

**2020 IEEE MTT-S International Microwave Workshop Series on
Advanced Materials and Processes for RF and THz Applications
(IEEE MTT-S IMWS-AMP 2020)**

Final Technical Program

July 29-31, 2020

Organizer



Co-Organizers



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IEEE IMWS-AMP 2020 Program at A Glance

Wednesday, July 29, 2020			
8:40-12:10	Opening and Keynote Speeches		
12:10-13:30	Lunch Break		
	Room 1	Room 2	Room 3
13:30-15:30	WP1A: Wideband and Multi-band Polarization Conversion Metasurface	WP2A: Multi-Band Antennas for Future Wireless Systems	WP3A: High Efficiency Devices in Transceiver Applications
15:30-15:40	Break		
15:40-17:40	WP1B: RF & Terahertz Devices: Design, Fabrication, Characterization, and Application I	WP2B: Recent Advances in Microwave and Millimeter-Wave Antenna Arrays	WP3B: Active Microwave and Terahertz Devices
Thursday, July 30, 2020			
8:30-10:15	TA1A: RF & Terahertz Devices: Design, Fabrication, Characterization, and Application II	TA2A: Leaky-Wave Structures and Relative Technologies	TA3A: RF and Terahertz Sensing: Components, Systems, EMC I
10:15-10:25	Break		
10:25-12:10	TA1B: Engineered Metamaterials and Applications I	TA2B: Novel Antennas and Circuits Design for Future Wireless Systems	TA3B: RF and Terahertz Sensing: Components, Systems, EMC II
12:10-13:30	Lunch Break		
13:30-15:30	TP1A: Graphene and 2D Electronic and Optoelectronic Devices	TP2A: Advanced manufacturing techniques for antennas and RF components applications	TP3A: Passive Microwave and Terahertz Devices I
15:30-15:40	Break		
15:40-17:40	TP1B: Antennas with Artificial Materials	TP2B: Antennas for Emerging Applications I	TP3B: Passive Microwave and Terahertz Devices II
Friday, July 31, 2020			
8:30-10:15	FA1A: Advanced Metamaterials and Metasurfaces for Microwave Wave Manipulations	FA2A: Antennas for Emerging Applications II	FA3A: Far-field Wireless Power Transfer and Ambient RF Energy Harvesting I
10:15-10:25	Break		
10:25-12:10	FA1B: RF Devices with Novel Fabricated Methods for 5G Mobile Communications	FA2B: Recent Development on Dielectric and Liquid Antennas	FA3B: Far-field Wireless Power Transfer and Ambient RF Energy Harvesting II
12:10-13:30	Lunch Break		
13:30-15:30	FP1A: Engineered Metamaterials and Applications II	FP2A: Antennas for Emerging Applications III	
15:30-15:40	Break		
15:40-17:40	FP1B: Advanced Metasurfaces for Efficient Wavefront Control		

Zoom Link Information

Date	Room Name	Period	Link	Meeting ID	Passcode
28 July (Tue)	Test Room (28 July)	8:00 - 18:00	https://us02web.zoom.us/j/84110975465?pwd=a21yblYzcVFpbzIcDWVBYamxub3FIUT09	841 1097 5465	761077
29 July (Wed)	Room 0 (29 July)	8:00 - 12:30	https://us02web.zoom.us/j/88232144472?pwd=ZHNZRFPVTUxMOGdEWkkyS0RIS2Fjdz09	882 3214 4472	222100
	Room 1 (29 July)	13:00 - 18:00	https://us02web.zoom.us/j/87901962083?pwd=RzNRSTVtYjF3VW1SQ3lwMk9XSTJHUT09	879 0196 2083	084679
	Room 2 (29 July)	13:00 - 18:00	https://us02web.zoom.us/j/84035350991?pwd=bElaeDA5ZDM0b1BvbjZBRG9hOOctpdz09	840 3535 0991	080608
	Room 3 (29 July)	13:00 - 18:00	https://us02web.zoom.us/j/81857317876?pwd=MzA5aksyUTA3WjNQMhSdZDNEUm9Ddz09	818 5731 7876	400844
	Student Contest (29 July)	15:00 - 18:00	https://us02web.zoom.us/j/81983537878?pwd=djhjbThRZmUwUU9OdFluTzNCdW5Vdz09	819 8353 7878	490464
	Test Room (29 July)	8:00 - 18:00	https://us02web.zoom.us/j/85809503008?pwd=YTVMYnVxZmwvZFBuVTQvdUM3Y1hQdz09	858 0950 3008	506592
30 July (Thu)	Room 1 (30 July)	8:00 - 18:00	https://us02web.zoom.us/j/82620247195?pwd=cjVEb3Nhr3grdWRlBTZwTHVMVGljdz09	826 2024 7195	143371
	Room 2 (30 July)	8:00 - 18:00	https://us02web.zoom.us/j/88074270520?pwd=aDVjR3RkOE9aVmJoYXp1WHJGaE54QT09	880 7427 0520	349807
	Room 3 (30 July)	8:00 - 18:00	https://us02web.zoom.us/j/89872235063?pwd=a1JkelRKL1d4ZTIUK21BcmNOV1dHdz09	898 7223 5063	875808
	Test Room (30 July)	8:00 - 18:00	https://us02web.zoom.us/j/86306255183?pwd=QzVOcU5uTEw0NDNFcUQ4VU1CM1FFQT09	863 0625 5183	366803
31 July (Fri)	Room 1 (31 July)	8:00 - 18:00	https://us02web.zoom.us/j/83905182886?pwd=eUIYaHh6NGhqazFRFFkQkHb3RXUT09	839 0518 2886	753650
	Room 2 (31 July)	8:00 - 18:00	https://us02web.zoom.us/j/83285146368?pwd=ckJyNlFoTTQzSUFVYzhmN09xV3VrUT09	832 8514 6368	218214
	Room 3 (31 July)	8:00 - 18:00	https://us02web.zoom.us/j/87932088534?pwd=QVRwUEd5aUxFR2Rod0JOaHVYQnNRZz09	879 3208 8534	542909
	Test Room (31 July)	8:00 - 18:00	https://us02web.zoom.us/j/83652421975?pwd=eE44MkxqazNQMNjZU1NhOFVWUC9mUT09	836 5242 1975	742512

2020 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications

Organizer

National University of Singapore Suzhou Research Institute (NUSRI)

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National University of Singapore, Singapore

East China Research Institute of Microelectronics, China

Northwestern Polytechnical University, China

Science and Technology on Monolithic Integrated Circuits and Modules
Laboratory, Nanjing, China

Science and Technology on Electromagnetic Compatibility Laboratory, China

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Welcome Message from the General Chairs



On behalf of the organizing committee, and with great pleasure, we warmly welcome you to the 2020 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IEEE MTT-S IMWS-AMP 2020) to be held from July 29 2020 to July 31, 2020. The IEEE MTT-S IMWS-AMP 2020 was planned to be held in Suzhou and is currently delivered as a virtual event due to the Covid-19 pandemic, which is impacting every aspect of our society. The health and safety of all participants is the top priority. The organizing committee has put together a comprehensive technical program to facilitate the exchange of information on the progress and advancements of Advanced Materials and Processes for RF and THz applications.

IEEE MTT-S IMWS-AMP 2020 is organized by National University of Singapore Suzhou Research Institute, co-organized by National University of Singapore, East China Research Institute of Microelectronics, Northwestern Polytechnical University, Science and Technology on Monolithic Integrated Circuits and Modules Laboratory, Science and Technology on Electromagnetic Compatibility Laboratory. This workshop is financially sponsored by IEEE MTT Society. It is technically co-sponsored by the IEEE MTT Society and the IEEE. The purpose of this workshop platform is to boost and promote MTT-S technical and educational activities as well as MTT-S international exchanges and collaborations. The IEEE MTT-S IMWS-AMP 2020 brings in a unique mix of high-quality keynote, invited and contributed papers. In particular, we urge you not to miss our keynote and invited talks, featuring innovative and enabling technologies on Advanced Materials and Processes for RF and THz applications, by world-class speakers.

We look forward to welcoming you all to participate in this exciting virtual conference!

Yongxin Guo (General Chair), National University of Singapore, Singapore

Jiaguo Lu (General Co-Chair), East China Research Institute of Microelectronics, China

Deyun Zhou (General Co-Chair), Northwestern Polytechnical University, China

Eng Gee Lim (General Co-Chair), Xi'an Jiaotong-Liverpool University, China

Welcome Message from the TPC Chairs



On behalf of the Technical Program Committee (TPC), we cordially welcome you to the 2020 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IEEE MTT-S IMWS-AMP 2020) to be held as a virtual event on July 29-31, 2020. The IEEE MTT-S IMWS-AMP 2020 received a total submission of 209 papers, including invited papers and regular papers from 12 countries/regions. Each paper was reviewed by at least two expert reviewers and the final decisions were made at the TPC online meeting held in June 2020. Among all the submissions, 29 invited papers and 132 regular papers were accepted. The TPC is very pleased with the quality of the submissions and we trust that you will find many papers interesting and informative.

Benefitted from the convenience of the virtual conference, all the accepted papers have been arranged into 27 oral technical sessions, including 13 special sessions and 14 regular sessions. The technical sessions will be split into three parallel tracks spanning over two and a half days. Authors can choose either On-Line Live-Streaming or Uploading a Pre-Recorded Slide-Presentation for the oral presentations. In addition, we are honored to have four renowned experts as Keynote Speakers. Another highlight is the Best Paper Awards for two categories, i.e., the best regular paper and the best student paper. They were nominated by the TPC after considering the review reports and further carefully evaluated by the Award Committee.

The TPC has worked hard to generate a diverse and well-organized technical program, which covers nearly all topics on the recent advances in materials and processes for RF and THz applications. On behalf of the TPC, we would like to express our sincere thanks to all the authors for their contributions to the workshop. We would like to express our sincere appreciation to all TPC members, special session organizers, reviewers, session chairs, and all who have been involved for their effort and dedication in finalizing this technical program. In particular, we would like to thank the IEEE MTT-S for its strong support to this workshop.

We wish you a pleasant and interesting IEEE IMWS-AMP 2020.

Yujian Li (TPC Chair), Beijing Jiaotong University, China

Long Xiao (TPC Co-Chair), Science and Technology on Electromagnetic Compatibility Laboratory, China

Shigang Zhou (TPC Co-Chair), Northwestern Polytechnical University, China

Zhihao Jiang (TPC Co-Chair), Southeast University, China

Maurizio Bozzi (TPC Co-Chair), University of Pavia, Italy

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Zhan Zhang, Beijing Jiaotong University
Shaoyong Zheng, Sun Yat-sen University
Lin Zhou, Nanyang Technological University

Session Information

Instructions for Presenters in Oral Sessions

All the presentations are delivered online as this event has been converted to a virtual event. Speakers are requested to log in in their respective **Zoom** sessions at least 10 minutes prior to the commencement of each session. The duration of the keynote speech presentation is 45 minutes, including 40-minute presentation and 5-minute Q&A. The duration of the invited paper presentations is 30 minutes, including 25-minute presentation and 5-minute Q&A. The duration of the regular paper presentations is 15 minutes, including 12-minute presentation itself and 3-minute Q&A.

There are two following oral presentation modes

- (1) On-line Live-Streaming
- (2) Uploading the Pre-Recorded Presentation

For those who choose mode 2, please upload your recorded presentation file to an on-line cloud storage space and send the download link to imws2020@nusri.cn before July 26th, 2020. You can choose one of following on-line cloud space methods for uploading your pre-recorded presentations.

- (1) Youtube (www.youtube.com)
- (2) Youku (www.youku.com)
- (3) Baidu Disk (<https://pan.baidu.com/>)
- (4) Tacent Weiyun (<https://www.weiyun.com/>)

All papers must be presented at the conference in order to be included in the proceedings published in IEEE Xplore[®].

Instructions for Session Chairs

Please remember the time frame. Keeping the program to time is very important and please be aware of the time slots speakers have been designated to present.

Test Sessions for Speakers and Session Chairs

Speakers and Session Chairs are encouraged to test the Zoom using the following link if you have not used this tool previously. The time is from 8:00 to 18:00 for the following dates. Our technical supports will be there to assist you online.

Date	Link	Meeting ID	Passcode
28/7	https://us02web.zoom.us/j/84110975465?pwd=a21yblYzcVFpbzIDWVBYamxub3FIUT09	841 1097 5465	761077
29/7	https://us02web.zoom.us/j/85809503008?pwd=YTVMYnVxZmwyZFBuVTQvdUM3Y1hQdz09	858 0950 3008	506592
30/7	https://us02web.zoom.us/j/86306255183?pwd=QzVOcU5uTEw0NDNFcUQ4VU1CM1FFQT09	863 0625 5183	366803
31/7	https://us02web.zoom.us/j/83652421975?pwd=eE44MkxqazNQMnJZU1NhOFVWUC9mUT09	836 5242 1975	742512

Shortlisted Best Student Papers

The below papers are shortlisted for Best Student Papers. The online oral presentation will be conducted on the afternoon 15:40-17:40 of 29 July. A Zoom link has been created as follows.

Zoom Meeting ID: 819 8353 7878; **Passcode:** 490464; **Zoom Link:** <https://us02web.zoom.us/j/81983537878?pwd=djhjbThRZmUwUU9OdFluTzNCdW5Vdz09>.

1. A Graphene Based Metasurface with Dynamically and Continuously Tunable Scattering Pattern
Jin Zhang and Weiren Zhu (Shanghai Jiao Tong University, China)
2. Multi-Resonant Modes on Resistor-Loaded Metal Strip and Its Application on Absorptive Frequency-Selective Structures
Lingwen Kong, Binchao Zhang and Cheng Jin (Beijing Institute of Technology, China)
3. A 2-D Frequency Beam-Scanning Antenna Array Based on Varactor-Embedded Slow-Wave Phase-Shifter
HanJun Zhao, Hui Chu and Xiaohua Zhu (Nanjing University of Science and Technology, China)
4. Dual-Band Polarization-Independent Rectenna for RF Energy Harvesting
Suibin Liu (Xidian University, China), Tung Ngo (National University of Singapore, Singapore), Fushun Zhang (Xidian University, China)
5. Propagation Characteristics of Periodically Slotted Elliptical Waveguides with Different Cross Section Shapes of Dielectric Filling
Yan Lu, Jun Hong Wang and Xiaowen Li (Beijing Jiaotong University, China)
6. A Cylindrical Conformal Leaky Wave Antenna with Omnidirectional Beam
Xiaoya Shi, Yuchen Ma and Jun Hong Wang (Beijing Jiaotong University, China)
7. Compact Spoof Surface Plasmon Polaritons Array Antenna with Enhanced Scanning Rate and Bandpass Filtering Response
Chuangkai Wang, Shaoyong Zheng and Guolin Ouyang (Sun Yat-sen University, China)
8. Design of a Leaky-wave Antenna with Backfire-to-Broadside Scanning Beam Utilizing Odd-mode Spoof Surface Plasmon Polaritons
Xiaoyu Du, Jian Ren and Yingzeng Yin (Xidian University, China)
9. Design of A Dual-Frequency Planar Microwave Ablation Antenna
Sen Lin, Haidong Chen, Quan Xue and Wenquan Che (South China University of Technology, China)
10. Modelling and Performance Analysis of an Efficient Compact Integrated Rectifier-Receiver for SWIPT
Zhenzhen Jiang (Xi'an Jiaotong-Liverpool University & University of Liverpool, China), Zhao Wang (Xi'an Jiaotong Liverpool University & University of Liverpool, China), Mark Leach (Xi'an Jiaotong-Liverpool University, China); Yi Huang (The University of Liverpool, United Kingdom); Eng Gee Lim (Xi'an Jiaotong-Liverpool University, China)
11. Reconfigurable Slotted Antenna Inspired by Multidimensional Modulation
Nanshu Wu and Su Xu (Jilin University, China), Zuoqia Wang (Zhejiang University, China), Hong-Bo Sun (Tsinghua University, China)
12. Tri-band Metasurface for Multi-mode Vector Beam Conversion
Linda Shao and Weiren Zhu (Shanghai Jiao Tong University, China)
13. A 3-D Printed Circularly Polarized Antenna
Shao Cong Peng and Zi Long Ma (South China University of Technology, China)

Keynote Speech

WAA-1 (Wednesday, 09:00-09:45)

Flexible Electronics: Contribution from IAM/IFE @Nanjing & Xi'an



Wei Huang
Northwestern Polytechnical University, China
Academician of the Chinese Academy of Sciences

Professor HUANG Wei is Academician of Chinese Academy of Sciences (CAS), Russian Academy of Sciences (RAS), Academy of Engineering and Technology (ASEAN), Asian Pacific Academy of Materials (APAM), and Pakistan Academy of Sciences (PAS). He is Deputy President & Provost of Northwestern Polytechnical University, and an eminent scientist in the area of organic optoelectronics and flexible electronics. He is Chair Professor of "The Recruitment Program of Global Talents" and the "Cheung Kong Scholars Program", Winner of the "National Outstanding Youth Fund", Chief Scientist of "The National 973 Programs". Professor Huang was awarded Honorary Doctorate by the Russian Academy of Sciences (RAS) and University of Sheffield, UK. He is the Fellow of Royal Society of Chemistry (RSC), the Optical Society of America (OSA), Society of Photo-Optical Instrumentation Engineers (SPIE), and the President of the Federation of Engineering Institutions of Asia and Pacific (FEIAP). Moreover, Professor Huang was awarded the Second Prize of the National Natural Science Award in 2013 and 2018, the Technological and Scientific Progress Award from the Ho Leung Ho Lee Foundation, Hong Kong in 2014, the Top 10 Progress in Science and Technology of China's Universities from Ministry of Education in 2016, and the 1st Prize of the National Natural Science Award of Ministry of Education in 2016, 2017 and 2018.

Professor Huang is one of the earliest and most renowned scholars in the research of polymer light-emitting diodes (PLEDs) and has great reputation in the field of organic optoelectronics research in international community. His current research interests include organic/plastic/flexible electronics, bioelectronics, nanomaterials, nanoelectronics, and polymer chemistry. Since early 1990s, he has focused on the frontier areas in organic optoelectronics which developed from Physics, Chemistry, Materials, Electronics, and Information Science & Technology based interdisciplines. Professor Huang has established the principal framework for organic optoelectronics, achieved high-performance and multi-functionalization organic semiconductors, and boosted the commercialization and industrialization of scientific and technological achievements, enabling him the founder and pioneer of organic optoelectronics in China.

Keynote Speech

WAA-2 (Wednesday, 09:40-10:30)

Accurate Material Characterization over THz Frequency Range



Ke Wu

University of Montreal, Canada

Fellow of the Canadian Academy of Engineering and Fellow of the Royal Society of Canada

FIEEE

Dr. Ke Wu is Endowed Industrial Research Chair in Future Wireless Technologies and Professor of Electrical Engineering at École Polytechnique (University of Montreal). He was Canada Research Chair in RF and millimeter-wave engineering. He has been Director of the Poly-Grames Research Center and the Founding Director of the Center for Radiofrequency Electronics Research of Quebec. He also holds an adjunct position with the School of Information Science and Engineering at Ningbo University. He held/holds visiting/honorary professorships at various universities around the world. He has authored/co-authored over 1300 referred papers, and a number of books and book chapters and filed more than 50 patents. His current research interests involve substrate integrated circuits and systems, antenna arrays, field theory and joint field/circuit modeling, ultra-fast interconnects, wireless power transmission and harvesting, and MHz-through-THz technologies and transceivers for wireless sensors and systems as well as biomedical applications. He is also interested in the development of microwave and terahertz photonic circuits and systems.

Dr. Wu was General Chair of the 2012 IEEE MTT-S International Microwave Symposium. He was 2016 President of the IEEE Microwave Theory and Techniques Society (MTT-S). He also served as the inaugural North-American representative in General Assembly of the European Microwave Association. He was the recipient of many awards and prizes including the inaugural IEEE MTT-S Outstanding Young Engineer Award, 2004 Fessenden Medal of the IEEE Canada, 2009 Thomas W. Eadie Medal from the Royal Society of Canada, Queen Elizabeth II Diamond Jubilee Medal, 2013 Award of Merit of Federation of Chinese Canadian Professionals, 2014 IEEE MTT-S Microwave Application Award, the 2014 Marie-Victorin Prize (Prix du Quebec), 2015 Prix d'Excellence en Recherche et Innovation of Polytechnique Montréal, 2015 IEEE Montreal Section Gold Medal of Achievement, and 2019 IEEE MTT-S Microwave Prize. He was an IEEE MTT-S Distinguished Microwave Lecturer. Dr. Wu is a Fellow of the IEEE, Canadian Academy of Engineering and Royal Society of Canada (Canadian Academy of the Sciences and Humanities).

Keynote Speech

WAB-1 (Wednesday, 10:40-11:25)

Heterogeneous Integration for Millimeter Wave Circuits and Systems Based on BCB Material



Junfa Mao

Shanghai Jiaotong University, China

Academician of the Chinese Academy of Sciences

Fellow of IEEE

Junfa Mao was born in 1965. He received the B.S. degree in radiation physics from the National University of Defense Technology, China, in 1985, the M.S. degree in experimental nuclear physics from Shanghai Institute of Nuclear Research, Chinese Academy of Sciences, China, in 1988, and the Ph.D. degree in electronic engineering from Shanghai Jiao Tong University, Shanghai, China, in 1992.

Since 1992, he has been a faculty member of Shanghai Jiao Tong University, where he is currently a chair professor and vice President. He is a member of the Chinese Academy of Science. He was a visiting scholar at the Chinese University of Hong Kong, Hong Kong, from 1994 to 1995, and a postdoctoral researcher at the University of California, Berkeley, from 1995 to 1996. His research interests include the interconnect and package problem of integrated circuits and systems, analysis and design of microwave components and circuits. He has authored or coauthored more than 500 papers (including more than 140 IEEE journal papers).

He earned the National Natural Science Award of China in 2004, the National Technology Invention Award of China in 2008 and the National Science and Technology Advancement Award of China in 2012, earned 10 best paper awards of international conferences. He also earned 2 National Awards of Teaching in 2005 and 2018. He is a chief scientist of the National Basic Research Program (973 Program) of China, a project leader of the Natural Science Foundation of China for Creative Research Groups, a Cheung Kong Scholar of the Ministry of Education, China, director of the Microwave Society of China Institute of Electronics (CIE), and the 2009-2019 Chair of IEEE MTT-S Shanghai Chapter. He is a fellow of IEEE and CIE. He was a member of 2012-2014 IEEE Microwave Theory and Techniques Society Fellow Evaluation Committee, a member of 2015 IEEE Fellow Committee Member, the founder and the 2007–2009 Chair of the IEEE Shanghai Section.

Keynote Speech

WAB-2 (Wednesday, 11:25-12:10)

**New architecture wireless communications and imaging based on
information metasurfaces**



Tiejun Cui

Southeast University, China

Academician of the Chinese Academy of Sciences

Fellow of IEEE

Tie Jun Cui is the Chief Professor of Southeast University, Nanjing, China, and the academician of Chinese Academy of Science. He authored two books and published over 400 peer-review journal papers, which have been cited by more than 30000 times (H-index 86, Google Scholar). He proposed the concept of digital coding metamaterials, and realized the first programmable metamaterial and information metamaterial. Dr. Cui received the National Natural Science Awards of China in 2014 and 2018. His researches are widely reported by Nature News, Science, MIT Technology Review, Scientific American, New Scientists, etc. Dr. Cui is an IEEE Fellow.

IEEE IMWS-AMP 2020 Technical Program

08:40 - 12:10*, Wed, July 29 2020

Room: Room 0; Zoom Meeting ID: 882 3214 4472; Passcode: 222100;

Zoom Link: <https://us02web.zoom.us/j/88232144472?pwd=ZHNZRFPVTUxMOGdEWkkyS0RIS2Fjdz09>

08:40-09:00

Opening Address

Session WAA: Keynote Speeches I

Chairs: Jianguo Lu, East China Research Institute of Microelectronics, China
Yueping Zhang, Nanyang Technological University, Singapore

WAA-1 Flexible Electronics: Contribution from IAM/IFE @Nanjing & Xi'an (Keynote)

09:00-09:45 Wei Huang (Northwestern Polytechnical University)

WAA-2 Accurate Material Characterization over THz Frequency Range (Keynote)

09:45-10:30 Ke Wu (University of Montreal, Canada)

Session WAB: Keynote Speeches II

Chairs: Deyun Zhou, Northwestern Polytechnical University, China
Eng Gee Lim, Xi'an Jiaotong-Liverpool University, China

WAB-1 Heterogeneous Integration for Millimeter Wave Circuits and Systems Based on BCB Material (Keynote)

10:40-11:25 Junfa Mao (Shanghai Jiaotong University, China)

WAB-2 New architecture wireless communications and imaging based on information metasurfaces (Keynote)

11:25-12:10 Tiejun Cui (Southeast University, China)

*The time in the technical program is based on Beijing Time Zone (GMT +8)

13:30 - 15:15, Wed, July 29 2020

Special Session: WP1A

Wideband and Multi-band Polarization Conversion Metasurface

Room: Room 1; Zoom Meeting ID: 879 0196 2083; Passcode: 084679;

Zoom Link: <https://us02web.zoom.us/j/87901962083?pwd=RzNRSTVtYjF3VW1SQ3lwMk9XSTJHUT09>

Organizers: Yu Jian Cheng, Kuang Zhang

Chairs: Yu Jian Cheng, Kuang Zhang

WP1A-1 Wideband Microwave Metasurface for Independent Manipulation of Orthogonal Circular Polarizations (invited)

13:30-14:00 Kuang Zhang, Yueyi Yuan, Yuxiang Wang, Jinxing Li, Xumin Ding and Wu Qun (Harbin Institute of Technology, China)

WP1A-2 Wideband and Multi-band Circular Polarization Conversion Metasurfaces (invited)

14:00-14:30 Hong Bin Wang, Yujian Cheng (UESTC, China)

WP1A-3 Low-profile SSPP Antenna with Vertical Polarization and Omnidirectional Radiation

14:30-14:45 Bingyue Qu (Faculty of Electronic and Information Engineering, Xi'an Jiaotong University, China); Anxue Zhang and Sen Yan (Xi'an Jiaotong University, China); Zhuo Xu (Electronic Materials Research Laboratory, Xi'an Jiaotong University, China)

WP1A-4 Shared-aperture Multifunctional Coding Metasurface

14:45-15:00 Jia Yuan Yin and Li-xin Guo (Xidian University, China)

WP1A-5 Multi-Resonant Modes on Resistor-Loaded Metal Strip and Its Application on Absorptive Frequency-Selective Structures

15:00-15:15 Lingwen Kong (School of Information and Electronics, Beijing Institute of Technology, China); Binchao Zhang and Cheng Jin (Beijing Institute of Technology, China)

WP1A-6 Linear dual-Polarization Terahertz Focusing at the Metasurface

15:15-15:30 Wei Kou (University of Electronic Science and Technology of China, China)

13:30 - 15:30, Wed, July 29 2020

Special Session: WP2A

Multi-Band Antennas for Future Wireless Systems

Room: Room 2; Zoom Meeting ID: 840 3535 0991; Passcode: 080608;

Zoom Link: <https://us02web.zoom.us/j/84035350991?pwd=bElaeDA5ZDM0blBvbjZBRG9hOCtpdz09>

Organizers: Lei Ge, Yujian Li

Chairs: Lei Ge, Yujian Li

WP2A-1 Wideband Magneto-Electric Dipole Antenna Array with Bend Structure for Millimeter-Wave Applications (invited)

13:30-14:00 Lei Xiang, Fan Wu, Zhi Hao Jiang and Chao Yu (Southeast University, China)

WP2A-2 Bands-Spanned Radiation-Differentiated Antenna (BSRDA) (invited)

14:00-14:30 Lei Ge (Shenzhen University, China)

WP2A-3 Millimeter-wave Magneto-Electric Dipole Antenna Array Specially Designed for Timesaving Metallic 3D Printing

14:30-14:45 Fanqi Sun, Yu Jian Li and Jun Hong Wang (Beijing Jiaotong University, China)

WP2A-4 3-D-Printed Wideband Multibeam Dual Reflector Antenna for 5G Millimeter-Wave Applications

14:45-15:00 Yingyu Bi, Yu Jian Li and Jun Hong Wang (Beijing Jiaotong University, China)

WP2A-5 3D Printed Nearly-Isotropic Millimeter-Wave Luneburg Lens Using Hybrid Gradient Index Materials

15:00-15:15 Yujiao Guo, Yu Jian Li and Jun Hong Wang (Beijing Jiaotong University, China)

WP2A-6 A Phase Corrected Substrate Integrated Waveguide Horn Antenna with Air Holes for Narrow Beamwidth in the H-plane

15:15-15:30 Yuwei Zhao, Yu Jian Li and Jun Hong Wang (Beijing Jiaotong University, China)

13:30 - 15:30, Wed, July 29 2020

Special Session: WP3A

High Efficiency Devices in Transceiver Applications

Room: Room 3; Zoom Meeting ID: 818 5731 7876; Passcode: 400844;

Zoom Link: <https://us02web.zoom.us/j/81857317876?pwd=MzA5aksyUTA3WjNQMhdSZDNEUm9Ddz09>

Organizers: Yuanchun Li, Shichang Chen

Chairs: Yuanchun Li, Shichang Chen

WP3A-1 Single- And Dual-Band Filtering Power Amplifiers (invited)

13:30-14:00 Yuan Chun Li and Wang Yuanbo (South China University of Technology, China)

WP3A-2 A Reconfigurable Mixer for 1.8-5GHz Software-Defined Radios

14:00-14:15 Shilpa Mehta, Xue Jun Li and Aayush Aneja (Auckland University of Technology, New Zealand)

WP3A-3 A Diode-based Wideband Reconfigurable Power Amplifier

14:15-14:30 Qi Cai (Nanjing University of Posts and Telecommunications, China); Tianyu Zhang (Nanjing Electronics and Institute); Wenquan Che (South China University of Technology, China)

WP3A-4 Design of Broadband Amplifier Based on InP DHBT

14:30-14:45 Yanfei Hou and Weihua Yu (Beijing Institute of Technology, China); Yan Sun and Wei Cheng (Nanjing Electronic Devices Institute, China)

WP3A-5 LTCC Wideband 1-To-4 Power Dividing Networks with 90° or 180° Output Phase Differences

14:45-15:00 Wei Qin, Ling-Hua Shi and Jian-Xin Chen (Nantong University, China)

WP3A-6 Improvement of Thermal Endurance for Integrated Millimeter-Wave Silicon IMPATT Device in μm^2 -Scale

15:00-15:15 Wogong Zhang (Nanjing Chuhang Technology Co Ltd Anqing, Hefei, Nanjing, China); Jinzhong Yu (China); Erich Kasper (University of Stuttgart, Germany)

WP3A-7 A Highly Efficient 60 GHz CMOS Doherty Power Amplifier with Adaptive Gate Biases

15:15-15:30 Yuan Chun Li and Run-Ze Zhan (South China University of Technology, China); Haiwei Zhang (HUAWEI Technologies Co. LTD, China)

15:40 - 17:40, Wed, July 29 2020

Session: WP1B

RF & Terahertz Devices: Design, Fabrication, Characterization, and Application I

Room: Room 1; Zoom Meeting ID: 879 0196 2083; Passcode: 084679;

Zoom Link: <https://us02web.zoom.us/j/87901962083?pwd=RzNRSTVtYjF3VW1SQ3lwMk9XSTJHUT09>

Chairs: Wenhua Gu, Chuanming Zhu

WP1B-1 Design and Fabrication of Flexible and Transparent Absorbers in Different Wavebands Based on EHD-Printing Technology (invited)

15:40-16:10 Yanghui Wu, Junjie Wang, Chen Fu, Huiyu Chang, Wenhua Gu and Xue Chen (Nanjing University of Science and Technology, China)

WP1B-2 Extracting Complex PCB Substrate Permittivity from a Transmission Line Using the Finite Difference Integral Method from 10 GHz - 100 GHz

16:10-16:25 Felix Sepaintner, Andreas Scharl and Werner Bogner (Technische Hochschule Deggendorf, Germany); Stefan Zorn and Franz Röhl (Rohde&Schwarz, Germany)

WP1B-3 Characterizing Microwave Connectors over Temperatures Using Thermal-stable Standards

16:25-16:40 Si-Ping Gao and Iurii Cherukhin (National University of Singapore, Singapore)

WP1B-4 Design of CMOS Chip to Waveguide Transition in eWLB Package for Full W-band Applications

16:40-16:55 Chuanming Zhu (The 38th Research Institute of China Electronic Technology Group Corporation)

WP1B-5 Design and Simulation of Transparent Electromagnetic Shield Based on Ultra-miniaturized Grid with a Wide Band

16:55-17:10 Zhongxiang Wang, Xiaohan Yang, Zhi-Yuan Zong, Wen Wu, Wenhua Gu and Bin Chen (Nanjing University of Science and Technology, China)

WP1B-6 60 GHz Optimised Nickel-free Gold-plated Enclosed Coplanar Waveguide Liquid Crystal Phase Shifter

17:10-15:25 Jinfeng Li (University of Southampton & Imperial College London, United Kingdom (Great Britain))

WP1B-7 Traceable Measurement of Terahertz Spectrum Power and Frequency

17:25-17:40 Yuqiang Deng (National Institute of Metrology, China)

15:40 - 17:25, Wed, July 29 2020

Special Session: WP2B

Recent Advances in Microwave and Millimeter-Wave Antenna Arrays

Room: Room 2; Zoom Meeting ID: 840 3535 0991; Passcode: 080608;

Zoom Link: <https://us02web.zoom.us/j/84035350991?pwd=bElaeDA5ZDM0blBvbjZBRG9hOCtpdz09>

Organizers: Yuxiang Sun, Shaoyong Zheng

Chairs: Yuxiang Sun, Shaoyong Zheng

WP2B-1 Design of Compact Dual-Frequency Antenna Array Using Quarter-Mode Substrate-Integrated Waveguide (invited)

15:40-16:10 Yu-Xiang Sun and Di Wu (Shenzhen University, China)

WP2B-2 Compact Spoof Surface Plasmon Polaritons Array Antenna with Enhanced Scanning Rate and Bandpass Filtering Response

16:10-16:25 Chuangkai Wang, Shaoyong Zheng and Guolin Ouyang (Sun Yat-sen University, China)

WP2B-3 A Wideband Switched-Beam Antenna Array Based on Compact Butler Matrix

16:25-16:40 Jia Min Wen, Shaoyong Zheng and Chuangkai Wang (Sun Yat-sen University, China)

WP2B-4 Design of Series-Fed, Single-Layer, and Wideband Millimeter Wave Microstrip Array

16:40-16:55 Yongmei Pan and Guo Yuqing (South China University of Technology, China)

WP2B-5 Design of a Leaky-wave Antenna with Backfire-to-Broadside Scanning Beam Utilizing Odd-mode Spoof Surface Plasmon Polaritons

16:55-17:10 Xiaoyu Du, Jian Ren and Yingzeng Yin (Xidian University, China)

WP2B-6 On Study of the Short Conductor Line Used in the Simulation of the Re-Configurable Antenna

17:10-17:25 Yu-Qiu Shang, Qing-Sheng Zeng (Nanjing University of Aeronautics & Astronautics, China), Wan-Zhao Cui (China Academy of Space Technology (Xi'an), China)

15:40 - 17:25, Wed, July 29 2020

Session: WP3B

Active Microwave and Terahertz Devices

Room: Room 3; Zoom Meeting ID: 818 5731 7876; Passcode: 400844;

Zoom Link: <https://us02web.zoom.us/j/81857317876?pwd=MzA5aksyUTA3WjNQMHdSZDNEUm9Ddz09>

- Chairs:** Haidong Chen, Changrong Liu
- WP3B-1 A 20GHz LC-VCO for Satellite Microwave Communication Application**
15:40-15:55 Yu Fu and Guochi Huang (Fujian Normal University, China)
- WP3B-2 Ka-band MMIC LNA Design**
15:55-16:10 Gang Qin (Nanjing University Of Science And Technology, China)
- WP3B-3 Study of 28 GHz Transceiver Module Integrated with LO Source for 5G mmWave Communication**
16:10-16:25 Zewen Luo, Haidong Chen, Wenquan Che and Quan Xue (South China University of Technology, China)
- WP3B-4 A New Design of Wide Band Equalizer Using Meandering Lines**
16:25-16:40 Weidong Huang (Tongda College of NUPT, China)
- WP3B-5 Based on Diode with 30GHz Bandwidth Terahertz Amplitude Modulator**
16:40-16:55 Xiaolin Hao, Yaxin Zhang, Xu Hou and Ting Zhang (University of Electronic Science and Technology of China, China)
- WP3B-6 Multilayer Terahertz Modulator Based on VO2**
16:55-17:10 Guo Xiaoqing, Yaxin Zhang, Xiaolin Hao and Xuan Cong (University of Electronic Science and Technology of China, China)
- WP3B-7 Quadrature Injection-Locked Frequency Divider 2 for Radio Frequency Interference Reduction**
17:10-17:25 Wen Cheng Lai (National Taiwan University of Science and Technology, Taiwan)

08:30 - 10:15, Thu, July 30 2020

Session: TA1A

RF & Terahertz Devices: Design, Fabrication, Characterization, and Application II

Room: Room 1; **Zoom Meeting ID:** 826 2024 7195; **Passcode:** 143371;

Zoom Link: <https://us02web.zoom.us/j/82620247195?pwd=cjVEb3NhR3grdWRlYkZwTHVMVGljdz09>

Chairs: Xingchang Wei, Weihong Liu

TA1A-1 Low Loss LTCC Ag System for 5G Applications

08:30-08:45 Ellen Tormey, Peter Marley and Chao Ma (Ferro Corporation, USA)

TA1A-2 mm-Wave Letter-Based Chipless RFID Tags on Cheap Plastic Substrates

08:45-09:00 Larry M Arjomandi and Grishma Khadka (Monash University, Australia); Nemaï Karmakar (MONASH University, Australia)

TA1A-3 Design of 4th Order Cylinder Filter Suitable for SU-8 Micromachining

09:00-09:15 Min Liu (Xi'an Jiaotong University, China)

TA1A-4 Broadband Dielectric Measurement of LCP Substrate Materials by Differential Phase Length Method

09:15-09:30 Weiyong Song and Weihong Liu (Xi'an University of Posts and Telecommunications, China)

TA1A-5 A Highly Selective and Compact 5G N77 Band Pass Filter Based on HRS IPD Technology

09:30-09:45 Xiaomei Li, Jiajin Song, Danye Wang, Qianqian Qin and Liguó Sun (University of Science and Technology of China, China)

TA1A-6 Saving the Human Body from Radio Frequency: A Ni-Cu Conductive Tape-based Technique

09:45-10:00 Raja Usman Tariq, Ming Ye and Zhi Cao (Xi'an Jiaotong University, China); Yongning He (Xi'an Jiaotong University, China)

TA1A-7 Extraction of the Complex Permittivity of PCB

10:00-10:15 Chongxin Xu, Yuru Feng and Xing-Chang Wei (Zhejiang University, China)

08:30 - 10:15, Thu, July 30 2020

Special Session: TA2A

Leaky-Wave Structures and Relative Technologies

Room: Room 2; Zoom Meeting ID: 880 7427 0520; Passcode: 349807;

Zoom Link: <https://us02web.zoom.us/j/88074270520?pwd=aDVjR3RkOE9aVmJoYXp1WHJGaE54QT09>

Organizer: Zheng Li

Chairs: Zheng Li, Zhang Zhan

TA2A-1 Electrically Beam Scanning Antenna Based on Leaky-Wave Structures (invited)

08:30-09:00 Zheng Li, Shanzhe Wang and Jun Hong Wang (Beijing Jiaotong University, China)

TA2A-2 A Design of Leaky-Wave System for the High-Speed Rail in the Vacuum Tube

09:00-09:15 Li Ying Zou and Zheng Li (Beijing Jiaotong University, China); Liu Liu (Beijing Jiaotong University, China); Jun Hong Wang (Beijing Jiaotong University, China)

TA2A-3 A Conical-Beam Leaky-Wave Antenna with High Radiation Efficiency

09:15-09:30 Yulu Zhang, Jun Hong Wang and Xiaowen Li (Beijing Jiaotong University, China)

TA2A-4 Propagation Characteristics of Periodically Slotted Elliptical Waveguides with Different Cross Section Shapes of Dielectric Filling

09:30-09:45 Yan Lu (University of Beijing Jiaotong, China); Jun Hong Wang and Xiaowen Li (Beijing Jiaotong University, China)

TA2A-5 Interleaved-Slotted Annular Leaky-Wave Antenna with Conical Beam

09:45-10:00 Haijiao Yang, Yuchen Ma and Jun Hong Wang (Beijing Jiaotong University, China)

TA2A-6 A Cylindrical Conformal Leaky Wave Antenna with Omnidirectional Beam

10:00-10:15 Xiaoya Shi, Yuchen Ma and Jun Hong Wang (Beijing Jiaotong University, China)

08:30 - 10:15, Thu, July 30 2020

Session: TA3A

RF and Terahertz Sensing: Components, Systems, EMC I

Room: Room 3; Zoom Meeting ID: 898 7223 5063; Passcode: 875808;

Zoom Link: <https://us02web.zoom.us/j/89872235063?pwd=a1JkelRKL1d4ZTIUK21BcmNOV1dHdz09>

Chairs: Xianqi Lin, Li Wu

TA3A-1 The Design of a 220GHz Single Sideband Communication System (invited)

08:30-09:00 Zhongqian Niu (University of Electronic Science and Technology of China China); Bo Zhang, Yong Fan and Zhen Zhou (University of Electronic Science and Technology of China, China)

TA3A-2 Microwave Sensors designed based on group-delay detecting (invited)

09:00-09:30 Xianqi Lin (University of Electronic Science and Technology of China, China)

TA3A-3 Electromagnetic Pulse Coupling Effect Analysis for Outboard Engine System of Vehicle

09:30-09:45 Longying Guo, Long Xiao, Junfeng Chen, Meng Yang and Jingxian Yang (China Ship Development and Design Center, China)

TA3A-4 Application of Radar Cross Section to Far-field Damage Detection

09:45-10:00 Yingxue Shang (Nanjing University of Aeronautics and Astronautics, China)

TA3A-5 Analysis of Test Distance and Truncation Angle of the Two-dimension Phased Array Radar Antenna

10:00-10:15 Yufan Yao (No. 38 Research Institute of CETC, China)

10:25- 12:10, Thu, July 30 2020

Session: TA1B

Engineered Metamaterials and Applications I

Room: Room 1; Zoom Meeting ID: 826 2024 7195; Passcode: 143371;

Zoom Link: <https://us02web.zoom.us/j/82620247195?pwd=cjVEb3NhR3grdWRlbtZwTHVMVGljdz09>

Chairs: Mingchun Tang, Yinglu Wan

TA1B-1 **Advanced metasurface for high-efficiency wavefront control and integrated functionality (invited)**

10:25-10:55 He-Xiu Xu, Air Force Engineering University, China

TA1B-2 **Polarization reconfigurable, end-fire radiating, electrically small antennas (invited)**

10:55-11:25 Ming-Chun Tang (Chongqing University, China), Qingli Lin (Chongqing University, China), Richard W. Ziolkowski University of Technology Sydney, Australia)

TA1B-3 **Application of Hybrid Metasurface for RCS Reduction of Dual Band Slot Antenna**

11:25-11:40 Hengyan Hu (Nanjing University of Aeronautics and Astronautics, China)

TA1B-4 **Design of Circuit Analog Absorber Using Characteristic Mode Analysis**

11:40-11:55 Qingxin Guo (Information Engineering School, Communication University of China, China); Jianxun Su (Communication University of China, China); Zengrui Li (Communication University of China & Faculty of Science and Technology, China)

TA1B-5 **Conformal Metasurface for Wideband RCS Reduction**

11:55-12:10 Yajin Wang and Jianxun Su (Communication University of China, China)

10:25- 12:10, Thu, July 30 2020

Special Session: TA2B

Novel Antennas and Circuits Design for Future Wireless Systems

Room: Room 2; Zoom Meeting ID: 880 7427 0520; Passcode: 349807;

Zoom Link: <https://us02web.zoom.us/j/88074270520?pwd=aDVjR3RkOE9aVmJoYXp1WHJGaE54QT09>

Organizers: Jing-Ya Deng, Shi-Gang Zhou

Chairs: Yuhang Yang, Shi-Gang Zhou

TA2B-1 Research on wideband circularly polarized antenna design (invited)

10:25-10:55 Yu Hang Yang (Northwestern Polytechnical University, China)

TA2B-2 Study on Wide-angle Scanning Circularly Polarized Phased Array in Ka-band

10:55-11:10 Yang Li, Shi-Gang Zhou (Northwestern Polytechnical University, China)

TA2B-3 A Circularly Polarized Antenna with Conical-Beam

11:10-11:25 Zhiguang Wang and Zhan Zhang (Beijing Jiaotong University, China)

TA2B-4 Design of a Broadband Communication Array Element Antenna in K-band

11:25-11:40 Longwei He, Xiaofei Wang, Guodong Liu and Wei Wang (Beijing Institute of Long March Space Vehicle, China); Shigang Zhou (Northwestern Polytechnical University, China)

TA2B-5 A Novel Ka-band Waveguide Slotted Antenna with Wide-band Dual-Polarization

11:40-11:55 GuoDong Liu and Xiaofei Wang (Beijing Institute of Long March Space Vehicle, China); Suixue Wang (The State Key Laboratory of Experimental Physics & Computational Mathematics, China); LongWei He (Beijing Institute of Long March Space Vehicle, China); Shigang Zhou (Northwestern Polytechnical University, China)

TA2B-6 Pattern Synthesis of Conformal Antenna Array Based on Convex Optimization Model

11:55-12:10 Xinji Li (Beihang University, China); Xiaofei Wang (Beijing Institute of Long March Space Vehicle, China); Shigang Zhou (Northwestern Polytechnical University, China)

10:25 - 12:10, Thu, July 30 2020

Session: TA3B

RF and Terahertz Sensing: Components, Systems, EMC II

Room: Room 3; Zoom Meeting ID: 898 7223 5063; Passcode: 875808;

Zoom Link: <https://us02web.zoom.us/j/89872235063?pwd=a1JkelRKL1d4ZTIUK21BcmNOV1dHdz09>

Chairs: Peng Li, Faeyz Karim

TA3B-1 Portable Omni-directional Micro Deformation Monitoring Radar System

10:25-10:40 Fang Liu (Inner Mongolia University of Technology); Pingping Huang (Inner Mongolia University of Technology, China); WeiXian Tan (National Key Laboratory of Microwave imaging Technology, China); Huifang Ren (Inner Mongolia University of Technology)

TA3B-2 Space Power Synthesis Technology of Distributed Jamming System on Motion Platforms

10:40-10:55 Xingsong Deng, Liang Qi and Yingbo Zhang (CSIC, China); Bingyang Wang (Jiangsu of China, China); Jinfeng Wang (CSIC, China)

TA3B-3 A Simple Terahertz Orthomode Transducer Based on Equivalent Circuits Analysis

10:55-11:10 Tao Qin, XianQi Lin and Yuxin Kang (University of Electronic Science and Technology of China, China)

TA3B-4 Design and Realization of an S-band High Performance Frequency Synthesizer for Radar System

11:10-11:25 Jing Zhou (Tongda College, China)

TA3B-5 A Random Ergodic Method for Distributed Transmitting Coherent Combination

11:25-11:40 Meng Yang (China Ship Development and Design Center, China)

TA3B-6 Research on Millimeter-wave Radiation Characteristics of Stereo Air Target

11:40-11:55 Jinyu Zhang (Nanjing University of Science and Technology, China); Taiyang Hu (NanJing University of Science and Technology, China)

TA3B-7 An Effective Method of Collided Signals Separation for Satellite-based AIS

11:55-12:10 Dan Zhao (Zijin College of Nanjing University of Science and Technology, China); Min Huang, Peng Li, Luan Wang, Renhong Xie, Yibin Rui (Nanjing University of Science and Technology, China)

13:30-15:00, Thu, July 30 2020

Session: TP1A

Graphene and 2D Electronic and Optoelectronic Devices

Room: Room 1; Zoom Meeting ID: 826 2024 7195; Passcode: 143371;

Zoom Link: <https://us02web.zoom.us/j/82620247195?pwd=cjVEb3NhR3grdWRlYTZwTHVMVGJldz09>

Chairs: Weiren Zhu, Bian Wu

TP1A-1 Microwave Absorption Properties of Sandwich-Like Graphene-Carbon Black Composite

13:30-13:45 Rui An, Ming Feng and Pengcheng Gao (Shanghai Radio Equipment Research Institute, China); Kaihua Zhang (Shanghai Academy of Spaceflight Technology, China); Yutao Zhang and Yanan Chen (Shanghai Radio Equipment Research Institute, China)

TP1A-2 A Graphene Based Metasurface with Dynamically and Continuously Tunable Scattering Pattern

13:45-14:00 Jin Zhang and Weiren Zhu (Shanghai Jiao Tong University, China)

TP1A-3 325-400 GHz 2-D Beam Steering Antenna Based on MEMS Micromachining Technology

14:00-14:15 Jing Ning (University of Electronic Science and Technology of China, China); Yu Jian Cheng (UESTC, China); Yong Fan (University of Electronic Science and Technology of China, China)

TP1A-4 Design of Wideband Wearable Antenna Based on High Conductive Multilayer Graphene Film

14:15-14:30 Xinlei Lv and Bian Wu (Xidian University, China); Nan Wu (701 Research Institute, China); Maosong Wu (China Ship Development and Design Center, China); Daping He (Wuhan University of Technology, China)

TP1A-5 Graphene Coated Honeycomb Composites with High-Power and High-Temperature EM Performance

14:30-14:45 L. Liu (Shenzhen General Test Systems, China)

TP1A-6 Experimental Demonstration of a Transient Decrease and Increase in Terahertz Conductivity of Multilayer Graphene Induce by Different Optical Excitation

14:45-15:00 Lan Wang (University of Electronic Science and Technology of China, China)

13:30-15:30, Thu, July 30 2020

Special Session: TP2A

Advanced Manufacturing Techniques for Antennas and RF Components Applications

Room: Room 2; Zoom Meeting ID: 880 7427 0520; Passcode: 349807;

Zoom Link: <https://us02web.zoom.us/j/88074270520?pwd=aDVjR3RkOE9aVmJoYXp1WHJGaE54QT09>

Organizers: Guan-Long Huang, Bing Zhang

Chairs: Guan-Long Huang, Bing Zhang

TP2A-1 3D Printed Microwave Devices: The Past, Present and Future (invited)

13:30-14:00 Bing Zhang (Sichuan University, China)

TP2A-2 Recent Progress in Antenna Development with Additive Manufacturing Technology (invited)

14:00-14:30 Guan-Long Huang, Zi-Yu Pang and Xiao-Yu Ma (Shenzhen University, China); Ge Zhao (Xidian University, China)

TP2A-3 A Metallic 3D Printed Miniaturized Quasi Log Periodic Koch-Dipole Antenna Using T-Shaped Top Loading

14:30-14:45 Yichen Xiong and Bing Zhang (Sichuan University, China)

TP2A-4 Rapid Prototyping of A Three-Dimensional Dual-Band Dual-Polarized Shared-Aperture Antenna

14:45-15:00 Zi-Yu Pang and Xiao-Yu Ma (Shenzhen University, China); Ge Zhao (Xidian University, China); Guan-Long Huang (Shenzhen University, China)

TP2A-5 Design of a Miniaturized Dual-Polarized Slot-Coupled Patch Antenna Element and Its Sub-array

15:00-15:15 Jianchuan Liu (Antenna Designer, China)

TP2A-6 A Miniaturized Log-Periodic Dipole Antenna Using Dual-Band Top-Loaded Dipoles as Radiating Elements

15:15-15:30 Junlin Pu and Bing Zhang (Sichuan University, China)

13:30-15:30, Wed, July 30 2020

Session: TP3A

Passive Microwave and Terahertz Devices I

Room: Room 3; Zoom Meeting ID: 898 7223 5063; Passcode: 875808;

Zoom Link: <https://us02web.zoom.us/j/89872235063?pwd=a1JkelRKL1d4ZTIUK21BcmNOV1dHdz09>

Chairs: Jianpeng Wang, Lei Zhao

TP3A-1 Recent Progress in the Implementation of Highly Reconfigurable Couplers (invited)

13:30-14:00 Shaoyong Zheng (Sun Yat-Sen University, China)

TP3A-2 Continuously Tunable Phase Shifter Based on Defected Ground Structures

14:00-14:15 Chuan Shao (School of Electronic and Optical Engineering, Nanjing University of Science and Technology, China); Hui Chu and Xiaohua Zhu (Nanjing University of Science and Technology, China)

TP3A-3 Tunable Frequency Selection Surface Based on 2.5-D Structure

14:15-14:30 Fukang Li (Nanjing University of Aeronautics and Astronautics, China)

TP3A-4 Spoof Plasmonic Waveguide of a Roofed Metallic Grating for Terahertz Applications

14:30-14:45 Yong-Qiang Liu (Science and Technology on Electromagnetic Scattering Laboratory, China)

TP3A-5 Broadband Linear Phase Shifting of Terahertz Wave with Low Insertion Loss by Artificial-microstructure Phase Manipulation Chip

14:45-15:00 Huajie Liang (University of Electronic Science and Technology of China & Terahertz Science Cooperative Innovation Center, School of Electronic Science and Engineering, China); Hongxin Zeng, Yaxin Zhang and Ziqiang Yang (University of Electronic Science and Technology of China, China)

TP3A-6 A Compact Quint-Band Bandpass Filter with High Selectivity Using Uniform Impedance Resonators (UIRs)

15:00-15:15 Haiwen Liu (Xi'an Jiaotong University, China); Chen Lai (East China Jiaotong University, China); Ruolin Wang (Xi'an Jiaotong University, China)

TP3A-7 An Efficient Wideband Line Cross-Polarization Conversion THz Metasurface with Wide Incidence Angles

15:15-15:30 Xuan Cong (University of Electronic Science and Technology of China, China)

15:40-17:25, Thu, July 30 2020

Special Session: TP1B

Antennas with Artificial Materials

Room: Room 1; **Zoom Meeting ID:** 826 2024 7195; **Passcode:** 143371;

Zoom Link: <https://us02web.zoom.us/j/82620247195?pwd=cjVEb3NhR3grdWRlbtZwTHVMVGljdz09>

Organizers: Yu Luo, Wan-Chen Yang

Chairs: Yu Luo, Wan-Chen Yang

TP1B-1 Miniaturized Wideband Planar Antennas Using Capacitive-loaded Metasurface Structures (invited)

15:40-16:10 Wanchen Yang (South China University of Technology, China)

TP1B-2 A Gain-Enhanced Compressed Higher-Order Mode Dipole Antenna Loaded with Metamaterial (invited)

16:10-16:40 Yu Luo, Xiaoyu Ma (University of Tianjin, China)

TP1B-3 Dual-polarized Low-Profile Broadband Microstrip Antenna

16:40-16:55 Wenxing An (Beijing University of Posts and Telecommunications, China); Yu Luo (Tianjin University, China)

TP1B-4 Two Dimension Frequency Scanning Antenna with Meta-surface

16:55-17:10 Han Xu (University of Electronic Science and Technology of China & Chengdu, China)

TP1B-5 Construction of A Cost-Effective Phased Array Through High-Efficiency Transmissive Programmable Metasurfaces

17:10-17:25 Xudong Bai (Shanghai Aerospace Electronics Co., Ltd, China)

15:40-17:40, Thu, July 30 2020

Session: TP2B

Antennas for Emerging Applications I

Room: Room 2; Zoom Meeting ID: 880 7427 0520; Passcode: 349807;

Zoom Link: <https://us02web.zoom.us/j/88074270520?pwd=aDVjR3RkOE9aVmJoYXp1WHJGaE54QT09>

Chairs: Hui Chu, Xing Zhao

TP2B-1 mm-Wave Filtering Antennas Based on Substrate Integrated Waveguides (invited)

15:40-16:10 Hui Chu (Nanjing University of Science and Technology)

TP2B-2 Mobile MIMO Antenna Using Mode Analysis (invited)

16:10-16:40 Xing Zhao and Shaobin Liu (Nanjing University of Aeronautics and Astronautics, China)

TP2B-3 A Beam-Steering Water-Loaded Dipole Antenna

16:40-16:55 Qingyuan Fang, Tong Wang and Weidong Liu (Shijiazhuang Tiedao University, China)

TP2B-4 Compact Millimeter-Wave Dual-Polarization Antenna Based on Magneto-Electric Dipole

16:55-17:10 Li Jiang (AVIC the First Aircraft Institute, China); Jinjin Liu (Xidian University, China); Nan Zhang (Xidian University, China); Bian Wu (Xidian University, China)

TP2B-5 A 2-D Frequency Beam-Scanning Antenna Array Based on Varactor-Embedded Slow-Wave Phase-Shifter

17:10-17:25 HanJun Zhao, Hui Chu and Xiaohua Zhu (Nanjing University of Science and Technology, China)

TP2B-6 High-isolation Dual-polarized Patch Antenna Array

17:25-17:40 Lu Chen, Wanchen Yang, Wenquan Che and Quan Xue (South China University of Technology, China)

15:40-17:25, Wed, July 30 2020

Session: TP3B

Passive Microwave and Terahertz Devices II

Room: Room 3; Zoom Meeting ID: 898 7223 5063; Passcode: 875808;

Zoom Link: <https://us02web.zoom.us/j/89872235063?pwd=a1JkeIRKL1d4ZTIUK21BcmNOV1dHdz09>

Chairs: Maurizio Bozzi, Wei Nie

TP3B-1 Substrate Integrated Waveguide (SIW) Technology for Communication and Sensing (invited)

15:40-16:10 Maurizio Bozzi (University of Pavia, Italy)

TP3B-2 Novel Dual-Band Bandpass Filters Using Short-Circuited Coupled-Line Resonator

16:10-16:25 Wei Nie and Zhichao Han (Chongqing University of Posts and Telecommunications, China); Yinghao Wang (United Microelectronics Center of Chongqing, China); Liang Bo Xie and Mu Zhou (Chongqing University of Posts and Telecommunications, China)

TP3B-3 Balanced Dual-band SIW Bandpass Filter with Enhanced Selectivity

16:25-16:40 Peng Li, Min Huang, Dan Zhao, Zhenzhong Rao, Renhong Xie, Yibin Rui, Hui Chu (Nanjing University of Science and Technology, China)

TP3B-4 Analysis and Verification of Four-Way Gysel Power Divider with Arbitrary Power Dividing Ratio

16:40-16:55 Hongping Li and Haidong Chen (South China University of Technology, China)

TP3B-5 Frequency Tripler Design by Using Dual-Mode Hybrid Coupler for High-Isolation Wireless Sensing

16:55-17:10 Hao Zhang (Northwestern Polytechnical University, China)

TP3B-6 Self-biased CPW Circulator with Low Insertion Loss

17:10-17:25 Sumin David Joseph (University of Liverpool, United Kingdom (Great Britain)); Yi Huang (The University of Liverpool, United Kingdom (Great Britain)); Alex Schuchinsky (University of Liverpool, United Kingdom (Great Britain)); Richard Lebourgeois (Thales Research & Technology, France); Laurent Roussel (Thales LAS OME, France)

08:30-10:15, Fri, July 31 2020

Special Session: FA1A

Advanced Metamaterials and Metasurfaces for Microwave Wave Manipulations

Room: Room 1; **Zoom Meeting ID:** 839 0518 2886; **Passcode:** 753650;

Zoom Link: <https://us02web.zoom.us/j/83905182886?pwd=eUIYaHh6NGhqazFRcFFQkHb3RXUT09>

Organizers: He-Xiu Xu, Zhi Hao Jiang

Chairs: He-Xiu Xu, Fan Wu

FA1A-1 Compact Multiband, Multi-Polarization Antennas Enabled by Dispersion Engineering of Metasurfaces (invited)

08:30-09:00 Ke Zhang (SKLMMW, SEU, China); Zhi Hao Jiang (Southeast University, China)

FA1A-2 Effective Localized Surface Plasmons Resonator Excited by Substrate Integrated Waveguide (invited)

09:00-09:30 Wen Qi Li and Yong Jin Zhou (Shanghai University, China)

FA1A-3 Optomechanical Nonlinear Metasurface Based on the Reflective-Type Meta-Atom

09:30-09:45 Yongjun Huang (University of Electronic Science and Technology of China, China)

FA1A-4 Numerical Demonstrations of Thermally Tunable Metamaterials Based on Liquid Metals

09:45-10:00 Liang Ma (University of Electronic Science and Technology of China, China); Dexu Chen (University of Electronic Science and Technology of China, China); Jian Li, Na Li, Yongjun Huang and Wen Guangjun (University of Electronic Science and Technology of China, China)

FA1A-5 Comparative Study of a Metal Antenna, a Liquid Antenna and a Plasma Antenna

10:00-10:15 Lei Xing (Nanjing University of Aeronautics and Astronautics, China); Hailong Wang (Nanjing University of Aeronautics & Astronautics, China); Xiangkun Kong and Qian Xu (Nanjing University of Aeronautics and Astronautics, China)

08:30-10:15, Fri, July 31 2020

Session: FA2A

Antennas for Emerging Applications II

Room: Room 2; **Zoom Meeting ID:** 832 8514 6368; **Passcode:** 218214;

Zoom Link: <https://us02web.zoom.us/j/83285146368?pwd=ckJyNlFoTTQzSUFVYzhmN09xV3VrUT09>

Chairs: Zengdi Bao, Hao Wang

FA2A-1 **Design of Dual-band Antenna Based on Half-mode Substrate-integrated Waveguide**

08:30-08:45 Dan Cheng and Li Ying Feng (Tianjin University of Technology and Education, China)

FA2A-2 **A Planar Integrated Beam Scanning Folded Reflectarray with Circular Polarization for Millimeter-Wave Applications**

08:45-09:00 Zhenyu Yu (Wuhan University, China)

FA2A-3 **Design and Optimization of Plane Microstrip Fractal Antenna Based on Y Structure**

09:00-09:15 Fu Lihua (Shenyang Institute of Technology, China)

FA2A-4 **A Low-Profile Horn Antenna at Ka-Band**

09:15-09:30 Jingwen Sun and Teng Li (Southeast University, China); Wenbin Dou (Southeast University & State Key Of MMW, Southeast University, China); Hongfu Meng (Southeast University, China)

FA2A-5 **Reconfigurable Slotted Antenna Inspired by Multidimensional Modulation**

09:30-09:45 Nanshu Wu and Su Xu (Jilin University, China); Zuojia Wang (Zhejiang University, China); Hong-Bo Sun (Tsinghua University, China)

FA2A-6 **An Ultra-Wideband Antenna with Unidirectional Radiation Characteristics**

09:45-10:00 Yanfang Wang (Hohai University, China); Fuguo Zhu (Science and Technology on Antenna and Propagation Lab, the 14th Research Institute, CETC, China); Steven Gao (University of Kent, United Kingdom (Great Britain))

FA2A-7 **A Wideband Circularly Polarized Antenna with Stepped-Shaped Patch**

10:00-10:15 Yanfang Wang (Hohai University, China); Fuguo Zhu (Science and Technology on Antenna and Propagation Lab, the 14th Research Institute, CETC, China); Steven Gao (University of Kent, United Kingdom (Great Britain))

08:30-10:15, Fri, July 31 2020

Special Session: FA3A

Far-Field Wireless Power Transfer and Ambient RF Energy Harvesting I

Room: Room 3; **Zoom Meeting ID:** 879 3208 8534; **Passcode:** 542909;

Zoom Link: <https://us02web.zoom.us/j/87932088534?pwd=QVRwUEd5aUxFR2Rod0JOaHVYQnNRZz09>

Organizers: Hao Zhang, Si-Ping Gao

Chairs: Hao Zhang, Si-Ping Gao

FA3A-1 Zero-Powered 3rd-Order Intermodulation Generator for Highly-Isolated Wireless Sensing Applications (invited)

08:30-09:00 Hao Zhang (Northwestern Polytechnical University, China); Si-Ping Gao (National University of Singapore, Singapore); Yu-Qian Yang (Nanjing University of Science & Technology, China)

FA3A-2 Analysis of mmWave Rectifiers Towards Maximum Possible Efficiency (invited)

09:00-09:30 Si-Ping Gao (National University of Singapore, Singapore); Hao Zhang (Northwestern Polytechnical University, China);

FA3A-3 Investigation of Rectenna's Bandwidth for RF Energy Harvesting

09:30-09:45 Sun Hucheng (Nanjing Information Engineering University, China); Rui Ren (Hohai University, China)

FA3A-4 A Planar Near-field Measurement System for Microwave Power Transmission

09:45-10:00 Jingxian Yang, Longying Guo and Meng Yang (China Ship Development and Design Center, China)

FA3A-5 A Waveguide-Fed Transmitting Antenna for High Efficiency Microwave Power Transmission

10:00-10:15 Junfeng Chen, Long Xiao and Liang Chen (China Ship Development and Design Center, China); Songcen Wang (Chinese Electric Power Research Institute, China); Wu Fengtao (University of hust, China); Deliang Zhao (China Ship Development and Design Center, China)

10:25-12:10, Fri, July 31 2020

Special Session: FA1B

RF Devices with Novel Fabricated Methods for 5G Mobile Communications

Room: Room 1; **Zoom Meeting ID:** 839 0518 2886; **Passcode:** 753650;

Zoom Link: <https://us02web.zoom.us/j/83905182886?pwd=eUIYaHh6NGhqazFRReFFFQkjh3RXUT09>

Organizers: Kai Xu Wang, Zi Hao Chen

Chairs: Kai Xu Wang, Zi Hao Chen

FA1B-1 Active VO2 Integrated Polarizer for THz Frequency (invited)

10:25-10:55 Kaixu Wang (Harbin Institute of Technology, Shenzhen, China); Hang Wong (City University of Hong Kong, Hong Kong); Laure Huitema (Xlim Laboratory, France); Aurelian Crunteanu (XLIM, CNRS/ University of Limoges, France)

FA1B-2 Multi-port Power Combining Grid Array Antenna on Fan-out Wafer Level Packaging (invited)

10:55-11:25 Zihao Chen (Harbin Institute of Technology, Shenzhen, China); Xi Zhu (University of Technology Sydney, Australia); Lin Zhong (Harbin Institute of Technology (Shenzhen), China)

FA1B-3 Overview of On-Chip Millimetre-wave Passive Circuit Design in Silicon-based Technologies

11:25-11:40 Lingling Zheng (State Key Laboratory of Automotive Simulation and Control & Jilin University, China)

FA1B-4 A 3-D Printed Circularly Polarized Antenna

11:40-11:55 Shao Cong Peng and Zi Long Ma (South China University of Technology, China)

FA1B-5 A Compact Dual-Band and High-Isolation MIMO Antenna System for 5G Smartphone Applications

11:55-12:10 Xiao-Ting Yuan (Shenzhen University, China); Zhe Chen (City University of Hong Kong, Hong Kong); Jin Li and Tao Yuan (Shenzhen University, China)

10:25-12:10, Fri, July 31 2020

Special Session: FA2B

Recent Development on Dielectric and Liquid Antennas

Room: Room 2; **Zoom Meeting ID:** 832 8514 6368; **Passcode:** 218214;

Zoom Link: <https://us02web.zoom.us/j/83285146368?pwd=ckJyNlFoTTQzSUFVYzhmN09xV3VrUT09>

- Organizers:** Bin Li, Yongmei Pan
- Chairs:** Bin Li, Zhe Chen
- FA2B-1 **Reconfigurable DRAs with Liquid Materials (invited)****
- 10:25-10:55 Zhe Chen, Jin Li and Tao Yuan (Shenzhen University, China); Hang Wong (City University of Hong Kong, Hong Kong)
- FA2B-2 **Wideband and Replaceable Cylindrical Dielectric Resonator Antennas****
- 10:55-11:10 Ling Peng Weng, Xiao Sheng Fang, Jing Yan and Kang Ping Shi (Shantou University, China)
- FA2B-3 **Design of Dual-Layer Fabry Perot Cavity Antenna****
- 11:10-11:25 Li Ying Feng, Dan Cheng and Bin Hao (Tianjin University of Technology and Education, China)
- FA2B-4 **Wideband Millimeter-Wave Circularly Polarized Substrate-Integrated Dielectric Resonator Antenna****
- 11:25-11:40 Mei Di Yang and Yongmei Pan (South China University of Technology, China)
- FA2B-5 **A Wideband Circularly Polarized Reflectarray of Cross Shaped Dielectric Element****
- 11:40-11:55 Chen Yu Mei and Bin Li (Beijing Institute of Technology, China)
- FA2B-6 **Smart Antenna System with Memcapacitors****
- 11:55-12:10 Yi-Feng Ye (Shanghai Jiao Tong University, China); Zong-Rui Xu, Lin-Sheng Wu and Junfa Mao (Shanghai Jiao Tong University, China)

10:25-11:40, Fri, July 31 2020

Special Session: FA3B

Far-Field Wireless Power Transfer and Ambient RF Energy Harvesting II

Room: Room 3; **Zoom Meeting ID:** 879 3208 8534; **Passcode:** 542909;

Zoom Link: <https://us02web.zoom.us/j/87932088534?pwd=QVRwUEd5aUxFR2Rod0JOaHVYQnNRZz09>

Organizers: Hao Zhang, Si-Ping Gao

Chairs: Eng Gee Lim, Ngo Tung

FA3B-1 Modelling and Performance Analysis of an Efficient Compact Integrated Rectifier-Receiver for SWIPT (invited)

10:25-10:55 Zhenzhen Jiang (Xi'an Jiaotong-Liverpool University & University of Liverpool, China); Zhao Wang (Xi'an Jiaotong Liverpool University & University of Liverpool, China); Mark Leach (Xi'an Jiaotong-Liverpool University, China); Yi Huang (The University of Liverpool, United Kingdom (Great Britain)); Eng Gee Lim (Xi'an Jiaotong-Liverpool University, China)

FA3B-2 Dual-Band Polarization-Independent Rectenna for RF Energy Harvesting

10:55-11:10 Suibin Liu (Xidian University, China); Tung Ngo (National University of Singapore, Singapore); Fushun Zhang (Xidian University, China)

FA3B-3 Simultaneous Wireless Power Transfer and Communications by Recycling Third Harmonics for WPAN Applications

11:10-11:25 Zhenzhen Jiang (Xi'an Jiaotong-Liverpool University & University of Liverpool, China); Mark Leach (Xi'an Jiaotong-Liverpool University, China); Zhao Wang (Xi'an Jiaotong Liverpool University & University of Liverpool, China); Hao Zhang (Northwestern Polytechnical University, China); Yi Huang (The University of Liverpool, United Kingdom (Great Britain)); Eng Gee Lim (Xi'an Jiaotong-Liverpool University, China)

FA3B-4 A Novel Extraction Method for Series Inductance in Schottky Diodes Based on Resonance

11:25-11:40 Haorui Luo, Aolin Li and Wenrui Hu (National University of Singapore, Singapore); Hao Zhang (Northwestern Polytechnical University, China)

13:30- 15:00, Fri, July 31 2020

Session: FP1A

Engineered Metamaterials and Applications II

Room: Room 1; Zoom Meeting ID: 839 0518 2886; Passcode: 753650;

Zoom Link: <https://us02web.zoom.us/j/83905182886?pwd=eUIYaHh6NGhqazFRFFQkHb3RXUT09>

- Chairs:** Long Xiao, Hucheng Sun
- FP1A-1** **Design of Polarization-Insensitive and Wide-Angle Broadband Metamaterial Absorber**
- 13:30-13:45 Zhaomei Liu, Xingxing Han and Lihua Zhao (China)
- FP1A-2** **Design of Reflective Coding Metasurface Capable of Switching Six Different Polarization States**
- 13:45-14:00 Yan Chen (Nanjing University of Aeronautics and Astronautics, China)
- FP1A-3** **A Miniaturized Frequency-reconfigurable Rat-race Coupler Based on Metasurface**
- 14:00-14:15 Yinglu Wan (The 38th Research Institute of CETC, China)
- FP1A-4** **Research on a Metamaerial for Electromagnetic Protection of UAV**
- 14:15-14:30 Lijie Chen and Long Xiao (China Ship Development and Design Center, China); Liang Chen (China Ship Development and Design Center, China); Deliang Zhao (China Ship Development and Design Center, China)
- FP1A-5** **A Transparent Broadband Absorbing Metamaterial Based on ITO Structure**
- 14:30-14:45 Jingxian Yang, Long Xiao and Junfeng Chen (China Ship Development and Design Center, China)
- FP1A-6** **A Fast and Accurate Method for Bond Wires Inductances Extraction Based on Machine Learning Strategy**
- 14:45-15:00 Qi Liu, Zijian Shao, Yue Ping Zhang and Junfa Mao (Shanghai Jiao Tong University, China)

13:30- 15:00, Fri, July 31 2020

Session: FP2A

Antennas for Emerging Applications III

Room: Room 2; Zoom Meeting ID: 832 8514 6368; Passcode: 218214;

Zoom Link: <https://us02web.zoom.us/j/83285146368?pwd=ckJyNlFoTTQzSUFVYzhmN09xV3VrUT09>

Chairs: Zhijiao Chen, Zhenguo Liu

FP2A-1 Dual-Band Antenna Made of Slow-Wave Substrate Integrated Waveguide

13:30-13:45 Jiajun Luo (Guizhou University, China); Peng Huang (Beihang University, China)

FP2A-2 Design of High-isolation Band-notched Via-fed UWB MIMO Antennas with Multi-Objective Optimization

13:45-14:00 Diqun Lu (The 38th Research Institute of China Electronics Technology Group Corporation, China); Jiamin Zhao and Sheng Bi (CETC 38, China)

FP2A-3 Design of A Dual-Frequency Planar Microwave Ablation Antenna

14:00-14:15 Sen Lin, Haidong Chen, Quan Xue and Wenquan Che (South China University of Technology, China)

FP2A-4 Phase-Controlled Pattern Diversity Antenna for 360° Continuous Beam Steering

14:15-14:30 Zeyu Song and Zhijiao Chen (Beijing University of Posts and Telecommunications, China); Junsheng Yu, Yuan Yao and Limei Qi (Beijing University of Posts and Telecommunications, China); Xiaodong Chen (Queen Mary, University of London, United Kingdom (Great Britain))

FP2A-5 Highly Compact DRA Array Using Metallic Grid-Shaped Partial Ground Plane

14:30-14:45 Mohit Mishra (Indian Institute of Technology, Guwahati, India); Sumantra Chaudhuri (IIT Guwahati, India); Rakesh Singh Kshetrimayum (Indian Institute of Technology Guwahati, India); Sunandan Bhunia (Central Institute of Technology Kokrajhar, India)

FP2A-6 Dielectric Resonator Antenna Fed by the Surface-wave Goubau Line

14:45-15:00 Haixin Jiang and Zhijiao Chen (Beijing University of Posts and Telecommunications, China); Junsheng Yu, Limei Qi and Yuan Yao (Beijing University of Posts and Telecommunications, China); Xiaodong Chen (Queen Mary, University of London, United Kingdom (Great Britain))

15:40 - 16:55, Fri, July 31 2020

Special Session: FP1B

Advanced Metasurfaces for Efficient Wavefront Control

Room: Room 1; Zoom Meeting ID: 839 0518 2886; Passcode: 753650;

Zoom Link: <https://us02web.zoom.us/j/83905182886?pwd=eUIYaHh6NGhqazFRoFFQkjh3RXUT09>

- Organizers:** Jianxun Su, Ke Chen
- Chairs:** Jianxun Su, Ke Chen
- FP1B-1 Helicity-selective Metasurface for Fully Manipulating Circularly Polarized Waves**
15:40-15:55 Ke Chen, Guowen Ding, Wenlong Guo, Junming Zhao and Yijun Feng (Nanjing University, China)
- FP1B-2 Bandwidth Spread of Microwave Absorber by Integrating Spoof Plasmonic Structure and Resistive Metasurface**
15:55-16:10 Fangkun Zhou, Yingjie Wang, Wei Fang and Ping Chen (Nanjing University, China)
- FP1B-3 Out-of-band RCS Reduction of a Dipole Antenna Based on Frequency-Selective Metasurface**
16:10-16:25 Boyu Sima (Nanjing University of Science and Technology); Ke Chen and Yijun Feng (Nanjing University, China)
- FP1B-4 Tri-band Metasurface for Multi-mode Vector Beam Conversion**
16:25-16:40 Linda Shao (Shanghai Jiaotong University, China); Weiren Zhu (Shanghai Jiao Tong University, China)
- FP1B-5 Wideband Frequency-Selective Absorber Based on Metal Cross Ring**
16:40-16:55 Mengyao Li and Jianxun Su (Communication University of China, China)