



SCUT Newsletter 华工新闻快讯



1. South China University of Technology achieves the best ever result in the National Postgraduate Mathematical Contest in Modeling

华南理工在中国研究生数学建模竞赛创历史最佳成绩

On December 28, 2021, the 18th Huawei Cup National Postgraduate Mathematical Contest in Modeling held in

October officially announced the winners. The teams led by Liang Yunshun and Xi Ciyang from SCUT won the first prize and were nominated for the Star of Mathematical Modeling. Another 15 teams won second prize, 16 teams won third prize, and 60 teams received the participation award. The contest is one of the academic events that attracts the largest number of graduate students from SCUT in the widest range of majors.

2021年12月28日，“华为杯”第十八届中国研究生数学建模竞赛正式公布获奖名单。华南理工大学梁允舜团队和习慈羊团队荣获一等奖，并获得数模之星提名。另有15个团队获得二等奖、16个团队获得三等奖、60个团队获得成功参与奖。该赛事是目前华南理工大学在校研究生参与人数最多、涉及专业最广的学科竞赛活动之一。

The contest was sponsored by the Chinese Society of Academic Degrees and Graduate Education and the Youth Science and Technology Center of China Association for Science and Technology, and hosted by SCUT. Its participants include 17,692 postgraduate teams from 459 education institutes at home (provinces, autonomous regions, municipalities directly under the Central Government, and special administrative regions) and abroad.

本届大赛由中国学位与研究生教育学会、中国科协青少年科技中心主办，华南理工大学承办，共吸引了来自全国各省、自治区、直辖市、特别行政区和国外共459个研究生培养单位的17692支研究生队伍参赛。



2. South China University of Technology jointly establishes China's first production-education-research-application joint laboratory for refrigerator food preservation

华南理工参与组建的中国首个冰箱食品保鲜产学研用联合研究实验室成立

On January 7, China's first joint research laboratory for refrigerator food preservation, the Midea Refrigerator-South China University of Technology Advanced Preservation Technology Joint Laboratory was established in Foshan, Guangdong.

1月7日，中国首个冰箱食品保鲜产学研用联合研究实验室“美的冰箱-华南理工先进保鲜技术联合实验室”在广东佛山成立。

The joint research lab will conduct systematic and in-depth research on topics such as refrigerator food

preservation with and refrigerator intelligent perception and information technology, aiming to fill the gaps in all aspects of research on refrigerator food preservation in China.

该联合研究实验将对冰箱食材保鲜技术、冰箱智能感知及信息技术等课题进行系统深入研究，旨在填补中国全方位冰箱食品保鲜研究领域的一个空白。



3. Professor Chen Junlong of South China University of Technology wins the 2021 Wu Wenjun AI Award for Outstanding Contribution

华南理工陈俊龙教授荣获2021年度吴文俊人工智能杰出贡献奖

On January 27, Professor C. L. Philip Chen (School of Computer Science and Engineering, SCUT), academician of the Academia Europaea, and academician of the European Academy of Sciences and Arts, won the Wu Wenjun AI Award for Outstanding Contribution.

1月27日，华南理工大学计算机科学与工程学院教授、欧洲科学院外籍院士、欧洲科学与艺术学院院士陈俊龙荣获吴文俊人工智能杰出贡献奖。

The Wu Wenjun AI Science and Technology Award, the highest award in the field of AI in China, was established with the approval of the Ministry of Science and Technology. The award is granted once a year to recognize the institutes and individuals who have made outstanding contributions or major breakthroughs in the field of AI science and technology.

吴文俊人工智能科学技术奖是中国智能科学技术最高奖，经国家科技部核准设立。该奖项每年评奖一次，表彰一批在人工智能科学技术领域中做出突出贡献、取得重大突破的单位和个人。

4. South China University of Technology offers 3 new undergraduate majors

华南理工新增3个本科专业

On February 24, the Ministry of Education announced the results of the 2021 filing and approval of undergraduate majors in institutes of higher education. Three new undergraduate majors of SCUT, namely Intelligent Construction, Intelligent Vehicle Engineering, and Marxism, were approved to be established.

2月24日，教育部公布2021年度普通高等学校本科专业备案和审批结果，华南理工大学新增智能建造、智能车辆工程、马克思主义理论等3个本科专业。

Major Name 专业名称	Major Code 专业代码	Degree Type 学位授予门类	Duration 修业年限
Intelligent Construction 智能建造	081008T	Engineering 工学	Four years 四年
Intelligent Vehicle Engineering 智能车辆工程	080214T	Engineering 工学	Four years 四年
Marxism 马克思主义理论	030504T	Laws 法学	Four years 四年

In recent years, SCUT has taken the initiative to meet the needs of the country and Guangdong-Hong Kong-Macao Greater Bay Area for economic and social development. This has been achieved by successively establishing a number of new majors in engineering, arts and medicine, including Artificial Intelligence, Robotics Engineering, Intelligent Manufacturing Engineering, Microelectronics Science and Engineering, Fintech, and Clinical Medicine. These measures accelerate the training of talents who have the caliber of innovation, creation and entrepreneurship and meet the needs of the new economy and new industries.

近年来，华南理工大学主动对接国家和粤港澳大湾区经济社会发展需求，先后增设人工智能、机器人工程、智能制造工程、微电子科学与工程、金融科技、临床医学等一批新工科、新文科、新医科专业，加快培养适应新经济、新产业需求的“三创型”人才。

The collage features a blue banner on the left for a signing ceremony between XuetangX and Indonesia Cyber Education Institute. The center shows a screenshot of the XuetangX website with course listings. On the right, there are three video thumbnails: one for 'Food Biochemistry & Nutrition' with a woman presenting, one for 'Computer Networks' with a woman, and another for 'Computer Networks' with a man.

5. South China University of Technology offers three MOOCs to Indonesian universities for free

互惠共享 华南理工向印尼高校捐赠3门慕课

On February 24, XuetangX, a MOOC platform in China, and Indonesia's national online education platform held an online education cooperation agreement signing ceremony. According to the agreement, XuetangX and 18 Chinese universities will offer 60 high-quality MOOCs to Indonesian university students for the online learning.

2月24日，中国学堂在线与印度尼西亚国家在线教育平台举行在线教育合作协议签约仪式。根据双方协议，学堂在线及中国18所高校将向印尼捐赠60门优质慕课资源与服务，用于印尼高校学生的在线学习。

Among them, three courses are from SCUT, namely Calculus by Professor Deng Xue of the School of Mathematics, Food Biochemistry by Professor Ren Jiaoyan of the School of Food Science and Engineering, and Computer Network by Associate Professor Wang Haoxiang of the School of Computer Science and Engineering. These three courses were first launched globally in 2020 on international online learning platforms such as iCourse and XuetangX.

华南理工大学共有3门慕课参与此次捐赠计划，分别是数学学院邓雪教授的《微积分》慕课、食品科学与工程学院任娇艳教授的《食品生物化学》慕课、计算机科学与工程学院王昊翔副教授的《计算机网络》慕课。这3门课程于2020年作为首批课程通过以“爱课程”“学堂在线”为代表的在线教学国际平台面向全球推出。



6. South China University of Technology is approved to establish three pilot virtual teaching and research offices by the Ministry of Education

华南理工获批3个教育部首批试点虚拟教研室

South China University of Technology is approved to establish three pilot virtual teaching and research offices by the Ministry of Education, namely the Virtual Teaching and Research Office for the Mechanical Design Basic Course, the Virtual Teaching and Research Office for the Urban Design Course, the Virtual Teaching and Research Office for the Food Science and Engineering Professional Course Group.

华南理工大学机械设计基础课程虚拟教研室、城市设计课程虚拟教研室和食品科学与工程专业课程群虚拟教研室等3个

单位获批教育部首批试点虚拟教研室。

These pilot offices aim to prepare faculty of good character and improve their ability to train students. Relying on modern information technology, they explore the possibility of building new grass-roots teaching organizations, academic communities and a quality-oriented culture to ignite the faculty's passion for teaching and improve their ability to teach and research.

各试点单位以立德树人为根本任务，以提高人才培养能力为核心，以现代信息技术为依托，探索建设新型基层教学组织，打造教师教学学术共同体和质量文化，引导教师回归教学、热爱教学、研究教学，提升教育教学能力。



7. South China University of Technology signs a tripartite strategic cooperation agreement with Pazhou Lab and China Unicom Guangdong Branch

华南理工大学、琶洲实验室与广东联通签署三方战略合作协议

On March 4, South China University of Technology, Guangdong Lab of Artificial Intelligence and Digital Economy (Guangzhou) (hereinafter referred to as "Pazhou Lab") and China Unicom Guangdong Branch signed a comprehensive strategic cooperation agreement.

3月4日，华南理工大学、人工智能与数字经济广东省实验室（广州）（以下简称“琶洲实验室”）与广东联通全面战略合作协议签署。

Focusing on artificial intelligence and the digital economy, SCUT takes extraordinary measures to gather state-of-the-art technologies in related fields to empower talent training and research innovation. As the organization that leads the establishment of Pazhou Lab, SCUT will support the establishment in all aspects to lead and support the high-quality development of the country and Guangdong-Hong Kong-Macao Greater Bay Area.

华南理工聚焦人工智能和数字经济领域，汇聚相关领域全球顶尖科技创新资源，以超常规举措大力推进人才培养和科研创新。作为琶洲实验室的牵头组建和依托单位，华工将全方位支持实验室建设，为国家和粤港澳大湾区高质量发展提供引领和支撑。

This tripartite cooperation will focus on the research of key technologies such as AI, research breakthroughs, and co-training of talent by schools and enterprises. The parties will strive to promote the commercialization of scientific and technological achievements in industries and the integration of the innovation chain and industrial chain, so as to build a bridge among renowned universities, labs and large corporations that cooperate on production, education and research.

此次三方合作将聚焦人工智能等关键技术研究、各类科研攻关、校企人才培养等方向，努力推动科技成果向产业流动转化，促进创新链产业链深度融合，成功架起“名高校”“实验室”和“大企业”之间的产学研合作大桥。

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ARTICLES

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A transistor-like pH-sensitive nanodetergent for selective cancer therapy

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8. A team from South China University of Technology reports "proton transistor" nanodetergents for selective cancer therapy

华南理工团队首次报道选择性抗肿瘤的pH超敏溶瘤纳米材料

On March 25, a research team of SCUT published an online article on tumor acidity-activatable nanomaterials in *Nature Nanotechnology*, a top academic journal in the field of nanotechnology. The research was conducted by the team led by Professor Wang Jun and Professor Xiong Menghua at the SCUT School of Biomedical Sciences and Engineering and the National Engineering Research Center for Tissue Restoration and Reconstruction, in cooperation with Associate Professor Bao Yan at Sun Yat-sen Memorial Hospital of Sun Yat-sen University and Associate Professor Xiao Shiyan at the University of Science and Technology of China. The co-first authors of the article are postdoctoral researcher Liu Mingdong, master's student Huang Liangqi, and doctoral student Zhang Weinan.

3月25日，华南理工大学科研团队在肿瘤酸性微环境激活型纳米材料的研究成果以论文形式在纳米技术领域顶级学术期刊*Nature Nanotechnology*上在线发表。该研究由华南理工大学生物医学科学与工程学院、国家人体组织功能重建工程技术研究中心王均教授和熊梦华教授团队，与中山大学孙逸仙纪念医院鲍燕副研究员、中国科学技术大学肖石燕副教授合作。刘明冬博士后、黄良琪硕士与张伟男博士为论文的共同第一作者。

The team report the design of 'proton transistor' nanodetergents that can convert the subtle pH perturbation

signals of tumour tissues into sharp transition signals of membranolytic activity for selective cancer therapy. The design of pTNT achieves the precise control of its membranolytic activity within a 0.1 pH change, offering new strategies and opportunities for the treatment of tumors, and even drug-resistant tumors.

研究通过发展了具有“质子晶体管”效应的pH超敏纳米去垢剂pTNTs ("Proton transistor" Nanodetergents)，使得具有裂解细胞膜活性的材料在杀灭肿瘤细胞的同时，突破了以往该类材料对正常细胞和组织的高毒性问题。pTNT的设计实现了在0.1的pH变化下膜裂解活性材料功能的精准控制，为肿瘤乃至耐药肿瘤的治疗提供了新策略和新思路。

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