



SCUT Newsletter 华工新闻快讯



1. SCUT Team Ranked Globally Top 16 in the Philip C. Jessup International Law Moot Court Competition

全球16强！华南理工大学代表队在杰赛普国际法模拟法庭比赛中获佳绩

From April 8 to 15, the 64th Philip C. Jessup International Law Moot Court Competition was held in Washington D.C., USA. SCUT broke its record in the competition, ranking among the global top 16, and was awarded the Alona E. Evans Award for Best Memorials.

4月8日至15日，第六十四届“杰赛普国际法模拟法庭比赛（Philip C. Jessup International Law Moot Court Competition）”国际赛在美国华盛顿举行。华南理工大学代表队取得了全球前16名的历史最佳成绩，并荣获Alona E. Evans最佳文书奖。

The Philip C. Jessup International Law Moot Court Competition is organized by the International Law Students Association (ILSA), and is known as the "Olympics for Law Professionals". Since its establishment in 1959, the competition has attracted students from more than 900 colleges and universities in over 100 countries and regions, demonstrating the legal education level of their countries.

杰赛普国际法模拟法庭大赛由美国国际法学生联合会主办，一直被誉为法学领域的“奥林匹克竞赛”。自1959年举办以来，每年有100多个国家和地区的900余所大学参赛，是各国法学教育水平的集中展示。



2. Vice President Makoto Watanabe of Chiba University Visited SCUT and Appointed as a SCUT Visiting Professor

日本千叶大学渡边诚理事来访并受聘华南理工大学客座教授

On April 28, SCUT Chancellor Zhang Xichun met with Makoto Watanabe, Vice President of Chiba University. This year marks the 45th anniversary of the signing of the *China-Japan Treaty of Peace and Friendship*. In the context of building a China-Japan relationship fit for a new era, the two countries have seen more frequent communications, in particular between their young people, as well as growing cultural exchanges and academic cooperation between higher education institutions. Availing the opportunity of the joint undergraduate program of industrial design, both universities will join hands to break new ground for China-Japan educational cooperation based on existing collaboration projects.

4月28日，华南理工党委书记章熙春会见日本千叶大学理事渡边诚一行。今年正值《中日和平友好条约》缔结45周年，在构建契合新时代要求的中日关系背景下，中日两国之间特别是青年的交流不断强化，高校间的人文交流与学术合作也日益紧密。双方将立足现有合作，以工业设计本科专业中外合作办学项目为契

机，携手开创中日教育合作交流新局面。

The cooperation between SCUT and Chiba University began in 2019, and both sides have carried out such cooperative actions as joint teaching and course co-development, building up mutual trust and deep friendship. The "4+0" joint undergraduate program of industrial design was approved by the Ministry of Education and will start to recruit students this year. It is the first Chinese-foreign joint program in collaboration with Japan's national higher education institutions in the Guangdong, Hong Kong and Macao Greater Bay Area, which is expected to prepare high-caliber innovative global talents for the region and beyond.

华南理工大学与千叶大学的合作始于2019年，双方在学生联合培养、课程共建等方面开展了务实合作，建立了深厚的互信和情谊。两校合作举办的“4+0”工业设计专业本科中外合作办学项目获教育部批复并将于今年招生。该项目是粤港澳大湾区首个与日本国立高校开展的中外合作办学项目，将为区域乃至全球培养拔尖创新的国际化人才。

The image shows a screenshot of the IEEE ComSoc website on the left and a technical diagram on the right. The website page is titled "The IEEE Communications Society Best Tutorial Paper Award" and lists details such as the prize amount (up to \$5500), eligibility criteria, and the 2023 award recipients: Qingqing Wu, Shaowen Zheng, Beixiong Zheng, Changsheng You, and Rui Zhang. The technical diagram illustrates an IRS system. It shows an IRS controller connected to an AP/BS (Access Point/Base Station) and a control circuit board with a copper backplane. The IRS consists of a grid of tunable elements. A beam of light is shown reflecting off the IRS towards a user. The diagram also shows various applications of IRS, including localization, AR/VR, massive connectivity, edge computing, smart office, smart transportation, physical layer security, and dead zone users. A detailed view of a tunable reflecting element shows a DC feeding via hole and a PIN diode. The equivalent circuit of the PIN diode is shown in two states: ON (with a resistor) and OFF (with a capacitor).

3. Associate Prof. Zheng Beixiong of SCUT Received IEEE Communications Society Best Tutorial Paper Award

华南理工郑倍雄副教授成果荣获IEEE通信学会最佳教程论文奖

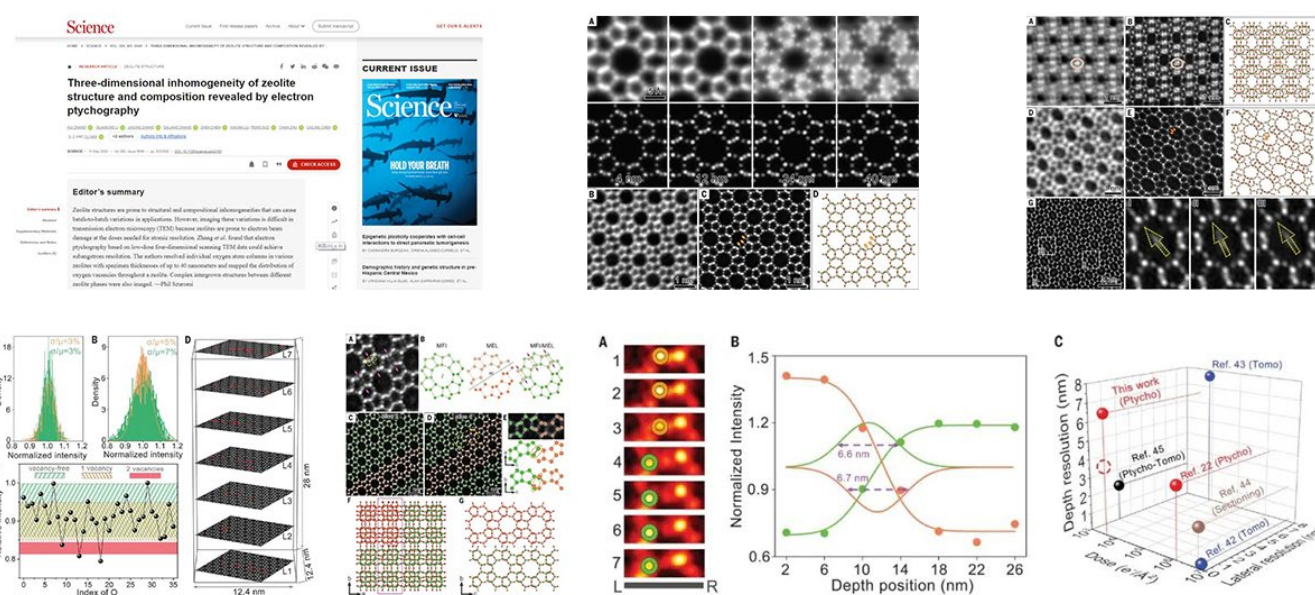
In April, Associate Prof. Zheng Beixiong of South China University of Technology (SCUT) and other scholars received the prestigious 2023 IEEE Communications Society Best Tutorial Paper Award for their co-authored paper titled "Intelligent Reflecting Surface-Aided Wireless Communications: A Tutorial". The award ceremony took place at the IEEE flagship conference on wireless communications, the International Conference on Communication (ICC), in Rome, Italy in May 2023. The other co-authors of the paper include Prof. Zhong Rui of the Chinese University of Hong Kong (Shenzhen), a Fellow of the Academy of Engineering Singapore (SAEng), Prof. Wu Qingqing of Shanghai Jiao Tong University, Prof. Zhang Shuowen of Hong Kong Polytechnic University, and Prof. You Changsheng of Southern University of Science and Technology.

4月，华南理工大学微电子学院郑倍雄副教授与其他学者合作撰写的论文《Intelligent Reflecting Surface-

Aided Wireless Communications: ATutorial》获2023年度IEEE通信学会最佳教程论文奖 (IEEE Communications Society Best Tutorial Paper Award)。颁奖典礼于2023年5月在意大利罗马召开的IEEE无线通信旗舰会议ICC上举行。该论文的合作作者包括新加坡工程院院士、香港中文大学(深圳)的张瑞教授, 上海交通大学的武庆庆教授、香港理工大学的张硕闻教授和南方科技大学的游昌盛教授。

The IEEE Communications Society Best Tutorial Paper Award is one of the most recognized international academic awards in the field of communications. Each year, only one paper is awarded this honor (or left vacant), recognizing the best tutorial paper published in the journals or magazines of the IEEE Communications Society over the past five years.

IEEE通信学会最佳教程论文奖是通信领域最重要的国际学术奖项之一, 每年最多授予1篇最佳教程论文(可空缺), 旨在颁发给在过去5年中发表在IEEE通信学会杂志或期刊上的最佳教程论文。



4. SCUT's Collaborative Research Published in Science, Revealing New Advances in Zeolite Molecular Sieve Low-dose Imaging Technology

华南理工合作成果登上Science 沸石分子筛低剂量成像技术取得新进展

On May 12, "Three-dimensional Inhomogeneity of Zeolite Structure and Composition Revealed by Electron Ptychography", the collaborative research of SCUT Professor Zhang Hui and Professor Han Yu from King Abdullah University of Science and Technology (KAUST), was published in Science, with Professor Zhang Hui and KAUST Dr. Li Guanxing as co-first authors, Professor Zhang Hui and KAUST Professor Han Yu as co-corresponding authors, and SCUT as the first communication unit.

5月12日, 华南理工大学张辉教授和阿卜杜拉国王科技大学 (KAUST) 韩宇教授的合作研究成果"Three-dimensional inhomogeneity of zeolite structure and composition revealed by electron ptychography"在Science上发表。其中, 张辉教授和KAUST李冠星博士为共同第一作者, 张辉教授和KAUST韩宇教授为共同通讯作者, 华南理工大学是第一通讯单位。

To overcome the limits of the existing atomic-resolution low-dose imaging technology, sample tilting and electron-dose control methods used in ultra-low dose imaging are applied to electron

ptychography, achieving a transverse resolution better than 1 Å and a longitudinal resolution of ~6.6 nm in a variety of zeolite molecular sieves of tens of nanometers thick. The abundant 3-D structural information makes it possible to conduct in-depth research into the local structure and composition characteristics, such as oxygen vacancy distributions, configurations of absorbed molecules and nanodomain interface structure. Since zeolite molecular sieves are one of the most important solid catalysts in the petrochemical industry, this breakthrough of low-dose imaging technology will help establish the structure-property relationship and accelerate the research and development of catalysts.

该研究成果针对现有原子分辨率低剂量成像技术的不足，将低剂量成像技术中的样品倾转和电子计量控制方法运用于叠层衍射，在几十纳米厚的多种沸石分子筛中实现了优于1 Å的横向分辨率和~6.6 nm的纵向分辨率。丰富的三维结构信息使深入探究氧空位分布、孔道分子构型和纳米畴界面结构等局域结构及成分特征成为可能。由于沸石分子筛是石油化工行业中最重要固体催化剂之一，低剂量成像技术的突破将有助于更深入地探究其构效关系，加速催化剂的研发。



5. SCUT Co-hosted 6th International Conference on Energy, Electrical and Power Engineering (CEEPE2023)

华南理工大学联合主办第六届能源、电气和电力工程国际会议 (CEEPE2023)

From May 12 to 14, the 6th International Conference on Energy, Electrical and Power Engineering (CEEPE2023), co-hosted by SCUT, CSG Guangdong Power Grid Corporation and the Institute of Electrical and Electronics Engineers (IEEE), was held in Guangzhou, China, attracting more than 200 experts, scholars and representatives from universities, enterprises and research institutes from home and abroad.

5月12-14日，第六届能源、电气和电力工程会议（CEEPE2023）在中国广州召开。会议由华南理工大学、中国南方电网广东电网有限责任公司和电气与电子工程师协会（IEEE）联合主办，来自国内外多所高校、企业、科研院所等超过200位专家学者和研究团队代表参加了会议。

With the theme of "Powering Complex Systems for a Brighter Future", the conference featured 8 keynote presentations, 4 youth forums, 20 sub-forums, 2 poster exhibition venues, and 4 student essay

competitions. At the conference, experts and scholars discussed ideas and measures to deal with new problems and challenges arising from energy and power systems in the context of realizing China's "dual carbon" strategic goal and developing a new power system with new energy as its main component, which is of great significance to the green development of China and the world.

本次会议以赋能复杂系统点亮未来为主题，设8个主旨报告、4个青年论坛、20个分论坛、2个墙报展示会场、4个学生论文竞赛环节。会上各专家、学者共同探讨了在实现我国"双碳"战略目标和建设以新能源为主体的新型电力系统背景下，应对能源与电力系统新问题和新挑战的思路和举措，对中国及全球绿色发展具有重要意义。



6. SCUT's Millimeter-Wave and Terahertz Technology Team Has Won Best Student Paper Awards at IEEE IWS for Three Consecutive Years

毫米波与太赫兹技术团队连续三年获国际无线年会最佳学生论文奖

During 2023 China Microwave Week, which was held in Qingdao from May 14 to 17, Miss He Xianhui, a PhD student of Millimeter-Wave and Terahertz Technology Team from School of Electronic and Information Engineering in SCUT, won Best Student Paper Award at 2023 IEEE MTT-S International Wireless Symposium (IEEE IWS2023) for her paper entitled "A 140 GHz LTCC-based High-efficiency Heterogeneous Reflectarray Antenna" (Supervisors: Che Wenquan, Yang Wanchen, Xue Quan). This is the third time for the team to win the Best Student Paper Awards of IWS (2020-2023).

5月14-17日，中国微波周（2023 China Microwave Week）在青岛举办。华南理工大学电子与信息学院毫米波与太赫兹技术团队博士生贺显惠（指导老师：车文荃、杨琬琛、薛泉）的论文“A 140 GHz LTCC-based High-efficiency Heterogeneous Reflectarray Antenna（基于LTCC工艺的140GHz高效率异构反射阵天线）”获2023年度国际无线年会（IEEE IWS2023）最佳学生论文奖。这是毫米波与太赫兹团队自2020年以来连续第三次获得该会议最佳学生论文奖。

The paper addresses the problems of serious electromagnetic wave transmission loss in terahertz band and high dependence of terahertz antenna on machining accuracy, and proposes a novel design method of heterogeneous reflectarray antenna based on equivalent medium analysis, realizing a high-

efficiency and high-gain terahertz reflectarray antenna and providing valuable technical solutions for future terahertz communication/radar applications.

获奖论文针对太赫兹频段电磁波传输损耗严重、太赫兹天线对加工精度依赖性较高等问题，提出一种新颖的基于等效媒质分析的异构反射阵天线设计方法，实现了高效率高增益太赫兹反射阵天线，为未来太赫兹通信/雷达应用提供了有价值的技术解决方案。

China Microwave Week includes 2023 National Conference on Microwave and Millimeter Wave (NCMMW2023), 2023 Microwave Wireless Industry Exhibition (MWIE2023), 2023 International Conference on Microwave and Millimeter Wave Technology (ICMMT2023) and 2023 International Wireless Symposium (IWS2023). A total of 2,150 papers were submitted and 1,748 were accepted for presentation in the conferences.

中国微波周由2023年全国微波毫米波会议（NCMMW2023）、微波毫米波科技成果及产品展（MWIE2023）、国际微波毫米波技术会议（ICMMT2023）和国际无线年会（IWS2023）组成。本届中国微波周会议共收到投稿论文2150篇，会议收录论文1748篇。



7. SCUT Professor Chen Xiaoqi Elected as RSNZ Fellow

华南理工大学陈小奇教授当选新西兰皇家科学院院士

In May, SCUT Professor Chen Xiaoqi was elected as a fellow of the Royal Society of New Zealand (RSNZ) and went to New Zealand to attend the RSNZ fellows award ceremony, where he delivered an academic lecture.

5月，华南理工大学陈小奇教授当选新西兰皇家科学院院士，赴新西兰参加了新西兰皇家科学院院士授予仪式并作学术报告。

Academician Chen Xiaoqi, a high-level talent recruited by SCUT, currently serves as dean of SCUT Shien-Ming Wu School of Intelligent Engineering. He has made outstanding contributions in fields including autonomous robotics, automation, and digital manufacturing. In respect to mobile forestry robots, his research has greatly facilitated the safe and autonomous operation of forestry pruning and

elling. The new forest walking bionic robots he has developed can work in the forest with steep terrain, which has solved the pain points of the industry and generated considerable economic benefits. Professor Chen Xiaoqi has also developed a 3D grinding and polishing robot system with soft contact force control for the repair and remanufacturing of aircraft engine blades, setting a new benchmark in the industry. Applications of the system also include use in the maintenance of Rolls-Royce aircraft engines .

陈小奇院士是华南理工大学引进的高层次人才，现任华南理工大学吴贤铭智能工程学院院长。他在自主机器人、自动化和数字制造等领域作出了杰出贡献。移动林业机器人方面，极大地促进了林业修枝和砍伐的安全自主作业。他研发的新型树林穿越仿生机器人能在陡峭地形的树林作业，解决行业的痛点，产生可观的经济效益。陈小奇教授还研制了软接触力控三维磨抛机器人系统，用于航空发动机叶片的修复与再制造，该系统已成为行业的新标杆，并在劳斯莱斯等航空发动机的维修中得到应用。

The Royal Society of New Zealand (RSNZ), New Zealand's most prestigious academic institution established in 1867, is intended to promote research in science, technology and the humanities in New Zealand.

新西兰皇家科学院是新西兰最具声望的学术机构，成立于1867年，旨在促进新西兰的科学、技术和人文研究。



8. SCUT Hosted International Paper Physics Conference 2023

首次在中国举行 华南理工大学主办国际纸页物理会议

From May 31 to June 2, the International Paper Physics Conference 2023 (IPPC2023), an annual academic conference with international reputation in the field of pulp and papermaking, was held in China for the first time this year by SCUT. More than 150 scholars from 36 universities and institutions from China, the United States, Canada, Sweden, Australia, France, Finland and other countries were in attendance.

5月31-6月2日，2023年国际纸页物理会议由华南理工大学主办，该会议是制浆造纸领域一年一度的具有重

要国际影响力的学术会议，今年首次在中国举行。来自中国、美国、加拿大、瑞典、澳大利亚、法国、芬兰等国家36所高校和科研单位的150余名学者参加了会议。

The conference covered the topics of paper structure and performance, process simulation and detection, novel materials and applications as well as intelligent control and sustainable development and other leading disciplines, involving 9 keynotes, 27 invited speeches, 31 oral presentations, International Paper Physics Committee meetings and posters with live streaming on ZOOM as well.

本次会议涉及主题包括纸张结构与性能、工艺仿真与检测、新型材料及应用与智能控制及可持续发展等学科前沿，设有9个主题报告、27个邀请报告、31个口头报告、国际纸页物理委员会会议和墙报交流等环节，并同步在ZOOM平台线上直播。

As an international academic feast in the field of pulping and papermaking, the conference aims to bring scholars and experts from academia and industry together to carry out in-depth and extensive discussions on emerging technologies in the field of paper physics and their potential impact on the industry. Simultaneously, it aims to build a valuable international exchange platform for theoretical and technological development of basic research in paper physics and new paper-based materials at home and abroad. Additionally, five distinguished attendances were invited to address Cailun Academic forum, promoting the discipline reform.

作为轻工造纸领域国际学术饕餮，会议旨在汇聚学术界和工业界的专家学者，对纸张物理领域的研究成果及其对工业的潜在影响开展深入而广泛的讨论，为国内外纸物理基础研究、新型纸基材料等研究领域的理论与技术发展搭建宝贵的学习和国际化交流平台。另外，特邀5位著名参会学者推出“蔡伦讲坛之海外名师大讲堂”系列课程，多维度推进学科科教改革。

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