronic and Communications Research Institute)
- 10:40 - 11:00 A Low Profile Wideband Linearly Polarized Slot Antenna Using a Circular AMC Surface.....284  
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(China Academy of Electronics and Information Technology)
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Date / Time: 2020-08-07 AM / 09:30 - 11:00  
Room B (ZOOM Conference ID: 69574437263 / Password: 123456)

ORAL Session: FA1B  
Antennas

Session Chairs: Yu Luo (Tianjin University),  
Jiyang Dong (Xiamen University)

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- 09:30 - 10:00 Investigation on Non-Uniform compressed High-order Mode Dipole  
(invited).....N/A  
Yu Luo  
(Tianjin University)
- 10:00 - 10:20 A DOA Tracking Method of UCA Based on QPIO in the presence of  
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- 10:20 - 10:40 Array Signal Recovery and Direction-Finding Based on Non-Uniform  
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- 10:40 - 11:00 A space-time adaptive processing algorithm based on multi-stage wiener  
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Jing Cao, Xiaoqin Xue, Qiang Li, Ruipeng Zhang, Ming Song,  
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Date / Time: 2020-08-07 AM / 09:30 - 11:00  
Room C (ZOOM Conference ID: 62359920666 / Password: 123456)

ORAL Session: FA1C  
Antennas

Session Chairs: Xianming Qing (Institute For Infocomm Research (I<sup>2</sup>R)),  
Maokun Li (Tsinghua University)

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- 09:30 - 10:00 Metamaterial-based Near-field Antennas (invited).....N/A  
Xianming Qing, Zhi Ning Chen, Yunjia Zeng  
(Institute For Infocomm Research (I<sup>2</sup>R))
- 10:00 - 10:20 Radio-Frequency Interference Shielding Gasket Based Frequency  
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(Universiti Malaysia Perlis)
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Date / Time: 2020-08-07 AM / 09:30 - 11:00  
Room D (ZOOM Conference ID: 68417183745 / Password: 123456)

ORAL Session: FA1D  
Antennas

Session Chairs: Shaoqiu Xiao  
(University of Electronic Science and Technology of China),  
Gang Xu (Southeast University)

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- 09:30 - 10:00 New Antenna Miniaturization Mechanism: Electromagnetic Radiation Based on the Converse Magnetoelectric Effect (invited).....N/A  
Guokai Xu, Yan Li, Shaoqiu Xiao  
(University of Electronic Science and Technology of China)
- 10:00 - 10:20 A 5G Millimeter-Wave Circularly Polarized Planar Antenna Array.....298  
Kexin Li, Yiwen Wu, Zhangcheng Hao  
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- 10:20 - 10:40 Substrate Integrated Waveguides Slot Antenna Array with Heatsink Enclosed.....300  
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(Shanghai Jiao Tong University)
- 10:40 - 11:00 Study on A New Broadband Conical Corrugations Shaped as Archimedes Spiral Horn Antenna.....302  
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Room E (ZOOM Conference ID: 62608553232 / Password: 123456)

ORAL Session: FA1E  
Antennas

Session Chairs: Xue-Song Yang  
(University of Electronic Science and Technology of China),  
Zhang-Cheng Hao (Southeast University)

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- 09:30 - 10:00 A Wideband Dual-Polarization Metasurface Antenna (invited).....N/A  
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- 10:00 - 10:20 Design of a Low-Sidelobe Pyramidal Horn Antenna based on the Image  
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- 10:20 - 10:40 Characteristic Mode Analysis for Improving Radiation Patterns of Dipoles  
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- 10:40 - 11:00 A Novel Log-Periodic Antenna Based on Spoof Surface Plasmon Polaritons.....308  
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ORAL Session: FA1F  
Antennas

Session Chairs: Wen-Jun Lu (Nanjing University of Posts and Telecommunications),  
Zhi Hao Jiang (Southeast University)

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09:30 - 10:00 Compact Metasurfaces-Based Dual-band and Multi-Polarized Antennas  
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10:00 - 10:20 A Study on Microstrip-fed Shorted Patch Antennas.....310

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(Southeast University)

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ORAL Session: FA2A  
Antennas

Session Chairs: Yunfei Cao (South China University of Technology),  
Yanhui Liu (University of Electronic Science and Technology of China)

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- 11:10 - 11:30 Novel Leaky-Wave Antenna using Finger-Connected Interdigital Capacitor-Based Composite Right/Left- Handed Transmission Line.....316  
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Date / Time: 2020-08-07 AM / 11:10 - 12:30  
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**ORAL Session: FA2B**  
**Antennas**

Session Chairs: Jiyang Dong (Xiamen University),  
Yu Luo (Tianjin University)

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- 11:10 - 11:30 An SIW Cavity-Backed Slot Phased Array With Enhanced Bandwidth and Wide Scan.....N/A  
You-Feng Cheng, Fan Peng, Lian-Xu Guan, Cheng Liao  
(Southwest Jiaotong University)
- 11:30 - 11:50 Beamforming a Holey-Plate Array with Random Circular Slots at Millimeter-Wave.....324  
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- 11:50 - 12:10 A highly integrated E-band radar.....326  
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- 12:10 - 12:30 Parametric Modeling of Unequally Spaced Linear Array Based on Artificial Neural Network.....328  
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Date / Time: 2020-08-07 AM / 11:10 - 12:30  
Room C (ZOOM Conference ID: 62359920666 / Password: 123456)

ORAL Session: FA2C  
Antennas

Session Chairs: Maokun Li (Tsinghua University),  
Xianming Qing (Institute For Infocomm Research (I<sup>2</sup>R))

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- 11:10 - 11:30 Capacitor Loaded Dual-band Flexible Antenna for ISM Band Applications.....330  
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- 11:30 - 11:50 A Diplexing Antenna for Dual-band Dual-Sense Operation with High  
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- 11:50 - 12:10 A HMSIW Dual-band Dual-polarization Cavity-backed Antenna.....332  
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(East China Research Institute of Electronic Engineering)
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Date / Time: 2020-08-07 AM / 11:10 - 12:30  
Room D (ZOOM Conference ID: 68417183745 / Password: 123456)

ORAL Session: FA2D  
Antennas

Session Chairs: Gang Xu (Southeast University),  
Shaoqiu Xiao (University of Electronic Science and Technology of China)

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- 11:10 - 11:30 Design of Low-profile Lightweight Wide Scanning Antenna element for  
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- 11:30 - 11:50 Research and Implementation of Novel Matched Filter Architecture for  
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- 11:50 - 12:10 Circularly Polarized Folded Transmitarray Antenna for Multi-beam  
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- 12:10 - 12:30 Single-Sideband Time-Modulated Phased Array With 2-bit Phased Shifters.....340  
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Date / Time: 2020-08-07 AM / 11:10 - 12:30  
Room E (ZOOM Conference ID: 62608553232 / Password: 123456)

ORAL Session: FA2E  
Antennas

Session Chairs: Zhang-Cheng Hao (Southeast University),  
Xue-Song Yang (University of Electronic Science and Technology of China)

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- 11:10 - 11:30 An Optimized Spline-Profile Smooth-Walled Horn with Low Sidelobe.....N/A  
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- 11:30 - 11:50 Novel TEM Horn Antenna Based on the Linearly Tapered Slot Antenna.....342  
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- 11:50 - 12:10 A Wideband Millimeter Wave Substrate Integrated Waveguide Antenna  
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Date / Time: 2020-08-07 AM / 11:10 - 12:30  
Room F (ZOOM Conference ID: 64245246322 / Password: 123456)

ORAL Session: FA2F

Antennas

Session Chairs: Zhi Hao Jiang (Southeast University),  
Wen-Jun Lu (Nanjing University of Posts and Telecommunications)

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- 11:30 - 11:50 Wideband Circularly Polarized Antenna With All- Textile Metasurface for  
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- 11:50 - 12:10 Study On Ka-band Wideband Dual-polarized Waveguide Slot Antenna.....N/A  
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(Beijing Institute of Space Long March Vehicle)
- 12:10 - 12:30 An Ultra-Wideband Microstrip Antenna Based on Koch Fractal Resonance  
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