

2019年海峡两岸四地无线技术研讨会日程						
7月18日	8:00-22:00	会议注册（山西大学学术交流中心一楼大厅， 新纪元大酒店一楼大厅）				
7月19日	9:00-9:30	开幕式（会议中心博雅报告厅）	大会主席欢迎辞		主持人：陈新伟副教授	
			山西大学张天才副校长致辞			
	9:30-10:00	全体合影				
	大会报告(报告 25 分钟，提问 5 分钟)	10:00-10:30	毫米波半导体异质集成电路	毛军发 院士	主持人：张文梅教授	
		10:30-11:00	毫米波与太赫兹技术在 6G 移动通信中的应用	洪 伟 教授		
		11:00-11:30	基于模式控制的宽带谐振天线设计	褚庆昕 教授	主持人：刘海文教授	
		11:30-12:00	Development of Dielectric Resonator Antenna	梁国华 教授		
	12:00-13:30	午餐				
	大会报告	13:30-14:00 Design of Massive MIMO Antennas for Tablet Applications		陳文山 教授	主持人：唐万春教授	
		14:00-14:30 基于光场量子态的量子网络		苏晓龙 教授		
	分组会场	第 2 会议室		第 3 会议室	第 4 会议室	
	14:40-16:35	太赫兹技术与应用		无源微波器件与电路	高速互连技术与电磁建模	
16:35-16:50	海报论文张贴/茶歇					
16:50-18.45	电波传播与散射路		超材料与超表面(I)	有源微波器件与电		
18:45-21:00	晚餐					
7月20日	8:30-10:10	多波束天线与极化天线	天线理论技术	阵列天线理论与设计		
	10:10-10:20	海报论文张贴/茶歇				
	10:20-12:00	超材料与超表面(II)	天线理论技术	阵列天线理论与设计		
	12:00-13:40	午餐				
	13:30-15:40	天线理论与技术	计算电磁与电磁兼容	太赫兹技术与应用		
	15:40-16:00	海报论文张贴/茶歇				
	16:00-18:10	天线理论与技术	计算电磁与电磁兼容	无源微波器件与电路		
	18:10-20:00	颁奖晚宴				
7月21日	上午	文化交流 免费参观山西省博物院				

2019 海峡两岸四地无线技术研讨会

Cross Strait Quad-Regional Radio Wireless Conference 2019



程序册

山西 太原

2019 年 7 月 18 日-2019 年 7 月 21 日

大会主办单位

山西大学
西安交通大学
南京师范大学
山东惠工电气有限公司
山西省通信学会



大会组织机构

大会主席

张文梅
刘海文
唐万春

山西大学
西安交通大学
南京师范大学

联合主席

杨荣草
张安学
聂守平

山西大学
西安交通大学
南京师范大学

咨询委员会主席

张道治
褚庆昕
陈志豪
陆贵文
薛 泉
郭立新
陈文山
余文华
郑益昌
张跃平
沈忠祥
陆亿洸
曾庆生

亚东技术学院
华南理工大学
香港城市大学
香港城市大学
香港城市大学
西安电子科技大学
南台科技大学
江苏师范大学
万能科技大学
新加坡南洋理工大学
新加坡南洋理工大学
新加坡南洋理工大学
加拿大通信研究中心

技术委员会主席

陈新伟
文 品
马青玉
赵 雷

山西大学
西安交通大学
南京师范大学
江苏师范大学

联合技术委员会主席

(排名不分先后)

郑宏兴	河北工业大学
曹祥玉	空军工程大学
肖绍球	电子科技大学
周远国	西安科技大学
张 冰	四川大学
官雪辉	华东交通大学
邓敬亚	西安电子科技大学
陈文超	浙江大学
李迎松	哈尔滨工程大学
施宏宇	西安交通大学
许河秀	空军工程大学
王 昊	南京理工大学
任 强	北京航空航天大学
唐明春	重庆大学
金湘亮	湖南师范大学
刘文鑫	中国科学院空天信息研究院
赵鲁豫	西安电子科技大学
李晓春	上海交通大学
韩国瑞	山西大学
唐 旻	上海交通大学
张青峰	南方科技大学
陈晓明	西安交通大学
薛文瑞	山西大学
韩丽萍	山西大学
刘宇峰	山西大学

会议技术程序委员会/论文评审专家

(排名不分先后)

边历峰	苏州纳米技术与纳米仿生学研究所
曹群生	南京航空航天大学
曹祥玉	空军工程大学
陈 娟	西安交通大学
陈梦琳	香港大学
陈 平	南京大学
陈如山	南京理工大学
陈文超	浙江大学
陳文山	南台科技大学
陈晓明	西安交通大学
陈新伟	山西大学
陈益凯	电子科技大学
陳志豪	香港城市大学
程知群	杭州电子科技大学
褚庆昕	华南理工大学
代文亮	芯禾科技有限责任公司
丁大志	南京理工大学
邓敬亚	西安电子科技大学
窦文斌	东南大学
杜 彪	中国电子科技集团公司第 54 研究所
杜 平	合肥工业大学
冯一军	南京大学
傅佳辉	哈尔滨工业大学
官雪辉	华东交通大学
高建军	华东师范大学
郭立新	西安电子科技大学
郭永新	新加坡国立大学
郭宇锋	南京邮电大学
韩国瑞	山西大学
韩丽萍	山西大学
郝张成	东南大学
胡 俊	中国电子科技大学
胡 南	北京星英联微波科技有限责任公司
黄 衡	香港城市大学
黄惠芬	华南理工大学
黄志祥	安徽大学
蒋立军	香港大学
金荣洪	上海交通大学
金湘亮	湖南师范大学
李 斌	北京理工大学
李 慧	大连理工大学
李凌云	上海微系统与信息研究所
李 龙	西安电子科技大学
李晓春	上海交通大学
李秀萍	北京邮电大学
李 越	清华大学
李迎松	哈尔滨工程大学
廖文照	台湾科技大学
刘长军	四川大学
刘海文	西安交通大学
刘太君	宁波大学

刘文鑫	中国科学院航空航天信息研究所
刘宇峰	山西大学
刘志伟	华东交通大学
凌 峰	芯禾科技有限责任公司
陆贵文	香港城市大学
陆亿洸	南洋理工大学
罗国清	杭州电子大学
马青玉	南京师范大学
马润波	山西大学
孟繁义	哈尔滨工业大学
聂守平	南京师范大学
朴大志	中国传媒大学
任宝平	华东交通大学
任 强	北京航空航天大学
沙 威	浙江大学
沈忠祥	新加坡南洋理工大学
施宏宇	西安交通大学
孙 胜	中国电子科技大学
孙晓伟	上海微系统信息研究所
唐 旻	上海交通大学
唐明春	重庆大学
唐万春	南京师范大学
王传云	华东交通大学
王 昊	南京理工大学
魏彦玉	中国电子科技大学
文 品	西安交通大学
吴 边	西安电子科技大学
伍悍东	西安恒达微波技术发展有限公司
吴克利	香港中文大学
吴林晟	上海交通大学
吴 群	哈尔滨工业学院
吴宇茂	复旦大学
夏明耀	北京大学
肖高标	上海交通大学
肖绍球	中国电子科技大学
谢文青	北京星英联微波科技有限责任公司
薛晨阳	中北大学
薛 泉	香港城市大学
许河秀	西安空军工程大学
闫 森	西安交通大学
杨 帆	清华大学
杨 楠	香港城市大学
杨荣草	山西大学
杨仕文	中国电子科技大学
杨雪松	中国电子科技大学
杨雪霞	上海大学
尹文言	浙江大学
张安学	西安交通大学
张 冰	四川大学
张 厚	西安空军工程大学
张 娇	山西大学
张青峰	南方科技大学
张晓燕	华东交通大学
张文梅	山西大学
章秀银	华南工业大学

张跃平	南洋理工大学
张志军	清华大学
赵 雷	中国矿业大学
赵鲁豫	西安电子科技大学
郑益昌	万隆大学
郑宏兴	河北工业大学
曾庆生	加拿大通信研究中心
周 亮	上海交通大学
周远国	西安科技大学
祝 雷	澳门大学

大会主席致辞

尊敬的各位来宾、女士们、先生们、朋友们：

衷心地欢迎您来山西太原参加2019年海峡两岸四地无线技术研讨会！

海峡两岸四地无线技术研讨会是目前世界及两岸四地在无线通信科技领域非常重要且受到各界华人高度重视的年度学术会议。自1998年台湾长庚大学主办了第一届会议以来，轮流在大陆、台湾、香港和澳门举行，每年一届，今年是第二十二届。本次会议一如既往，围绕无线移动通信、微波遥感和电磁兼容等相关理论、技术与应用展开深入的探讨和交流。

本次会议的论文征集工作得到了广大无线电领域的专家学者和学生的积极响应和大力支持。会议共录用论文287篇，其中大陆274篇，台湾7篇，香港4篇，澳门1篇，瑞典1篇，另有大会报告6篇，内容涉及电磁场理论与计算方法、天线理论与技术、微波器件与电路、电波传播与散射、信号处理和通信系统等主题，反映了海峡两岸四地无线电领域的研究与发展现状。每篇论文经过两位以上专家评审后，按照评分高低选取了15篇论文作为本次会议优秀论文的候选论文。衷心感谢各位论文作者、评审专家对本次大会的大力支持。

本次会议由山西大学、西安交通大学、南京师范大学、山东惠工电气有限公司和山西通信学会共同主办。衷心感谢所有大力支持本次会议的企业、学校和个人。

太原，简称“并”，古称晋阳，又称龙城。是一座具有2500多年建城历史的古都。太原市是中国古代北方重要的政治、军事、经济和文化中心。如今，太原不仅是中国的能源和重工业基地之一，也是国家历史文化名城和国家园林城市。太原有丰富的旅游资源。拥有晋祠、天龙山石窟、春阳宫、崇山寺等13处中国民族文物保护单位，33处省级文物保护单位。其中，晋祠圣母殿内的宋塑侍女栩栩如生，姿态各异。天龙山的北朝石窟是北齐佛教文化的代表。崇善寺的佛经和纯阳宫的关羽铜像在中国文学艺术史上有着辉煌的一页。

我们相信，精英汇聚的2019年海峡两岸四地无线技术研讨会，必将为推动两岸四地无线技术事业的发展发挥重要作用。同时，衷心祝愿所有与会代表在太原度过愉快的日子。

大会主席：张文梅 刘海文 唐万春

2019年7月10日

会议须知

各位来宾：

您好！欢迎您到山西太原，参加2019年海峡两岸四地无线技术研讨会。现将会议有关事宜敬告如下：

一、会议日期：2019年7月18日报到，7月19日～7月20日开会，7月21日文化交流。

二、住宿地点：新纪元大酒店、山西大学学术交流中心及其周边酒店。

三、会议地点：山西大学会议中心博雅报告厅及会议中心第2、3、4会议室。

四、7月19日～7月20日自助餐请凭会议餐券就餐。

五、遵守大会日程安排进入会场，请主动将手机设置在静音状态。需要接听，请到会场外以免影响大会进行。

六、集体活动请听从大会工作人员的安排，开会与活动期间请佩带代表证。

会议工作人员

接待：韩国瑞 (18734562502) 苏晋荣 13753135854

会场：刘宇峰 (13700505494)

会务：陈新伟 15135142589

财务：韩丽萍 (13593175987) 张娇（领取发票事宜）

论文：马润波

Conference Processing

会议议程

2019-07-19 AM

Opening Ceremony 开幕式

9:00 – 9:30 山西大学会议中心博雅报告厅 主持人： 陈新伟 副教授
9:30 – 10:00 全体代表合影 (会议中心门前)

Keynote Speeches 大会主题报告

10:00-12:00 13:30-14:30 山西大学会议中心博雅报告厅
主持人： 张文梅教授 刘海文教授 唐万春教授

10:00-10:30 毫米波半导体异质集成电路

毛军发 院士 上海交通大学

10:30-11:00 毫米波与太赫兹技术在6G移动通信中的应用

洪 伟 教授 东南大学

11:00-11:30 基于模式控制的宽带谐振天线设计

褚庆昕 教授 华南理工大学

11:30-12: 00 Development of Dielectric Resonator Antenna

梁国华 教授 香港城市大学

13:30-14:00 Design of Massive MIMO Antennas for Tablet Applications

陳文山 教授 國立臺灣科技大學

14:00-14:30 基于光场量子态的量子网络

苏晓龙 教授 山西大学

Summaries of Keynote Speeches

大会主题报告摘要

10:00-10:30

毫米波半导体异质集成电路

摘要: 毫米波半导体异质集成电路可将 GaAs、GaN、InP 等材料的高性能毫米波器件或芯片与硅基低成本、高集成度、高复杂度的数字和模拟混合电路，通过异质生长或异质键合等方式集成为一个完整的 2 维至 3 维集成电路，充分发挥各种材料、器件与结构的长处，是毫米波集成电路系统的重要发展方向。由于半导体-电磁-热-力多物理效应、复杂多尺度结构、高密度异质集成工艺兼容性与电路多性能可测性等特点，毫米波异质集成电路在设计理论与实现技术方面有诸多重要问题需要解决。该报告拟介绍毫米波异质集成电路的研究背景与意义，分析其面临的科学技术问题，并给出国内外及报告人项目组的一些研究进展。



毛军发，1985 年于国防科技大学获学士学位，1988 年于中国科学院上海原子核研究所获硕士学位，1992 年于上海交通大学获博士学位，并留校工作至今。曾在香港中文大学和美国加州大学伯克利分校各作了一年博士后研究。现为上海交通大学电子信息与电气工程学院讲席教授。2017 年当选为中国科学院院士。他是 973 首席科学家，国家自然科学基金委创新研究群体带头人，IEEE FELLOW，中国电子学会会士、

微波分会主任委员。主要研究高速与射频电路的互连和封装集成、电磁兼容与防护。已发表 400 多篇学术论文，包括 IEEE 刊物论文 130 多篇，获授权发明专利 35 项；成果用于我国一些重要装备研制。先后获国家自然科学二等奖、国家技术发明二等奖、国家科技进步二等奖各 1 项。

10:30-11:00

毫米波与太赫兹技术在 6G 移动通信中的应用

摘要：最近，第六代移动通信（6G）已成为通信领域的热点话题。欧洲、北美以及中国的一些权威机构都宣称太赫兹将是6G的核心技术，也有很多学者认为卫星通信将是6G的主要演进方向。本报告将阐述我们关于6G的一些看法，以及毫米波与太赫兹技术在5G向6G演进过程中的作用。



洪伟，博士、教授、博士生导师。教育部长江学者计划特聘教授、IEEE Fellow、国家杰出青年基金获得者。东南大学毫米波国家重点实验室主任。

作为首席科学家或项目负责人承担完成多项国家973、863、创新群体、科技重大专项项目等。主撰学术专著2部，主撰合撰核心期刊论文300余篇，其中160余篇发表在“中国科学”和IEEE系列刊物上，论著被他引1万3千余次。获国家自然科学奖2项、部省科技进步一等奖3项等多项科技奖，以及IEEE 802.11aj国际标准杰出贡献奖、首届全国创新争先奖状等。指导的学生中有2人获全国优秀博士学位论文奖。

目前担任中国电子学会微波分会、天线分会副主任委员等职，曾任IEEE MTT-S AdCom Member（2014-2016）等，2007-2010年间曾担任IEEE Trans. on MTT 副主编。

基于模式控制的宽带谐振天线设计

摘要：现代无线系统对天线至少有两个基本的要求：宽带化与小型化。而宽带小型化天线几乎无一例外地属于多模天线。因此，如何控制或产生天线的多个频率相近、电流分布相似的模式就成为宽带小型化天线设计的关键。基于阻抗谐振寻找模式的方法简单方便，特别适合宽带线天线的设计，但难以直接预测模式的电流分布。基于电流展开的特征模法为宽带天线的设计了提供非常有效的方法，也成为近十年来的研究热点。本报告介绍了华南理工大学褚庆昕教授团队近年来在基于阻抗谐振模和基于电流特征模设计宽带天线方面的一些研究成果，包括宽带偶极子类双极化天线、宽带微带类圆极化天线和宽带环形缝隙类天线等。



报告人简介：褚庆昕，华南理工大学二级教授，博士指导教师，广东省天线与射频技术工程技术研究中心主任，电气信息与控制国家级实验教学示范中心主任，天线与射频技术研究所所长，IEEE Guangzhou AP/MTT

Chapter 主席，中国电子学会会士，IEEE Fellow，中国电子学会天线学会副主任委员、微波学会和电波学会委员。所主讲的本科生课程《射频电路与天线》2009 年被评为国家精品课程，2012 年获批国家级精品资源共享课。

2010 年获广东省教学名师称号。已发表学术论文 700 余篇，SCI 他引 4000 余次，尤其是 70 多篇发表在 IEEE Transactions on Microwave Theory and Techniques, IEEE Transactions on Antennas and Propagation 等微波和天线领域国际权威期刊上。多篇文章入选 ESI 高被引论文，仅 2018 年，就有 8 篇文章（2 篇 1%，6 篇 3%）。2014 年以来年年入选爱思唯尔发布的中国高被引学者（电气与电子工程）。已获授权中国发明专利 60 余项，实用新型专利 100 余项，20 余项专利实现成果转化。2018 和 2016 年获中国电子学会自然科学二等奖，2013 年获广东省自然科学二等奖，2008 和 2002 年两次获教育部自然科学一等奖，2001 获国务院政府津贴和陕西省优秀回国人员称号。目前从事的研究领域包括新一代无线通信中的天线与射频技术、微波毫米波空间功率合成技术等。

Development of Dielectric Resonator Antenna

Abstract—The fundamentals and development of dielectric resonator antenna will be discussed in this talk. For many years, dielectric resonators (DRs) have only been used as high-Q elements in microwave circuits until S. A. Long and his collaborators showed that they can also be used as efficient radiators. The studies were motivated by an observation that carrier frequencies of modern wireless systems had gradually progressed upward to the millimeter-wave region, where efficiencies of metallic antennas can be reduced significantly due to the skin effect. In contrast, DR antennas (DRAs) are purely made of dielectric materials with no conductor loss. This feature makes DRAs very suitable for millimeter-wave systems.

Although the DRA received attention originally for millimeter-wave applications, it is also widely investigated at microwave or even RF frequencies. It is because the DRA is a volume device that offers designers more degrees of freedom than 2D-type antennas (e.g., microstrip antennas) or 1D-type antennas (e.g., monopole antennas). Other advantages of the DRA include its light weight, low cost, low loss, and ease of excitation.

As compared to the microstrip antenna, the DRA has a much wider impedance bandwidth ($\sim 10\%$ for dielectric constant ~ 10). This is because the microstrip antenna radiates only through two narrow radiation slots, whereas the DRA radiates through the whole DRA surface except the grounded part. Avoidance of surface waves is another attractive advantage of the DRA over the microstrip antenna. In this talk, the development of DRA will be presented and different DRA designs will be discussed.



Prof. Kwok Wa (Ben) Leung was born in Hong Kong. He received the B.Sc. degree in electronics and the Ph.D. degree in electronics engineering from the Chinese University of Hong Kong, Hong Kong, in 1990 and 1993, respectively. In 1994, he joined the Department of Electronic Engineering, City University of Hong Kong (CityU) and is currently a Chair Professor. From January to June, 2006, he was a Visiting Professor at the Department of Electrical Engineering, The Pennsylvania State University, State College, PA, USA. His research interests include antenna designs and EM theory. Prof. Leung received the International Union of Radio Science (USRI) Young Scientists Awards in Japan and Russia, in 1993 and 1995, respectively. He received the CityU Research Excellence Award 2013 and Departmental Outstanding Teacher Awards in 2005, 2010, and 2011. He also received the prestigious First Class Award (Natural Science) in the 2016 Higher Education Outstanding Scientific Research Output Awards (Science and Technology) of the Ministry of Education, China. His students received the 2015 iWEM Student Best Paper Award, 2015 IEEE AP-S Eugene F. Knott Memorial Pre-Doctoral Research Award, and 2014 IEEE MTT-S Undergraduate/Pre-graduate Scholarship. He was the Chair of the IEEE AP/MTT Hong Kong Joint Chapter in 2006 and 2007. He was the Technical Program Chair, 2008 Asia-Pacific Microwave Conference, Hong Kong, and the Technical Program Co-Chair, 2006 IEEE TENCON, Hong Kong. He was a Guest Editor of *IET Microwaves, Antennas and Propagation* and an Associate Editor of the *IEEE Antennas and Wireless Propagation Letters* and of the *IEEE Transactions on Antennas and Propagation*. He received Transactions Commendation Certificates twice in 2009 and 2010 for his exceptional performance. He was the Editor-in-Chief of the *Transactions* from 2013 to 2016, being the first appointed from Asia since the journal was founded in 1952. He was a Distinguished Lecturer of the IEEE Antennas and Propagation Society. He is a Fellow of IEEE.

13:30-14:00

Design of Massive MIMO antennas for tablet

Abstract-A design of massive MIMO antennas by using 12 coupled-fed slot antennas to cover the WRC-15 C-band (3.4 – 3.6GHz) and two multiband antennas to match eight-band operation is proposed and investigated in the talk. The design is printed on a FR4 substrate of thickness of 0.8 mm, permittivity of 4.4, and loss tangent of 0.0245. The slot antennas are with a small dimension of $33.7 \times 3.4 \times 7.8$ mm³ and located on the corners of the ground, with the dimension of $248 \times 166 \times 0.8$ mm³. The slot antennas on the corner are also using polarization diversity to improve the isolation between them. The S₁₁ of the three slot antennas reaches 10dB, and the isolation between these slot antennas is larger than 10dB. More parameters and results are presented in the talk. An extended design extending to 16 slot antennas is also proposed in the talk. Detail results and discussion for the extended design will be presented in the talk too.



Prof. Wen-Shan Chen (陳文山) received his BS degree from National Taiwan University of Science and Technology (Taiwan Tech), Taipei, Taiwan, and his PhD degree from National Sun Yat-Sen University, Kaohsiung, Taiwan in 2001. He is currently a Professor with the Department of Electronic Engineering at Southern Taiwan University of Science and Technology, Tainan, Taiwan. He is an IEEE Senior Member with AP, MTT and EMC Societies. He served as the General Secretary in 2007-2008, Vice Chair in 2009-2010, and Chair in 2011-2012, all with the IEEE AP-S Tainan Chapter. He is also a Consultant of IEEE

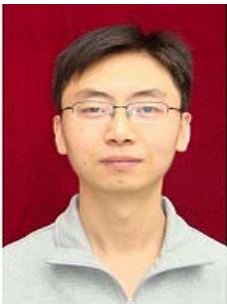
AP-S Tainan Chapter. He is a member of the Institute of Antenna Engineers of Taiwan (IAET) and was elected to be an AdCom member of IAET in 2008-2020. He is a member of the Taiwan Microwave Association (TMA, formerly called CMA) and was elected to be an AdCom member of the Taiwan Microwave Association (CMA) this year (2019-2020). He is a member of the TIEEE, Chinese Institute of Electrical Engineering (CIEE), and IEICE. His research interests include antenna design, RF and microwave circuits.

Quantum network based on optical field

Abstract-A quantum network can be established by distributing a multipartite entangled state to space-separated nodes. A global quantum internet is able to be built by connecting several space-separated local quantum networks. Here, we present the first experimental exploration on building a quantum internet by connecting two space-separated quantum networks, each of which involves three nodes consisting of a tripartite entangled state of light. The connection is accomplished by means of the deterministic entanglement swapping between two optical multipartite entangled states. After swapping, the two independent local quantum networks are merged into a larger network and the originally independent nodes in two local networks respectively become entangled, such that the quantum communication can be implemented between the two networks.

Einstein-Podolsky-Rosen (EPR) steering is an intermediate type of quantum correlation between entanglement and Bell nonlocality, where local measurements on one subsystem can apparently adjust (steer) the state of another distant subsystem. Distribution of quantum correlations among remote users is a key procedure for quantum information processing. We experimentally demonstrate distribution of Gaussian four-mode cluster state in a lossy channel and verify monogamy relations for Gaussian EPR steering.

Besides distribution of EPR steering directly, another feasible method for distribution of EPR steering is proposed, in which EPR steering is distributed by separable states. All the proposed steering distribution protocols can be implemented with squeezed states, beam splitters and displacements. The presented protocols demonstrate that one can switch multipartite states between different steerability classes by operations on parts of the states. We experimentally demonstrate distribution of two-mode and three-mode EPR steering from a cloud server to users by separable states. Notably, all the modes used for the distribution are separable from the users, so the eavesdropper cannot decipher any useful information from the channel, making the protocol robust against loss and leakage in long distance transmissions.



苏晓龙，男，1979年生，陕西省宝鸡市岐山县人。理学博士，山西大学光电研究所、量子光学与光量子器件国家重点实验室教授、博士生导师。国家自然科学基金优秀青年基金获得者，山西省青年拔尖人才，山西省高等学校优秀青年学术带头人。获2009年全国优秀博士论文提名奖、2010年山西省自然科学一等奖（排名第三）。

主要从事量子光学和量子信息的实验与理论研究，近期的研究兴趣集中在连续变量多组份纠缠态的实验产生、量子网络和量子计算等方面。近期主持国家自然科学基金项目3项，省级科研项目2项；先后在国内外学术刊物上发表论文近40篇。

ORAL Session: MP1C**Terahertz Technology and Its Application 太赫兹技术与应用**

Session Chairs: Yanyu Wei and Lifeng Bian 魏彦玉 边历峰

-
- 14:40 - 15:00 正弦波导真空电子器件的研究进展 (Invited)
魏彦玉, 徐进, 殷海荣, 岳玲娜, 赵国庆, 王文祥 (China Mainland)
- 15:00 - 15:20 Design of GaN-based Resonant Tunneling Diode THz Source Device (Invited)
Qiu Haibing, Yang Wenxian, Bian Lifeng, Lu Shulong (China Mainland)
- 15:20 - 15:35 Measurement and Traceability of Terahertz Wavelength and Frequency
Shuheng Guo, Yuqiang Deng, Ying Meng, Qing Sun, Bo Fang, Jinhui Cai (China Mainland)
- 15:35 - 15:50 Design of Output Window for 0.5THz Backward Wave Oscillator
Jiaqi Guo and Wenxin Liu (China Mainland)
- 15:50 - 16:05 Design of Electron Optics System for 220GHz Traveling Wave Tube
Zhao Chao, Liu Wenxin, Guo Xin, Wang Meng, Wang Yong (China Mainland)
- 16:05 - 16:20 Reflection of fiber-reinforced laminates to polarized THz electromagnetic waves
Changyou Li, Yali Zong, Shengtao Li (China Mainland)
- 16:20 - 16:35 Steerable terahertz radiation from 2D arrays of subwavelength holes excited by sheet electron-beam
Yucheng Liu, Weihao Liu, Zijia Yu, Qika Jia, and Yalin Lu (China Mainland)
-

ORAL Session: MP2C**Propagation and Scattering 电波传播与散射**

Session Chairs: Mingyao Xia and Bian Wu 夏明耀 吴边

-
- 16:50 - 17:10 大规模动态目标群的电磁散射分析快速算法 (Invited)
Mingyao Xia (China, Mainland)
- 17:10 - 17:30 Graphene-based Flexible Absorptive Frequency Selective Surface (Invited)
Yaojia Yang, Bian Wu, Huiling Li, Shining Sun, Xiaochun Liu, liang Chen (China Mainland)
- 17:30 - 17:45 Near-Field Target Scattering Characteristics Based on Vortex Waves
Zhengtian Chen, Xianzheng Zong, Zheyuan Zhang, Zaiping Nie (China Mainland)
- 17:45 - 18:00 Electromagnetic Scattering From Asteroid Surface Modeling Based on Midpoint Displacement Method
Wanqiang Qin, Lixin Guo, Wei Liu, Donghai Xiao, Xi Luo (China Mainland)
- 18:00 - 18:15 Simulation Modeling and Real Measurement for Lunar Surface Backscattering Coefficient
Shi Zheng, Ruidong Liu, Jia Sun, Hongxing Dang, Xiaomin Tan (China Mainland)
- 18:15 - 18:30 Research on Scattering Characteristics of Slotted Array Antenna
Mang Chen, Geng Zhang, Xinqian Zhang (China Mainland)
- 18:30 - 18:45 Solar spectral radiance simulation and sensitivity analysis in visible band
Jinlu Li, Lu Bai, Penghui Gao (China Mainland)
-

ORAL Session: MP2B

Passive Microwave Devices and Circuits 无源微波器件与电路

Session Chairs: Jingya Deng and Bing Zhang 邓敬亚 张冰

-
- 14:40 - 15:00 MEMS加速度传感器用五阶数字闭环力平衡伺服电路SOC芯片设计 (Invited)
金湘亮 (China Mainland)
- 15:00 - 15:20 An optically transparent and ultra-wideband absorber based on multi-layer structure (Invited)
Xinru Lu, Juan Chen, Zhenghui Peng, Zixian Wu, Anxue Zhang (China Mainland)
- 15:20 - 15:35 Compact and Wideband LTCC Filter Using Lumped-Elements
Ninglin Wang, Ziyang Zhang, Xiuxian Li, Lingxuan Huang, Li Qian, Changkun Li and Bo Zhou (China Mainland)
- 15:35 - 15:50 Miniaturized and Wideband Lumped Filter Using LTCC Integrated Package
Ninglin Wang, Ziyang Zhang, Lingxuan Huang, Xiuxian Li, Changkun Li, Li Qian and Bo Zhou (China Mainland)
- 15:50 - 16:05 Gap Waveguide with Interdigital-Pin Bed of Nails
Dongquan Sun, Xiaofei Zhao, JingYa Deng (China Mainland)
- 16:05 - 16:20 A Dual-Band Superconducting Filter with Large Upper-Lower Bandwidth Ratio
Xinxiang Lu, Xubo Guo, Chenjie Luo, Liuwan Zhang, Bin Wei, Bisong Cao (China Mainland)
- 16:20 - 16:35 A Quantified Method for Characterizing Waveform Distortion
Qunfang, Junjun Wang, Changyang Ye (China Mainland)
-

ORAL Session: MP2B

Metamaterials and super surfaces 超材料与超表面

Session Chairs: Qunsheng Cao and Hongyu Shi 曹群生 施宏宇

-
- 16:50 - 17:10 Research and Improvement of a New Snowflake FSS Absorber (Invited)
Ziying Yu, Qunsheng Cao (China Mainland)
- 17:10 - 17:30 Generation of Orbital Angular Momentum by Quasi-continuous Metasurfaces and Photonic Crystals: from High Purity to Easy Integration (Invited)
Menglin L. N. Chen, Li Jun Jiang, and Wei E. I. Sha (China Hong Kong)
- 17:30 - 17:45 Novel Polarization Conversion Metasurface Based Circular Polarized Slot Antenna with Low Profile
Zhong Tao, Hou Zhang, Hai Xu, Qiang Chen (China Mainland)
- 17:45 - 18:00 Gradient Metasurface with Anomalous Transmission and Linear-Circular Polarization Conversion
Jialin Feng, Hongyu Shi and Anxue Zhang (China Mainland)
- 18:00 - 18:15 Flexible Controls of Radar Cross Section based on Coding Metasurface with Varactors
Tianshuo Qiu, Yueyu Meng, Jiafu Wang, Yongfeng Li, Shaobo Qu (China Mainland)
- 18:15 - 18:30 A broadband Radar Cross Section Reduction Metasurface Based on Polarization Conversion and Scattering Cancellation
W. Fang, X. Y. Xie, S. N. Sun, D. G. Fan, X. C. Liu and P. Chen (China Mainland)
- 18:30 - 18:45 Design of a slot antenna for 5G mid-band applications and UAV detectors used in airports
Shu-Huan Wen, Shih-Wei Lin, Hsing-Yi Chen (China, Taiwan)

ORAL Session: MP1A**High Speed Interconnection and Electromagnetic Modeling 高速互连技术与电磁建模**

Session Chairs: Xiaochun Li and Yuanguo Zhou 李晓春 周远国

-
- 14:40 - 15:00 Transformer based broadband matching (Invited)
Guixiang Jin, Yang Kong, Hao Min, Hongtao Xu, Yan Na (China, Mainland)
- 15:00 - 15:20 高速互连技术 (Invited)
Xiaochun Li (China, Mainland)
- 15:20 - 15:35 Analysis of the Number of Wire Grids in Bounded Wave Simulator
Mingyue Yang, Kuisong Zheng, Xiaoyun Tu, Kang An and Shuting Qin (China, Mainland)
- 15:35 - 15:50 Modeling of Slow-wave Si-BCB Transmission Line Loaded With Stepped Impedance Resonators
Liyun Shi, Liang Zhou, Linsheng Wu (China, Mainland)
- 15:50 - 16:05 Analytical Thermal Modeling of Nanowire Structures Including Self-Heating Effects
Pengfei Pu, Min Tang, and Junfa Mao (China, Mainland)
- 16:05 - 16:20 Electro-thermal Investigation on Emerging Electronic Devices for 3D Integration
Wenchao Chen (China, Mainland)
- 16:20 - 16:35 Diagnosis of the Inhomogeneous Evaporation Duct and Its Effects on the Electromagnetic Wave Propagation of the Radar
Jiao lin, Li Qinghong, Zhang Yonggang (China, Mainland)
-

ORAL Session: MP2A**Active Microwave Devices and Circuit 有源微波器件与电路**

Session Chairs: Zhiqun Chen and Yufeng Guo 程知群 郭宇锋

-
- 16:50 - 17:10 A power amplifier based on filter matching circuit (Invited)
Guohua Liu, Sudong Li, Zhiqun Cheng (China Mainland)
- 17:10 - 17:30 Breakdown Voltage Prediction of SOI Lateral Power Device using Deep Neural Network (Invited)
Jing Chen, Yufeng Guo, Yibo Lin, Mohamed Baker Alawieh, Maolin Zhang, Jun Zhang, David Z. Pan (China Mainland)
- 17:30 - 17:45 Simulation Study of the Slope-Channel Double-Gate MOSFET for Low-Power Applications
Maolin Zhang, Yufeng Guo, Jing Chen, Jun Zhang, and Jiafei Yao (China Mainland)
- 17:45 - 18:00 W-Band Miniaturized Multistage MMIC Low-Noise Amplifier
Linpu Li, Rong Qian, Hao Sun and Xiaowei Sun (China Mainland)
- 18:00 - 18:15 Design of Polysilicon-Gate DDSCR Device For RF Chip's ESD Protection Based on 0.18 μ m BCD Process
Xiangliang Jin, Yang Wang (China Mainland)
- 18:15 - 18:30 Reconfigurable Active Frequency Selective Surface for Ultra-Wideband Applications
Yulin Zhao, Jiahui Fu, Zhiming Liang, Zhefei Wang, Zhiyi Zhang, Bo Lv, Wan Chen (China Mainland)
- 18:30 - 18:45 Study on the Heat Dissipation System Using Thermoelectric Cooling Based on Energy Harvesting for High-power LED
Ning Wang, Cong Gao, Qiuling Lu, Hongzhi Jia, Guorong Sui, Xiumin Gao (China Mainland)
-

ORAL Session: MP1C

Multi-beam antenna and polarization diversity antenna多波束天线与极化天线

Session Chairs: Xiuyin Zhang and Xiaoming Chen 章秀银 陈晓明

-
- | | |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:30 - 08:50 | Dual/broadband dual-polarized multi-beam base station antenna array (Invited)
<i>Xiuyin Zhang</i> (China, Mainland) |
| 08:50 - 09:10 | Measurements of Antenna Systems in Reverberation Chamber: A Review (Invited)
<i>Xiaoming Chen, Shitao Zhu, Anxue Zhang</i> (China, Mainland) |
| 09:10 - 09:25 | Design of Broadband Dual-Linearly Polarized Microstrip Antenna
<i>Xuhong Li, Zhuhui Ye</i> (China, Mainland) |
| 09:25 - 09:40 | Dual Frequency MIMO Antenna with Neutralization Line
<i>Xiaoli Wu, Guorui han and Caixia Feng</i> |
| 09:40 - 09:55 | Mutual Coupling Reduction for Linearly Arranged MIMO Antenna
<i>Faizan Faraz, Qinlong Li, Xiaoming Chen, Muhammad Abdullah, Shuai Zhang, Anxue Zhang</i> (China, Mainland) |
| 09:55 - 10:10 | Design of Circularly Polarized Beam Scanning Reflectarray Antenna at 100 GHz Based on Liquid Crystals
<i>Chuan-Hong Zhao, JianQiao Han, JianFeng Lv, Fan-Yi Meng, Qun Wu, WeiNan Li</i> (China, Mainland) |

ORAL Session: MP2C

Metamaterials and Supersurfaces超材料与超表面(II)

Session Chairs: Yueping Zhang and He-xiu Xu 张跃平 许河秀

-
- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:20 - 10:40 | Subsurface Mobile Radio (Invited)
<i>Yueping Zhang</i> (Singapore) |
| 10:40 - 11:00 | Chirality metasurfaces for independent control of phase, amplitude and polarization (Invited)
<i>He-xiu Xu</i> (China, Mainland) |
| 11:00 - 11:15 | The Design of Broadband Transmitting Absorbing Material Based on L-Shape Metamaterial
<i>Yajuan Zhao, Baoyi Li, Rong Zhang, Zekui Zhang, Donghong Wang, Fusheng Wang</i> (China, Mainland) |
| 11:15 - 11:30 | A high efficient microwave absorbing material with good thinness and simple structure
<i>Changyou Li, Yali Zong</i> (China, Mainland) |
| 11:30 - 11:45 | Broadband Ultraviolet Absorption in Graphene Using Metal-Dielectric-Metal Configuration
<i>Yijun Cai, Yongbo Guo, Yuanguo Zhou, and Ren Wang</i> (China, Mainland) |
| 11:45 - 12:00 | Analysis on plasmonic modes within rectangular sub-wavelength holes on metallic nanofilms
<i>Weiwei Li, Zijia Yu, Weihao Liu, Qika Jia, and Yalin Lu</i> (China, Mainland) |

ORAL Session: MP1B

Antenna Theory and Technology (I) 天线理论技术(I)

Session Chairs: Shaoqiu Xiao and Hongxing Zheng 肖绍球 郑宏兴

-
- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:30 - 08:50 | A Planar Ultrawideband Wide-angle Scanning Tightly Coupled Array Loaded With Metal Strips (Invited)
<i>Zhiguo Jiang, Shaoqiu Xiao, Zhixin Yao (China Mainland)</i> |
| 08:50 - 09:10 | An Improved Method of High Precision Group Delay Measurement (Invited)
<i>Rui Luo, Tianyu Pen, Shu-Na Wang, Lingyun Li (China, Mainland)</i> |
| 09:10 - 09:25 | Wideband, Electrically Small Filtenna Based on Electromagnetic Band-Gap Structure
<i>Weiwei Guo, Ming-Chun Tang, Yang Wang, Mei Li (China, Mainland)</i> |
| 09:25 - 09:40 | Broadband low-sidelobe slot antenna based on gap waveguide
<i>Jia-Chen Zhang, Fang-Fang Fan, Xiao-Yu Wang (China, Mainland)</i> |
| 09:40 - 09:55 | A Broadband High-Gain Fractal Telemetry Antenna with Intergrated structure
<i>Longwei He, Xiaoning Huo, Xuan Wang (China, Mainland)</i> |
| 09:55 - 10:10 | Design of a Miniaturized Antenna Based on Split Ring Resonators for 5G Wireless Communications
<i>Runlong Li, Qiaoxi Zhang, Yijia Kuang, Xiaodong Chen, Zhan Xiao, Jinling Zhang (China, Mainland)</i> |
-

ORAL Session: MP2B

Antenna Theory and Technology (I) 天线理论技术(I)

Session Chairs: Mingchun Tang and Wenchao Chen 唐明春 陈文超

-
- | | |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:20 - 10:40 | Design of Liquid Crystal Based Leaky Wave Antenna (Invited)
<i>Fan-Yi Meng, Shuang Ma, Qun Wu, WeiNan Li (China, Mainland)</i> |
| 10:40 - 11:00 | High Scanning-Rate Leaky-Wave Antennas (Invited)
<i>Qingfeng Zhang (China, Mainland)</i> |
| 11:00 - 11:15 | A Dual-band Filtering Antenna with Different Polarizations Over Two Bands
<i>Bingjie Xiang, Chuangkai Wang, Shaoyong Zheng (China, Mainland)</i> |
| 11:15 - 11:30 | A compact wideband helix antenna for a wireless meat probe based on RF energy harvesting
<i>Shaoyong Wang, Yuming Song (China, Mainland)</i> |
| 11:30 - 11:45 | A Miniaturized Rectangular Circularly-Polarized Loop Antenna for Quadcopter Applications
<i>Ting-Yan Tan, Cheng-Zhi Lu, Xiao Zhang, Guan-Long Huang, and Tao Yuan (China, Mainland)</i> |
| 11:45 - 12:00 | Design of high selectivity filtering antenna based on multi-coupling path
<i>Shengwei Fu, Jinrong Su, Xinwei Chen</i> |
-

ORAL Session: MP1A**Array Antenna Theory and Technology 阵列天线理论与设计**

Session Chairs: Biao Du and Kuo-Sheng Chin 杜彪 金國生

-
- 08:30 - 08:50 High sensitivity feed systems for the Square Kilometer Array Dish (Invited)
Biao Du, Jin Wang, Zeyu Meng and Lei Xie (China Mainland)
- 08:50 - 09:10 Design of the wide-bandwidth and high -gain automotive antenna array
Kuo-Sheng Chin (China Taiwan)
- 09:10 - 09:25 Compact Microstrip Antenna Arrays with Low SLL and High Directivity
Huanhuan Yang, Tong Li, Di Zhang, Chen Zhang, Jiangfeng, Han, Xiangyu Cao, Jun Gao (China Mainland)
- 09:25 - 09:40 A study on Interelement Spacing of Chinese-Character-Shaped Patch Antenna Array
Kwok L. Chung, Wen Li, Yansheng Li (China Mainland)
- 09:40 - 09:55 A Dual-Polarized Phased-Array Antenna Based on Single Ridge Slotted Waveguide Array
Yuhui Ren, Ke Li, Fuwei Wang, Handong Wu, Yang Zhang, Long Li (China Mainland)
- 09:55 - 10:10 Multi-Beam 3D Printed Luneburg Lens Fed by Magneto-Electric Dipole Antennas
Yujian Li (China Mainland)
-

ORAL Session: MP2A**Array Antenna Theory and Technology 阵列天线理论与设计**

Session Chairs: Hang WONG and Hao Wang 黄衡 王昊

-
- 10:20 - 10:40 A Fabry-Pérot Cavity Antenna for Millimeter-Wave Application (Invited)
QingYi GUO and Hang WONG (China Hong Kong)
- 10:40 - 11:00 A Novel Near-field UHF RFID Reader Array Antenna for Configurable Electrically Large Reading Area (Invited)
Xiuping Li, Quanping Li, Hua Zhu (China Mainland)
- 11:00 - 11:15 A Novel Wide-Band Low-Profile Waveguide Slot Antenna
Xinqian Zhang, Guodong Liu, YingHan, Xiaofei Wang and WeiYang Song (China Mainland)
- 11:15 - 11:30 Ultrathin broadband absorber based on metamaterials (Invited)
Xiaoqi Shao, Jiahui Fu, Bo Lv, Wang Chen (China, Mainland)
- 11:30 - 11:45 Design of a 32×32 slot array antenna based on ridge gap waveguide at 140GHz
Jinlin Liu, Ashraf Uz Zaman, Jian Yang (Sweden)
- 11:45 - 12:00 Circularly Polarized Rectangular Dielectric Resonant Antenna With Sequential Phase Feed
Shichun Huang, Hongzhi Zhao, Zhaoneng Jiang, Wenfei Yin, Zheng Fang, Wenrui Chang (China Mainland)
-

ORAL Session: MP1A**Antenna Theory and Technology 天线理论与技术**

Session Chairs: Handong Wu and Xuehui Guan 伍捍东 官雪辉

-
- 13:30 - 13:50 Research on polarization technology of antenna (Invited)
Handong Wu (China, Mainland)
- 13:50 - 14:10 A Low-profile Wideband Pattern and Polarization Diversity Antenna (Invited)
Yan Zheng, Sen Yan (China, Mainland)
- 14:10 - 14:25 A Frequency-Reconfigurable UWB Antenna with Switchable Single/Dual/Triple Band Notch Functions
Shan Wang, Jian Dong, Meng Wang (China, Mainland)
- 14:25 - 14:40 A microwave sensor with wire interconnection for pressure obtaining in metal cavity
Xiaoyong Chen, Jiale Wang, Xinxin Wang, Zeyu Zhang, Jijun Xiong (China, Mainland)
- 14:40 - 14:55 Substrate Integrated Waveguide Cavity-Backed Slot Filtering Antenna with Controllable Radiation Nulls
Chuanyun Wang, Xin Wang, Haiwen Liu, Xiaoyan Zhang, Guibin Chen (China, Mainland)
- 14:55 - 15:10 Stub-Loaded Slotline Coupled Filtering Dielectric Resonator Antenna with Tunable Radiation Nulls
Chuanyun Wang, Xin Wang, Haiwen Liu, Xiaoyan Zhang, Guibin Chen (China, Mainland)
- 15:10 - 15:25 A Dual-Polarized Broadband Horn Antenna for Mm-wave 5G Application
Nan Hu, Wenqing Xie, Qingsheng Zeng, Jianrui Liu, Lixin Zhao, Shuang Liu (China, Mainland)
- 15:25 - 15:40 Optically-Controlled Single-/Dual-band Switchable Terahertz Absorber
Damin Li, Su Yuan, Jiayun Wang, Rongcao Yang (China, Mainland)
-

ORAL Session: MP2A**Antenna Theory and Technology 天线理论与技术**

Session Chairs: Hou Zhang and Jiahui Fu 张厚 傅佳辉

-
- 16:00 - 16:20 Bandwidth Improvement of a Broadband Circularly Polarized Slot Antenna Using a Meander-Line (Invited)
Hou Zhang (China, Mainland)
- 16:20 - 16:40 Size Reduction of Omnidirectional Cylindrical Dielectric Resonator Antenna Using a Magnetic Aperture Source (Invited)
Nan Yang Kwok Wa Leung (China, Hong kong)
- 16:40 - 16:55 Phase Effect of Orthogonal Modes on 3-dB Axial Ratio Beamwidth of Circularly-Polarized Patch antennas
Xiao-Ting Yuan, Cheng-Zhi Lu, Xiao Zhang, Lei Zhu, Guan-Long Huang, Tao Yuan, and Wenbin Zou (China, Mainland)
- 16:55 - 17:10 A Double-Layer Filtering Antenna Based on Composite Resonator with Multiple Radiation Nulls
Xuehui Guan, Wang Liu, Baoping Ren, Lan Song, Weiping Li, and Yan Xie (China, Mainland)
- 17:10 - 17:25 A Compact Dual-band Antenna for 5G Application
Yu Zhang, Hongxing Zheng, Bin Gao, Can Tang, Ruipeng Liu, Mengjun Wang (China, Mainland)
- 17:25 - 17:40 Design of A Tri-band CPW-fed Antenna for WLAN and WiMAX
Yuntao Jin, Hongxing Zheng, Ruipeng Liu, and Mengjun Wang (China, Mainland)
- 17:40 - 17:55 Broadband circularly polarized rectangular dielectric resonant antenna
Hongzhi Zhao, Zhaoneng Jiang, Xiaoyan Zhao, Wenfei Yin (China, Mainland)
- 17:55 - 18:10 Design of a Wide Band Dual-Polarized Magneto-Electric Dipole Antenna
Geng Zhang, Wen Jin, Mang Chen, longwei He (China, Mainland)
-

ORAL Session: MP1B**Computational Electromagnetics and Electromagnetic Compatibility 计算电磁与电磁兼容**

Session Chairs: Wen-Jiao Liao and Lei Zhao 廖文照 赵雷

-
- 13:30 - 13:50 Phase cancellation based RCS reduction structure design (Invited)
Wen-Jiao Liao (China Taiwan)
- 13:50 - 14:10 New Developments for DGTD Method and Its Applications (Invited)
Lei Zhao (China, Mainland)
- 14:10 - 14:25 Faraday Rotation Retrieval from Polarimetric SAR using total variation denoising
Cheng Wang, Wulong Guo, Haisheng Zhao, Liang Chen, Shanshan Huang (China, Mainland)
- 14:25 - 14:40 Simulation of Integral Power Excited by TE₁₁-TM₀₁ Hybrid Modes in Conical Horn Antenna
Meng Yang, Feng Yan, Hong Jing, Yingjun Liu, Zhiwei Qi, Min Liu (China, Mainland)
- 14:40 - 14:55 A Fast Ray-Tracing Based Algorithm for Very Low Frequency Radio Propagation
Yu-Wei Cao, Zhong-Yu Liu, Li-Xin Guo (China, Mainland)
- 14:55 - 15:10 A Coarse and Precise Fusion Algorithm for Velocity Measuring of Millimeter Wave in the Bore
Jinjie Yao, Ruirui Wang, Rundong Jiang, Min Wang, Xinhua Dai (China, Mainland)
- 15:10 - 15:25 A Fast Ray-tracing Algorithm for Rugged Terrain
Shuo Hu, Lixin Guo, Zhongyu Liu (China, Mainland)
- 15:25 - 15:40 A Hybrid Method Based on Implicit and Explicit FDTD for Solving Transmission Line Network
Lu Yao, Jian Wang (China, Mainland)
-

ORAL Session: MP2B**Computational Electromagnetics and Electromagnetic Compatibility 计算电磁与电磁兼容**

Session Chairs: Lixin Guo and Qingsheng Zeng 郭立新 曾庆生

-
- 16:00 - 16:20 Investigation of Radar Echoes Characteristics from 3-D Large-scale Complex Sea surface (Invited)
Lixin Guo (China, Mainland)
- 16:20 - 16:40 船舶环境电磁建模的若干思考与研究
Qingsheng Zeng (Canada)
- 16:40 - 16:55 Directional Multi-path Routing Algorithm Base on BLE Mesh
Rui Li Xiaohui Li (China, Mainland)
- 16:55 - 17:10 Transient Thermal Analysis Based on Spectral Element Time Domain Method
Yilun Xue and Qiang Ren, Yuanguo Zhou (China, Mainland)
- 17:10 - 17:25 Reconstruction of Conductivity Distribution with Acousto-electrical Tomography
Kang An, Changyou Li, Kuisong Zheng and Shuting Qin (China, Mainland)
- 17:25 - 17:40 Nonreciprocal Transmission under Near-zero Biased Magnetic Field
Xiufeng Tao, Wenjin Pei, Qun Lou, Feifei Li, Xi Yang, Yin Poo, Ruixin Wu (China, Mainland)
- 17:40 - 17:55 HO-SIE Based Domain Decomposition Method for Solving Multiscale EM Scattering Problems
Qiang-Ming Cai, Yan-Wen Zhao, Yu-Yu Zhu, Xianjin Li, Xin Cao, Mao-Song Lin, and Jun Fan (China, Mainland)
- 17:55 - 18:10 Time Domain Analysis of Ultra-long Cable over Lossy Ground under the High-power Electromagnetic Environment
Ting Fan, Le Cao, Shuqi Wang, and Yuanguo Zhou (China, Mainland)
-

ORAL Session: MP1C

Terahertz Technology and Its Application 太赫兹技术与应用

Session Chairs: Chenyang Xue and Wenxin Liu 薛晨阳 刘文鑫

-
- 13:30 - 13:50 Networked Wireless Self-Powered Sensor Equipment via harvesting micro-vibration energy
Chenyang Xue
- 13:50 - 14:10 Study on 0.5THz Backward Wave Oscillator
Wenxin Liu, Qingqing Ye, Xin Guo, Chao Zhao and Zhaochuan Zhang
- 14:10 - 14:25 Diffraction radiation from an electron beam moving above a deep narrow groove
Weiwei Li, Weihao Liu, Qika Jia, and Yalin Lu
- 14:25 - 14:40 Intensity Evolution of Linear-Edge-Screw Mixed Dislocation Beam in Atmospheric Turbulence
Yankun Wang, Lu Bai, Penghui Gao
- 14:40 - 14:55 Multi-sphere T-matrix algorithm for UV light scattering of aircraft plume cluster particles
Dan-meng Zhang, Lu Bai
- 14:55 - 15:10 High-Resolution Micro-Displacement Measurement using a Fiber MZI Based on Microwave Photonics Filter
Jing Lei, Zixuan Song, Yunjie Cheng, Yiping Wang
- 15:10 - 15:25 Graphene-based Spatial Modulator Working in the Near-infrared Range
Fengyu Gao
- 15:25 - 15:40 Laser Attenuation Model in Low Visibility Fog
Jie Chen, ZhenSen Wu
-

ORAL Session: MP2C

Passive Microwave Devices and Circuits 无源微波器件与电路

Session Chairs: Wenbin Dou and Qiang Ren 窦文斌 任强

-
- 16:00 - 16:20 Power Combining using Quasi Optical Sum/Difference Network at Sub-Millimeter Waves (Invited)
Wenbin Dou, Huan Guo, Nan Liu, Long Wang (China Mainland)
- 16:20 - 16:40 A Wideband Millimeter-wave Substrate Integrated Coaxial Line (SICL) Array with 45-degree-angle Bends
Peng Ma, Xiao-Chun Li, and Jun-Fa Mao (China Mainland)
- 16:40 - 16:55 Design of a Dual-Band Power Divider using Single Ring Structure
Bin Zhang, Bin Wu, Qingfeng Wang, Xiaolong Wang, Zhewang Ma, Chun-Ping Chen (China Mainland)
- 16:55 - 17:10 Spurious Suppression and Dispersion Compensation for Practical Dielectric Resonator Filter
Fangyin Zhu, Qiuyi Wu, Yimin Yang, Xiaowei Shi, Ming Yu (China Mainland)
- 17:10 - 17:25 A Low-Loss Board-to-Cable Connector with Stepwise Structures
Han Zhang, Xiaochun Li, Junfa Mao (China Mainland)
- 17:25 - 17:40 Stacked Thin Film Heterostructure with Tunable Ferroelectric BSTO
Yijun Cai, Kai-Da Xu, Ronald J. Spiegel, and William T. Joines (China Mainland)
- 17:40 - 17:55 Nondestructive Defect Detection and Localization of Defects in Annular Through Silicon Via (TSV)
Dou Li and Jinrong Su (China, Mainland)
-

POSTER Session: TA2P
Passive Microwave Devices and Terahertz Technology
 无源微波器件，太赫兹技术

- P.1 A Study of Composite Microstrip/Coplanar-Waveguide Transmission Line for Miniaturization of Microwave Planar Circuits
Kwok L. Chung and Ruiqi Liu, Yansheng Li, Botao Feng (China, Mainland)
- P.2 Butterworth spiral filter for image processing with edge enhancement
Zhong Zheng Gu, Da Yin, Shou Ping Nie, Shao Tong Feng and Cao Jin Yuan (China, Mainland)
- P.3 Multiple resonant absorption of TE surface wave in metal stripe arrays coated with double high-index dielectric layer
Ling Guo, Shan Yin, Shouhong Chen (China, Mainland)
- P.4 Balance-Compensated Trans-Directional Coupled-Line Based Planar Balun with Connecting Lines of Arbitrary Impedance
Hongmei Liu, Xiao Jia, Shaojun Fang, Zhongbao Wang, Shiqiang Fu (China, Mainland)
- P.5 A Wideband Filtering Dipole Antenna Based on Short-Circuited Triple-Mode Resonator
Chaochao Tao, Baoping Ren, Xuehui Guan, Bo Zhao, Chuanyun Wang, Zhiwei Liu (China, Mainland)
- P.6 Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter
Ming-Jie Li, Dongquan Sun, Jing-Ya Deng (China, Mainland)
- P.7 Superconducting UWB bandpass filter with tunable notch band using reconfigurable resonator
ZhaoJiang Shang(China, Mainland)
- P.8 A Novel SSPP Structure with Tilted Grooves
Shaopeng Yang, Yang Cai, Qianzhong Xue, Baokun Xi (China, Mainland)
- P.9 An Improved Interdigital-based Parallel-Coupled Microstrip Bandpass Filter
Rundong Jiang, Jinjie Yao, Min Wang, RuiRui Wang, Xinhua Dai, Zeshu An (China, Mainland)
- P.10 A novel asymmetry C-band dual-mode bandpass filter using pentagon loop resonator
Jingxin Tang, Jing Wan, Zhengbiao Wang, Haiwen Liu, Baoping Ren, Pin Wen (China, Mainland)
- P.11 Compact Branch-line Coupler using Radial stubs
Liangfan Zhu (China, Mainland)
- P.12 A Band-Pass Filter Based on Printed Double-Sided Gap Waveguide with an Inserted Conductor Plane
Hao Wang, Yu Quan, Jianyin Cao, Yan Wang, Dalong Xu, Shuanglong Quan (China, Mainland)
- P.13 Design of Double-Layer Transmission Structure of Radome
Yue Song, Li Xiang, Qi Xiangbo, Wang Chuanbing, Zhou Yongxin, Pan rui (China, Mainland)
- P.14 A High-Performance Radome for Millimeter Wave Antenna Applications
Kai-Dong Hong, Guan-Long Huang, Xiao Zhang, and Tao Yuan (China, Mainland)
- P.15 Research of Novel Eddy-Current Brake System for Moving-Magnet Type Linear Electromagnetic launchers
Huilai Li, Meng Yang, Wenxi Hao (China, Mainland)
- P.16 Elastic collision of 4-soliton of the coupled generalized nonlinear Schrödinger equation
Xiaoya Xu, Yan Zhao, Zhifeng Du, Lijun Song, Yan Wang (China, Mainland)
- P.17 Research on Out-band Electromagnetic Injection Effect of Communication System Module
Xinfeng Li, Xiaofen Zhang, Chao Li, Hongfeng Geng (China, Mainland)
- P.18 Design of Ship Light Communication Training Simulator
Zhang Xu, Liu Hongbo, Qu Shanhu (China, Mainland)
- P.19 Side Lobes Suppression for liner Antenna Array by Using Bat Algorithms

- Yusheng Pan, Jiao Zhang* (China, Mainland)
- P.20 Shaping of independently controllable multiple vector curve beams
Yan Ran Zhang, Shou Ping Nie, Cao Jin Yuan (China, Mainland)
- P.21 A Negative Group Delay Circuit using Substrate Integrated Suspended line
Jian-Kang Xiao , Xiao-Yun Yang (China, Mainland)
- P.22 Phase distribution of surface current for a metallic ship in low frequency
Xiaoyun Tu, Kuisong Zheng, Mingyue Yang, Kang An and ShuTing Qin (China, Mainland)
- P.23 Far-Field Boundary Determination of Dipole Antenna for Indoor WLAN Applications
Qian Cui, Huali Lu, Baozhu Li, Shan Bao, Wanchun Tang (China, Mainland)
- P.24 Characterization of GaN Diodes at Microwave Frequencies using Coupled Resonator
Cheng Guo, Min Liu, Xuefeng Song, Hongyu Shi (China, Mainland)
- P.25 Terahertz metamaterial sensor integrated with microfluidic channel
Shan Yin, Wei Huang, Lin Guo (China, Mainland)
- P.26 THz Pattern Reconfigurable Antenna using Graphene-based Frequency Selective Surface
Xinlei Lv, Bian Wu, Yutong Zhao, Shining Sun, Xiaoyu Pang, Maosong Wu (China, Mainland)
- P.27 Numerical study of oblique incidence of terahertz wave into non-magnetized plasma
Yan Xu, Zhenseng Wu, Jie Chen (China, Mainland)
- P.28 Active control of terahertz wave electronmagnatically induced transparency via dark mode
Donger Xiang, Wentao Zhang, Yuting Zhang, Wei Huang, Shan Yin, Yinghui Yuan (China, Mainland)
- P.29 Reflection and transmission of terahertz vector Bessel vortex beam through homogeneous magnetized plasma
Wei Ding, Haiying Li, Jiawei Liu, Lu Bai, Zhensen Wu (China, Mainland)
- P.30 Monitoring System for Valuable Chinese Herbal Medicine Growth
Yingli Zhu and Ziyi Jiang (China, Mainland)
- P.31 Real-time temperature monitoring technology based on magnetoacoustic tomography with magnetic induction
Gepu Guo, Jiawei Wang, Yuzhi Li, Qingyu Ma (China, Mainland)
- P.32 A Design of Cognitive Anti-jamming System in Complex Environment
Bo Zhou Hongfeng Geng Huidong Qiao Wenzhao Liu Jianlu Wang (China, Mainland)
- P.33 Monitoring System for Coal Mine Safety Based on Wireless Sensor Network
Yingli Zhu, Guoping You (China, Mainland)
- P.34 Analysis of RF Electromagnetic Environment of Air Cushion Platform
Yong Zhang, Zusheng Jin, Liujun Wei (China, Mainland)
- P.35 Research On In-band Mode Scattering Characteristics Of Antenna Array
Peng Li, Pei Li, Liming Xu, Zeling Kuang, Zhijie Zhou, Jianchun Du (China, Mainland)
- P.36 Ultra-Wideband Scattering Coefficient Measurement in Time-Domain of Layered Dielectric Plates
Minghao Gong, Bing Wei, Weidong Wang, Bin Wu, Lixin Guo (China, Mainland)
- P.37 Analysis of Time-Domain Scattering Characteristics of Large Marine Ships Based on closed-form TDSBR
Wenwen Fan, Bing Wei, Hao Wang (China, Mainland)
- P.38 THz Scattering Characteristics of Simple Body
Xingtao Sun, ZhenSen Wu (China, Mainland)
- P.39 Simulation of full-polarization electromagnetic backscattering characteristics of large number of high-density chaff clouds
LiFei Zhang, ZhenSen Wu (China, Mainland)
- P.40 A Broadband Ultra-Thin Bifunctional Metasurface with Reflection and Transmission Modes
Tong Li, Huanhuan Yang, Fei Guo, Xiangyu Cao, Qi Li (China, Mainland)

- P.41 A novel 24GHz lens antenna based on phase gradient metasurface
Ruze Zhang, Runbo Ma (China, Mainland)
- P.42 Enhanced Gain of a Transmitarray Using the Superstrate loaded Planar Array as the Primary Feeder
Yin-Hua Yu, Zhi-Yuan Zong, Wen Wu, Da-Gang Fang (China, Mainland)
- P.43 Individually Controllable Tri-band Negative Group Delay Circuit using Defected Microstrip Structure
Jian-Kang Xiao, Qiu-Fen Wang (China, Mainland)
- P.44 High-gain Bow-tie Antenna Based on Complementary Split-ring Resonators Enhanced Substrate-integrated Waveguide
Caixia Feng, Lijuan Dong, Lihong Wang (China, Mainland)
- P.45 A novel ultra-wideband four-way power divider based on unilateral-bilateral SSPPs transition
Richeng Ping, HongMa, YangCai (China, Mainland)
- P.46 Miniaturized Lumped Coupler with Low Frequency Signals Suppression
Liangfan Zhu (China, Mainland)

2019-07-20 AM 9:40-10:40

Room P

POSTER Session: TA2P

Metamaterials and super surfaces

超表面，超材料与天线设计

- P.47 3-D Closely Spaced Dual-Band Frequency Selective Surface Based on Square Waveguide
Xia Yang, Cheng Wang, Zhengyong Yu, Zhongyin Hao, Peng Zhou, Wanchun Tang (China, Mainland)
- P.48 Frequency-Selective Surface with Wide-range Tunable Passband
Zhiqiang Zhao, Qingxin Guo, and Zengrui Li (China, Mainland)
- P.49 H-shaped Metamaterial Loaded Wideband Spoof Surface Plasmon Polaritons Antenna
Xiangxiang Li, Jing Tao, Yeqiang Li, Yushan Chen, Chang Deng (China, Mainland)
- P.50 Frequency Selective Resorber Based on Tripole Loops and Tripole Slots
Zhiwei Zhang, Qingxin Guo, and Zengrui Li (China, Mainland)
- P.51 A Transmissive Coding Metasurface
Yuxuan Jiang, Yubo Shi, Junchen Ke, Mingzheng Chen, Qiang cheng (China, Mainland)
- P.52 An L-band narrowband energy selective surface design
Guohui Yang, Xin Yang, Kuang Zhang, Yan Wang, Tao Zhang (China, Mainland)
- P.53 A design of broadband circular polarization anomalous reflection metamaterial
Jiangfeng Han, Xiangyu Cao, Jungao (China, Mainland)
- P.54 A Dual-Port Annular Antenna with Polarization Diversity for Smartwatches
BuYun Wang, AnXue Zhang, Sen Yan. (China, Mainland)
- P.55 Optimization of the 0.4m Monocone Antenna Using resistive Loading for Pulse Radiation
Xiaojia Wang, Tinyong Jiang, Heng Zhou, Youjie Yan, Jin Chen (China, Mainland)
- P.56 Reconfigurable Triple Band-Notched Monopole UWB Antenna
Ji Li, Yufa Sun (China, Mainland)
- P.57 Design of a Slot Antenna Array Using Array-antenna Decoupling Surface
Jie Chen, Liping Han, Wenmei Zhang (China, Mainland)
- P.58 An Experimental Study of Dielectric 3D Printed Cylindrical Cavity
Dali Yuan, Bing Zhang (China, Mainland)

- P.59 A Compact, Uniplanar Vivaldi Antenna with an Embedded CPW Feed
Changyu Liu, Amir Khurram Rashid, Fen Xia, Xiaolan Qingfeng Zhang (China, Mainland)
- P.60 A Multipath Monopole Antenna for Multi-band Applications
Cheng-Hsing Hsu, Shang-Hung Tsai, Ching-Fang Tseng (China, Taiwan)
- P.61 Design of a Multilayer Structure Microwave Filtering Antenna
Jingyu Cui, Jianzhong Chen, Anxue Zhang, Sen Yan, Jianxing Li, Yu Qiao (China, Mainland)
- P.62 A novel Tri-band Circular Polarization Antenna
Qing Liu, guoruihan (China, Mainland)
- P.63 Radiation Pattern Reshaping of Microstrip Antennas Based on Spoof Surface Plasmon Polaritons Mode Coupling
Bingyue Qu, Zhuo Xu, Anxue Zhang, Sen Yan (China, Mainland)
- P.64 A Design of High Gain Cylindrical Resonant Antenna
Jing Tan, Juan Chen, Zhenghui Peng, Xiangyuan Sang, Man Luo (China, Mainland)
- P.65 A Wideband Cavity-Backed Antenna with Good Impedance Matching
Boyi Gong, Bo Li, Weiren Zhu (China, Mainland)
- P.66 A New Ultra-wideband Planar Spiral Antenna
Zhi-Jie Zhou, Pei Li, Le Zuo, Jie Wei, Peng Li, Ze-Ling Kuang (China, Mainland)
- P.67 MIMO IFA Antennas for Laptop Computer Application at WLAN/5G C-band Operation
Wen-Shan Chen and Yao-Lin Chang, Ming-Tien Wu (China, Taiwan)
- P.68 A Self-Decoupling Structure of MIMO Antenna For 5G Application
Ji-Fa Bian, Qing-Xin Chu (China, Mainland)
- P.69 Research on New Electromagnetic Radiation Method for Antenna Miniaturization
Xia Jiang, Shaoqiu Xiao (China, Mainland)
- P.70 Effect of subreflector displacement induced aberrations for dual-reflector antenna
Binbin Xiang, Peiyuan Lian, Wei Wang, Fei Xue, Guljaina Kazezkhan, Kai Wang (China, Mainland)
- P.71 A New Broadband Question Mark Circularly Polarized Rectenna
Xiaodan Li, Wenmei Zhang (China, Mainland)
- P.72 A single-feed tri-band conformal circularly polarized dual-annular slot antenna
Lei zhang, Jinrong Su, Xinwei Chen (China, Mainland)
- P.73 High-Efficiency Microwave Vortex Beam Generation for Arbitrary Polarizations and Multiple OAM Modes Based on Planar Reflectarray
Hui-Fen Huang and Shuai-Nan Li (China, Mainland)
- P.74 Procedure to Design a Series-fed Microstrip Patch Antenna Array for 77 GHz Automotive Radar
Baolong Jian, Jing Yuan, Qiqin Liu (China, Mainland)
- P.75 Design and Analysis of A Miniaturized Array Antenna
Zekui Zhang, Wenmei Zhang, Rong Zhang, Yajuan Zhao, Baoyi Li, Peng Wang (China, Mainland)
- P.76 A Wide Band Circular Polarization Near-Field Focused Antenna Array
Hui-Fen Huang, Hong-Long Bu (China, Mainland)
- P.77 A Cosecant Squared Beam Antenna Array Operating at 5.85-7.6GHz
Xiao-Long Yang, Lei Chang, Jian-Qiang Zhang, Dan Li, Min Zhang (China, Mainland)
- P.78 A Planar MM-Wave Beam-Steerable Array Antenna for 5G Mobile Terminal Applications
Yang Liu, Liang Zhang (China, Mainland)
- P.79 A Compact Six-Element MIMO Array For Future 5G Mobile Terminal
Kangdi Ni, Youlin Geng (China, Mainland)
- P.80 Wideband High Power Horn Array Antenna with High Reliability
Pei Li, Peng Li, Xu Luo, Liming Xu, Zhijie Zhou, Qingtao Duan (China, Mainland)
- P.81 Effect of Loss Tangent on the Performance of Retrodirective Array Based on Microstrip Patch
Jie Zuo, Dazhi Piao (China, Mainland)

- P.82 SIW-fed Double layer End-fire Metasurface Antenna Array With Improved Gain
Jing Tao, Xiangxiang Li, Ye qiang Li, Fei Teng, Huifeng Wu (China, Mainland)
- P.83 A Low Sidelobe Ultrawideband 1D Monopulse Antenna Array for Direction Finding
Yushan Chen, Ye qiang Li, Xiangxiang Li (China, Mainland)
- P.84 Wideband Beam Deflection Antenna with High Gain
Cong Wan, Xiangxiang Li, Zhe Li, Suyun Wu (China, Mainland)
- P.85 Research on Application of UWB Wireless Communication System Based on Multi-antenna Array in Mine Emergency Rescue
Jingyong Liu (China, Mainland)
- P.86 A Rapid Method for Analysing the Asynchronous Feeding of Pulse Antenna Array
Lianyan Zhu, Min Zhang, Lei Chang (China, Mainland)
- P.87 Ridged Waveguide Slot Phased Array for 5G Millimeter-wave Application
Jingwei Zhou, Hao Wang, Jianyin Cao, Guochun Liang, Shunxi Jiang (China, Mainland)
- P.88 A Novel Antenna Beam Corrector Based on the Periodic Structure
Zeling Kuang, Zhijie Zhou, Pei Li, Peng Li, Luo Xu, Liming Xu (China, Mainland)
- P.89 A Linear to Circular Polarization Converter Based on Substrate Integrated Waveguide Cavities
Yu Zuo, Jialin Shi, Jianxuan Li, Zusheng Jin, Rui Chen and Yong Zhang (China, Mainland)
- P.90 A Novel Miniaturized Microstrip-to-Microstrip Transition Using Interdigital Structure Loaded Open Slot
Yi-Ting Zheng, Lin Li (China, Mainland)
- P.91 Strain Detection for structural health monitoring using circularly-polarized patch antenna sensor
Kwok L. Chung, Lingling Wang, Yansheng Li, Chuanwang Song (China, Mainland)
- P.92 Compact UHF RFID MIMO Tag Antenna for Platform Tolerant Applications
Zhiqiang Zhao, Wei Gao, Runbo Ma (China, Mainland)
- P.93 A Microstrip Reflect array Antenna Based on Double Minkowski Rings
Chu Tian, Jie Zhang, Yufeng Liu (China, Mainland)
- P.94 An UWB Inverted F Antenna with Coupled Feeding for 5G smartphone
Yi-Ting Chen, Qing-Xin Chu (China, Mainland)

POSTER Session: TA2P
Computational Electromagnetics and others
计算电磁学与其他

- P.95 Co-analysis of 2-Coupled Superconducting Transmission Lines and Josephson Junctions Based on FDTD
Ziwei Pei, Xiaochun Li, Yan Li, Junfa Mao (China, Mainland)
- P.96 Research on DGTD Algorithm of Hybrid Grid
Zhennan Xiao, Bing Wei, Debiao Ge, Qian Yang (China, Mainland)
- P.97 Algorithm Optimization of Moment Method Pre-Processing and Linear discrimination of computational complexity
Bin Fan, ZhengFa Yu, YiHeng Guo (China, Mainland)
- P.98 Particle Swarm Optimization for Side Lobe Reduction of Antenna Array
Li Xue, Jiao Zhang, Yusheng Pan, Yufeng Liu (China, Mainland)
- P.99 A Novel Microstrip Reflectarray Antenna with Ultra-Wideband Feed
Jiyu Liang, Yufeng Liu (China, Mainland)
- P.100 Measurement and analysis of infrared radiation characteristics on the sea surface
Donghui Meng, Yunhua Cao, Guozhan Tang, Mingsen Shi (China, Mainland)
- P.101 Research of Diaphragm Type Resistive Sensor built-in Waveguide for High Power Microwave Pulse Measurement
ZhengFeng Xiong, Huilai Li, Jing Liu, Feng Yan (China, Mainland)
- P.102 A Method for Beat-wave Measurement and Uncertainty Analysis
YingJun Liu, Hong Jing, Meng Yang, WenXi Hao, ZiJian Zong (China, Mainland)
- P.103 Device-Free speed measurement based on low cost wireless communication system
Mengling Chen; Wei Ke ; Yanli Wang; Haoran Zuo (China, Mainland)
- P.104 Simulation and Verification of Heterojunction AlGaAs/GaAs PIN Diode
Li Liu, Caiyan Li, Qilian Zhang, Xiaowei Sun, Hao Sun (China, Mainland)
- P.105 A Cryogenic Readout Circuit for SNSPD
Shu-Na Wang, Xingyu Zhang, Chaolin Lv, Lingyun Li (China, Mainland)
- P.106 A Compact TOF Measurement Circuit with Photon Counting and Timing
Jing Wang, Yi Zhang, Xinyue Cheng, Yufeng Guo (China, Mainland)
- P.107 High Performance Germanium n+/p Shallow Junction for nano-Scaled n-MOSFET
Chen Wang, Yihong Xu, Cheng Li, Songyan Chen (China, Mainland)
- P.108 An Ultra-Broadband Quadruple-Stacked CMOS Power Amplifier
Qian Lin, Hai-Feng Wu, Xiao-Ming Zhang, Liu-Lin Hu, Si-Wei Chen, Dan-Hui Hu (China, Mainland)
- P.109 An Absorbing/ Transmissive Radome Based on Tantalum Nitride
Fuwei Wang, Yuhui Ren, Ke Li (China, Mainland)
- P.110 Calibration of K-band Cryogenic Receiver for Nanshan 26m Radio Telescope
Kai Wang, Hao Yan, Maozheng Chen, Jun Ma, Xiaofei Li, Liang Cao (China, Mainland)
- P.111 A Wideband CP Dipole Rectenna for RF Energy Harvesting
Chengfang Guo, Wenmei Zhang (China, Mainland)
- P.112 Three-Dimensional Broadband Metamaterial Absorber Array
Gaiping Zhang, Xinggang Lei, Aixia Wang, Weiwei Wang, Jingli Wang (China, Mainland)
- P.113 A Three-dimensional Resistive Metamaterial with Extremely Broadband Absorption

- Ai-xia Wang, Shao-bo Qu, Bin-ke Wang, Gai-ping Zhang, Cui-lian Xu, Hui-li Dai (China, Mainland)
- P.114 Design of wide-angle And Polarization-Insensitive Metamaterial Absorber
Hui-li Dai, Ai-xia Wang, Ke-xia Jiang, Jun-Zeng, Li-jun Liu, Xiao-qing Yan (China, Mainland)
- P.115 An Improved Inversion Model for Two-Dimensional Microwave Imaging
Yurou Su, Guizhen Lu (China, Mainland)
- P.116 Assessing the Capacity of Air Traffic Control Secondary Surveillance Radar System
Guofeng Jiang, Yangyu Fan, Hongbo Yuan (China, Mainland)
- P.117 Research on Locating Model of Electromagnetic Tracking System
Yin Qin, Zhao Jie, Zhao Huachen, Shen xinmin, Wang dong (China, Mainland)
- P.118 Analysis of Waveform Parameters for Multi-segments of Wire Grids of Bounded Wave Simulator
Kuisong Zheng, Mingyue Yang, Xiaoyun Tu, Shuting Qin and Kang An (China, Mainland)
- P.119 Simulation of Single-Anode Coaxial Magnetron Injection Gun for MW-class Gyrotron at 170GHz
Kai Wang, Qianzhong Xue (China, Mainland)
- P.120 Simulation of 112Gbps Full-Link Interconnect System
Hongbin Zhu, Qi Sun, Xiaochun Li (China, Mainland)
- P.121 Research on Phase Scintillation of Point Target based on SAR-SS method
Jun Liu, Cheng Wang (China, Mainland)
- P.122 Light-induced magnetization needle generation with 3D controllable orientation
Hengwen Zhang, Ruibo Wang, Jianjun Luo, Bing Gu, Xiaolei Wang, Zhuqing Zhu, and Xiangping Li (China, Mainland)
- P.123 Secrecy Information Transmission Optimization of MIMO System
Xue Xiaoqin, Meng Gang (China, Mainland)
- P.124 A Study of FMCW Radar For The Detection of Water Level Inside a Wine Jar
Min Wang, Jinjie Yao, Yan Han, Rundong Jiang, Zhenni Liu, Yhong Fan (China, Mainland)
- P.125 A Quick Algorithm Implementation Method for ARM-FPGA Integrated SDR Platform
Feifei Zhang, Hongli Peng, Guanghui Xu (China, Mainland)
- P.126 Parallel SVD-CBFM based on GPU acceleration
Jialei Zhang, Yufa Sun (China, Mainland)
- P.127 A Pre-Processing Method for I-V Characteristics Modeling of the HEMT
Hai-Feng Wu, Qian Lin, LiuLin Hu, Xiao-Ming Zhang, Dan-Hui Hu, Si-Wei Chen (China, Mainland)
- P.128 Modeling of Circularly Polarized Stacked Patch Antenna
Yang Xiao, Lin-Sheng Wu, Liang-Feng Qiu, Yue-Ping Zhang, Jun-Fa Mao (China, Mainland)
- P.129 The Error Vector Magnitude (EVM) performance in LTE Downlink
Hsuan-Fu Wang, Chi-Pan Hwang, Mu-Song Chen (China, Taiwan)
- P.130 Far-End Crosstalk Mitigation for Microstrip Lines in High-Speed PCBs
Liang Zhang, Qiang-Ming Cai, Xiao-Bo Yu, Lin Zhu, Chao Zhang, Yinglei Ren, and Jun Fan (China, Mainland)
- P.131 Far-End Crosstalk Mitigation in DDR5 Using Graphene-Paraffin Material Coated Signal Lines with Tabs
Qiang-Ming Cai, Xiao-Bo Yu, Liang Zhang, Lin Zhu, Chao Zhang, Yinglei Ren, and Jun Fan (China, Mainland)
- P.132 Features and Methods of Road Extraction from High-resolution Remote Sensing Images
Guoping You, Wanghui Zeng (China, Mainland)
- P.133 Analysis of Missing Cloud Echoes in Atmospheric Duct
Hua Wang, Yunbo Li, Haichuan Tang, Lin Jiao (China, Mainland)
- P.134 Collaborative Beamforming for Cognitive UAV Relay System Coexisting with Satellite Networks
Shengxiang Zhu, Ke Yang, Jian Ouyang, Xiaohuan Wu, Luyao Xie (China, Mainland)
- P.135 Relay Selection for Wireless Cooperative Networks using Adaptive Q-learning Approach

- Ke Yang , Shengxiang Zhu , Zhenlei Dan , Xiaolan Tang, Xiaohuan Wu, Jian Ouyang* (China, Mainland)
- P.136 A relay selection strategy based on network fairness under hybrid duplex mode
Lin Kang ,Yanjie Qi (China, Mainland)
- P.137 Morse Recognition Algorithm Based on K-means
Qu Shanhu, Liu Hongbo, Zhang Xu (China, Mainland)
- P.138 Electromagnetic Transmission Calculation in Single Room
Tian-Yu Fan,Li-Xin Guo, Zhongyu Liu (China, Mainland)
- P.139 Three-Dimensional Dual-Band Frequency Selective Surface With Close Band Spacing
Zhengyong Yu,Xia Yang, Wanchun Tang, Jianping Zhu, Cheng Wang (China, Mainland)
- P.140 A Novel Design of Metasurface-Antenna with Both Radiation and Low Scattering Performances
Chen Zhang, Xiangyu Cao,Jun Gao, Sijia Li, Huanhuan Yang,Tong Li (China, Mainland)
- P.141 Simulation on the Defect Mode Properties of 1-D Plasma Photonic Crystals
Tianbo Yang, Qi Li, Xingxing Liu, Fei Liu, Tao Fu (China, Mainland)
- P.142 A graphene-based tunable negative refractive index metasurface in terahertz band
Yanbin Luo, Qingsheng Zeng, Xia Zhang, Xin Yan, Nan Hu, Wenqing Xie (China, Mainland)
- P.143 Orbital Angular Momentum Multiplexing under Partial Angular Aperture Receiving with Multiple Receiving Elements
Hua Tang, Xianzheng Zong, Zaiping Nie, Zhengtian Chen (China, Mainland)
- P.144 Hybrid Antenna Selection for Massive MIMO
Hua Tang, Xianzheng Zong, Zaiping Nie, Ao Chen (China, Mainland)
- P.145 6-7 GHz Cryogenic Low-Noise mHEMT-Based Amplifier for Quantum computing
Shenqi Qu, Xiaochuan Wang, Cheng Zhang, Zili Wang (China, Mainland)
- P.146 MEMS accelerometers testing using a laser feedback interferometer
Dongmei Guo, Huimin Zhao, Hui Hao (China, Mainland)
- P.147 Monte Carlo Based Risk Analysis Method for Multi-attribute Decision Methods
Chao Li, Zhengxiong Wu, Ning Zhu (China, Mainland)
- P.148 Triple-mode Dielectric Cavity Filter Using Grooved Dielectric Resonator
Yun Liu(China, Mainland)
- P.149 24-GHz Wide-Beam Patch Antenna Array Laterally Loaded With Parasitic Strips
Chia-An Yu, Kuo-Sheng Chin, Roger Lu (China, Taiwan)

学生论文竞赛

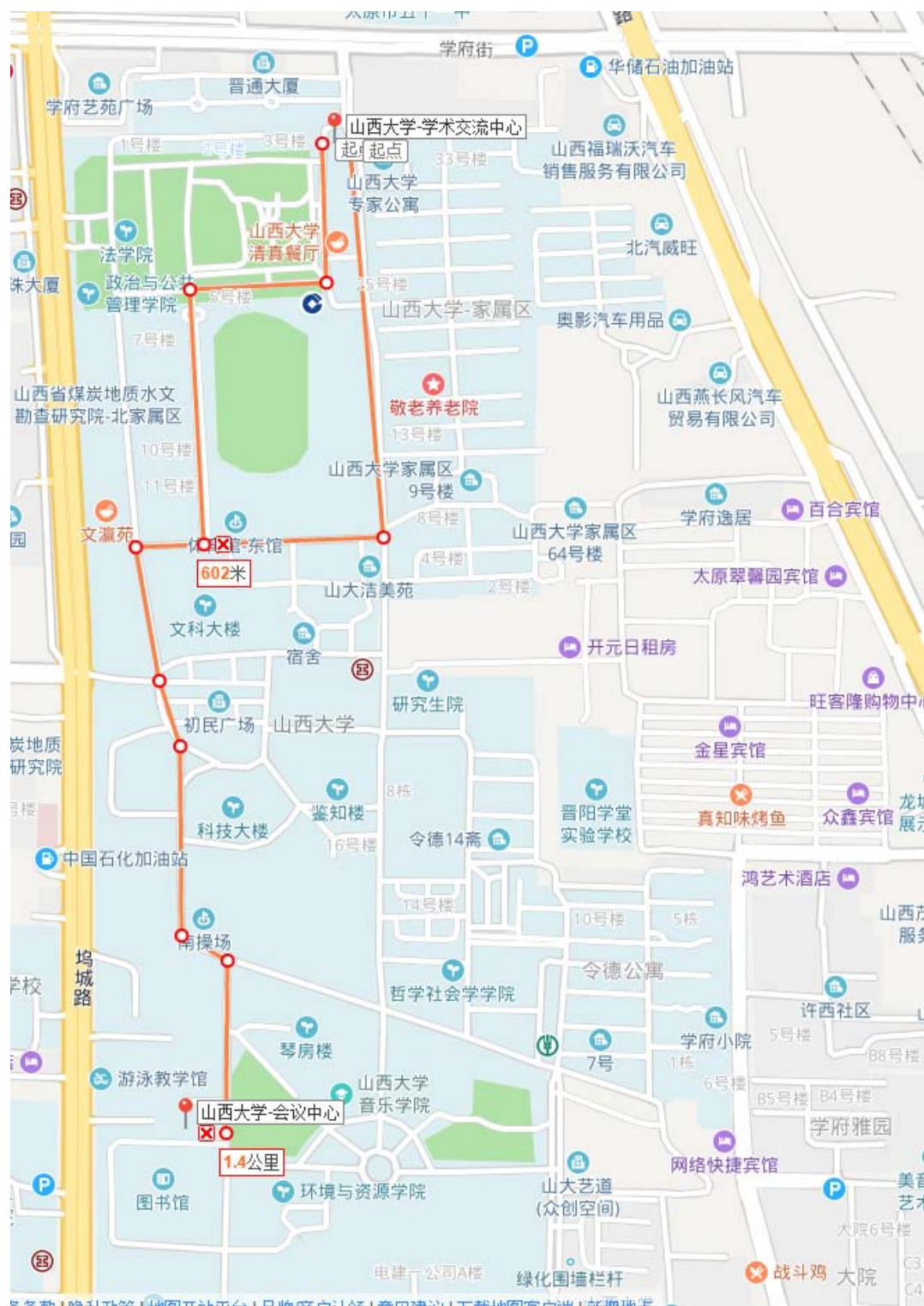
- P.150 Wideband Oblique-Incident Spherical-Plane Wave Conversion Metalens in K-band
Huilin Huang, Mengran Zhao, Xiaoming Chen, Shitao Zhu, Jiazhi Tang, Anxue Zhang (China, Mainland)
- P.151 Multifunctional rotatable illusion device
Jin Chen, Mingji Chen, Daining Fang (China, Mainland)
- P.152 Graphene-based Flexible Absorptive Frequency Selective Surface
Yaojia Yang, Bian Wu, Huiling Li, Shining Sun, Xiaochun Liu, liang Chen (China, Mainland)
- P.153 A Broadband Metamaterial Polarization Converter Based on Split Ring Resonators
Xiaonan Jiang, Pinyuan Zhong, Qingfeng Zhang, and Amir Khurram Rashid (China, Mainland)
- P.154 A Low-profile Wideband Pattern and Polarization Diversity Antenna
Yan Zheng, Sen Yan (China, Mainland)
- P.155 Mirror-Integrated Dielectric Resonator Antenna with Omnidirectional Circular Polarization
Xiyao Liu, Kwok Wa Leung, Yanting Liu, Nan Yang (China, Hongkong)
- P.156 A Wideband Millimeter Wave Antenna Based on SIW for 5G
Ruipeng Liu, Hongxing Zheng, Yang Zhou, Lu Wang, Wenjie Cui, Mengjun Wang, and Erping Li (China, Mainland)
- P.157 A 2×2 Monopole Antenna Array for Ceiling-Mount Wireless Access point
Min Chou, Jing-Feng Ke, Zhi-Chao Zhang, and Wen-Jiao Liao (China, Taiwan)
- P.158 Broadband ReflectArray for Millimeter Wave Coverage Enhancement in Indoor NLOS Scenario
Zeqing Lu, Yao Fang, Hao Yi, Long Li (China, Mainland)
- P.159 A Dual-Band WLAN Antenna Design for Placement in Hinges of Convertible Notebooks
Jing-Feng Ke, Min Chou, Zhi Chao Zhang and Wen-Jiao Liao (China, Taiwan)
- P.160 Compact Wideband Gain-Agile Receiving Filtenna
Yaqing Yu, Daotong Li, Ming-Chun Tang, Dajiang Li, Mei Li (China, Mainland)
- P.161 Design and Fabrication of 5.8GHz RF Energy Harvesting Rectifier
Mengfan Wang, Jianing Chen, Xinwang Cui, Long Li (China, Mainland)
- P.162 On the Outage Performance of Dual-Hop UAV Relaying with Multiple Sources
Zhenlei Dan, Xuewen Wu, Shengxiang Zhu, Tianxing Zhuang, Jinyuan Wang (China, Mainland)
- P.163 Study on 0.5THz Backward Wave Oscillator
Wenxin Liu, Qingqing Ye, Xin Guo, Chao Zhao and Zhaochuan Zhang (China, Mainland)
- P.164 A Wave-field Decomposition for Reverse Time Migration to Reduce the Low-wavenumber Artifact
Fei Lei, Xinrong Mao, Jin Liu, Yuanguo Zhou (China, Mainland)

交通信息

太原火车站	<p>出租车: 从太原火车站到山西大学约 20~23 元。</p> <p>公交车: 在太原火车站（公交站）上车，可乘坐 812/23/11/870/901/901 支线/902/861 路；坐 812/870/861 路在太原火车站（公交站）上车到坞城路学府街口下车后步行 350 米；坐 23/11/901/901 支线/902 路在太原火车站（公交站）上车到太榆路学府街口下车后步行 400 米。</p>
	<p>出租车: 从太原火车站到新纪元大酒店约 15 元。</p> <p>公交车: 在太原火车站（公交站）上车，可乘坐 812/23/11/870/901/901 支线/902/870 路；坐 812/870 路在太原火车站（公交站）上车到坞城路长风街口下车后步行 513 米；坐 861 路在太原火车站（公交站）上车到长风街建设南路口下车步行 180 米；坐 23/11/901/901 支线/902 路在太原火车站（公交站）上车到太榆路长风街（公交站）下车后步行 253 米。</p>
太原南站	<p>出租车: 从太原南站到山西大学南门 8 元。</p> <p>公交车: 在太原南站上车，可乘坐 868/70/861/849/813/201/817/902/901（支）/11 路；坐 868/70/861/849 路太原南站上车到山西大学站下车；坐 813/201/ 817/902/901（支）/11 路到太榆路学府街口站下车后步行 400 米。</p>
	<p>出租车: 从太原南站到新纪元大酒店约 10 元。</p> <p>公交车: 在太原南站上车，可乘坐 868/861/813/201/817/901/901（支）/11 路；坐 868 路太原南站上车到长风街坞城路口（公交站）下车步行 376 米；坐 861/813/201/817/901/901（支）/11 路到长风街建设南路口（公交站）下车后步行 187 米。</p>
太原武宿机场	<p>出租车:从太原武宿机场到山西大学约 18 元。</p> <p>公交车: 在武宿机场坐机场巴士三号线到太原南站（快站）公交站后坐 868/70 路到山西大学站下车；在武宿机场坐机场巴士三号线到太原南站（快线）公交站下车步行 200 米到火车南站（B 上客区东站台）公交站坐 861 路，在山西大学站下车；在武宿机场坐机场巴士一号线到建设南路长风街口公交站下车，步行 229 米到太榆路长风街口公交站坐 813/11/23/201/836/901/901 支/55/902/817 路到太榆路学府街口公交站下车，后步行 400 米到山西大学，或在太榆路学府街口公交站乘坐 877 路内环到坞城路学府街口公交站下车后步行 351 米。</p>

	<p>出租车:从太原武宿机场到新纪元大酒店约 18 元。</p> <p>公交车: 在武宿机场坐机场巴士一号线到迎兵汽车站公交站后步行 106 米到太榆路坞城东街口（公交站）坐 813/877 路外环/902/55/11/23/817/836/201 路到长风街建设南路口（公交站）步行 187 米；在武宿机场坐机场巴士一号线到建南汽车站公交站下车步行 244 米到建设南路十方街口公交站坐 808/838 路内环/619/861 路到长风街建设南路口（公交站）步行 187 米；在武宿机场坐 201 路到长风街建设南路口（公交站）步行 187 米；从武宿机场步行 2.5 公里到蓝海汽配城公交站坐 901 路（支）/901 路到长风街建设南路口（公交站）步行 187 米。</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

会议场所及餐厅地图



酒店地图及路线指引



酒店用餐信息

7月19日中、晚餐：山西大学学术交流中心，请携带会议用餐凭证；

7月20日中餐：山西大学学术交流中心，请携带会议用餐凭证；

7月20日颁奖晚宴：新纪元大酒店，19:00，请携带会议用餐凭证；

7月21日中餐：山西大学学术交流中心，请携带会议用餐凭证；