

经管视野

ECON
MANAGEMENT
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AACSB
ACCREDITED

EQUIS
ACCREDITED

AMBA
ACCREDITED



谋好篇 起好步 奋进“十四五”

2月20日夜,全世界的目光再次聚焦“双奥之城”,五环旗下的中国自信通过镜头向世界传递,闭幕式上“美美与共”的中国结,承载着“世界大同,天下一家”的美好寓意;

在北京冬奥期间,“一带一路”朋友圈迎来了新伙伴——中国与阿根廷签署共建“一带一路”谅解备忘录。“一带一路”倡议提出八年多来,朋友圈越来越大,在各方共同努力下,不断走深走实,为全球开放合作、世界经济复苏注入了新动能;

在960多万平方公里的国土之上,扶贫车间里机器轰鸣,大型基础设施如火如荼建设,果园枝头挂满当地的特色瓜果,以县长群体为代表的政府官员纷纷“带货”……

随着春天脚步的临近,无数新时代风景线气象万千,“十四五”起步铿锵有力。

这一年来,学院围绕国家重大战略,以“人”为本、扩大开放、加强协同、促进创新、着力转型,不仅实现了“十三五”圆满收官,交出了高质量发展的高分报表,而且为学院“十四五”跨越式发展奠定了良好的基础。

人才培养,关键在师资。学院着力在高层次人才引育方面下功夫,目前学院国家级人才已达到19人次。同时,学院不断加强内涵建设,2021国家级一流本科专业建设点由原来的4个增至7个,多本教材获

国家级荣誉,多门课程入选教育部或上海市重点课程等。学院在扩大国际交流与合作方面也亮点颇多,国际生源进一步提升,再获EQUIS和AACSB国际权威认证,管理学项目国际排名持续位居前列。除不断提升内生发展动力外,学院还持续以经管智慧服务国家和重大战略需求,并积极整合资源搭建高水平学术交流平台,先后承办了一系列国家级高端会议和一系列高水平专业性论坛,学院影响力和知名度再上新台阶。为高质量发展积势蓄能,学院还积极探索了多元化的校企合作模式,从党建共建到业务融合,从学科共建到人才培养,走出了一条高质量发展的新路子。

奋进新征程,迈向现代化。“十四五”开局之年,学院自觉将自身工作放到国家发展新格局和现代化建设全局中去思考,进一步找准坐标和方位,谋定“十四五”的工作思路。

“十四五”既是宏大叙事,也有微观落脚。基于此,我们每个经管人都要鼓足干劲,全力以赴,在接力奔跑、奋力冲刺中,我们定能在新起点上实现新跨越,顺利实现“十四五”规划目标,一起奔赴更美好的未来!

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“经”彩璀璨 点亮新篇

2021 TOP 10 EVENTS IN 2021

同济经管 2021 十大事件

这一年
我们继续战“疫”，守望校园
于纷繁中寻找坚定

这一年
我们踔厉奋发、笃行不怠
瞄准高质量
矢志创新 协同并进
筑巢引凤 众建贤才
传承同济基因
铸造学科筋骨
与国家发展同频共振
以经管智慧传递中国声音
“十四五”迈出稳健步伐

这一年
我们回眸百年，汲取智慧和力量
星空中闪闪发光的故事
鉴照未来新征程
激励我们
以汗水铸就未来
以热爱，奔赴山海！

01 “经”心向党 庆百年华诞

2021 年恰逢中国共产党成立 100 周年，学院师生积极开展多种形式的党史学习教育，持续不断学习贯彻习近平总书记在庆祝中国共产党成立 100 周年大会上的重要讲话精神和党的十九届六中全会精神，学党史、感党恩、悟党魂，切实做到学史明理、学史增信、学史崇德、学史力行，将对党的历史的感悟转化为落实立德树人根本任务、推动学院高质量建设“双一流”的内在力量。



荣誉之光照前路，不忘初心共前行——
同济经管“光荣在党 50 年”纪念章颁发仪式隆重举行



2020 级公共管理硕士研究生郑思馨，
荣获“全国脱贫攻坚先进个人”荣誉称号！



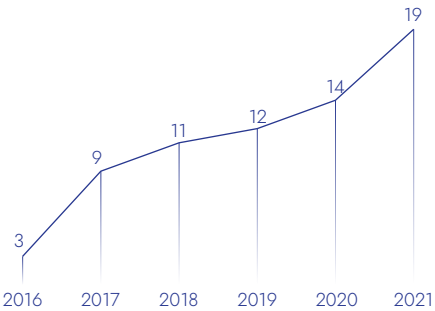
我院党委书记施骞为师生上党史学习教育专题党课



同济经管师生齐声合唱，迎接建党百年

02 高层次人才倍增 师资队伍质量显著提升

学院着眼于整体规划和学科发展需求，持续加大高层次人才引育力度，成效显著。十三五期间，学院国家级高层次人才数翻两番，2021 年再创新高，新增 5 人，其中 3 人入选重大人才工程。目前，学院国家级人才已达到 19 人次（占教师总量的 10%）。学院高度重视教师队伍整体建设，提供各类教学、科研平台助力教师发展。来自宾大沃顿、密歇根大学、达特茅斯学院等国际一流高校博士学位的年轻教师纷纷加入同济经管，显著优化了学院师资队伍学术背景和学缘结构，超过一半的新进教师已经拥有发表在本领域顶尖学术期刊上的成果。学院还引进了一批中坚学术力量，他们在人才队伍扩容，国家重大项目取得等方面做出了显著贡献，共同构建了学院高层次人才聚集的“高地”。



近五年，国家级人才总数增长达到 19 人次

03 培根铸魂 追求内涵式发展

近年来学院不断加强专业内涵建设，深入推进教育教学改革，鼓励教师开展创新实践，2021 年我院新增 3 个专业入选**国家级一流本科专业建设点**，加上之前已入选的金融学、信息管理与信息系统、工程管理和市场营销共有 7 个专业入选**国家级一流本科专业建设点**，实现了管理科学与工程、工商管理、应用经济学 3 个一级学科全覆盖，在全国同类学院名列前茅；《工程项目管理（第二版）》和《企业管理概论（第六版）》**2 本教材荣获首届全国教材建设奖二等奖**；另有**1 项荣获教育部新文科研究与改革实践项目**，**5 门课程入选上海市高校一流本科课程**，**2 门课程获上海市重点课程立项等**，充分体现学院构建高质量人才培

养体系的扎实成果。学院以**“融合新知、励志弘学，求实创新、点燃理想”**为宗旨，联合国内外各高校、企业杰出人士共建课程体系以及校级、院级高等讲堂，同时发挥朋辈示范引领作用，通过“经世”学术可持续发展沙龙，鼓励学术争鸣、活跃学术思想，打造“洞见新知”学术讲坛，邀请院士与经管学子面对面，感受大师风采、启迪人生智慧；鼓励学生参与各类创新创业大赛，培育和锻造大学生创新实践能力，以文化人，推动学术育人迈上新台阶。



丁士昭、尤建新、邵鲁宁老师主编的两本教材荣获全国优秀教材二等奖



中国工程院外籍院士奥托·海因里希·赫尔佐格“洞见新知”学术讲坛演说现场

04 国际交流合作再创佳绩 国际竞争力日益提升

学院积极应对疫情影响，以国际认证指标为发展抓手，创新形式，质量导向，主动加强同全球合作伙伴的互鉴、互容、互通，不断拓展国际交流合作的广度深度，开展更全方位、更宽领域、更多层次的对外合作交流。**2021 年学院国际生源质量进一步提升，数量继续保持校内领头羊地位。**管理学硕士项目跻身英国《金融时报》2021 年全球管理硕士排名全球第 35 位，位列全国第 2，连续六年稳居全球 50 强。办学质量获国际权威机构肯定；2021 年先后再获国际权威认证



同济经管荣获 AACSB 五年期再认证



同济经管荣获 EQUIS 五年期再认证

机构颁发的 EQUIS 和 AACSB 最高标准五年期认证，学院高质量人才培养、高水平教学科研和深层次国际化方面超越了国际认证标准。2021 年学院通过积极搭建开放共享的国际交流平台，创新完善内外协同的育人模式，促进教育教学质量提高，国际影响力持续提升。



同济经管第 13 届国际咨询委员会成功举行



2021 年世界城市日中国主场活动暨首届城市可持续发展全球大会重磅首发“上海指数” 同济经管诸大建和陈海云领衔研究

06 坚持“四个面向” 服务国家和地方重大战略需求

全面贯彻党的十九大及十九届历次全会精神，夯实基础研究，加快科技创新，为服务国家战略需求贡献科技力量，科学研究呈高质量可持续发展态势。获批科研项目稳中求进，承担国家重点重大项目能力稳步提升，2021 年获批**国家自科、社科项目 17 项**，其中包括**国家社科重大 3 项**，占获批国家级项目总量的 17.6%；**国家自然科学基金优秀青年基金项目 1 项**，是学院连续第二年获批国家优青项目；获批青年科学基金项目 7 项，比 2019 年近乎翻倍，表现出青年教师蓬勃生长的科研力量。原创性、引领性、代表性的学术成果不断涌现，**国内外高水平论文数量大幅提高，在大学的同类学院排名大幅上升。**科研成果向资政转化能力持续提升，诸大建教授受聘为上海市政府第九届决策咨询特聘专家，钟宁桦教授受聘为上海政协协商议政咨询专家库首批专家。



陈强教授担任首席专家的国家社科基金重大项目“新形势下进一步完善国家科技治理体系研究”开题论证会



刘虎沉教授担任首席专家的国家社科基金重大项目“新技术变革下质量提升策略与质量强国建设路径研究”开题论证会



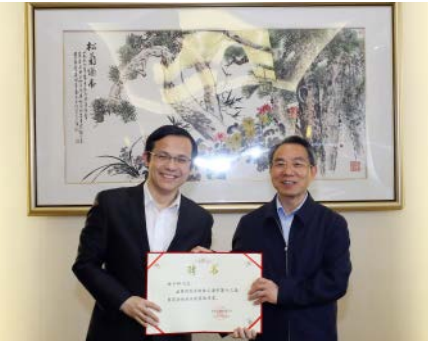
解学梅教授国家社会科学基金重大项目开题报告会

05 用中国实践升华中国理论 持续提升国际影响力

在国际顶尖期刊上讲述中国故事，学术影响力不断提升。2021 年有**2 位教授入选斯坦福大学全球前 2% 顶尖科学家榜单**，有 5 位教授共同入选**爱思唯尔中国高被引学者榜单**。与联合国人居署等共同研发的城市可持续发展指标体系框架(上海指数)，在上海 2021 年世界城市日由上海市市长正式发布，为提高中国在全球可持续发展的话语权做出重要贡献。



诸大建教授受聘为上海市政府第九届决策咨询特聘专家



钟宁桦教授受聘为上海政协协商议政咨询专家库首批专家



08 搭建高水平学术交流平台
引领实践创新

学院积极筹办和承办 2021 浦江创新论坛 - 区域（城市）论坛等国家级高端会议和一系列高水平专业性论坛，发布一批引领性研究成果，搭建学术交流的重要平台，增强对外合作，推动学科交叉发展转型，引领实践创新，促进复合型人才培养，不断扩大与提升学院的社会影响力与知名度。



中国乡村振兴（同济）高层论坛

07 高起点 重谋划 学科发展开新篇

以上海市第二期高峰学科建设和同济大学新一轮“双一流”学科建设为契机，面向国家重大战略需求，以推动高质量发展、创造高品质生活、实现高效能治理为目标导向，积极凝练学科建设新方向，蓄力学科建设新动能。确立了以“人工智能赋能超大城市精细化管理”为本轮高峰学科建设重要方向，并确定五个重点攻坚领域。在同济大学“2+8”新一轮双一流学科平台建设中，学院围绕精品文科建设，积极推动四个一级学科重点支撑其中 7 个学科平台的建设，积极开展与校内学科交叉融合与协同发展。

响应城市数字化转型和超大城市治理体系和治理能力现代化的需求，作为上海市区校企合作典范，在学校的统一部署和指导下，施骞教授团队协同相关部门成功获批“**国家智能社会治理实验综合基地**”项目。未来将利用校内学科交叉融合优势，开展智能社会治理的综合性实验，打造智能社会治理的示范和样板，助力“创新杨浦”转型升级，推进区校合作向纵深发展。



协同集聚：新城市、新空间——2021 浦江创新论坛 - 区域（城市）论坛

09 产教融合 校企合作 协同育人

学院继续深入推进产教融合、产学研结合、校企合作，联合 SAP 中国研究院共同推出“智能化转型前沿课程”，与上汽通用汽车共同签署《战略合作会议备忘录》；发挥学科优势，通过青岛胶东国际机场、深圳机场卫星厅、西藏“3+1”新建和改建机场、上海浦东机场四期扩建等多地机场项目工程及太原 BIM 技术应用地铁线路项目管理实践，在服务民航强国和交通强国建设的同时，以项目带学科，以学科促发展，推动学校人才培养供给侧与产业链紧密对接，加快培育面向经济社会发展需要为导向的各类卓越拔尖人才，实现高校人才培养、学科建设与企业、社会经济发展的多方共赢。



同济经管联合 SAP 中国研究院推出智能化转型前沿课程



同济经管携手福建广电网络集团 校企联动深化产学研合作



同济大学与上汽通用汽车联合举办“致匠心”专题活动 传承匠心精神 校企共创共赢



学院陈建国、乐云、施骞、唐可为等老师在青岛胶东国际机场，深圳机场卫星厅工程，西藏隆子、定日、普兰 3 个新建机场及拉萨机场第二跑道改扩建工程，上海浦东机场四期扩建工程，及厦门、西安、长沙、杭州萧山、鄂州、呼和浩特等地机场工程实践中发挥经管学科优势，培养大批工程项目管理人才，服务新时代民航强国建设。

10 多措并举
打造依法治校示范学院

学院深入贯彻教育部和上海市教委关于开展依法治校示范校创建活动的指示，全力推进“示范校”与“示范院”一体化工作，将“依法治校”的三个关键环节“组织领导、制度建设和实施保障”做足做好，全面形成规范的立、改、废流程，将依法治校精神、法治文化融入学院日常工作和学院文化建设之中。

重温经彩，迈入新征程
牛奔虎跃，再创新辉煌

2 SPLENDID ACCOMPLISHMENT PAVES THE WAY TOWARD A BRIGHTER FUTURE

—Top 10 Accomplishments
of Tongji SEM 2021

This year

We continued to fight against the “Pandemic” while guarding our campus

We kept calm amid turmoil

This year

We worked hard with high spirit

Aiming at high-quality development

We worked hand-in-hand with an innovative spirit

We provided nurturing grounds for skilled professionals

We inherited the Tongji DNA

We forged the backbones in various disciplines

We moved in coordination with our country

We spread the voice of China via the wisdom of Tongji SEM

We made steadfast improvement during the “14th Five Year Plan”

This year

We drew wisdom and strength from the past one hundred years

The stories that shone amongst the starry sky

Lightened up the way toward a new venture ahead

They inspired us

To forge our future with our sweat

To conquer oceans and mountains with great passion!

01

Tongji SEM devoted itself wholeheartedly to the CPC and celebrated the CPC's centennial anniversary with solid actions



SHI Qian, Party Secretary of Tongji SEM, Delivered a Thematic Course on CPC History



Glamorous Honor Enlightens the Way forward and We Will March ahead with the Original Intention in Mind -- Tongji SEM Awarded “Honored CPC Members of 50 Years” with a Special Ceremony



ZHENG Sixin, postgraduate student of MPA Received the Honorary Title of “National Model Individual of Poverty Alleviation”!



The Teachers and Students of Tongji SEM Celebrated the Centennial Anniversary of the CPC with Chorus

2021 marks the centennial anniversary of the founding of the Communist Party of China. The teachers and students of Tongji SEM actively carried out various forms of Party history learning and education, and continued to study and implement the spirit of General Secretary Xi Jinping's important speeches at the celebration of the centennial anniversary of the founding of the Communist Party of China and the Sixth Plenary Session of the 19th Party Congress. The teachers and students learned the history of the Party, expressed their gratitude for the Party, and further comprehended the soul of the Party. They earnestly learned the history to understand the truth, learned the history to increase the confidence, learned the history to honor high moral codes, and learned the history to practice. They have transformed the perception of the Party's history into an internal force to drive the implementation of the fundamental tasks of fostering talents with high ethical standards and to promote the School's high-quality “double first-class” construction.

02

The number of high-level talents doubled and the quality of the faculty increased significantly

Focusing on the overall planning and discipline development needs, the School has continued to increase its efforts to attract and cultivate high-level talents, with remarkable results. **During the 13th Five-Year Plan period, the number of national-level talents in the School has quadrupled, and it has reached a new high in 2021, with 5 new people, 3 of which are selected for major talent projects. At present, the number of national-level talents in the School has reached 19 (accounting for 10% of the total number of teachers).** The School attaches great importance to the overall construction of the teaching staff team, and provides various teaching and scientific research platforms to help teachers

develop. Young teachers with doctorate degrees from world-class universities such as Penn Wharton, the University of Michigan, and Dartmouth College have joined Tongji SEM, which has significantly optimized the academic background and structure of the School's faculty. More than half of the new teachers already have research results published in top academic journals in their respective fields. The School has also introduced a group of backbone academic forces, who have made significant contributions in the expansion of the talent team and the application for major national projects, and jointly built a “high plateau” for the gathering of high-level talents in the School.



Two textbooks authored by DING Shizhao, YOU Jianxin, and SHAO Luning won the second prize of the First National Textbook Construction Award

03

*Nurture the roots while forging the soul
Seeking quality-oriented development*

In recent years, the School has continuously strengthened the improvement of the quality of disciplines, further promoted the reform of education and teaching, and encouraged teachers to carry out innovative practices. **In 2021, our School added 3 new disciplines as national first-class undergraduate education testing programs**, with previously selected Finance, Information Management and Information Systems, and Engineering Management and Marketing, **a total of 7 disciplines were selected as national first-class undergraduate education testing programs**. With this new addition, the School has achieved full coverage of 3 first-level disciplines of Management Science and Engineering, Business Administration, and Applied Economics, ranking among the best in similar schools in the country; **Two textbooks -- *Engineering Project Management (Second Edition)* and *Business Management (Sixth Edition)* -- won the second prize of the First National Textbook Construction Award; one of the School's programs won the Ministry of Education's New Liberal Arts Research and Reform Practice Project, 5 courses were selected as the first-class undergraduate course in Shanghai universities, and 2 courses were approved as key courses in Shanghai**, which fully reflects the solid achievements of the School in building a



Professor Otto Heinrich Herzog, Foreign academician of Chinese Academy of Engineering, delivered a keynote speech at the "Insights and New Knowledge" salon

04

International cooperation reaps more fruit and the international competency of the School increases gradually

The School actively responds to the impact of the COVID-19 pandemic, takes international accreditation as the starting point for development, innovates in form, conducts quality-oriented actions, actively strengthens mutual learning, mutual tolerance, and communication with global partners, and continuously expands the breadth and depth of international exchanges and cooperation in much wider fields and on more diversified levels. **In 2021, the quality of international students of the School has been further improved, and the number of foreign students continues to lead among all schools of Tongji University. The Master of Management program ranked 35th worldwide in the Financial Times Global Master of Management Ranking 2021, ranked 2nd domestically, and has been ranked among the Top 50 in the world for six consecutive years.** The quality of the School's programs has been affirmed by international authoritative institutions; **in 2021, it received another five-year accreditation by authoritative accreditation institutions EQUIS and AACSB**, reaching the longest duration possible. The high-quality talent fostering, high-quality teaching and research, and in-depth international cooperation have exceeded global standards. In 2021, the School actively built an open and shared international exchange platform, innovated and improved the education model of internal and external coordination, promoted the quality of education and teaching, and continued to enhance its international influence.

05

Upgrade Chinese theories with Chinese practice and further strengthen our global clout

Tongji SEM has been telling Chinese stories in top international journals, and increasing its academic influence. **In 2021, 2 professors have been mentioned in Stanford University's top 2% of the World's Top Scientists list**, and 5 professors have been mentioned in **Elsevier's list of China's Highly Cited Scholars**. The Urban Sustainable Development Indicator Framework (Shanghai Index), jointly developed with UN-Habitat and others, was officially released by the **mayor of Shanghai on World Cities Day in Shanghai in 2021**, making an important contribution to improving China's voice in global sustainable development.



Research proposal meeting for the national science foundation key project "Research on further improving the national science management system in the New Era" chaired by Professor CHEN Qiang



Research proposal meeting for the national social science fund key project "Quality improvement and quality-led national strength built-up strategy under the revolution of new technologies" chaired by Professor LIU Huchen



The "Shanghai Index" was released at the 2021 World Cities Day China Observance and 1st SDG Cities Global Conference The Index was a research product by ZHU Dajian and CHEN Haiyun, et al.

06

Uphold "Four-aspect Services" to the key demands of national and regional development

Fully implemented the spirit of the 19th National Congress of the Communist Party of China and all previous 19th plenary sessions, consolidated basic research, accelerated technological innovation, and contributed scientific and technological strength to serve the national strategic needs, and the School's research showed a trend of high-quality and sustainable development. Approved research projects were making steady progress, and the ability to undertake national key projects has steadily improved. In 2021, 17 projects received funding from the National Natural Science Foundation and the National Social Science Fund, including 3 major national social science projects, accounting for 17.6% of the total number of approved national-level projects. The School has fostered one Outstanding Youth Fund Project of the National Natural Science Foundation, which is the second consecutive year that the School received this honor; 7 Youth Science Fund Projects

have been approved, nearly doubling from 2019, showing the vigorous growth of the research potentials of young teachers. Original, leading and representative academic achievements continued to emerge, the number of high-quality papers at home and abroad has increased significantly, and the ranking among similar Schools in the university has risen sharply. The ability to convert research achievements into political consultative advisory has been continuously improved. Professor ZHU Dajian was hired as a special expert in the ninth decision-making consultation of the Shanghai Municipal Government, and Professor ZHONG Ninghua was hired as the first batch of experts in the Shanghai Political Consultative Conference Consultation Expert Database.



Research proposal meeting for national social science fund key project chaired by Professor XIE Xuemei

07

Starting from a strong background Focus on strategic planning
Open new stage for disciplinary development

Taking the second phase of Shanghai’s high-standard discipline construction and Tongji University’s new round of “Double First-Class” discipline construction as an opportunity, facing major national strategic needs, with the goal of promoting high-quality development, creating high-quality life, and achieving high-efficiency governance, the School actively consolidated the new direction of discipline construction and accumulated new kinetic energy for discipline construction. An important direction for the construction of high-standard disciplines with “artificial intelligence empowering refined management of megacities” was established, and five key areas for tackling were identified. In the new round of “2+8” double first-class discipline platform construction of Tongji University, the School focuses on the construction of high-quality liberal arts disciplines, actively promotes the construction of four first-level disciplines to support the construction of 7 discipline platforms, and actively develops inter-disciplinary integration and cooperation.

In response to the needs of urban digital transformation and the modernization of governance systems and capabilities in megacities, as a model of district-school cooperation in Shanghai, under the unified deployment and guidance of Tongji University, Professor SHI Qian’s team and relevant departments have successfully obtained the approval of the “National Intelligent Society Governance Comprehensive Experiment Base” project. In the future, it will take advantage of the interdisciplinary integration of the School to carry out comprehensive experiments on intelligent social governance, create demonstrations and models of intelligent social governance, help the transformation and upgrading of “Innovative Yangpu”, and promote the in-depth development of district-school cooperation.



Selected as the “National Intelligent Society Governance Comprehensive Experiment Base” Use a contextualized way of thinking to deal with city governance Yangpu District explores new ways to build “transparent digital blocks”

08

Built high-level platform for academic exchanges Lead in innovative practice

The School actively organized the 2021 Pujiang Innovation Forum-Regional and Urban Forum and other national-level high-end conferences and a series of high-level professional forums, published a number of leading research results, built an important platform for academic exchanges, strengthened external cooperation, and promoted inter-disciplinary development and transformation, leading practical innovation, promoting the cultivation of compound talents, and continuously expanding and enhancing the social influence and popularity of the School.



Collaborative Agglomeration: New Cities and New Spaces – 2021 Pujiang Innovation Forum-the Regional & Urban Forum



China Rural Revitalization (Tongji) Summit



CHEN Jianguo, LE Yun, SHI Qian, TANG Kewei and other teachers from Tongji SEM made full use of their disciplinary advantages and fostered a great number of project management talents, serving our country via bettering the civil aviation system. Prominent projects include Qingdao Jiaodong International Airport, Shenzhen Airport Satellite Hall, 3 new airports in Lhuntse, Tingri, and Purang counties and Lhasa Airport second runway upgrade, Shanghai Pudong Airport Phase 4 expansion, and many local airports upgrade projects such as Xiamen, Xi’an, Changsha, Hangzhou Xiaoshan, E’zhou, and Hohhot.

10

Build a model governed-by-law school through multiple actions

The School thoroughly implemented the instructions of the Ministry of Education and the Shanghai Municipal Education Commission on the establishment of model schools for governing schools according to law, and makes every effort to promote the integration of “model university” and “model school”. Do a good job to solidify the three key aspects of “build leadership, construct mechanism and implementation guarantee” in building a “governed-by-law” school, comprehensively form a standardized process of establishment, reform and abolition, and integrate the spirit of governing the school by law and the culture of the rule of law into the daily work of the School and the cultural construction of the School.



Tongji SEM developed an intelligent transformation course with SAP China Research Institute



Tongji SEM established a partnership with Fujian Broadcast and TV Network Group Pushing for in-depth school-enterprise cooperation



Tongji University host “Honor the Craftsmanship” event with SAIC-GM Pass on the torch of great craftsmen Achieve win-win situation for school-enterprise cooperation

09

Integrate industry demand and education output
Conduct school-enterprise cooperation
Foster talents with various partners

The School continues to further promote the integration of industry demand and education output, the combination of production, education and research, and school-enterprise cooperation. The School jointly launched the “Intelligent Transformation Frontier Course” with SAP China Research Institute, and signed the “Memorandum of Strategic Cooperation” with SAIC-GM; through solid projects such as Jiaodong International Airport, Shenzhen Airport Satellite Hall, Tibet airports “3+1” new construction and upgrade, Shanghai Pudong Airport Phase 4 expansion and other airport projects and Taiyuan BIM technology application subway line project management practice, the School contributed to the empowerment of our country via bettering the civil aviation and ground transportation. At the same time, the School used projects to lead disciplines and promoted development through disciplines, promoted the close connection between the supply side of school personnel training and the industrial chain, and accelerated the cultivation of all kinds of outstanding and top-notch talents oriented to the needs of economic and social development. Achieving a win-win situation for the university talents raising as well as enterprises and economic development.

“
Relive the SEM highlights, and step onto the new adventure
Bulls gallop and tigers lunge, and we shall receive glory once more
”



2021 年世界城市日中国主场活动暨 首届城市可持续发展全球大会重磅首发 “上海指数”

同济经管诸大建教授和陈海云教授领衔研究

2021 年 10 月 31 是世界城市日，以“应对气候变化 建设韧性城市”为主题的 2021 年世界城市日中国主场活动暨首届城市可持续发展全球大会开幕式，在位于上海北外滩的世界会客厅举行。上海市委书记李强出席并致辞。联合国秘书长安东尼奥古特雷斯发来贺信。住房和城乡建设部部长王蒙徽在线致辞，联合国副秘书长、人居署执行主任麦慕娜·谢里夫通过视频致辞。上海市委副书记、市长龚正宣布发布“上海指数”综合指标体系框架和 2021 版《上海手册》。

此次发布的“上海指数”综合指标体系框架是全球首个以经济、社会、文化、环境和治理“五位一体”理念为基础框架设计的城市可持续发展指数体系，旨在评估全球可持续发展进步水平，推广以人为本的城市可持续发展理念。

中方和联合国人居署根据《联合国 2030 年可持续发展议程》和《新城市议程》等权威国际文件，基于联合国人居署提出的《全球城市监测框架》，共同研发了“上海指数”。**我院公共管理系诸大建教授是此次“上海指数”研究课题负责人，陈海云老师是领衔专家，与联合国人居署及德国、法国、美国、日本、韩国等多国专家学者共同完成指数研究。**

该指数可以帮助城市评估和反映其在可持续城市化方面取得的成就、面临的挑战，从而帮助城市确定或调整发展重点，推动全球城市实现可持续发展目标和《新城市议程》，进而引领全球城市的可持续发展方向。

“上海指数”，注重体现“人民城市”的理念，由一项综合指数和若干主题指数构成。其中，综合指数衡量城市在可持续发展领域的总体进步水平。主题指数与城市日主题、城市发展热点等议题结合，侧重对特定领域的评估。

“上海指数”指标体系由核心指标和适应性指标组成。核心指标覆盖全球各类城市，稳定通用于不同发展水平和人口规模的城市。适应性指标则根据城市量级和规模分类测算。综合指数和主题指数全部由核心指标和适应性指标进行支撑。相关指标重点围绕权威性、客观性、科学性、可获取性和适应性五个标准。指标覆盖教育、交通、基础设施、就业、社会保障、公众参与、污染物排放、公共空间、应急响应等领域。



“上海指数”将突显上海智慧，讲好中国故事，传播中国声音，为提高中国在全球可持续发展领域的话语权做出重要贡献。

联合国副秘书长、人居署执行主任麦慕娜·谢里夫表示，新冠肺炎疫情以及气候危机带来的挑战为合作和创新提供了机会。今年世界城市日活动是人居署与中国合作伙伴密切合作的又一里程碑。期待《上海手册》、“上海指数”能够广泛分享，更好推动落实联合国可持续发展目标。希望上海展示更多“城市，让生活更美好”的最佳实践。

我院第13届国际咨询委员会议 成功举行



同济大学经济与管理学院第13届国际咨询委员会议于12月3日举行。同济大学党委书记方守恩出席会议并致辞。院长李垣教授在会上介绍了学院2021年重点工作和未来规划，并听取了委员们对“新时代经管教育的国际化与高质量发展”的建议。国际咨询委员会主任、同济经管原院长霍佳震教授主持会议。

出席本届会议的国际咨询委员包括：上海市政协副主席虞丽娟教授，同济大学原常务副校长、同济经管原院长周箴教授，上海国际集团总裁刘信义，思爱普全球高级副总裁、全球研发网络总裁 Clas NEUMANN，上海浦东发展银行副行长谢伟，烟台张裕葡萄酒股份有限公司总经理孙健，上海汽车集团股份有限公司原董事会秘书陈晓东。

教育部原副部长、同济大学原校长吴启迪教授，美国柏森商学院资深教务长 Amir REZA 教授，英国曼彻斯特大学曼彻斯特商学院院长 Fiona DEVINE 教授、京东工业副总裁兼华东区总经理沈学军通过线上参会。中国工程院院士郭重庆教授为会议发来书面建议。



同济大学党委书记方守恩出席会议并致辞

方守恩书记在致辞中首先感谢各位委员对于同济大学发展的关心、支持和帮助，他表示，当前同济大学正在积极推进新一轮“双一流”建设，建设“双一流”大学关键要坚持立德树人根本任务，构建高质量人才培养体系，要扎根中国大地办大学，也要汲取全球高等教育的智慧，不断提升育人能力与水平，培养德智体美劳全面发展的社会主义建设者和接班人，服务国家和社会发展。



同济经管院长李垣教授汇报学院主要工作

李垣教授首先感谢委员们提出的宝贵意见，推动学院更加注重复合型人才培养、学科交叉发展转型，以及跨产业、跨学科、跨国家合作，他向委员们汇报了学院今年所推进工作目标和取得一些成果，并指出，学院将继续明晰思路，以“人”为本、扩大开放、加强协同、促进创新、着力转型，奋力实现“十四五”高质量建设的目标。

在主题讨论环节，委员们围绕“新时代经管教育的国际化与高质量发展”，从不同角度提出建议。

郭重庆院士在为本次会议发来的书面建议中指出，数字文明、绿色文明是经济转型的抓手，同济大学要积极把握“双碳”这个百载难逢的机遇，加强跨学科整合，力争成为开放型、平台型、生态型的数字化绿色工程的引领者，工程项目价值链的整合者。



教育部原副部长、同济大学原校长吴启迪教授通过线上参会

吴启迪教授表示，同济一直以来都具备对德、对欧等国家和地区国际合作的优势，经管学院多年来也与国际机构保持着密切联系和交流，学校身处上海国际化大都市这样的平台，可积极把握各类国际交流的优势和机遇，持续推进国际化，实现学院可持续发展。



上海市政协副主席虞丽娟教授

虞丽娟教授在会上提出，同济人才培养和学科建设布局要特别关注后疫情时代催生的重要产业，如数字经济、智能经济和健康经济，主动融入上海协同推进城市数字化转型等发展战略中，积极利用学科优势领域拓展办学空间和丰富办学模式，为产教融合发展培养高层次人才和应用型人才，继续为服务上海和国家做出更大贡献。



同济大学原常务副校长、同济经管原院长周箴教授

周箴教授建议学院要坚持正确的发展方向不动摇，在坚持国际化的同时，注重思考如何能总结好中国的经济和管理经验，建立中国的管理学语境，面向国际舞台讲好“中国故事”。



上海国际集团总裁刘信义

刘信义谈到，在理论研究方面，可以关注当前的数字化转型为传统管理理论带来什么变化，从而协助企业实现管理方法或工具的创新。



上海浦东发展银行副行长谢伟

谢伟认为，紧扣当今经济社会的发展热点、区域战略和产业战略，学院的跨学科人才培养大有可为。针对人才培养，他提出可以通过学科设计和社团组织提升学生人文素质等综合技能的培养。



烟台张裕葡萄酒股份有限公司总经理孙健

孙健作为我院杰出校友代表为本次国际咨询会议提供了大力支持，他以张裕近几年的国际化历程为例，鼓励学院继续通过国际化兼收并蓄实现高质量发展，更进一步加强整合融合校友资源和网络，提升产学研一体化。



思爱普全球高级副总裁、全球研发网络总裁 Clas NEUMANN

Clas NEUMANN 提出，希望能在智能制造等相关产业方面进一步加强与学院的合作，包括与学生分享最新行业前沿发展，让学生参与数字化和人工智能技术研究等项目，探索不同的工作模式下更多地参与企业研究。



上海汽车集团股份有限公司原董秘陈晓东

陈晓东指出，管理人才的培养需要和业界有更多合作，加强理论与实践的结合，在不同层次推进双导师制度，他还建议师资引进方面可多关注“一带一路”沿线国家的优质大学资源。



京东工业副总裁兼华东区总经理沈学军

沈学军谈到，中国企业走出去和国际企业在中国经营都对国际化的人才有很大的需求，除了传统的联合办学模式，希望未来学院有机会到国外办学，或依托国内企业走出去把中国培养的高质量人才推向国际舞台。



英国曼彻斯特大学曼彻斯特商学院院长 Fiona DEVINE

Fiona DEVINE 教授强调，面对新冠疫情带来的不确定性，大学要勇于拥抱新的变化，要平衡线下教学和线上教学，注重学生对不同教学形式的真实需求，保障学生的国际交流机会。她还建议，通过举办国际化会议扩大学院国际影响力。



美国柏森商学院资深副教务长 Amir REZA

未能现场参会的国际咨询委员也通过网络表达了建议。Amir REZA 教授提出，虽然新冠疫情为大学推进国际化进程带来一定影响，但仍需要持续引进国际师资，加强合作研究，鼓励学生去国外学习和就业，创新国际合作方法，扩大学院的国际影响力。

出席本次会议的还有我院党委书记施骞，院党委副书记、纪委书记、副院长阮青松，党委副书记董变林，副院长程名望，以及管理科学与工程系教授张小宁，市场营销系（筹）教授 Jerome BON 等。

同济大学经济与管理学院国际咨询委员会成立于 2008 年，是学院治理结构的重要组成部分，由国内外具备丰富教育、管理实践经验，在经济与管理领域具有重要影响的专家组成，至今已召开 13 次会议。咨询委员会就学院的战略发展、人才培养、学术研究等关系学院长远发展的重大问题向学院提供咨询意见与指导，并通过自身专长与资源的分享，推动学院与国内外政府机构、知名企业和顶尖商学院的交流合作。

On December 3rd, 2021, the 13th International Advisory Committee Meeting was held successfully at the School of Economics and Management. Prof. FANG Shouen, Chairman of University Council of Tongji University attended the meeting and delivered a welcome speech. Prof. LI Yuan, Dean of SEM, briefed the past development and future plan of SEM, and gave close attention to the advice made by advisory members on “Internationalization and High-quality Development of Economics and Management Education in the New Era”. The meeting was hosted by Prof. HUO Jiazhen, the former dean of SEM and Director of International Advisory Committee.

Onsite participants included: Prof. YU Lijuan, Vice President of Chinese People’s Political Consultative Conference Shanghai Committee; Prof. ZHOU Zhen, Former Executive President of Tongji University, Former Dean of SEM, Tongji University; Mr. LIU Xinyi, President of Shanghai International Group; Prof. Clas NEUMANN, SAP Senior Vice President, Head of Global SAP Labs Network; Mr. XIE Wei, Vice President of Shanghai Pudong Development Bank; Mr. SUN Jian, General Manager of Yantai Changyu Pioneer Wine Co., Ltd; Mr. CHEN Xiaodong, Former Secretary of BOD, SAIC Motor Co., Ltd.



In his welcome speech, Prof. FANG Shouen expressed his gratitude towards the guidance and support from the Committee members on the development of Tongji University and the SEM. He said that Tongji University is actively promoting a new round of “double first-class” development. The key to the development of “double first-class” university is to adhere to the fundamental task of moral cultivation, build a high-quality personnel training system, establish a university with Chinese culture, while at the same time, draw on the wisdom of global higher education to constantly improve our education. To train socialist builders and successors who are well-developed morally, intellectually, physically, aesthetically, and artistically to serve the development of the country and society.

Prof. LI first thanked the members for their valuable suggestions, which includes promoting interdisciplinary talent cultivation, development and transformation, as well as cross-industry, cross-discipline and cross-national cooperation. He then briefed the development and achievements of SEM in 2021, and pointed out that SEM would continue to opening-up, strengthen collaboration, promote innovation and focus on transformation, and strive to achieve the goal of high-quality construction in the 14th Five-Year Plan.



Prof. WU Qidi said, Tongji university always had advantages in international cooperation with Germany, Europe and other countries and regions, SEM also has maintained close contacts and exchanges with international organizations over the years. In an international metropolis like Shanghai, Tongji SEM can actively grasp the advantages and opportunities of various international exchanges, continuously promote internationalization and realize the sustainable development.



During the panel discussion session, members offered their thoughts on “Internationalization and High-quality Development of Economics and Management Education in the New Era from different perspectives.

Prof. GUO Chongqing in his written suggestions, pointed out that digital civilization and green civilization are the starting point of economic transformation. Tongji University should actively seize this once-in-a-century opportunity of “carbon peaking and carbon neutrality goals”, strengthen interdisciplinary integration, and strive to become a leader in green digitalized projects that features openness, supportiveness, and eco-friendliness, and an integrator of engineering project value chain.



Prof. YU Lijuan pointed out that, when it comes to personnel training and discipline construction, Tongji university should pay special attention to the important industries in the post-epidemic era such as digital economy, smart and healthy economy. Tongji University should actively integrate itself into Shanghai’s development strategy of jointly promoting urban digital transformation, and actively use its disciplinary advantages to expand space and enrich teaching modes, cultivate high-level innovative talents and application-oriented talents for the integrated development of industry and education, and continue to make greater contributions to serving Shanghai and the country.

The 13th International Advisory Committee Meeting of Tongji SEM Held Successfully



Online participants included: Prof. WU Qidi, Former Vice Minister of Education, Former President of Tongji University; Prof. Amir REZA, Senior Vice Provost of Babson College, US; Prof. Fiona DEVINE, Dean of Alliance Manchester Business School, University of Manchester, UK; Mr. SHEN Xuejun, Vice President of JD Industry and General Manager of Region East. Prof. GUO Chongqing, Academician of Chinese Academy of Engineering; China, sent written suggestions for the meeting.



Prof. ZHOU Zhen suggested that the School should stick to the right development direction and focus on China's economic and management experience, establish a Chinese management context, and tell "China story" well for the international stage while adhering to internationalization.



Mr. LIU Xinyi said that in theoretical research, we shall pay attention to what changes the current digital transformation brings to the traditional management theory, thus assist enterprises to achieve continuous innovation in management methods or tools.



Prof. Clas NEUMANN proposed to further strengthen the cooperation with the School in intelligent manufacturing and other related industries, including sharing the latest cutting-edge development of the industry with students, allowing students to participate in digital and artificial intelligence technology research and other projects, and exploring different working modes to participate in enterprise research.



Mr. XIE Wei believes that the interdisciplinary talent training of the School has a promising future in line with the current economic and social development hotspots, regional strategies and industrial strategies. For talent training, he proposed that students' comprehensive skills such as humanistic quality can be improved through discipline design and community organization.



Mr. SUN Jian, as an outstanding alumni representative of our college, provided strong support for the meeting. He took the internationalization process of Changyu in recent years as an example to encourage the SEM to continue to achieve high-quality development through internationalization and inclusiveness, further strengthen the integration of alumni resources and network, and enhance the integration of industry, university and research.



Mr. CHEN Xiaodong pointed out that management talent cultivation requires further cooperation with the industry, strengthening the combination of theory and practice, and promoting the dual-tutor system at different levels. He also suggested that more attention should be paid to high-quality university resources in countries along the Belt and Road in recruiting teachers.



Mr. SHEN Xuejun said that both Chinese enterprises going global and international enterprises operating in China have a great demand for international talents. In addition to the traditional mode of joint education, he hopes that the college would have the opportunity to run schools abroad in the future, or promote high-quality talents trained in China to the international stage with the support from domestic enterprises.



International advisory committee members who were not able to attend the conference also expressed their suggestions via Zoom. Prof. Amir REZA pointed out that despite the impact of COVID-19 on the University's internationalization process, the University still needs to continue to introduce international faculty, strengthen collaborative research, encourage students to study and work abroad, and innovate international cooperation methods to expand the international influence.



Prof. Fiona DEVINE stressed that in the face of uncertainties caused by COVID-19, universities need to embrace new changes, balance offline and online teaching, pay attention to students' real needs for different forms of teaching, and ensure international exchange opportunities for students. She also suggested expanding the School's international influence by holding international conferences.

Professors from Tongji University that present at the meeting also included: Prof. SHI Qian, Chairman of School Council; Prof. RUAN Qingsong, Deputy Dean; Prof. DONG Bianlin Deputy Dean; Prof. CHENG Mingwang, Deputy Dean; Prof. ZHANG Xiaoning, Department of Management Science and Engineering, and Prof. Jérôme BON, Department of Marketing.

同济经管管理学硕士 FT 排名 跻身全球第 35 连续六年稳居全球 50 强

9月13日，英国《金融时报》（Financial Times，简称 FT）正式发布 2021 年全球管理硕士百强榜单，同济大学经济与管理学院管理学硕士项目（Master in Management，简称 MiM）再获殊荣，连续六年稳居全球 50 强，跻身全球第 35 位，位列全国第 2。

强综合实力 居全球前列

FT-MiM 排名以其严苛的参评标准、独立客观的数据调查和全面深入的评价体系著称，是全球公认的管理学领域的权威排名之一。该项排名包含 4 大类、24 个分项指标，综合评价商学院整体实力和项目教学质量。同济经管在多项指标上表现不俗，稳居全球前列。

在项目总体满意度（Overall Satisfaction）单项上，同济经管以 9.63 高分位居全球第 5；职业发展服务（Career Service Rank）名次上升迅速，位列全球第 3；毕业生薪资增幅（Salary Percentage Increase）为 86%，位列全球第 8；毕业后三个月内就业率（Employed at Three Months）达 100%；此外师资、课程、国际化等重要指标也在稳步提升。

项目总体满意度 **9.63**
全球第 **5**

职业发展表现优异

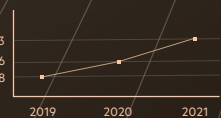
加权薪资
全球第 **25**

薪资增幅
全球第 **8** **86%**

三个月就业率连续**3**年
100%



职业发展服务
全球第 **3**



项目质量稳步提升

目标达成 **82%**



博士师资比 **92%**



项目性价比
全球第 **11**

COST VALUE

提项目质量 融教育资源

同济经管管理学硕士项目旨在培养具备具有全球视野、社会责任、创新精神及解决问题能力的优秀管理菁英。项目在教授系统的管理理论和扎实的研究方法的基础上，一方面对标国际一流教学标准，保持与国际一流商学院的交流互动，持续营造国际化教学氛围，使得学生全面了解全球战略愿景，拥有国际视角的跨文化意识和责任意识；另一方面，学院强调学术和实践相融合，与大型企业联手建立管理人才实习培养基地，创造丰富的行业实践和创新实践资源。

此外，学院职业发展中心立足于为学生提供专业化、个性化的职业发展教育与服务，通过“学生访谈录”、“对话 HR”、“职业发展焦点小组咨询”、“朋辈讲堂”等教育活动，整合大学、企业等教育资源，为学生提供高质量的职业发展咨询服务。作为大学的施教者，我院职业发展教育以立德树人为根本，着力提高学生的职场能力，为学生的长期职业发展打下坚实的可持续发展基础。

塑国际格局 拓国际视野

学院多年来努力拓展国际课程资源，致力于塑造学生的国际格局，海外交流项目覆盖本硕博多层次，类型涵盖长期双学位、中期学期交换及短期暑期课程等多维度的交流。目前，学院已与来自 30 多个国家的 100 余所全球知名商学院建立了合作关系，签订了 100 余个双学位及非学位交流合作项目，每年提供超过 300 个国际交换名额，接收逾 500 位国际学生。同济经管的学子们因此得以走出国门，拓宽视野，收获新知，在全球顶尖商学院的课堂上展开探索与多元对话。

不断提高国际化程度一直是同济经管发展的重要目标之一。伴随着中国经济的高速发展，越来越多的海外学生来中国求学，为了进一步打造“留学中国”品牌，同济经管学院于 2019 年全面升级改造了面向国际学生的全球管理硕士全英文项目（Master of Global Management，简称 MGM），旨在培养掌握国际管理理论和方法，通晓中国经营之道，并致力于在跨文化工作环境中担任管理领导角色的国际人才。



该项目 2018 届优秀毕业生杨云聪，现就职于上海证券交易所。回顾硕士生涯，她表示在同济经管的求学之路给予了她包容开放的国际视野、积极奋进的专业素养。她谈到，学院高度重视国际化人才的培养，她特别难忘在荷兰鹿特丹管理学院（RSM）的留学生活，国外课程的文献讨论、项目模拟等让她与来自世界各地的同学有了更加深入的交流沟通，不同的生活方式、多样的文化碰撞让她感叹处处有惊喜。硕士期间国内、国外学习经历，让她系统学习了经济管理的前沿课程，也让她提高了国际视野和实践能力，未来她将继续积极进取，在自己的岗位上为中国资本市场建设贡献绵薄之力。

同济大学经济与管理学院院长李垣教授指出：“学院各项排名的优异表现，说明学院的办学水平和教育质量获得了国际权威排名和教育机构的充分肯定，也是学院综合实力不断稳步提升的体现。这得益于同济经管多年在人才培养、师资建设、科学研究、国际化等方面的持续深耕和发展进步。”

面向未来，同济经管将继续勇担时代赋予的使命，进一步提升教育质量和水平，践行同济大学“与祖国同行，以科教济世”的办学传统，进一步提升教育质量和科研实力，朝着“成为培养卓越管理人才，推动可持续发展的全球知名商学院”的愿景稳步迈进。

TONGJI SEM RANKED 35th IN FT 2021 MASTERS IN MANAGEMENT RANKING

On September 13th, 2021, Financial Times officially released its 2021 Global Masters in Management (MiM) Ranking. Tongji SEM's Master in Management program ranked 35th in the world and 2nd in China. It has been ranked among the Top 50 in the world for six consecutive years.

FT MiM ranking is renowned for its rigorous evaluation criteria, independent and objective data survey, comprehensive and in-depth evaluation system. It is one of the globally recognized authoritative rankings in the field of business education. The ranking consists of 24 sub-indicators in four categories to comprehensively evaluate the overall strength of business schools and the quality of the program. Tongji SEM has a prominent

performance in several key indicators. In terms of **Career Service**, Tongji SEM ranked **3rd in the world**; with regard to **Salary Percentage Increase**, Tongji SEM ranked **8th worldwide**; **Employed at Three Months reaches 100%** within three months after graduation; **Overall Satisfaction ranked 3rd** in the world; in addition, key indicators such as faculty and internationalization have also been steadily improved.

Ranking	School Name	Country	Programme Name
1	University of St Gallen	Switzerland	MA in Strategy and International Management
2	HEC Paris	France	Master in Management **
3	University College Dublin: Smurfit	Ireland	MSc International Management
4	London Buiness School	UK	Master in Management
5	Rotterdam School of Management, Erasmus University	Netherlands	MSc International Management
6	Essec Business School	France	Master in Management **
7	ESCP Business School	France	ESCP Master in Management **
8	Stockholm School of Economics	Sweden	Master Program in International Business
9	Imperial College Business School	UK	MSc International Management
10	Edhec Business School	France	Edhec Master in Management
35	Tongji University School of Economics and Management	China	Master in Management



Tongji SEM's MiM program aims to cultivate excellent management elites with international vision, social responsibility, innovative research capability, and practical problem-solving skills. Tongji SEM partners with many top foreign business schools to create an international learning environment and to enable students to fully understand the global strategic vision and develop a sense of cross-cultural perspective and social responsibility from an international perspective. Also, Tongji SEM emphasizes the integration of academic and practice by collaborating with enterprises to provide with students rich industry internship opportunities.

In addition, Tongji SEM's Career Development Center (CDC) invites managers from industry to provide professional guidance for students' career planning and development by organizing "Dialogue with HR" and "Peer Lecture"; it has also developed online professional counseling courses and employment service platforms to provide "one-to-one" counseling, providing students with comprehensive guidance and support from internship to employment.

Internationalization improvement has always been one of the most important goals of Tongji SEM. With the rapid development of China's economy, more and more overseas students come to China to study. In order to further promote the "Studying in China" branding, Tongji SEM has upgraded **Master of Global Management (MGM)** for international students in 2019, which is a full-time postgraduate degree program customized for worldwide recent graduates and young professionals with interest in both international management and Chinese economy, having multi-cultural aptitudes and aiming to take up international leadership positions in their career. The program intends to enhance students' international exposure for leadership roles in cross-cultural working environment.

第十届中国产业园区持续发展论坛举办

以“高质量发展背景下园区管理：理论与实践”为主题，12月4日，由同济大学发展研究院和新华社中国金融信息中心主办的“第十届中国产业园区持续发展论坛”在我院举办，同济大学常务副校长吕培明，同济大学经济与管理学院党委书记施骞参加论坛，并邀请来自政府、园区、学界和企业的专家代表分别从政策、理论及实践等视角共同探讨新发展格局下园区高质量发展方向与路径。同时举行首部园区管理理论重要著作《园区管理通论》出版发布仪式。



论坛首先举行了《园区管理通论》的发布仪式，同济大学经济与管理学院教授、同济大学发展研究院院长任浩发表题为《园区管理体系：前提、框架和特色》的演讲。发布仪式后，30位专家代表围绕主题进行研讨。其中，战略规划、产城融合、文化赋能、数字化发展等话题成为讨论热点。

园区管理研讨后，举行了同济大学发展研究院成立20周年纪念活动。

“绿色发展背景下创新驱动再生资源产业高质量发展论坛”举行

11月13日，由同济大学主办的“绿色发展背景下创新驱动再生资源产业高质量发展论坛”在我院举行。学院副院长程名望教授代表学院致开幕辞，管理科学与工程系教授刘光富担任本次论坛主席。十余位来自全国循环经济、社会学、环境科学、再生资源领域专家和二十多位嘉宾通过线上/线下的形式参与此次论坛。

同济经管副院长程名望教授表示，此次论坛主题对接国家“双碳”目标和绿色发展战略，为学科交叉与融合搭建优质平台，希望全国不同学科专家借此平台加强合作，推进深入研究与实践。

论坛围绕绿色发展背景下再生资源产业现状与问题、互联网人工智能信息技术的应用与管理、“双碳”目标下创新驱动节能减排路径和废弃物资源化共生网络演化展开讨论，阐释绿色发展和再生资源高质量发展的内涵，针对再生资源产业绿色、低碳发展问题，提出了有效的技术路径和解决方案。



同济大学经济与管理学院副院长谢恩致辞

第十三届全国 MBA 商业伦理与社会责任教学研讨会隆重召开

7月10-11日，第十三届全国 MBA 商业伦理与社会责任教学研讨会在同济大学经济与管理学院隆重召开。本次会议由全国工商管理专业学位研究生教育指导委员会主办，同济大学经济与管理学院承办，采用线上线下相结合的方式，来自近百所高校的二百余名代表参与。

同济大学经济与管理学院副院长谢恩代表同济大学经济与管理学院致辞。他对前来参会的领导，以及专家学者们表示热烈欢迎，对会议的顺利召开表示热烈祝贺，并对经济与管理学院发展情况进行了详细介绍，回顾了学院在商业伦理与社会责任层面教学研究事业近年来取得的各项进展，并指出希望借助此次会议将同济大学经济与管理学院商业伦理与社会责任教学工作进一步向前推进。

会议闭幕式由同济大学经济与管理学院创新与战略系（筹）系教授陈守明主持。他表示非常荣幸能有这样一个机会与各位教师齐聚同济大学经济与管理学院，共同探讨 MBA 商业伦理与社会责任教学问题，并希望在未来的教学实践中能够有更多的交流借鉴机会，同济大学经济与管理学院始终以开放的姿态欢迎各位同仁莅临。



2021 年房地产学术研讨会暨第 14 届中国高等院校房地产学者联谊会召开

10月24日，2021年房地产学术研讨会暨第14届中国高等院校房地产学者联谊会在我院召开。同济大学副校长顾祥林、中国房地产估价师与房地产经纪人协会会长柴强、清华大学房地产研究所所长刘洪玉、华东师范大学经济与管理学部终身教授张永岳出席会议开幕式并致辞。

会议以习近平总书记重要讲话精神为行动指南，秉承“加强交流、促进合作，推动房地产行业和房地产学科发展”的宗旨，以“面向未来的房地产研究与教育高质量发展”为主题，由中国房地产业协会、中国房地产估价师与房地产经纪人学会指导，中国高等院校房地产学者联谊会、同济大学联合主办，同济经管承办。

疫情之下，房地产行业、学科发展和教育面临前所未有的挑战。玉汝于成，砥砺前行，只有直面挑战、迎难而上，才能化危为机、实现高质量发展。大会与会人员一致认为，房地产行业 and 学科应不懈努力，共同进步，为实现第二个百年目标而奋斗！



同济经管教授主编教材荣获 全国优秀教材二等奖

10月12日，全国教材工作会议暨首届全国教材建设奖表彰会（视频会）举行。同济大学荣获全国优秀教材特等奖1项（全国共10项，其中高等教育类4项）、一等奖2项、二等奖8项，荣获全国教材建设先进集体、先进个人各1项。其中我院丁士昭教授主编的《工程项目管理》（第二版），尤建新教授、邵鲁宁博士主编的《企业管理概论》（第六版）两本教材荣获全国优秀教材二等奖。

全国教材建设奖是教材领域的最高奖，是检阅、展示教材建设服务党和国家人才培养成果，增强教材工作者荣誉感、责任感，推动构建中国特色、世界水平教材体系的一项重大制度。

《工程项目管理》是高校工程管理专业指导委员会规划推荐教材、“十二五”国家级规划教材，主要用于工程管理专业“工程项目管理”课程的教学，也可用于土建学科其他专业的“工程项目管理”课程的教学。其主要内容包括工程项目管理的基本理论、工作任务、工作方法，以及工程管理信息化的概念、理论和方法。该教材理论性强，内容新颖，紧密联系工程管理实践，可供政府管理部门、建设单位、设计单位、工程管理咨询单位、科研单位和施工单位参考。

《企业管理概论》是“十二五”国家级规划教材、面向21世纪课程教材。本书在第五版的基础上更加关注企业管理的实践发展，与时俱进更新了相关案例。新版继续沿用第四、五版的结构，分为导论、组织与战略、资源管理、产品运作、创业与创新五篇十六章进行全面、系统阐述，更新了大部分章节的案例，力求给读者以企业管理理论与实践的全貌，更好地支持学生在知识与能力两个方面得到提高。本书内容全面、体系清晰，反映了企业管理领域许多新的进展，特别适用于非管理类专业学生学习，也可以作为管理类专业的基础课程用书。



丁士昭
同济大学经济与管理学院教授



尤建新
管理科学与工程系教授



邵鲁宁
创新与战略系（筹）副教授

Textbooks Edited by Professors of Tongji SEM Won 2nd Prize for National Excellent Textbook

Recently, the Ministry of Education announced the list of awards for the first National Textbook Award. The two textbooks “*Engineering Project Management (Second Edition)*” edited by Professor DING Shizhao and “*Introduction to Business Management (Sixth Edition)*” edited by Professor YOU Jianxin and Professor SHAO Luning were selected as National Excellent Textbooks.

“*Engineering Project Management (Second Edition)*” edited by Professor DING Shizhao is a recommended textbook by the Chinese Advisory Committee on Engineering Project Management to Majors in Higher Education. The main content of the textbook includes the basic concepts of project management, project management organization and working methods of project life cycle tasks, and project management information content. The theory of the textbook is connected with reality, the content is novel, and the frontier of the subject and engineering practice are closely connected, and it is easy to teach and learn.

“*Introduction to Business Management (Sixth Edition)*” edited by Professor YOU Jianxin and Professor SHAO Luning focuses on standardizing corporate governance structure, promoting entrepreneurship, improving resource efficiency, protecting the ecological environment, improving overall quality, ensuring occupational health and safety, encouraging innovation and entrepreneurship, etc. Based on the forefront of development, advancing with the times, serving the practical needs of China’s reform and opening up.

A total of 10 kinds of textbooks were granted the “Grand Prize for National Excellent Textbook”, 200 the “1st Prize for National Excellent Textbook”, and 789 the “2nd Prize for National Excellent Textbook”. 99 collectives were granted the title of “Advanced Collective in National Textbook Construction” and 200 comrades “Outstanding Individual in National Textbook Construction”.



The National Textbook Construction Award is the highest award in the field of textbooks. It is a major system for reviewing and displaying the achievements of textbook construction in serving the Party and the state in cultivating talents, enhancing the sense of honor and responsibility of textbook workers, and promoting the construction of a world-class textbook system with Chinese characteristics.

阮青松教授主持项目获批教育部首批新文科研究与改革实践项目



阮青松
学院党委副书记、副院长
经济与金融系教授

10月28日，教育部公布首批新文科研究与改革实践项目，其中我院阮青松教授主持的项目“基于学科交叉的金融科技政产学研协同育人机制创新与实践研究”名列其中。

为全面推进新文科建设，构建世界水平、中国特色的文科人才培养体系，教育部今年开展新文科研究与改革实践项目立项工作。设新文科建设发展理念、专业优化、人才培养模式改革、重点领域分类推进、师资队伍建设和特色质量文化建设研究与实践6个选题领域、22个选题方向，项目建设周期为3年。

马国丰教授获2021年“上海市育才奖”



马国丰
建设与房地产系教授

在全国第37个教师节来临之际，上海市教育发展基金会公布了2021年“上海市育才奖”获奖名单，经同济大学推荐，经由市教育发展基金会和市教委有关部门组成评选工作办公室进行评议遴选，并报评选工作领导小组审定，我院马国丰教授荣获2021年“上海市育才奖”。

马国丰教授全身心投入教学和科研中，带领了一批批优秀的科研团队，形成了良好的科研氛围。积极推进学科建设并探索创新，把握研究前沿，在建筑智能化、项目管理与大数据等领域取得了丰富的研究成果。在生活上，他事无巨细关心学生，让同学们互相帮助、共同进步，以实际行动积极践行师者的内涵。

5 门课程入选 上海市高校一流本科课程

12月2日，上海市教委发布《上海市教育委员会关于公布2021年度上海高等学校一流本科课程认定结果的通知》，认定317门课程为2021年度上海高等学校一流本科课程。2020年，上海市教育委员会印发《上海高等学校一流本科课程建设实施方案》，全面开展一流本科课程建设，拟经过两年左右时间，认定600门左右市级一流课程，构建具有上海特色、多类型、多样化的一流本科课程体系。

《职业生涯规划与职场能力提升》

石建勋（2021年）

结合时代发展变迁和当代大学生特点，《职业生涯规划与职场能力提升》课程全方位多视角地介绍职业生涯规划与管理的基本知识和基本方法，引导和帮助学生进行科学、合理的职业生涯规划，进行自我管理，提升情商和认知自我、认知社会，处理复杂人际关系的能力。基于社会需要与学生需求，持续优化课程体系，不仅讲解职业规划方法，也讲解职场能力提升；基于数据挖掘与分析理念，持续丰富教学内容；线上与线下紧密结合，持续更新教学方法；将

2020和2021两个年度同济大学共获批课程总数达52门，其中我院共5门课程获批，在全校名列前茅。包括：**优质在线课程**《职业生涯规划与职场能力提升》（石建勋老师负责），**示范性全英语课程**《项目管理 Project Management in China》（施骞老师负责），**优质在线课程**《解读中国经济发展的密码——习近平经济思想研读》（石建勋老师负责），**线上线下混合式课程**《营销管理》（熊国钺老师负责）、《运营管理》（邱灿华老师负责），以下为课程简介。

个人选择与树立正确“三观”的课程思政内容有机融入课程中。课程负责人连续两年每学期在同济面向本、研学生开设三个班《职业生涯规划与职场能力提升》课程，评教多次为优；同时在智慧树慕课平台开课3个期次，全国累计有万余名学生选课，涉及31所院校，互动发帖12.83万条。主编的课程教材《职业生涯规划与管理》入选21世纪经济管理精品教材·人力资源管理，已在多所学校使用，发行超过五万册。



石建勋
经济与金融系教授

《项目管理》（Project Management in China）

施骞（2021年）

《项目管理》课程作为同济大学经济与管理学院本科生和国际留学生的核心课之一，旨在为学生奠定坚实的项目管理基础知识根基，搭建完整的项目管理理论体系，培养和提升应对复杂项目的综合素质和能力。并进一步通过国际项目管理知识体系与中国重大项目管理实践的有效结合，探索融入思政教育元素，强化项目管理理论对国家经济社会发展战略支撑作用，增强学生的责任感和使命感。相关课程体系和大纲得到EQUIS、AACSB、PMI-GAC等国际组织认证。课程负责人为管理科学与工程国家A+学科与上海市高峰学科骨干教师，长期承担本科生、留学生、MBA及MEM学生的《项目管理》课程以及"Project Management in China"英文课程教学工作，具有二十余年的本科教学一线工作积累。2014年起，课程负责人作为核心教学团队成员在中国大学生MOOC网，开展在线开放课程的建设与教学工作，课程目前累计超25万学生报名学习，覆盖全国百余所高校的学生。曾获国家级教学成果二等奖、国家精品课程、国家级精品在线开放课程、项目管理学会PMI中国项目管理优秀教育奖。



施骞
学院党委书记、建设与房地产系教授

《解读中国经济发展的密码——习近平经济思想研读》

石建勋（2020年）

《解读中国经济发展的密码——习近平经济思想研读》课程将习近平经济思想融入到经济学专业课和通识选修课程之中去，紧扣时代主题和热点问题、紧扣学生兴趣点和兴奋点，系统讲解习近平经济思想的核心内涵以及实践发展成果。旨在培养学生的经济思维能力和大局观，使学生能够全面了解国家经济发展规划、战略和政策，把握中国经济发展的大势，增强四个自信，树立正确的“三观”，能够把个人发展与国家发展紧密结合起来。课程充分利用现代教育技术，



石建勋
经济与金融系教授

以学生为中心，持续更新教学理念和方式，积极推进线上、线下混合式教学模式，实现了线下名师授课录制视频或同步直播，线上优质网课资源学习。除校内学生，校外有303所院校选课，其中智慧树平台有33所院校；超星尔雅有29所院校；学银在线有241所院校。学生总人数达29507（中国大学MOOC未统计在内）。且校内外学生和社会学习者在课程平台互动积极，智慧树、超星尔雅、学银在线三个平台累计发帖12万7千多条。

《营销管理》

熊国钺（2020 年）

《营销管理》课程是在大市场经济发展的时代背景下，面向全校学生开设的一门通识选修课，致力于培养学生的市场战略思维和实践能力。课程旨在培养学生对于营销的学习兴趣，加深对营销概念的理解和认识，全面掌握市场营销学的理论、技术、方法，在敏于思考中体会营销的魅力。此外，我们秉承课程思政的要求，着重引导学生树立正确的营销品格和诚信的价值观。课程特点是充分挖掘受众课程的兴趣点，用生动案例代替理论传授，实验模拟让学生亲身体会竞争的激烈和挑战。课程于2014 年作为我院的明星课程开始向全

校输出，在课程内容设计上，一方面继承和发扬上海市精品课程《市场营销》的良好基因，另一方面根据学生的学科背景调整教学内容和课时安排，强调学以致用。经过多年的摸索与实践，《营销管理》课程已成为上海市一流本科课程、上海市本科重点课程、同济大学精品通识课程、同济大学立德树人示范课程。课程负责人同时也是国家精品视频开放课程骨干成员，上海市精品课程《市场营销》核心成员，主编的《市场营销学》入选国家“十一五”和“十二五”规划教材，并荣获上海市青年教师讲课比赛二等奖。



熊国钺
市场营销系（筹）副教授

《运营管理》

邱灿华（2020 年）

《运营管理》课程是商科课程的重要基础专业课，教学设计着重于通过团队行动学习进行探索性的案例研究过程，掌握对企业运营逻辑的理解，使学生具备分析创业企业业务逻辑的基本能力。课程经过多年建设，完成了MOOC 教学资源（学堂在线运营管理），可实现翻转课堂教学，并通过微信公众号（知道工坊）和B 站（前浪阿丘）平台提供动态学习资源。教学过程实现线上线下结合，借助于课堂动态感知学生学习情况，实现与学生的有效互动。线上线下都可快速组织团队行动学习，分享团队学习成果。采用团队列名法、世界咖啡等有趣的团队行动学习方法，不仅帮助学生提高人际沟通技能和团队协作技能，而且提升学生领导力。课程负责人案例教学经验丰富，荣获“第四届全国管理案例精英赛（2016）”全国总决赛“最佳教练奖”，2017 年度同济大学经济与管理学院“卓越教学奖”，2018 年上海 MBA 教育指导委员会第二届上海 MBA 案例教学比赛一等奖。



邱灿华
管理科学与工程系副教授

近年来，学院扎实开展课程建设，做好优质课程培育工作，推进现代信息技术与教学有机融合，推动教师积极开展教学创新和改革实践，推动科教融合与产教融合，优化教学设计，创新教学方法，打造一批具有高阶性、创新性和挑战度的课程，为建设和申报一流课程打下良好基础。未来，学院将以一流本科课程建设为契机，持续推进一流本科专业建设工作，实行科学部署、统筹规划，着力构建高质量人才培养体系，与学校一流学科建设形成合力，推动“双一流”建设，助力中国特色、国际一流的高等教育事业发展建设。

FIVE COURSES OF TONGJI SEM HAVE BEEN SELECTED AS THE SHANGHAI FIRST-CLASS UNDERGRADUATE COURSES

Recently, the Shanghai Municipal Education Commission issued a notice stating that 317 courses have been selected as the Shanghai first-class undergraduate courses. A total of 52 Tongji University's courses in 2020 and 2021 have been selected as the first-class undergraduate courses. 5 courses of Tongji SEM have been selected, ranking among the best in Tongji University. The 5 courses are: **“Career Planning and Workplace Ability Improvement”** (by Prof. SHI Jianxun), **“Project Management in China”** (by Prof. SHI Qian is responsible), **“Interpretation of China's Economic Development – A study of Xi Jinping's Economic Thoughts”** (by Prof. SHI Jianxun), **“Marketing Management”** (by Prof. XIONG Guoyue), and **“Operation Management”** (by Prof. QIU Canhua).

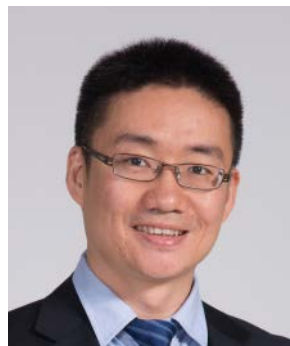
In recent years, Tongji SEM continues to carry out curriculum construction, cultivate high-quality courses, and promote the integration of modern information technology & teaching, the integration of science &

education and the integration of industry & education. Also, the SEM has continuously assisted teachers in actively carrying out teaching innovation and reform practice, optimize teaching design and innovate teaching methods. Now, Tongji SEM has a number of courses with high-level and innovative courses and it has laid a good foundation for the construction and application of first-class courses.

In the future, the SEM will take the construction of first-class undergraduate courses as an opportunity to implement scientific deployment and overall planning, focus on building a high-quality talent training system, and form a joint force with the construction of the Tongji University's first-class disciplines, to facilitate the development and construction of world-class higher education with Chinese characteristics.



梁哲教授团队 “不正常航班智能恢复” 科研成果获得中国航空学会 科学技术二等奖



梁哲
管理科学与工程系教授

11月4日，中国航空学会发布的“关于2021年度‘中国航空学会科学技术奖’的授奖决定”，我院梁哲教授团队联手厦门航空有限公司等其他专业机构共同研发完成的《航空公司大规模不正常航班智能恢复关键技术及应用》科研成果获得中国航空学会科学技术二等奖。

民用运输航空以国内及全球范围的旅客运输和货邮运输为核心，涉及空管、机场、航空公司等多个主体。作为最快的交通运输方式，时效性是民用航空至关重要的竞争优势，因此航班正常性治理是民航业非常重要的工作。不正常航班恢复问题长期困扰全球航司的原因主要在于恶劣天气等成因不确定以及问题本身规模巨大，需要业务人员花费数小时手工处理。自动化的运营管理系统被欧美供应商垄断，其系统价格昂贵，且不能针对我国国情实行定制化，制约了

我国航空公司当前的生产运营与长期的规划发展。本项成果融合运筹优化与机器学习等科技创新手段解决大规模航班恢复问题：1) 实现对直接延误与连锁延误的精准识别与提前预警，大幅降低航班延误风险；2) 基于列生成和分支定界算法框架，针对性地设计快速求解算法，实现对航司的航班、机组、机务、旅客等多种核心资源的一体化智能恢复和高效统筹；3) 构建基于强化学习的专家知识库，依据恢复优化目标智能优化参数。



Recently, the Chinese Society of Aeronautics and Astronautics issued the “Decision on Awarding the 2021 Science and Technology Award of the Chinese Society of Aeronautics and Astronautics”. The research results of “Key Technologies and Applications for Intelligent Recovery of Large-scale Irregular Flights of Airlines” jointly conducted by the team of Professor LIANG Zhe of Tongji SEM and Xiamen Airlines, won the second prize of Science and Technology Award of the Chinese Society of Aeronautics and Astronautics.



LIANG Zhe
Professor of Tongji SEM, Doctoral
Supervisor

The Science and Technology Award of the Chinese Society of Aeronautics and Astronautics is a social science and technology award initiated by the Chinese Society of Aeronautics and Astronautics and approved by the Ministry of Science and Technology. It is the highest national science and technology award in the aviation industry. Based on independent research and development, the team of Professor LIANG Zhe focuses on cutting-edge technologies in the field of aviation operations, combines theory with practice, actively promotes school-enterprise cooperation, and jointly develops and innovates new models of aviation operations management to better serve the development of civil aviation industry in China.

The Research Results of Professor LIANG Zhe's Team on “Intelligent Recovery of Irregular Flight” Won the Second Prize of Science and Technology of the Chinese Society of Aeronautics and Astronautics

诸大建教授受聘为上海市政府 第九届决策咨询特聘专家

9月26日，上海市政府召开特聘专家经济形势座谈会。上海市委副书记、市长龚正为市政府第九届决策咨询特聘专家代表颁发聘书，并与专家学者座谈交流，听取大家对当前经济形势的研判和做好上海各方面工作的建议。同济大学可持续发展与管理研究所所长、同济大学经济与管理学院教授诸大建受聘为上海市政府第九届决策咨询特聘专家。

会上，包括诸大建教授在内的8位专家，结合国内外最新形势和各自专业领域，围绕推动经济高质量发展、优化产业结构和提升能级、加大科技创新力度和成果落地、推动高水平制度型开放、吸引国际顶尖人才、实施绿色低碳发展战略等议题各抒己见。龚正代表市委、市政府，衷心感谢各位专家长期以来为上海经济社会发展作出的贡献。



PROFESSOR ZHU DAJIAN OF TONGJI SEM HIRED AS THE SPECIALLY- APPOINTED EXPERT IN THE NINTH DECISION-MAKING CONSULTATION ORGANIZED BY SHANGHAI MUNICIPAL GOVERNMENT

On September 26th, Shanghai municipal government held a Symposium of Specially-Appointed Experts on the Economic Situation. GONG Zheng, Deputy Secretary of the Shanghai Municipal Party Committee and the Mayor of Shanghai awarded the Letter of Appointment to the representatives of the specially-appointed experts in the ninth decision-making consultative committee organized by Shanghai Municipal Government, discussed with the experts and scholars, listened to their opinions on the current economic situation and their suggestions on how to do a good job in all aspects of Shanghai's work. ZHU Dajian, Director of Sustainable Development and Management Institute, Tongji University and Professor of Tongji SEM was appointed as one of the specially-appointed experts in the ninth decision-making consultative committee organized by Shanghai Municipal Government.

At the symposium, in light of the latest situation both at home and abroad and their respective fields of expertise, eight experts including Professor ZHU Dajian expressed their views on promoting high-quality economic development, optimizing the industrial structure and upgrading the energy level, intensifying scientific and technological innovation and delivering results, promoting high-level institutional opening-up, attracting international top talent, and implementing green and low-carbon development strategies, etc. On behalf of Shanghai Municipal Party Committee and Shanghai Municipal Government, GONG Zheng sincerely thanked all the experts for their long-term contributions to Shanghai's economic and social development.



坚持走生态优先、绿色低碳发展道路 有条件如期实现 碳达峰碳中和目标



刘兴华
同济大学特聘教授、博士生导师

习近平总书记在主持召开中央财经委员会第九次会议时强调：“要把碳达峰、碳中和纳入生态文明建设整体布局，拿出抓铁有痕的劲头，如期实现 2030 年前碳达峰、2060 年前碳中和的目标。”近日，中共中央、国务院印发了《关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见》，彰显了我国坚定不移走生态优先、绿色低碳发展道路的决心和信心，为确保如期实现碳达峰、碳中和目标规划了时间表和路线图。

工业革命以来，煤炭、石油、天然气等化石能源的大规模开发利用，大大促进了全球经济社会发展，同时也释放出大量二氧化碳等温室气体，严重威胁整个地球的生物安全和生态平衡，给人类自身的生存和发展带来严峻挑战。人类必须采取有力措施解决过去 200 多年发展中由于温室气体大量排放所造成的生态和气候难题，给自己赖以生存的蓝色星球减负降温。实现碳达峰、碳中和目标，就是我国为应对二氧化碳等温室气体排放所引发的气候变化威胁、促进人类走上新的文明发展道路所作出的庄严承诺和努力，必将推动人类社会从“工业文明”向“生态文明”迈进。

实现碳达峰、碳中和目标对我国来说既是挑战也是机遇。首先，当前我国经济社会发展仍处于爬坡过坎阶段，对能源的需求仍在增加，实现碳达峰、碳中和目标面临诸多困难和挑战。但辩证地看，实现碳达峰、碳中和目标，必将推动我国能源结构、产业结构、生态结构发生根本性优化变革，有利于我们加快建立现代化能源体系、产业体系，有利于我国经济发展实现质量变革、效率变革、动力变革。其次，实现碳达峰、碳中和目标对我国科技创新能力提升和科技人才队伍建设提出了新的更高要求，有利于突破相关关键技术，并建立相应产业体系和高质量人才队伍，占据全球科技、产业和人才竞争制高点。再次，中华文明历来主张人与自然和谐共生，实现碳达峰、碳中和目标与中华优秀传统文化提倡“天人合一”“道法自然”理念相契合，既有利于推动我们对能源资源的高效循环利用，实现绿色低碳循环发展，又有利于继承和弘扬中华优秀传统文化。

我国实现碳达峰、碳中和目标的条件不断成熟。自“十一五”以来，我国就积极实施应对气候变化国家战略，采取一系列措施推进节能减排、控制温室气体排放。一是实施产业结构调整、能源结构优化、重点行业能效提升等有力举措，推动碳减排取得显著成效，单位 GDP 能耗明显降低，碳排放总量增速变缓，为实现碳达峰、碳中和目标积累了经验、奠定了基础。二是大力发展

风能、太阳能等可再生能源和清洁能源及相应产业链。目前，我国在可再生能源、新能源汽车等领域和行业处于领先地位，掌握一些核心技术。同时，我国拥有强大装备制造能力和超大规模国内市场，相关产业的产业链优势将不断巩固和提升。三是开展多样化的节能环保教育，引导青少年从小树立勤俭节约、绿色环保的价值观念，在全社会积极促进生活方式和消费模式向勤俭节约、绿色低碳、文明健康方向转变。我国公众的环境保护意识和气候意识不断增强，越来越多的人自觉践行绿色生活方式，实现碳达峰、碳中和目标具有越来越深厚的社会基础。我们在应对气候变化方面所作的不懈努力和取得的巨大成就，正在不断夯实如期实现碳达峰、碳中和目标的基础。

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STICK TO THE PATH OF ECO-FIRST AND LOW CARBON DEVELOPMENT AND WE ARE POSITIVE ON ACHIEVING CARBON PEAKS AND CARBON NEUTRAL GOALS ON TIME



LIU Xinghua
Professor of Tongji SEM,
Doctoral Supervisor

Presiding over the 9th Meeting of the Financial and Economic Commission of the CPC Central Committee, General Secretary Xi Jinping stressed that “the carbon peak and carbon neutrality should be incorporated into the overall layout of building an ecological civilization, and we shall strive to achieve the peak of carbon emissions by 2030 and carbon neutrality by 2060 as scheduled with strong momentum.” Recently, the Opinion on Fully, Accurately and Comprehensively Implementing the New Development Concept to Achieve Carbon Peak and Carbon Neutrality issued by the CPC Central Committee and the State Council has demonstrated China’s determination and confidence to follow the green and low-carbon development path with ecological priority, and worked out time-tables and roadmaps to ensure that the goal of carbon peak and carbon neutrality can be achieved as scheduled.

Since the Industrial Revolution, the large-scale exploitation and utilization of coal, oil, natural gas and other fossil energy have greatly promoted global economic and social development. At the same time, it has also emitted large amounts of greenhouse gases such as carbon dioxide, posing a serious threat to the biological security and ecological balance of the entire planet, and bringing severe challenges to the survival and development of human beings. Human beings must take strong measures to solve the ecological and climatic problems caused by the massive emission of greenhouse gases during the past two centuries of development, so as to lighten the load and cool the blue planet on which human beings live. To achieve the goal of carbon peak and carbon neutrality is our solemn commitment and efforts to address the threat of climate change caused by carbon dioxide and other greenhouse gas emissions and promote human beings to embark on a new path of civilized development, which is bound to advance human society from an “industrial civilization” to an “ecological civilization”.

To achieve the goal of carbon peak and carbon neutrality is both a challenge and an opportunity for China. First of all, China’s economic and social development at present is still in the climbing stage, its energy demand is still increasing, and it will face many difficulties and challenges to achieve carbon peak and carbon neutrality. But dialectically, to achieve the goal of carbon peak and carbon neutrality will promote fundamental improvements in China’s energy, industrial and ecological structures, which is conducive to not only accelerating the establishment of a modern energy and industrial system, but also promoting China’s economic development to achieve changes in its quality, efficiency and driving force. Secondly, to achieve the goal of carbon peak and carbon neutrality will put forward new and higher requirements for the improvement of China’s scientific and technological innovation capacity and the construction of scientific and technological talents, which is conducive to the breakthrough of relevant key technologies, and the establishment of the corresponding industrial system and high-quality talent team, so as to occupy the commanding

heights of global competition in science and technology, industry and talents. Thirdly, Chinese civilization has always advocated the concept of realizing the harmonious coexistence between man and nature, and achieving the goal of carbon peak and carbon neutrality, which is in line with the concept of “harmony between man and nature” and “Tao follows nature” advocated by the fine traditional Chinese culture. It not only helps us promote efficient recycling of energy and resources to achieve green, low-carbon and circular development, but also helps us inherit and carry forward the fine traditional Chinese culture.

The conditions for China to achieve the goal of carbon peak and carbon neutrality are maturing. Since the “11th Five-Year Plan” period, China has actively implemented the national strategy on climate change and adopted a series of measures to promote energy conservation & pollution reduction and control greenhouse gas emissions. At first, we have taken strong measures such as industrial structure adjustment, energy structure optimization, energy efficiency improvement in key industries, etc. to achieve significant results in carbon emission reduction. Energy consumption per unit of GDP has decreased significantly, and the growth rate of total carbon emissions has slowed down, thus accumulating experience and laying a solid foundation for achieving the goal of carbon peak and carbon neutrality. Secondly, China will vigorously develop renewable and clean energy such as wind and solar energy and the corresponding industrial chain. At present, China is taking a leading role in renewable energy, new energy vehicles and other fields and industries, having mastered some core

technologies. At the same time, China has a strong equipment-manufacturing capacity and a super-large-scale domestic market, and the advantages of industrial chain in related industries will be constantly consolidated and enhanced. Thirdly, China has carried out diversified education on energy conservation and environmental protection, guided young people to establish the value of diligence & frugality and environmental protection from an early age, and actively promoted a shift in our lifestyles and consumption patterns toward frugality, green, low-carbon, civilized and healthy development in the whole society. The public’s awareness of environmental protection and climate change in China is increasing, and more and more people consciously practice a green lifestyle, which will lay an increasingly profound social foundation for achieving the goal of carbon peak and carbon neutrality. Our unremitting efforts and tremendous achievements in addressing climate change are laying a solid foundation for achieving the goal of carbon peak and carbon neutrality as scheduled.

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习近平总书记强调，中国要强盛、要复兴，就一定要大力发展科学技术，努力成为世界主要科学中心和创新高地。“十四五”规划和 2035 年远景目标纲要明确提出：把科技自立自强作为国家发展的战略支撑。百年未有之大变局下，新一轮科技革命和产业变革有哪些特征？作为科技创新主力军，研究型大学、科研院所、企业等多元主体如何“跨界融合”、形成合力，走出一条技术强、企业强、产业强、经济强、国家强的创新发展新路径？

历史性交汇期，高水平科技自立自强何以实现

成为世界主要科学中心和创新高地，须在核心技术领域有话语权

Q1

文汇报：“我们迎来了世界新一轮科技革命和产业变革同我国转变发展方式的历史性交汇期”，这是习近平总书记在《努力成为世界主要科学中心和创新高地》的文章中作出的重要判断。如何从科技史的角度来理解这个“历史性交汇期”？

雷星晖：基于对世界范围内的产业转型、技术发展的研究和实践总结，我曾以技术为主变量来分析国际政治、经济、社会和技术环境的演变，以及由此带来的产业变迁和国家竞争力的变化。我把它称之为“长波模型”。这个“长波”有几个重要的特征。

一是约 50 年是一个周期，长波的每个波段都有它发展的核心技术以及由此带来的产业的飞速发展。拥有核心技术的国家就是技术中心国家，同时也必然会真正意义上世界的经济中心。比如，1900—1950 是以蒸汽机内燃机技术为核心技术的波段，钢铁、铁路和汽车等产业飞速发展，而世界经济中心相应地在欧洲，并逐渐发展到了美国；1950 年之后，随着世界上第一台电子计算机的发明，核心技术则转变为半导体技术，以及集成电路、大规模集成电路和芯片，美国成为这个波段的中心国家；2000 年以来，实际上也是从上世纪 90 年代起，整个世界就已经在不断研究这个波段的核心技术究竟是什么。在我看来，这一波段的核心技术不是单一的，而是几大基本技术齐头并进：一是电子与通讯技术，

包括 IC、移动互联、5G、物联网等；二是生命技术，包括基因、干细胞等；三是以纳米技术为代表的新材料及其技术，此外还有新能源、环保、海洋、航空航天等集成技术。而这些也恰恰都是近年来国家重点发展的产业方向，即我们所说的战略性新兴产业。

二是每个波段的上升周期表达的是由核心技术所带来的一轮经济增长，而下降周期并不是表示经济下降，我把它叫做“技术转移阶段”，也就是此阶段波段的核心技术会逐渐地从发达国家向欠发达国家转移，而发达国家“套现”后则会尽快追逐和进入下一个波段的核心技术及其带动的产业。

三是由于牵涉到核心技术的变化或者转移，必定会带来技术中心国家的改变，进而影响到经济中心的改变。所以在每个波段转折点之前，在科学技术领域一定会发生革命性的事件，以确立下一个波段的核心技术。与此同时，世界也会出现各种纷争和危机。

四是每个波段最主要的贡献要素是不同的。上世纪前 50 年最主要的是物质资源，矿产、土地等最为重要；后 50 年最主要的则是财务资源，因为世界上几乎所有的资产或者依附之上的权利都已经资本化后可以交易；现在我们所处的波段无疑人力资源已经成为最为重要的资源。这种核心资源变化所带来的贡献度改变看似简单，实际上是个非常复杂的问题，它会带来博弈力量的改变、一系列政策制度改变的要求，比如资产的估值问题，知识和专利技术的作价问题等等。

五是在上个世纪的两个波段中，中国由于种种原因均与核心技术失之交臂。也因此虽然我国的经济总量已高居世界第二，但一遇到“卡脖子”问题，我们就会遭遇困境。在新一轮世界科技产业革命孕育兴起的形势下，包括 5G 在内的核心技术的话语权争夺空前激烈，怎样突破这个波段的核心技术？怎样突破“卡脖子”问题就成了关键。我们已经确立了到 2050 年这个波段末要建成富强、民主、文明、和谐、美丽的社会主义现代化强国的宏伟目标，因此必须在这个波段的核心技术领域要有话语权，要真正成为世界的主要科学中心和创新高地。这一轮科技革命，我们一定要抓住机遇！

科技创新组织范式的中国特色：从“产学研”到“政产学研用”

Q2

文汇报：“我们迎来了世界新一轮科技革命和产业变革同我国转变发展方式的历史性交汇期”，这是习近平总书记在《努力成为世界主要科学中心和创新高地》的文章中作出的重要判断。如何从科技史的角度来理解这个“历史性交汇期”？

雷星晖：我认为这个问题可以从两个方面来分析。一方面，现在技术升级换代、产品迭代的速度越来越快。原来我们开发一个技术、研发一个产品，可以满足一代人，甚至几代人的需求。所以，资本敢投资、企业敢经营，因为投入能够通过收入收回来，还有足够的回报。随着升级换代速度的加快，投资的时间之窗很短，投资决策就会很困难。比如大家都知道芯片技术有个摩尔定律，意思是：集成电路上可容纳的晶体管数目每 18 个月会增加一倍，性能也将提升一倍。它也意味着每一美元所能买到的电脑性能每 18 个月增加一倍。而芯片生产企业属于资本密集型企业，投资建设周期一般在两年半左右，因此这个投资决策就需要国家从战略高度来统筹和政策支持。

另一方面，一百多年来从科学原理的发现到技术开发和工程应用经过的时间越来越短，它形成了一个“陡峭的漏斗”，我称之为“半衰期缩短”。我们知道，企业一般都有个重要的机构叫 R&D（研发部）。过去，由于从科学发现到应用的时间周期比较长，科学原理的发现都是大学和科研院所在做，是属于纯兴趣而引发的研究，它主要不是去考虑应用。企业也不会主动去做研究。但从上世纪 90 年代以来，随着科学到技术的半衰期急剧缩短，情况发生了很大的变化，企业不做研究竞争力就会下降。所以我们可以看到，世界 500 强的企业都加强了对 R&D 的投入，有的达到了 15% 以上，包括我们的华为，纷纷建立自己的研发和创新实验室。而有的则是因为不重视投入在这 20 年间被洗牌淘汰。

Q3

文汇报：基础研究与应用研究的“跨界”，越来越成为推动当代新科技革命的强有力引擎。在这样的背景下，科技创新组织范式发生了怎样的深刻变革？

雷星晖：从“跨界融合”到推动技术变革、新产业发展需要有体系化的设计、需要通过示范效应引导相关的各方都能投入其中。比如，美国硅谷的出现并不是一种偶然，当大量创新企业出现并集聚，创业初期研发投入很大，风险当然也很大，而传统的金融架构是无法提供资金去支持的，此时大量追求风险回报的VC的出现无疑是关键因素，它们分别会聚焦在创业企业的不同发展阶段，既成就了硅谷的辉煌，也使得美国在这一轮核心科技发展的竞争中处于领先地位。

中国的情况则有很大的不同。中国工业化发展时间并不长，改革开放后虽然在经济总量上有了大幅度增长，也形

成了世界上最为完整的工业体系，但企业普遍积累不足，研发投入也不足。改革开放初期主要是发达国家技术的引进消化和吸收，需要和高校形成“产学研”的合作机制。在新一轮科技革命的背景之下，我国早在1986年就启动了“国家高技术研究发展计划”（简称863计划），在1997年启动了“国家重点基础研究发展计划”（简称973计划），旨在解决国家战略需求中的重大科学问题，以及对人类认识世界将会起到重要作用的科学前沿问题。这个阶段技术发展和创新形态发生了很大的变化，政府

在创新平台搭建中起到越来越重要的作用，而用户需求也成为创新的重要驱动力，此时科技创新组织范式也向“政产学研用”转变。



千方百计组建创投基金，
关注青年科技创新和创业群体

Q4

文汇报：就像硅谷依托斯坦福大学，在上海，环同济知识经济圈也是一个案例。您认为高校在服务城市经济社会发展方面能起到怎样的作用？

雷星晖：不仅是硅谷，实际上大学对于所在城市或者地区经济社会发展的带动作用

是显而易见的。尤其是在中国，像我们同济大学，早在本世纪初学校就提出了学校的科学技术研究成果应该跨过校园围墙，进入科技园区，通过创新创业实现经济价值，进而带动地方经济发展和大众创业、万众创新的氛围营造，以聚集更多的创新企业，成为地区的创新高地；与此同时，大学也是社会主义新思想和先进文化产生的地方，更应该走出象牙塔，溢出校园融入社区，以带动地方社会发展和城市更新。

正是在这样的理念下，同济大学相关优势学科、科教资源不断外溢，与所在地方杨浦区“校区、园区、社区三区融合、联动发展”，共同孕育出“市场驱动、学科支撑、企业主体、政府引导”的环同济产业发展模式。与此同时，学校的校办产业系统也将深入改革创新，一方面，进一步强化科教结合、产教融合，通过和学校的优势学科建立联合实验室、联合研发中心等创新基地和人才培养基地，成为学校事业建设的重要组成部分；另一方面，构建全链条的科技成果转化体系，培育创新创业的服务系统和资本生态。

Q5

文汇报：创新链产业链融合，关键是要确立企业创新主体地位。您认为中国企业如何履行高水平科技自立自强的使命担当？

雷星晖：我认为以下几个方面至关重要：首先，要站在整个行业的高度、就整个产业链系统进行全面的竞争分析，以明确关键技术突破的方向，以及可能会被“卡脖子”的地方。其次，



无论如何要进一步加大对研发的投入。无论是去建立企业自己的研发和创新中心，还是和高校建立联合的研发中心，这是企业保持可持续竞争能力的关键。要真正聚焦于这个波段的核心技术，不仅要运用核心技术发展相关新的产业，更要利用核心技术去改造我们的传统产业。三是为了提高创新的效率以及有效性，大企业一定要千方百计筹措资金组建创投基金，并关注青年科技创新和创业群体。如IBM就建立了自己的创投基金，专注于投资与IBM产业链相关的新技术和新创企业，其中有一部分专门投资于从IBM离职创业的人。他们

认为，敢从IBM离职创业的一定是发现了IBM的不足，或者IBM尚不屑于去发展的业务；基于未来技术发展的不确定性，与其让创业企业成为竞争对手，不如让他成为合作伙伴。这样的理念是

很值得我们企业学习的。

企业是创新的主体，是解决“卡脖子”技术的关键主体，尤其是进入本世纪这个波段以来，企业对科技创新、对产业革命的重要性日益凸显。近几十年来，中国科学技术和产业正处于最好的发展时期，各个领域都在致力于波段核心技术的攻关和突破；与此同时，我们还进一步加大了改革开放的力度，积极倡导并推进和世界其它国家在科技领域、产业领域的合作。在这样的背景下，随着企业高水平的自立自强，中国就一定

Q6

文汇报：“没有纳斯达克，也许就没有硅谷”。您长期研究金融与战略，在您看来，如何深化科技与金融的融合，成就更多“我们时代的企业”？

雷星晖：核心技术的突破，并由此带来产业的增长，没有金融的支持是绝对不行的。为了更好地推动科技创新，学习硅谷等的经验，国家在本世纪初就发出了“大众创业、万众创新”的号召，积极鼓励在核心技术领域的创新创业。这就需要我国资本市场的大力支持，不仅需要大量的VC资金进入，同时必须建立有效的退出制度和通道。所以我非常理解，我国为什么早在上世纪九十年代后期就启动创业板的研究，并且在世界刚刚经过一次危机，全球创业板市场普遍不景气的2009年坚持推出创业板的根本原因，并且我认为一定会成功。之后我们还进一步建立了聚焦集成电路、生物医药、高端装备等“硬科技”的“科创板”，现在随着聚焦于“专精特新”小企业的北京证券交易所的到来，构筑起了可以全面支持科技创新创业的多层次资本市场，并进一步助力科技创新组织范式向“政产学研用金”的转变，为“金凤凰”插上腾飞的翅膀。

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HOW TO ACHIEVE HIGH-STANDARD SELF- SUFFICIENCY AND INDEPENDENCE IN TECHNOLOGY SECTOR AGAINST THE BACKDROP OF HISTORICAL CHANGES IN HISTORY

General Secretary Xi Jinping stressed that "if China is to become strong and rejuvenated, it must vigorously develop science and technology, and strive to become a major scientific center and innovation highland in the world." It is clearly stated in the "14th Five-Year" plan and the outline of the vision for 2035 that: we should take self-reliance and self-improvement in science and technology as the strategic support for national development. What are the characteristics of the new round of scientific and technological revolution and industrial transformation in the context of profound changes unseen in a century? As the main force of scientific and technological

innovation, how can the research universities, scientific research institutions, enterprises and other diversified entities achieve the "cross-boundary integration", form a joint force, and create a new path of innovative development featuring strong technology, strong enterprises, strong industries, strong economy and strong country?

To become a major scientific center and innovation highland in the world, we need to have a say in core technologies.

Q1

Wenhui Daily: "We have ushered in a new round of scientific and technological revolution and industrial transformation in the world and the historic convergence period of China's transformation on development mode." This is an important judgment made by General Secretary Xi Jinping in his article "Striving to Become the World's Major Scientific Center and Innovation Highland". How do you understand the "historical convergence period" from the perspective of science and technology history?

LEI Xinghui: Based on the summary of research and practice on industrial transformation and technological development worldwide, by using technology as the main variable, I have analyzed the evolution of international politics, economy, society, and technological environment, as well as the resulting industrial changes and changes in national competitiveness. I call it the "long-wave model", which has several important characteristics:

The first characteristic is a cycle of about 50 years, and each wave band in the "long-wave" has its core technology and the rapid development of the industry brought by it. A country with core technologies is a technology-centered country, which is also bound to be the real economic center of the world. For example, from 1900 to 1950, it was the wave band with the steam engine and internal combustion engine technology as the core technologies, the industries such as steel, railways and automobiles, etc. developed rapidly, while the world economic center correspondingly was in Europe and gradually developed to the United States. After 1950, with the invention of the first electronic computer in the world, the core technologies were transformed into semiconductor technology, as well as integrated circuits, large-scale integrat-

ed circuits and chips, and the United States became the central country of this wave band. Since 2000, and indeed since the 1990s, the whole world has been trying to figure out what the core technologies of this wave band are. In my opinion, the core technology in this wave band is not single, but several basic technologies go hand in hand: the first is electronic and communication technology, including IC, mobile Internet, 5G, Internet of Things, etc.; the second is life technologies, including genes and stem cells, etc.; and the third is new material and its technologies represented by nanotechnology, in addition to new energy, environmental protection, marine, aerospace and other integrated technologies. And these are precisely the direction of the industry that our country has focused on developing in recent years (namely, the strategic emerging industries).

The second characteristic is that: an upwave represents a round of economic growth brought by core technologies, but a downwave does not represent economic decline, I call it the "technology transfer phase" (that is, the core technologies of the wave band at this stage will be gradually transferred from the developed countries to the less-developed countries, while the developed countries will chase and enter

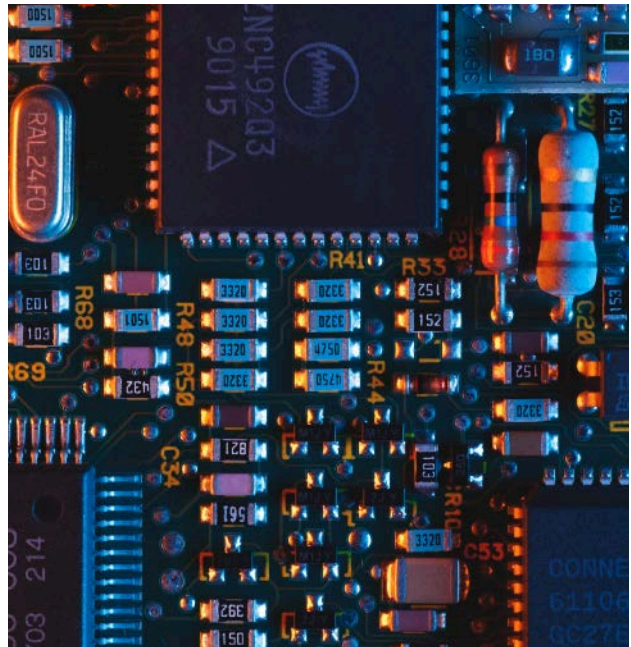
the core technologies of the next wave band and the industries it has driven as soon as possible after "cashing out").

The third characteristic is that: the change or transfer of core technologies is bound to bring about the change of the technology-centered countries, thus affecting the change of economic center. Therefore, before the turning point of each wave band, some revolutionary events must occur in the fields of science and technology to establish the core technologies of the next wave band. At the same time, all kinds of disputes and crises will occur in the world.

The fourth characteristic is that: the most important contributing factors of each wave band are different. In the first half of the 20th century, material resources were the most important, including mineral resources and land, etc. In the second half of the 20th century, financial resources were the most important, because almost all assets or rights attached to them in the world could be traded after being capitalized. Now we are in a wave band where human resources have become the most important resource. The change of contribution brought by the change of core resources seems simple, but it is actually a very complicated problem, which will bring about the change of game power and the requirements for a series of policy and institutional changes, such as the valuation of assets, the pricing of knowledge and patented technology and so on.

The fifth characteristic is that: China missed the core technologies due to various reasons in the two wave bands of the 20th century. That is why we always encounter difficulties when confronted with the problem of "being

hit in the throat”, although China’s economic aggregate has been ranked the second-largest in the world. In the context of a new round of world scientific and technological industrial revolution, the competition for the right to speak in core technologies, including 5G, is unprecedented, how can we break through the core technologies of this wave band? How to break through the problem of “being hit in the throat” has become the key. We have established the grand goal of building a prosperous, democratic, civilized, harmonious and beautiful modern socialist country at the end of the wave band by 2050. Therefore, we must have a say in the fields of core technologies in this wave band and truly become the major scientific center and innovation highland of the world. For this round of scientific and technological revolution, we must seize the opportunity!



Chinese Characteristics of Organizational Paradigm of Scientific and Technological Innovation: From “Industry-University-Research” to “Government-Industry-University-Research-and-Application”

Q2 *Wenhui Daily: In the early days of industrialization, it usually took nearly 100 years from scientific discovery to technological innovation. But the related studies have shown that technology patents in western countries now lag new scientific ideas by an average of only seven years. What challenges does this pose to the enterprises committed to “results transformation”?*

LEI Xinghui: I think this problem can be analyzed from two aspects. On the one hand, the speed of technology upgrading and product iteration now is getting faster and faster. Originally, technologies and products we have developed can meet the needs of a generation, or even several generations. Therefore, the reason why the capital is willing to invest in this technology or product and enterprises are willing to operate it is that: such investment can be recovered through income and sufficient returns can be obtained. With the speed of upgrading, the time window for investment is short, making investment decisions difficult. For example, we all know that there is Moore’s law in chip technology, which means that: the number of transistors on an integrated circuit doubles every 18 months, and so does its performance. It also means that: the computer performance a dollar can buy doubles every 18 months. However, the chip-manufacturing enterprises are capital-intensive, and it usually takes about two and a half years to invest and construct

them, therefore, this investment decision needs to be coordinated and supported by the government from a strategic perspective.

On the other hand, for more than one hundred years, the time elapsed from the discovery of scientific principles to the technology development and engineering applications has been getting shorter and shorter, and it forms a “steep funnel,” which I call as “half-life shortening”. As we all know, enterprises usually have an important organization called the R&D Department. In the past, as the period from scientific discovery to its application was relatively long, the discovery of scientific principles was carried out by universities and scientific research institutes, which was motivated by pure interest, not primarily by application. The enterprises would not take the initiative to do research. However, since the 1990s, as the half-life period from science to technology has been rapidly shortened, the situation has changed greatly, and the competitiveness of the enterprise will be reduced if the enterprise does not do the research. Therefore, we can see that the world’s top 500 enterprises have increased their R&D investment, some of which have reached more than 15%, including Huawei, which has set up its R&D and Innovation Laboratory. And some enterprises have been shuffled out of the market in the past 20 years because they did not pay attention to their R&D investment.

Q3 *Wenhui Daily: The “cross-boundary” between basic research and applied research has increasingly become a powerful engine driving the contemporary new scientific and technological revolution. Under such a background, what profound changes have taken place in the organizational paradigm of scientific and technological innovation?*

LEI Xinghui: From the “cross-boundary integration” to promoting technological change, the development of new industries requires systematic design and demonstration effect to guide relevant Parties to make investments. For example, the emergence of Silicon Valley in the United States is not an accident. When a large number of innovative enterprises emerge and gather together, their R&D capital investment is very large in the initial stage of entrepreneurship, and of course the risks are also very huge, but the traditional financial structures cannot provide the capital to support them. At this time, the emergence of a large number of VCs pursuing risks and returns is undoubtedly the key factor. They will focus on different development stages of entrepreneurial enterprises respectively, which not only makes Silicon Valley brilliant, but also puts the United States ahead in this round of competition for core technological development.

The situation in China is quite different. The development of industrialization in China is not very long. Although China’s economic aggregate has grown substantially and the world’s most com-

plete industrial system has been formed since the reform and opening-up, the enterprises generally lack sufficient accumulation and R&D investment. In the early stage of the reform and opening-up, it is mainly the introduction, digestion and absorption of technology from the developed countries, which requires the formation of an “industry-university-research” cooperation mechanism with universities. In the context of a new round of scientific and technological revolution, China launched the National High Technology Research and Development Program (863 Program) as early as 1986 and the National Key Basic Research and Development Program (973 Program) in 1997, aiming to solve the major scientific problems in national strategic needs, and the frontier scientific issues that played an important role in human understanding of the world. At this stage, great changes had taken place in technological development and innovation form. The government had played an increasingly important role in the construction of the innovation platform, and the user demand also had become an important driving force for innovation. At this time, the organizational paradigm of scientific and technological innovation was also shifted to the “government-industry-university-research-application”.

We shall do everything possible to set up venture capital funds and pay attention to the young group for scientific and technological innovation and entrepreneurship.

Q4

Wenhui Daily: Just as Silicon Valley relies on Stanford University, the knowledge economy circle around Tongji University in Shanghai is also a case in point. What role do you think colleges and universities can play in serving the economic and social development of cities?

LEI Xinghui: It is not only Silicon Valley, but in fact, the role of universities played in driving the economic and social development of the city or region is obvious. Especially in China, like Tongji University, as early as at the beginning of this century, this University proposed that its scientific and technological research achievements should cross the campus wall and enter the science and technology park to realize economic value through innovation and entrepreneurship, thus driving the local economic development and creating an atmosphere of mass entrepreneurship and innovation, so as to gather more innovative enterprises and become the innovation highland of the region. Meanwhile, the universities are also the places where new socialist ideas and advanced culture come into being, and they should go beyond the ivory tower and the campus to integrate into the community, so as to drive local social development and urban renewal.

It is under such a philosophy that: the continuous spillover of relevant advantageous disciplines and science & education resources in Tongji University, together with the “integration and linkage development of three zones such as campus, industrial park and community” in Yangpu District where it is located, has jointly bred the industrial development mode around Tongji University with “market-driven, discipline-supported, dominated by enterprises and guided by the government”. Meanwhile, the school-run industrial system of Tongji University will also undergo in-depth reform and innovation, on the one hand, it will further strengthen the combination of science and education and the integration of industry and education, which will become an important part of Tongji University’s undertaking construction through the establishment of joint laboratory, joint R&D center and other innovation bases and talent training bases with Tongji University’s dominant disciplines; on the other hand, we should establish a whole-chain system for transforming scientific and technological achievements, and foster a service system and a capital ecology for innovation and entrepreneurship.

Q5

Wenhui Daily: The key to the integration of innovation chain and industry chain is to establish the leading position of enterprises in innovation. How do you think Chinese enterprises can fulfill the mission of self-reliance and self-improvement in high-level science and technology?

LEI Xinghui: In my opinion, the following aspects are crucial: At first, a comprehensive competitive analysis of the entire industry chain system should be conducted from the perspective of the whole industry, in order to identify the direction of key technology breakthroughs and the possible “being hit in the throat”. Secondly, in any case, we should further increase investment in research and development. Whether it is to establish their R&D and innovation centers, or to establish joint R&D centers with universities, it is the key for enterprises to maintain sustainable competitiveness. To truly focus on the core technology of this wave band, we should use the core technology to develop relevant new industries and even more transform our traditional industries. Thirdly, in order to improve the efficiency and effectiveness of innovation, large enterprises must do everything possible to raise funds to set up venture capital funds, and pay attention to the young group for scientific and technological innovation and entrepreneurship. For example, IBM has set up its venture capital fund, which focuses on investing in new technologies and startups related to IBM’s industry chain, including a portion that specifically invests in people who have left IBM to start their

businesses. They thought, anyone who left IBM to start a business must have found a weakness in IBM, or a business IBM had not bothered to develop. Given the uncertainty of future technology development, it is better to make start-ups become partners than competitors. Such a concept is worth learning for our enterprises.

Enterprises are the main body of innovation and the key subjects to solve the “being hit in the throat” technology, especially since entering the wave band of this century, the importance of enterprises to scientific & technological innovation and industrial revolution has become increasingly prominent. In recent decades, China’s science, technology and industry are enjoying the best period of development, and all fields are committed to the breakthroughs in core technologies of this wave band; at the same time, we have further intensified the reform and opening-up and actively advocated and promoted the cooperation with other countries in the fields of science, technology and industry. Under such a background, with the high level of self-reliance and self-improvement of enterprises, China will surely find a new path of innovative development featuring strong technology, strong enterprises, strong industries, strong economy and strong country.

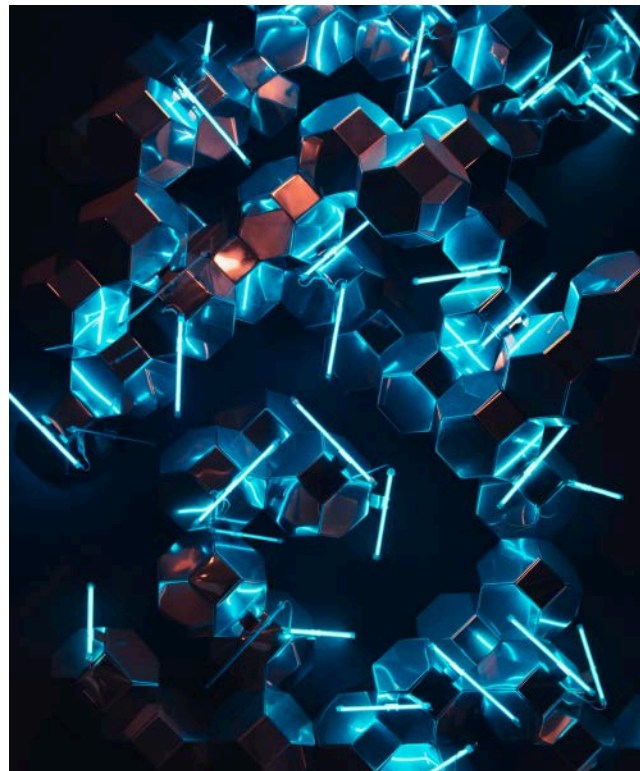
Q6

Wenhui Daily: “Without Nasdaq, there might not be Silicon Valley.” You have researched finance and strategy for a long time. In your opinion, how can we deepen the integration of science, technology and finance to achieve more “enterprises of our time”?

LEI Xinghui: The breakthroughs in core technologies and the resulting growth of the industry cannot be achieved without financial support. To better promote scientific and technological innovation and learn from the experience of Silicon Valley, China issued a call for “mass entrepreneurship and innovation” at the beginning of this century to actively encourage innovation and entrepreneurship in the field of core technology. This requires the strong support of China’s capital market, which not only requires a large number of VC funds to invest in this field, but also must establish an effective exit system and channel. Therefore, I fully understand the fundamental reason why China started the research on GEM as early as the late 1990s, and insisted on launching GEM in 2009 when the world had just gone through a crisis and the global GEM market was generally depressed. I believe that it will be successful. Later, we have further established the “Science and Technology Innovation Board” focusing on “hard technologies” such as integrated circuits, biological medicine and high-end equipment and the like. Now, with the arrival of the

Beijing Stock Exchange, which focuses on “specialized and innovative” small enterprises, a multi-level capital market has been established that can fully support scientific & technological innovation and entrepreneurship, and further facilitate the shift of the organizational paradigm of scientific and technological innovation to “government-industry-university-research-application-finance”, thus adding wings for the “Golden Phoenix” to fly.

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石建勋
经济与金融系教授

加快推动数字产业化和产业数字化

“十四五”规划和2035年远景目标纲要提出：“加快推动数字产业化”“推进产业数字化转型”。这是以习近平同志为核心的党中央把握世界科技革命和产业变革大趋势作出的战略部署，为我们打造数字经济新优势指明了方向。

数字技术的发展和运用，使得各类社会生产活动能以数字化方式生成为可记录、可存储、可交互的数据、信息和知识，数据由此成为新的生产资料 and 关键生产要素。互联网、物联网等网络技术的发展和应用，使抽象出来的数据、信息、知识在不同主体间流动、对接、融合，深刻改变着传统生产方式和生产关系。人工智能技术的发展，信息系统、大数据、云计算、量子通信等数据信息处理技术、先进信息通信技术的应用，使得数据处理效率更高、能力更强，大大提高了数据处理的时效化、自动化和智能化水平，推动社会经济活动效率迅速提升、社会生产力快速发展。

与传统经济相比，数字经济的蓬勃发展赋予生产要素、生产力和生产关系新的内涵和活力，不仅在生产力方面推动了劳动工具数字化，而且在生产关系层面构建了以数字经济为基础的共享合作生产关系，促进了组织平台化、资源共享化和公共服务均等化，催生出数字经济等新业态、新模式，改变了传统的商品交换方式，提升了资源优化配置水平。从这个角度看，数字经济将极大地解放和发展社会生产力，优化生产关系和生产方式，重构产业体系和经济体系。

在这样的背景下，加快推动数字产业化、推进产业数字化转型就成为数字时代推动高质量发展、打造数字经济新优势的主动选择。数字产业化是指数据要素的产业化、商业化和市场化。产业数字化是指利用现代数字信息技术、先进互联网和人工智能技术对传统产业进行全方位、全角度、全链条改造，使数字技术与实体经济各行各业深度融合发展。推动数字产业化能够为产业数字化发展提供数字技术、产品、服务、基础设施、相应解决方案以及完全依赖数字技术、数据要素的各类数字产品和服务，从而引领和推动各行各业的快速发展和数字化转型升级。产业数字化转型的推进，又会产生关于各行各业生产经营销售等的海量数据，为数字产业化提供源源不断的源头活水和数据资源，推动我国数字产业不断做强做大，催生出数字产品制造业、数字产品服务业、数字技

术应用业、数字要素驱动业、数字化效率提升业等数据产业。因此，数字产业化和产业数字化是一个相互促进、协同发展的过程。同时，数字技术与传感、仿生、人工智能、量子通信等新兴技术的有机结合及应用，使超大量高速流动的数据信息流得以跨越空间距离或地域限制，催生出智慧产业、智慧城市、智慧社会、智慧生活等新业态，进一步推动社会生产力发展和生产关系变革。

推动传统产业实现数字化转型升级，是加快推动数字产业化、推进产业数字化转型的重要方面。推动传统产业数字化转型，一方面，可以打破传统产业的生产周期和生产方式，使企业能够借助互联网广泛的数字连接能力打破时空局限，将产品和服务提供给更广泛的用户和消费者，提升企业产出效率，推动企业生产规模扩大；另一方面，能够让企业有效利用现代数字技术精确度量、分析和优化生产运营各环节，降低生产经营成本，提高经营效率，提高产品和服务的质量，创造新的产品和服务。可见，运用数字技术对传统生产要素进行改造、整合、提升，将大大促进传统生产要素优化配置、传统生产方式变革，实现生产力水平跨越式提升。

原文刊发于10月15日《人民日报》

上汽通用汽车
SAIC-GM

同济大学与上汽通用汽车联合举办

致匠心

专题活动

传承匠心精神 校企共创共赢

7月15日，同济大学与上汽通用汽车携手举办“致匠心 - 庆祝中国共产党成立100周年专题活动”，邀请不同行业的“匠心代表”分享在各自领域坚守信念、追求极致的匠心故事。以“匠心”致敬“初心”，用奋斗诠释新时代历史使命。

同济大学党委副书记吴广明、上汽通用汽车有限公司副总经理江炯出席并分别致辞。上海市总工会副主席张得志、同济大学工会常务副主席宋建华，以及上海市人力资源和社会保障局、江南造船（集团）有限公司、上海飞机制造有限公司等支持单位有关嘉宾出席活动。



吴广明副书记在致辞中表示，站在“两个一百年”奋斗目标的历史交汇点上，致敬匠心精神、弘扬匠心精神，希望师生把“工匠精神”刻印在对党忠诚、无私奉献的信念上，体现在干事创业的实践中，努力成为各行各业的“大国工匠”。



上汽通用汽车副总经理江炯表示，希望通过企业、大学携手合作，开创校企合作、创新育人的新路径，在为高校学子搭建优质实践平台的同时，进一步激发企业的创新活力，为社会培养具有过硬综合素质与匠心精神的社会栋梁与专业精英。



戚泉木寄语同济学子要珍惜时光，努力读书，不忘来时路，不忘责任使命，用实际行动报效祖国。

在分享环节，上海百老德育讲师团团长戚泉木，铁道部“火车头”奖章获得者、中国中铁上海工程局集团公司副总经理李杨，“全国劳动模范”、同济大学建筑设计研究院（集团）有限公司汽车运动与安全研究中心主任姚启明，上海市科技青年35人引领计划入选者、中国商用飞机有限公司5G工业创新中心副总工程师陈智超，“全国劳动模范”、江南造船船舶电焊工特级技师陈景毅，以及上汽通用汽车销售有限公司售后服务部技术支持中心车辆诊断及编程技术主管王正、上汽通用汽车有限公司新能源产品营销高级经理于博，分别与大家分享了在各自专业领域的技术革新和职业经历的感悟。



献身铁路事业38年的李杨，见证了中国铁路事业的迅猛发展。他说，大国重器有今天的发展，靠的是“吃得苦，沉得下心”的精益求精精神。他鼓励年轻人要以理想为基础，久久为功而不改初衷，精益求精而臻于至善；善于在思考中“破局”，以创新为核，做到人无我有、人有我强。



“中国赛道设计第一人”姚启明拥有60余项创新成果和核心技术，创造了赛道上无一例恶性事故，30余次“中国第一”的纪录。作为国际汽联全球赛道设计师中唯一的亚洲人，从填补国内空白到走到国际前沿，姚启明说，这是“因为赶上了好时代、来对了好地方、遇上了好机会。”能够让她以一己之力在这个没有规范、没有标准的领域开辟出一条非比寻常之路，离不开伟大的祖国、伟大的时代。



中国商用飞机有限公司十大青年英才、5G 工业创新中心副总工程师陈智超认为，越是国家需要，就越是青年人成长成才的地方。作为新一代投身科技创新的年轻人，要用新一代信息技术与制造业融合，推动跨界的开放创新，用科技创新指引未来的星辰大海；要对新生事物葆有好奇之心、面对困难与阻碍有坚韧之心、面对诱惑和迷茫不忘初心，用无悔青春践行初心和匠心。



陈景毅是从苏北农村走出的特级技师，他不断把技能和科技结合，推进本领域的技能进化，用技能实现了人生的华丽转变，带领江南焊接技术团队为一线生产扫清技术障碍，助力中国船舶产业破茧成蝶，助力中国制造从大到强。他说，青春热血铸巨轮、造大舰，构筑钢铁海防，为中华民族屹立东方奠定大国国防基础。



王正和于博介绍了各自领域的科技创新与技术革新亮点，鼓励青年学生将工作事业与兴趣相结合，使之成为持久迸发工作热情的原动力，从而成为各自领域的卓越“匠人”。



在当日活动上，同济大学经济与管理学院副院长程名望与上汽通用汽车销售公司党委副书记、工会主席王力臣分别代表双方共同签署《战略合作会议备忘录》。未来，双方将充分发挥各自优势，共建产学研合作平台，在科研联合攻关、人才联合培养、科技成果转化、社会公益等领域进一步推进校企合作。

上海市总工会副主席张得志，同济大学党委副书记吴广明，同济大学工会常务副主席宋建华，学院党委书记施骞、经济与金融系主任钟宁桦，上汽通用汽车副总经理江炯、工会主席沈正亮、纪委书记龙德刚上台见证双方签署仪式。学院党委副书记、工会主席董变林主持签署仪式。

活动尾声，来自上汽通用汽车与同济大学的代表共同演唱歌曲《不忘初心》：“你是我的一切我的全部，向往你的向往，幸福你的幸福，不忘初心继续前进，万水千山最美中国道路……”，以优美的歌声抒发赤诚情怀、唱响时代新声。

此次活动由同济大学经济与管理学院、上汽通用汽车销售有限公司联合承办，来自上汽通用汽车、喜马拉雅公司的有关代表等嘉宾，以及学校师生、校友近 200 人参会。

TONGJI SEM AND SAIC GENERAL MOTORS JOINTLY SIGNED THE “MEMORANDUM OF STRATEGIC COOPERATION”

On July 15th, Tongji SEM and SAIC General Motors jointly held a special event on “Ingenuity”, inviting representatives from different industries to share their ingenuity stories about adhering to their beliefs and pursuing the ultimate in their respective fields.

At the event of the day, Tongji SEM and SAIC General Motors jointly signed the “Memorandum of Strategic Cooperation”. In the future, the two parties will give full play to their respective advantages, jointly build a platform for industry-university-research cooperation, and further promote school-enterprise cooperation in areas such as joint scientific research, joint training of talents, transformation of scientific and technological achievements, and social welfare.





同济经管联合 SAP 中国研究院 推出智能化转型前沿课程

中德校企携手 共育数字人才

10月21日，同济大学经济与管理学院（同济经管）联合SAP中国研究院共同推出“智能化转型前沿课程”，并举办了盛大的启动仪式。双方将依托同济经管中德经济与管理研究院的平台，着眼于数字化转型的产业趋势，响应贯彻教育部关于新文科建设工作的要求，合力打造国家级一流课程，共同建设国家级一流专业，进一步增进校企合作与产教融合，共同培养数字化转型所需人才。



同济经管学院党委书记施骞教授、党委副书记董变林，与SAP全球高级副总裁、全球研发网络总裁柯曼（Clas Neumann），SAP全球高级副总裁、SAP中国研究院院长李瑞成博士共同为课程揭幕。

揭幕仪式由经管学院副院长阮青松教授主持，SAP执行董事会成员、SAP首席技术官、同济校友穆悦庚（Juergen Mueller）通过线上出席仪式，同济大学中国科技管理研究院常务副院长霍佳震教授、经管学院管理科学与工程系系主任王洪伟教授，与来自SAP的多位嘉宾，和近百名学院师生参与了此次活动。

国家“十四五”规划和2035年远景目标纲要提出，加快建设数字经济、数字社会、数字政府，以数字化转型整体驱动生产方式、生活方式和治理方式变革。

在新发展理念引领下，“智能化转型前沿课程”将聚焦数字经济发展趋势，秉承产教融合宗旨，将SAP高管和专家请进同济经管的课堂以及讲堂，为同学们录制打造MOOC（慕课），分享业界关于数字化转型的行业视角和前沿实践，同时依托同济经管的人才资源和科研成果，创新产学研合作模式，协助企业破解数字化转型难题。

同济大学副校长雷星晖教授表示，同济大学始终坚持人才培养面向国家重大战略需求，积极响应新时代人才强国战略，希望通过与SAP中国研究院进一步加深合作，培养具有国际水平的科技与管理人才，共建数字化人才高地。

SAP中国研究院院长李瑞成博士表示，在当今的数字时代，人才是创新与发展的源泉。作为全球领先的企业应用软件解决方案提供商，SAP非常高兴与同济经管延续并加深合作，共同为中国下一代数字化人才的成长助力。

同济经管一直以来非常重视校企合作，学院党委书记施骞教授表示，在经济社会转型升级的时代需求下，学院将践行人才强国战略，通过产教融合、校企合作的方式，建设一流课程和一流专业，将人才培养与市场需求对接，共同服务国家推进数字化转型的目标，为国家培养引领未来的社会栋梁和专业精英。



SAP全球高级副总裁、中国研究院院长李瑞成博士介绍合作背景和项目内容



同济经管学院党委书记施骞教授致辞



SAP执行董事会成员、首席技术官穆悦庚先生视频连线与现场师生亲切互动



SAP全球高级副总裁、全球研发网络总裁柯曼先生现场授课

SAP执行董事会成员、首席技术官、同济大学校友穆悦庚（Juergen Mueller）通过视频连线的方式，分享了对于双方未来合作的展望。同时作为同济大学校友，Juergen充满感情地回忆了在同济校园里度过的美好时光，学汉语、踢足球、结下难忘师生友情。他鼓励同学们，勇于创新、不懈努力、追逐梦想。

SAP全球高级副总裁、全球研发网络总裁柯曼（Clas Neumann）则与同学们分享了他关于世界经济发展与全球化的洞见，并与现场的同学进行了热烈互动。

同济经管非常重视与企业的合作，培养高端人才，进行联合创新。同济经管与SAP保持着长期紧密的合作。其中，同济经管早在2008年，就加入了SAP中国研究院大学联盟项目，2015年聘任SAP全球研发网络总裁柯曼先生，担任学院国际咨询委员会委员。2016年，同济经管与SAP签署校企合作的战略框架协议，为之后的深度合作落地打下了坚实的基础。同济大学经济与管理学院、SAP中国研究院此次推出智能化转型前沿课程，是SAP与同济大学长期合作的又一个里程碑，也为中德校企合作、携手培养下一代数字化人才树立了新的典范。接下来，双方将以此次活动为契机，进一步拓展合作领域，实现互利共赢、共同发展。



TONGJI SEM AND SAP KICK-OFF FURTHER COLLABORATION TO DEVELOP NEXT GENERATION DIGITAL TALENTS



On October 21st, Tongji SEM and SAP jointly launched the “Intelligent Transformation Course”. This new course is focus on the development trend of digital economy, adheres to the purpose of integration of industry and education, and will be delivered by SAP executives and experts as “co-lecture” to bring the profound insight, rich practice and cutting-edge technology of digital transformation to students of Tongji SEM. At the same time, the two parties will also innovate the mode of industry-university research cooperation through the collaboration, and both parties jointly help enterprises solve problems of digital transformation. This is another milestone in the long-term cooperation between Tongji and SAP, and also a lighthouse example for the Sino-German Enterprise-University Cooperation as the two parties work together to develop China's next generation digital talents.

Professor Xinghui Lei, Vice President of Tongji University said: “Tongji University always adheres to talent cultivation by matching the major strategic needs of the country and actively responds to national talent strategy in the current new era. We hope to further deepen cooperation with SAP, cultivating technology and management talents with international level, and to build a digital talent highland.”

Juergen Mueller, member of SAP Executive Board and Chief Technology Officer, join the ceremony virtually and kicked-off the further cooperation online. Then he also had a warm interaction with the students onsite. As an alumni of Tongji University, he recalled the wonderful time he spent on Tongji campus, learning Chinese, playing football and forming an unforgettable friendship between teachers and students. Clas Neumann, Senior Vice President and President of SAP Labs Network, also attended the launching ceremony, conduct lecture in person and shared insights on world economic development and globalization with students.

Tongji SEM attaches great importance to cooperation with enterprises, cultivating high-end talents and carrying out joint innovation. Tongji SEM and SAP have maintained long-term close cooperation. In 2008, Tongji SEM joined the SAP China Research Institute University Alliance Project. In 2015, Prof. Clas NEUMANN, President of SAP Global R&D Network, was invited to serve as a member of Tongji SEM International Advisory Committee. In 2016, Tongji SEM and SAP signed a strategic framework agreement for cooperation.



沈荣芳
生于1934年9月，江苏江阴人，曾任同济大学管理工程系主任、经济管理学院院长，上海防灾救灾研究所副所长兼系统工程研究室主任，中国人类工效学学会第一届理事會理事长，国际人类工效学协会理事會第一任中国理事等。

从架起“中国桥”、修筑“中国路”、驾驶“中国车”，到建造“中国港”、铺设“中国网”，中国在短短几十年时间里交出了一份全球其他国家难以企及的成绩单，“中国梦”的大美画卷正一步步变为现实。

在“基建狂魔”的赞誉和惊叹背后，高效规范、严谨细致的工程管理可以说发挥了“定海神针”的作用。而同济大学沈荣芳教授，就是这样一位善于运筹帷幄的“开路人”。

沈荣芳： 运筹帷幄“开路人”

作者 / 徐蓓 原文刊发于12月18日《上观新闻》

第一引路人

记者：您是“百年名校”市南中学的学生？

沈荣芳：是的，我初中就读于育才中学，高中是在清心中学，也就是现在的市南中学。

清心中学创建于1860年，有150多年的历史了，可以说是上海历史最悠久的学校之一。学校分为男中和女中，我姐姐在女中读书，我读的是男中，中间只隔着一条陆家浜路。

记者：当时的市南中学在教学上有什么特色？

沈荣芳：记得上高中的时候，老师教的《三角》课程教材是英文版的，因此培养了我阅读英文书籍的能力。

我最喜欢的课是数学，后来到同济大学念书时，就喜欢上了投影几何学，也称画法几何学。记得第一次和第二次测验，我的成绩分别是100分、99分。想来，是有中学的底子与爱好在起作用。但我不是很用功的学生，有的学科还学得不够好，特别是语文。

记者：您从小的志向就是当建筑师吗？

沈荣芳：我们家里共有7个兄弟姐妹，只有我一个报考了同济大学土木系。其中的原因，说起来也简单。

早在育才中学读书期间，我们家打算买一处新房子。跟着大人一起去选房子的时候，我对建筑产生了越来越大的兴趣。所以，就报考了同济大学土木系。

记者：可以说，父母是您的“第一引路人”。

沈荣芳：我爸爸是做进口颜料生意的，经常和外国人打交道。为了提高英语水平，他还专门去读了夜校。虽然他的英语口语并不好，但无论是哪个国家的人，只要会讲英语，爸爸似乎都能跟他们做成生意。在他的影响下，我也学了几句口语。

我父母的教育观跟很多人不一样。可能是因为我姐姐后来得了肺病退学的缘故，他们在家从来不会催着我们念书。他们认为，只要我们身体健康就好，考试成绩差一点没关系。所以，我们兄弟姐妹不算是很用功的学生，更不会像现在的一些孩子那样拼命刷题。但是，上课一定要认真，听懂老师的讲解。

毕竟，我们那个时候大学没这么难考。记得同班同学中，一起考上同济大学的就有四五人。

转向运筹学

记者：后来您从事运筹学研究，听说与钱学森先生有关？

沈荣芳：大学毕业后，我留校任教，被分配到“建筑施工组织与计划”教研室工作。这是一门叙述性的课程，说实话我不太喜欢。

我的老师翟立林先生很了解我。后来，他有一次听钱学森先生作有关运筹学的报告。钱先生说，中国要开展运筹学的学习和研究，并把它运用到中国的实际工作中。对此，翟先生表示赞同和支持。

那时候，我们以学苏联为主，而当时苏联没有运筹学。为了在同济大学开设运筹学课程，1958年，我被派到中国科学院运筹学研究室进修两年。由此，我就从“建筑施工组织与计划”转向了运筹学研究。



与中科院运筹学研究室主任许国志院士（左）的合影

记者：在“白纸”上开展运筹学教学研究，是不是遇到了很多考验？

沈荣芳：确实，遇到了一些困难。比如，没有中文书，只有英文资料；搞运筹学，需要达到大学本科数学专业的水平，而我只有工科院校数学课程的水平。

记得《高等数学》的学习，我们大概学了360个学时，数学系却学了整整4年，学时上就多出很多。

我首先面临的一个任务，是要在一般工科大学生具有的数学基础上，编写一本比较系统、全面的《运筹学》教材，并给同济学生开出一门《运筹学》的新课。

虽然难度很大，但只有迎难而上。当时，运筹学研究室主任是中国运筹学的奠基人许国志教授。遇到不懂的问题，我就向他请教。他有时候会花上半个小时甚至更长的时间，不厌其烦地教我推导数学论证过程中的难点。

研究室的其他老师、研究人员，也给了我许多指导和帮助。他们传授给我的经验，很大程度上成了我之后在教学、科研工作中的指路明灯。

记者：在同济大学开设《运筹学》，有什么收获？

沈荣芳：这门新课的第一批学生，主要是来自全国各地高等院校建筑工程管理方面的骨干教师。他们正好来到同济进修，其中很多教师后来成为一些大学的校长、院长。现在想来，这是“最好的礼物”。

那时候我26岁，没什么禁忌，什么都敢干。从1956年到1966年的10年，我主要是教这门课。这段时光，也是我心无旁骛上课的10年。

记者：《运筹学》教材又是如何从无到有的？

沈荣芳：我先后主编了几本运筹学方面的教材。印象最深的是1997年，由我负责主编的《运筹学》，由机械工业出版社出版，供全国大学本科生使用。这部教材由国内7所大学的教师合作编写。在此后的10多年间，这部教材重印了11次。2008年对原稿作了一次较大的补充、修改和更新后，于2009年出版了第2版。至今，第2版也重印了好多次。

我曾跟著名的工效学专家、美国普渡大学教授萨文迪有过交流。他告诉我，科技发展速度很快，需要不断地更新内容。所以，书籍编辑的思路就是把各路专家的内容合编在一起，哪个专家最在行、最了解新的研究成果，就由他来负责写这部分内容。

其实，我们的统编教材正是这么做的。比如，大规模线性规划的内容，由上师大张建中教授来写；系统模拟的内容，由哈工大的胡运权教授来写。

访学加拿大

记者：您有没有出国进修的经历？

沈荣芳：改革开放后，同济恢复了管理专业。因为缺乏对工业发达国家工商管理教育情况的了解，所以决定派人到外国去学习，我很幸运地被选中了。

出国前，系主任王达时教授对我说，我们现在要办管理专业，但目前国内没有这方面的经验，所以派你去把外国的经验学回来，将来我们学校要办出一个与国际接轨的管理专业。于是，1980年至1982年，我作为访问学者在加拿大进修了两年。

我所在的阿尔伯特大学，地处加拿大阿尔伯特省的首府埃德蒙顿市。我主要进修的是工业工程与工商管理专业方面的课程，着重于其中的运作管理、劳动科学、系统分析和项目管理等。

学习期间，我发现加拿大的大学有一个很大的特点，那就是教学与实践紧

密结合，实例特别丰富。尤其是教材每一章后面的习题，每道题几乎都有实际应用的背景。做完这些习题，不但学到了计算方法，还能提高实际应用能力。

记得有位教授在讲解运筹学课程中的一类随机过程，即马尔科夫过程的课程时，结合市场上牙膏的营销，举了一个通俗易懂的例子：市场上有A、B、C、D、E五种不同牌子的牙膏，目前用A牌牙膏的顾客，下一次买牙膏时，将会买五种牙膏的概率分别是多少；目前用B牌牙膏的顾客，下一次买牙膏时，将会买五种牙膏的概率又是多少。以此类推，经过一段时间后，五种牙膏在市场上的占有率将趋于稳定，从而可以利用这个稳定值来预测五种牙膏的市场占有率。

可见，加拿大大学的教学不一味追求用精确的数学理论来说明，更讲究活学活用。这样的讲授方法，给了我很大的启发。



在加拿大阿尔伯特大学学习，摄于学校路口

记者：还有没有什么新鲜体验？

沈荣芳：那个时候，我们中国人依旧大部分用手计算，而加拿大基本上都用上了电脑计算。阿尔伯特大学拥有北美最先进的大型电脑，我在学习期间做了大量有关运筹学问题的运算。

同时，我们的学习一般是先讲理论，再进行推导，而加拿大的一些大学就是教应用程序，学生会用就行。坐在计算机终端旁边，只要会看有关程序的说明书，运用程序就可以将其结果算出来。

这段学习经历使我理解了运筹学与计算数学的关系，也了解了运筹学与计算技术密切结合的未来趋势。

组建经管学院

记者：在同济大学没有先例的情况下率先提出要建立管理学院，您是如何考虑的？

沈荣芳：1979年5月，在教育部召开的部属工科院校专业调整会议上，有6所院校，即天津大学、同济大学、华中工学院、西安交通大学、大连工学院、清华大学决定建立管理工程专业。

由于同济大学之前办过10年管理工程专业，有一定的经验，因此，便在同济大学成立了“教育部直属高等工科院校管理工程专业协作组”。除了上述院校，还有哈尔滨工业大学、上海交通大学、上海化工学院、上海机械学院。协作组的牵头单位是清华大学和同济大学。没过多久，同济大学工业管理工程专业开始恢复招收本科生和研究生。

1984年初，我得知有几所兄弟学校在筹建管理学院，而我们的条件不比他们差。因此，当时我作为管理工程系的主任，就在一次学校召集的中层干部大会上提出建立管理学院的设想。

当时，同济大学还没有建立学院的先例，提出这样的建议确实有点突然。坐在听众席上的校党委书记王零同志听

了我的发言，陷入沉思之中。大约过了20分钟，他走到我的座位说：你把刚才的发言整理成一份书面材料，报给学校，由学校向国家教委打报告，申请成立管理学院。结果，1984年8月29日，国家教委批复“同意你校设立管理学院”。

记者：同济大学是国内第一所成立管理学院

沈荣芳：到底是哪一所大学最早成立管理学院，我没有核查过，但同济大学肯定是国内第一批建立管理学院的学校。

针对国家教委的批文，后来担任管理学院名誉院长的翟立林先生建议，同济大学的管理学院是否可定名为“经济管理学院”，以适应我国正从计划经济向中国特色社会主义市场经济转变的新形势。

于是，我们又向国家教委反映了这一想法和建议，国家教委同意了我们的建议。因此，我们学院被正式定名为“经济管理学院”，后来改为“经济与管理学院”。

记者：当初创办经管学院有哪些难点？

沈荣芳：国家教委批准成立管理学院的条件之一，是学院的学生规模必须达到1000人以上。当时，要维持1000人的学生规模，着实不是一件容易的事情。

根据国外的一般经验，一个学院至少有三个系，所以我们成立了工业管理工程系、技术经济系，后来又加了一个管理信息系统系。当时社会上对管理的认识比较落后，缺乏有管理知识和经验的干部，于是我们又成立成人教育培训中心，与城乡建设部合办总工程师培训班、城建局长培训班，还与世界银行等合办培训班。再加上研究生班等等，学生全部加起来就有1000人左右。

当时感到，要稳住这1000人的规模，还真的很不容易。谁曾想到，过了一段时间后，我们的学院仅研究生就不止1000人。

记者：经管学院如何办出自己的特色？

沈荣芳：就培养学生而言，要既懂技术又懂经济。很多大学都能培养管理人才，但同济大学经管学院培养的学生是既懂技术又懂经济。

同时，要注重定性分析和定量分析相结合。定性分析是依据一般的经济理论，定量分析则是运用运筹学，这是我们学院的特点。

同济大学的土木工程是优势和特色专业，所以我们学院理应以精通建筑的人才为重点培养对象。因为同济大学是对德主要联系的院校，所以还要注重学习德国的经验。



在加拿大阿尔伯特大学学习，摄于学校路口

防灾救灾靠什么

记者：上海防灾救灾研究所是怎样成立的？

沈荣芳：1987 年前后，上海出现了一系列交通和煤气事故。

一次，由于早晨出现大雾，过江轮渡运行受到影响，一些急于上班的职工和其他过江乘客出现拥挤现象，造成多名乘客伤亡。

另一次是在上海郊外发生火车相撞事故，但运载伤员的救护车开不出去。因为各种车辆太多，道路被堵住了。

还有一次，居民住宅内的煤气管道因管道漏气发生爆炸，炸破了楼板，造成压伤居民的严重事故。街道负责人很快来到现场指挥救援，不久消防救援人员来了，改由消防局负责救援；再后来，市府负责人来了，救援又改由市府负责人指挥。这种指挥人员的变动，干扰了救援工作的步调。



上海防灾减灾研究所的一次成果鉴定会

当时，上海有位副市长经常出现在电视新闻中，不管是水管爆裂还是发生火灾，忙着处理各类大大小小的事故。

其实，对事故灾害应该按照严重程度进行分级。轻的灾害，消防局就可以处理；大的灾害，上级部门协同处理。城市突发事件，不能全部由副市长来调

度指挥。
从系统工程的角度来看，城市突发事件处理或多或少都存在的问题。于是，在市科委、市建委和同济大学的共同努力下，1989 年春正式成立了“上海防灾救灾研究所”。

记者：强化城市防灾救灾能力，预案看来很重要。

沈荣芳：记得上海气象部门曾预测到某天将出现恶劣天气，于是有关部门通知各地赶快抢收已经成熟的粮食进仓。但是，有一个地区因电话无人应答，耽误了时间，造成了可以避免的损失。这使大家认识到，防灾救灾是一项复杂的系统工程，任何一个环节出了问题，都会对全局带来影响，乃至造成前功尽弃的不良后果。

1988 年在瑞典斯德哥尔摩举行的一次国际学术会议上，我们提交了论文，说明城市防灾救灾应该有一个总体、系统、长远的战略规划。

1990 年 5 月，在澳大利亚布里斯班举行的国际会议上，我代表上海防灾救灾研究所报告了上海的城市防灾救灾规划。一些国际同行向我们提了很多好的建议。

比如，每个城市面临的灾害是不同的，必须考虑其本身的特点和历史上的记载，以及地理和自然条件的特性，从而制定出更精准、科学的城市防灾救灾规划；规划每年要作一次调整，不断滚动；应急救援中，要把人员受伤到救护车到达之前这一时间段作为重中之重，如果没有这方面的准备和预案，人员伤亡的程度将会加重。

抓住基础与前沿

记者：你是中国人类工效学学会第一届理事会理事长。人类工效学是一门什么学问？

沈荣芳：运筹学讲的是资源的合理利用，是现代管理学的一门重要专业基础课。相较而言，工效学首先研究的是工作效率，进而研究工作时的人身安全。随着社会和经济的发展，工效学还研究工作环境的温度、湿度、尘埃、风速等卫生条件，以提高工作环境的质量。之后，又从心理学的角度，以期改善和创造良好的心理环境。

比如，汽车的研发，以前只讲究驾驶性能、行车安全，现在人们还关注座位是否舒服、车里的温度是否适宜、方向盘的手感好不好、驾驶舱视野是否开阔，等等。不单单产品的质量要好，买东西的环境也要好。这些都是工效学的研究课题。

随着人民对美好生活的向往，工效学将在我国得到进一步推广。我相信，这是发展的必然趋势。

记者：您和您的学友们设立“同济大学沈荣芳奖学金”，有什么初衷？

沈荣芳：我们这个学友会于 2013 年成立，全名叫作“同济大学荣芳合作创新与发展学友会”。学友会的会长施德容曾担任市民政局局长，“同济大学沈荣芳奖学金”正是由施德容、袁东两位学友发起并建立起来的。

这个奖学金有两个特点：第一，不仅发给学生奖学金，还配有一名导师，因为我们这些学友在工作上事业有成，特别是有些人留学回国，可以为年轻学生更好地指明前进方向；第二，在评选奖学金的过程中，着重关注学生有没有参与公益事业。如果一个年轻人能够在公益事业上有所贡献，那么他一定会具有更开阔的视野和乐于奉献的精神，而这正是我们积极倡导的。

目前，我们的奖学金一共募集到近百万元，资金募集还在进行中。每一年，会有 10 位学生获得奖学金。这些获得奖学金的学生都非常优秀，我们希望能够帮助他们在今后的事业中作出更大贡献。

记者：您当了一辈子老师，对青年学子有什么寄语？

沈荣芳：首先，必须牢牢掌握基础性的知识。我在加拿大看到有一门精算学的课程，学了以后很容易找到工作。实际上，精算就是一门运用概率数学理论和多种金融工具对经济活动进行分析预测的学问。仔细一看，精算专业的重要基础之一不就是数理统计学吗？假如把数理统计这门课学好的话，学习精算不会有

多大困难。
我们经管学院有一名

学生叫顾宗浩，他在美国编制了若干运筹学方面的通用软件。这些软件在世界各地受到广泛欢迎。顾宗浩编运筹学的软件，第一要懂运筹学，第二要懂计算数学，第三还要懂股票市场。

他在同济大学念书的时候，学习成绩就很突出，基础非常扎实，一些非常难懂的东西都能一一弄懂。可见，基础知识一定要学扎实。

其次，要学习一些前沿的知识，如大数据。此次新冠肺炎疫情暴发，健康码、行程码等都涉及大数据。还有人工智能，这些与未来生活息息相关的前瞻性的东西，一定要去学习。

SHEN Rongfang: a Strategic "Path Finder"



SHEN Rongfang
Dean of Tongji SEM (1986-1990)

From constructing “China’s bridges”, building “China’s roads”, and driving “China’s cars”, to the construction of “China’s ports” and the “China’s Internet”, China has made great achievements that the rest of the world cannot attain in just a few decades. The grand picture of the “Chinese dream” is gradually becoming a reality.

Behind the praise and wonder of “infrastructure maniac”, the efficient, standardized, rigorous and meticulous project management can be said to play the role of “mainstay”. Professor SHEN Rongfang from Tongji University is such a “path-finder” who is good at devising strategies within a command tent.

The Primary Path-finder

Reporter: Is your ambition to be an architect since your childhood?

SHEN Rongfang: There are seven brothers and sisters in my family, and I am the only one who has applied for the College of Civil Engineering, Tongji University. The reason why I applied for this university is easy to explain.

As early as when I was studying in Yucai Middle School, my family planned to buy a new house. I became more and more interested in architecture when I followed adults to choose a house. Therefore, I chose to apply for the College of Civil Engineering, Tongji University.



Reporter: It can be said that your parents are your “primary path-finder”.

SHEN Rongfang: My father was a merchant who imported pigments and often did business with foreigners. To improve his English, he even went to night school. Although his spoken English was not good, my father seemed to be able to do business with people from any country who could speak English. Under the influence of my father, I also learned some spoken English.

My parents’ views on education are different from many people. Maybe it was because my sister dropped out of school with lung disease, they never pushed us to study at home. My parents thought that as long as we were healthy, it didn’t matter if we didn’t do well in the exam. Therefore, my brothers and sisters were not very hard-working students, let alone like some of the children now desperately brush questions. However, they must listen carefully in class and understand what the teacher has explained.

After all, it wasn’t so hard to get into college in my day. I remember that four or five of my classmates were admitted to Tongji University together.

Switch to Operations Research

Reporter: Later, you are engaged in Operations Research, and I have heard that it is related to Mr. QIAN Xuesen?

SHEN Rongfang: After graduation, I was appointed to work in the Teaching and Research Office of “Architectural Construction Organization and Planning” in Tongji University. It is a narrative course, and to be honest, I don’t like it very much.

My teacher, Mr. ZHAI Lilin, knew me very well. Later, he once heard a report on Operations Research given by Mr. QIAN Xuesen. Mr. QIAN said that China should carry out the study and research on Operations Research and apply it to the practical work in China. For this, Mr. ZHAI agreed and supported it.



At that time, we mainly learned from the Soviet Union, but there was no Operations Research in the Soviet Union. In 1958, I was sent to the Operations Research Laboratory of the Chinese Academy of Sciences for further study for two years to open the Operations Research course at Tongji University. Therefore, I switched from “Architectural Construction Organization and Planning” to Operations Research.

Reporter: To carry out the teaching research on Operations Research on “a blank sheet of paper”, have you encountered some difficulties?

SHEN Rongfang: Yes, I have. For example, there are no Chinese books, only English materials. To engage in Operations Research, I needed to reach the level of undergraduate education of mathematics major, but I only had the level of mathematics courses in engineering colleges.

I remember that we took about 360 credit hours to study Advanced Mathematics, but the students from the Maths Department took four full years to study this course, so they had more credit hours.

The first task I faced was to compile a systematic and comprehensive textbook of Operations Research on the basis of the mathematical foundation that general engineering college students had in order to set up a new course of Operations Research for Tongji students.

Although the task was difficult, I had to rise to the challenge. At that time, the director of the Operations Research Office was Professor XU Guozhi, the founder of Chinese Operations Research. When I didn’t understand something, I asked him for advice. He sometimes spent half an hour or more trying to teach me the difficult points in the process of mathematical derivation.

Other teachers and researchers in the lab also gave me a lot of guidance and help. The experience they taught me, to a large extent, became my guiding light in my later teaching and scientific research.

Reporter: How does the textbook about Operations Research start from scratch?

SHEN Rongfang: I have edited several textbooks on Operations Research. What has impressed me most is that, in 1997, the Operations Research, of which I was the chief editor, was published by the China Machine Press and used by undergraduate students across the country. The textbook was co-written by teachers from seven universities in China. Over the next 10 years, the textbook has been reprinted 11 times. After a major supplement, revision and update to its original manuscript in 2008, the second edition was published in 2009. Until now, the second edition has also been reprinted many times.

I once had an exchange with Salvendi, a renowned ergonomics expert and professor at Purdue University. He told me that, science and technology were developing rapidly, which needed to be constantly updated. Therefore, the idea of a book editor is to put together the content of various experts, and it is up to the expert who knows the most about the new research to write the part of the content.

In fact, that’s exactly what our unified compilation of teaching materials has done. For example, the content of large-scale linear programming has been written by Professor ZHANG Jianzhong from Shanghai Normal University; and the content of the system simulation has been written by professor HU Yunquan from Harbin Institute of Technology.

Establish the School of Economics and Management (SEM)

Reporter: Tongji University has taken the lead in proposing the establishment of the School of Management when there was no precedent, how do you think about it?

SHEN Rongfang: In May 1979, at the professional adjustment conference of engineering colleges and universities under the Ministry of Education, there were six universities such as Tianjin University, Tongji University, Huazhong University of Science and Technology, Xi'an Jiaotong University, Dalian University of Technology, and Tsinghua University that have decided to establish management engineering major.

As Tongji University had 10 years of experience in running management engineering major, the “Cooperation Group for Management Engineering Major of Engineering Colleges and Universities directly under the Ministry of Education” was established in Tongji University. In addition to the above colleges and universities, there were Harbin Institute of Technology, Shanghai Jiao Tong University, East China University of Science and Technology, and Shanghai Institute of Mechanical Engineering. The collaborative team was led by Tsinghua University and Tongji University. Not long after, the Industrial Management Engineering major of Tongji University began to resume enrolling undergraduate and graduate students.

In early 1984, I learned that several brother universities were preparing for the School of Management, and our conditions were as good as theirs. Therefore, as the director of the Department of Management Engineering at that time, I put forward the idea of establishing the School of Management at the Middle-level Cadres Conference convened by the university.

At that time, Tongji University had no precedent of establishing the School of Management, so the proposal was a bit of a surprise. Sitting in the audience, Comrade WANG Ling, the Secretary of the Party Committee of Tongji University, listened to my speech and was deep in thought. After about 20 minutes, he walked to my seat and said, “Please sort out your speech into a written document and report it to our university. Then our university will make a report to the State Education Commission and apply for the establishment of the School of Management”. As a result, on August 29th, 1984, the reply from the State Education Commission was that “the establishment of the School of Management in your university has been approved.”



Reporter: Is Tongji the first university in China to establish the School of Management?

SHEN Rongfang: I haven't checked which university is the first to establish the School of Management, but Tongji University is definitely one of the first batch of universities to establish the School of Management in China.

In response to the official document from the State Education Commission, Mr. ZHAI Lilin, who was later served as the honorary president of the School of Management, suggested whether the School of Management of Tongji University could be renamed as “the School of Economics and Management, Tongji University”, in order to adapt to the new situation of China's transformation from a planned economy to a socialist market economy with Chinese characteristics.

Then, we reported this idea and proposal to the State Education Commission, which agreed to our proposal. Therefore, our School was officially renamed as “the School of Economics and Management”, which was later changed to “Tongji SEM”.

Reporter: What are the difficulties you have encountered while establishing Tongji SEM?

SHEN Rongfang: One of the conditions for the State Education Commission to approve the establishment of the School of Management is that the number of students enrolled must reach more than 1000 students. At that time, it was not easy to maintain 1000 students enrolled.

According to the general foreign experience, there were at least three departments in a School, so we set up the Department of Industrial Management and Engineering, the Department of Technical Economics, and later added the Department of Management Information System. At that time, the social understanding of management was relatively backward, and there was a lack of cadres with management knowledge and experience, so we set up Adult Education and Training Center, which not only jointly organized the training courses for the Chief Engineers and the training courses for Directors of Urban Construction Bureau with the Ministry of Urban-Rural Development, but also organized training programs with the World Bank and others. With the students in graduate classes and so on, the total number of all the students added up was about 1000.

At that time, I felt that it was not easy to maintain the size of 1000 students enrolled. Who would have thought that after a period of time, the number of only graduate students in our School exceeded 1000.

Reporter: How does Tongji SEM develop its characteristics?

SHEN Rongfang: In terms of cultivating students, it is required that the students should know both technology and economy. The students from many universities can be cultivated as management talents, but the students cultivated by Tongji SEM can understand both technology and economics.

At the same time, we should pay attention to the combination of qualitative and quantitative analysis. Qualitative analysis is carried out on the basis of general economic theory, while quantitative analysis is carried out by using Operations Research, which are characteristics of Tongji SEM.

Civil engineering major from Tongji University is a dominant and characteristic major, so the College of Civil Engineering should focus on cultivating talents who are proficient in architecture. Because Tongji University is a university that mainly contacts with Germany, so we should pay attention to learning experiences from Germany.

Reporter: You have been a teacher all your life, what do you want to say to the young students?

SHEN Rongfang: First of all, we must firmly grasp the basic knowledge. When I was in Canada, I read about a course in actuarial science and it was easy to get a job after learning it. In fact, actuarial science is a science that can analyze and predict economic activities by using probabilistic mathematical theories and a variety of financial instruments. Look carefully, isn't one of the important foundations in actuarial science major mathematical statistics? If you learn mathematical statistics well, you won't have much difficulty in learning actuarial science.

There is a student in Tongji SEM named GU Zonghao who has developed some general software for Operations Research in the United States. These software programs are popular all over the world. The software for Operations Research compiled by GU Zonghao shall require you that: 1) understand Operations Research; 2) understand Computational Mathematics, and 3) understand the stock market.

When GU Zonghao studied at Tongji University, his academic performance was outstanding with a solid foundation, and some very difficult points could be understood by him one by one. Obviously, our basic knowledge must be solid.

Secondly, we should learn some cutting-edge knowledge, such as big data. At the outbreak of COVID-19, health codes, travel codes and so on all involve big data. We must learn artificial intelligence and the forward-looking things which are closely related to our future life.

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黄渝祥：走向世界，走向开放

作者 / 顾杰 原文刊发于 12 月 3 日《上观新闻》



黄渝祥 1940 年生。同济大学教授，技术经济及管理专业博士生导师，曾任同济大学经济管理学院（现为同济大学经济与管理学院）院长等职，长期从事技术经济、项目评价方面的研究和教学，主要论著有《工程经济学》《费用效益分析》《建设项目经济评价方法与参数》等。

生于四川的黄渝祥教授，把四川老乡邓小平视为改变他一生命运的人。

这源于上世纪 70 年代末，邓小平在力主恢复高考的同时，还要求派遣一批知识分子去西方学习先进的管理和技术，冠名为“访问学者”。这是为改革开放储备人才，当时还是同济大学青年教师的黄渝祥就是受益者之一。

人生的际遇有其偶然，更有其必然。大学时期一次偶然加修英语课的经历，让黄渝祥成了为数不多符合出国条件的人。从历史维度看，打开国门拥抱世界，则是不可逆的时代必然。或许，从 1980 年踏上波音 707 客机飞往加拿大的那一刻，“开放”二字就已深深嵌入他的生命轨迹中。

回国后，黄渝祥受聘担任世界银行的咨询专家，将费用效益分析、可行性评价等先进技术和思想引入中国，制定了一系列指导地方进行项目建设的标准。

出生于上世纪 40 年代的黄渝祥，经历了从计划经济到市场经济的过程，让他对经济效益有了深刻的认识，对市场规则抱有深切的尊重。在参与南浦大桥、京沪高铁等多项重大工程的决策咨询中，这些信念贯穿在他工作的方方面面。

记者在一栋普通的单元楼里，见到了黄渝祥。虽已桃李满天下，甚至不少学生已身居高位，黄教授的生活仍然十分简朴。一幕幕往事历历在目，那些参与国家建设、拥抱世界的光辉岁月成了他一生珍视的财富。

老教授讲课一点“疙瘩”都没有

记者：当时为什么选择建筑工业经济与组织专业？

黄渝祥：我是 1958 年考入同济大学的，刚开始报的专业是工业与民用建筑，报到后，学校把我转到建筑工业经济与组织专业。当时大部分同学都想学工科，不愿意学经济管理相关的专业，但我没法做选择，就这么转过去了。

现在回顾觉得也蛮好，建筑工业经济与组织专业的特点是建筑和经济两面兼顾，学制五年，前三年半学习建筑学和力学等课程，后一年半学经济管理和当时的经济管理主要是学习苏联的计划经济。

记者：在同济学习期间，专业的办学情况如何？

黄渝祥：1952 年全国院系调整以后，同济大学成为以土木建筑学科为主的学校。当时我们这个大系包括建筑学、规划、建筑工程、工业与民用建筑、建筑工业经济与组织 5 个专业。我所在的专业由于是新创办的，师资力量相对较弱，而偏重于建筑造型的建筑学专业，师资力量比较强。当时我们的系主任是冯纪忠，他在圣约翰大学念书时和贝聿铭是同班同学。

交卷后去江湾体育场游泳

记者：还有哪些令您印象深刻的老师？

黄渝祥：有一位教我们数学的教授叫王福保，当时 50 多岁，他是同济版《高等数学》的编者之一，全国的大部分工科院校都用这本教材。当时这些编教材的教授，学术能力很强，但他们把主要精力放在教学上面，一心一意把教材编好，而且要适合工程类学生使用，这也是为什么这么多年我们还在用这部教材的原因。

现在我到其他高校去看，基本上还是这些内容，几十年没有太大变化，说明这是经过千锤百炼的。

记者：还记得老师怎么上课吗？

黄渝祥：王福保老师上课从不带书，也不带讲课笔记，就拿一支粉笔，他清楚记得上次讲到哪里，直接在黑板上边写边讲。对于重要的问题，他甚至可以讲十来遍，给你留下非常深刻的印象。而且他讲课一点“疙瘩”都没有，非常流畅，推导的板书也非常清楚。

当时教我们的老先生大部分都是国外留学回来的硕博士，专业能力非常强。我记得有一位从美国留学回来的博士教我们理论力学，有一次，他发现我的解法跟他讲的思路不同，他看了好久，觉得我这样答是错的。但他还是按照我的思路演算了一下，发现没错，他谦逊地说这是另一种解法。

记者：您当时成绩怎么样？

黄渝祥：成绩还算不错，高等数学、力学都是很难的课程，老师也都很严格，仅力学就要学理论力学、材料力学、结构力学这三门，我本身对数理就很感兴趣，基础也比较好，所以学得比较快。

我记得当时教结构力学的是个年轻老师，他给我们出的考题都不算难，结果我第一个做完就交卷了。老师看看周围没人交卷，他当场就批改了，写了个 100 分。

我想做完了干啥呢，就到江湾体育场去游泳，没想到游完泳回来他们还没考完。前面三年主要就学这些东西，我基础比较好，评三好学生都有我的份。

记者：除了专业课，还学些什么？

黄渝祥：三年级下学期，学校从全校范围内选拔一批成绩好的学生，可以加修一门英语课。当时我们的第一外语是俄语，从高中到大学，我学的都是俄语。教我们英语的老师很厉害，我还记得他的名字，叫邹迺之，当时英语老师很少，他教了我们一年，班上大概有 20 多个同学，都是来自不同专业成绩比较优秀的学生。后来才明白，这是一件对我一生都很重要的事。

记者：为什么这么说？

黄渝祥：对我来说，学英语是一个很大的转折。1977 年，国家恢复高考，同时要选派一批像我们这样的中青年教师到国外进修，叫作“访问学者”，把国外先进的东西学过来，然后才可以教大学生，为改革开放做准备。

因此，1979 年同济大学宣布了出国进修计划，选拔的人员需符合三个条件。第一个条件是 40 岁以下，第二个条件是在“文革”前毕业，符合这两条的已经不多了，我是 1963 年毕业的，那个时候是 39 岁，正好符合这两个条件。

第三个条件就麻烦了，要考英语，国家出钱派你到国外去，不懂英语怎么行？英语考试实行全国统考，笔试和口试我都过了，跟那个英语班有很大关系，可以说打下了很好的基础。要知道在上英语班之前，我只在初中学过英语，早就忘得差不多了。后来我发现，通过英语考试的人，大部分都是当年我们这个英语班里的同学。



黄渝祥参与编纂的部分图书教材（顾杰 摄）

毕业后去建筑工地做木工

记者：听说您毕业后曾经去工地劳动，这是怎么回事？

黄渝祥：1963 年我毕业后就留在学校当老师。从 1964 年到 1965 年，我到工地参加劳动，因为当时教育部有规定，新的老师或者助教一定要参加专业实习劳动，所以我们那一批留校的青年教师就去了工地，当时我是去吴泾的建筑工地做木工活。

记者：您在工地上具体做些什么？

黄渝祥：当时要建吴泾化工厂，锯锯子、钉钉子，甚至搬运木料等体力活我们都得做。不过我才 20 来岁，这些体力活都能对付得了。

后期就和专业结合了，在我们这些学生去工地之前，设计院的图纸一般的木工是看不懂的，只有退下来的高级木工读得懂。但我们学过建筑制图的课程，所以能读懂图纸成了我们的优势。师傅就让我专门干这活，由我负责把一项项任务分配下去，后来我相当于成了木工队的队长。我在工地干了一年，这一年对我帮助还是挺大的，那是正儿八经在一线劳动。

记者：您和工地的工人之间是一种怎样的关系？

黄渝祥：我们是正经拜师的，真正把工人当老师看待。师傅们人也挺好，手把手教我们，平时吃住都在一起，晚上睡在工地的临时工棚里，还经常跟他们聊天。他们对我们这些大学生也很尊重，虽然有些师傅不识字，但人都很聪明，经验也很丰富，大部分都是祖传的手艺活，脑子很灵。

记者：当时和工人师傅之间有什么难忘的故事吗？

黄渝祥：有一次，我把某个方案给木工师傅做，我去检查的时候，发现有个老师傅没有按照我的要求做，少做了一根梁。刚开始那位老师傅还不服气，我就把图纸拿出来给他看，他看后发现果然是自己错了，于是一句话没说连忙拆了重新做。

我们和师傅建立了很深厚的友谊，临别时，他们还把自己祖传的全套工具都送给了我，有刨子、锤子、斧头、锯子。后来我用这套工具在家里做了很多木工，有小板凳、椅子、沙发等。

出国在大衣领子上写上名字

记者：讲讲您的出国经历吧。

黄渝祥：刚开始我还不当回事，因为觉得自己的家庭出身不够根红苗正，还有点海外关系，出国应该轮不上我。

后来人事处来通知时，我说你别开玩笑，对方说这怎么能开玩笑，确实派你去。当时同济大学大概有二三十个人去，后来因为去的人实在太少，条件放宽了一些，年龄大的也能去了。

记者：出国前需要作哪些准备？

黄渝祥：出国前参加了几次纪律教育方面的培训，那时候我们收入比较低，没有像样的衣服，怎么代表国家出去？于是给每个人 800 元制装费，当时我一个月工资只有 65 块，但这个钱不能乱花，只能到规定商店去定做。虽然料子都很好，但每个人的式样都一样，包括衬衫、两套西装，还有很厚的呢子大衣和皮鞋等。

记者：怎么出发的还记得吗？

黄渝祥：1980 年 2 月，我们从北京首都机场出发，队伍里不只有同济的，全国各地学校的人都有。我们去加拿大的组成一个小队，大概有 20 多人，有一个年纪比我们稍大的团长，给每个人发 1 美元在路上用，其实连买瓶水都不够，这些美元都集中归团长保管。

我记得乘坐的飞机是波音 707，当时我们只有一条航线到加拿大，得先到卡拉奇，然后转到巴黎，在戴高乐机场待了十几个小时，再飞蒙特利尔。

记者：下飞机后是什么感觉？

黄渝祥：眼前的世界和我们的世界太不一样了，比我们先进很多。其实当时我们下飞机后还觉得挺自豪的，因为穿的是呢子大衣，没想到我听到旁边几个加拿大小女孩在轻声嘀咕，我记得很清楚，她们说这帮人可能是越南难民。

我们听了当然很生气，后来我们发现自己确实跟加拿大当地人不一样。他们穿的衣服没一件是一样的，我们的式样和料子都一模一样，身高也差不多，自己也搞不清哪件大衣是谁的。为了不拿错，我们在领子上写上自己的名字。

记者：您去的是加拿大哪所学校？

黄渝祥：加拿大有很多学校，有人留在蒙特利尔，我一个人去了多伦多大学。当时已经有一些像我这样的中国访问学者在那里，他们是之前被派去的。当时出国进修的人里面医生比较多，很多是医学院和大医院的骨干，他们英语比较好，此外还有科学院系统派出去的理工专业学者。



1980 年在多伦多大学工学院

在加拿大研究费用效益分析

记者：在加拿大您学的是什么专业？

黄渝祥：同济教师去多伦多大学的就我一个，当时有点尴尬的是，我出国前在同济是教结构力学的，不是经济管理，所以我在加拿大继续学土木工程还是学经济管理，这是一个问题。当时我也是 40 岁的人了，如果再学经济管理，起点等于零。

刚开始，我还到多伦多大学的工学院去看了看，发现他们的专业设备还不如同济，显然不是强项，所以最后我选了工程经济方向，主要是费用效益分析。工程经济的好处是既有工程方面的内容，又有经济方面的内容。这个专业当时在国内叫技术经济，实际上研究的对象差不多，也就是研究工程技术的经济方面。工程技术是为社会经济服务的，现在我们的 5G、人工智能、导弹等都是技术，无论技术为社会服务还是为国防服务，经济账总要算。

记者：当时选择这个专业，和您的老师有关系吗？

黄渝祥：有关系。我们经济管理的老前辈叫翟立林，他就是研究工程经济的，也是同济大学管理工程学科的奠基人。出国前他就劝我还是要回到经济管理领域来，因为我们国家需要，尽管这专业没有很深的学术内涵，但是比较实用。我也觉得，工程经济对百废待兴的国家来说是马上就能用的。

记者：当时研究学习的内容中，有什么令你印象深刻？

黄渝祥：费用效益分析给我留下比较深刻的印象，这是关于公共项目或者基础设施项目的经济分析。和一般的投资回报不一样，公共项目是要考虑社会经济效益的。比如我们修高铁、水利、博物馆、医院、学校等，不能都按照商业模式来建，因为有些项目没办法量化为钱，而且私人老板也不愿意投资，所以要用另外一种公共支出的模型来分析，这就是费用效益分析。

记者：可以举例谈谈吗？

黄渝祥：当时多伦多大学正在研究纸张的重复再利用问题，其实加拿大的木材很多，纸张不成问题，但他们说不行，要节省木材，教授带头去垃圾桶里把废纸拿出来继续用，这对我触动很大。

到中南海起草重要文件

记者：您是什么时候回国的？

黄渝祥：1982 年，我按照国家规定回国，当时我已经结婚，妻子孩子都在上海。我想，国家花了那么多钱让你出去学习了两年，应该赶快回国干活，为国家发展做贡献，所以我一天也没拖就回来了。回来以后我们这批人就被学校当成宝贝，整个国家都把我们当宝贝。

记者：您当时做了哪些事？

黄渝祥：从 1982 年到 1986 年，整个国家的形势是对外开放。世界银行、联合国、日本、美国、加拿大、英国，大量的贷款项目都过来了，按照规定，这些项目都要进行经济评价，也就是要做可行性研究。其实投资一个项目，甚至制定一个政策，都要做一个决策前的研究，概括地说就是这个项目在技术上是是否可行、在经济上是否合理，我当时主要做这方面的工作。

记者：当时国家缺少这方面的人才吗？

黄渝祥：当时从国家一直到基层的政府工作人员，对这套东西都不是很熟悉，因为在过去计划经济时期，往往是立项设计结束后就施工，甚至有些决策是“拍脑袋”的。当时包括美国在内的西方发达国家，对中国的改革开放是很欢迎很支持的，因为他们资本多、劳动力少，而我们劳动力多、资本少，投资者很愿意到中国来，所以国内要有人来帮着做这些沟通的事。

记者：做这些工作有什么要求？

黄渝祥：首先英语要过关，当时世界银行来了很多专家教授，但很多项目专业上的名字和术语，一般外语学院的老师翻译不了，所以我在回国后被派去接待专家，同时还做了很多翻译方面的工作。1985 年左右，我一边做翻译，一边做可行性研究，当时有个单位叫国务院发展研究中心，地点就在中南海，他们把我找去，参与起草制定了第一版《建设项目经济评价的方法与参数》，并以国家计委文件的名义发布。这是一份指导性文件，从上到下建设项目都要参照这份文件。

两座大桥的决策幕后

记者：您曾参与南浦大桥的项目决策咨询，这个项目有何背景？

黄渝祥：当时上海很多人住在浦东，需要坐轮渡跨过黄浦江到浦西上班，也有人从浦西到浦东上班。但当时浦东还没开发，人们的交通工具仍然以自行车和轮渡为主。鉴于这种情况，上海决定在市区建造黄浦江通道，选址就在南码头的位置。

记者：您参与了哪些工作？

黄渝祥：当时可行性研究已经得到推广，按照规定，项目建设一定要请专家进行可行性研究的评估，请专家出具评审意见后再报到国家计委审批，这个流程是不能少的。市里面请我做项目经济组的组长，还请了桥梁方面的专家，我们主要是开会并审查相关的报告，具体的设计则由设计院负责。

记者：您还参与了杭州湾跨海大桥的决策咨询，能否谈谈这个过程？

黄渝祥：对于远洋航运来说，大吨位的船只更显示其经济性，但当时上海长江口的航道只能通过两万吨的船。按理说长江是一个很好的航道，但长江口有“拦门沙”，这个地方水深只有 7 米多，两万吨载重的货船要潮涨的时候才能开进来。

因此要想办法开出航道来，所以就有了长江口航道疏浚工程，但这项工程很艰巨，动用了很多工程院院士做了很大的实验室模型，但由于台风和水流的变化，航道整治后并不稳定。

当时，从港口和自然条件来说，宁波比上海优越，但经济基础不如上海。上世纪 90 年代末，宁波提出筹建杭州湾大桥，延伸宁波港的腹地，以港兴市。我负责承担经济分析的部分，我当时带的几位学生也参加了这项工作。

记者：当时提出的方案是怎样的？

黄渝祥：杭州湾很宽，大部分是浅湾，航道要求不高，所以投资不太大。原先南北两岸交通要绕行杭州，建桥后上海到宁波的行驶距离可以缩短 100 多公里，节约的行驶费、过路费和时间很可观，即使收较高的过桥费还是有很高的交通量，效益是很好的。原来的方案是桥北岸接上海的金山卫，桥长一些，但绕行距离更短，后来，桥北段移到嘉兴的平湖附近，也就是现在的杭州湾跨海大桥。



1985 年和翟立林先生考察扬州港口

汶川地震后赴都江堰考察

记者：2008 年汶川地震发生后，您曾去都江堰考察，当时为什么会做这个决定？

黄渝祥：当时上海对口援建都江堰，有些当地的规划主要是同济大学来做，那时上海援建都江堰的一位领导是我曾经的学生，因为他知道我是搞工程经济的，所以他和同济大学联系，希望把我请过去。虽然我 2005 年已经退休了，但其实还一直在做相关的研究。

记者：到达都江堰后看到怎样一个场面？

黄渝祥：我们是 5 月 20 号出发的，一起去的有上海市的有关领导，还有一些研究规划重建和土木工程的教授，以及上海市的对口单位负责人，大概有 20 人左右。

都江堰的情况其实还好，我是研究工程经济的，我认为中国历史上最成功的工程就是都江堰。虽然看上去一点都不起眼，但是花很小的代价实现了很大的效益。我到当地一看，发现这个工程几乎没损坏，还在发挥着作用。

记者：您提出了什么建议吗？

黄渝祥：都江堰的领导召集我们开座谈会，我只提了一个建议，就是应该尽可能保留古老的工程设施，不要统统拆除。既然还能用就应该保留，现在哪个工程能够维持几千年呢？只要稍微维修更新一下，就能保留原始的操作办法，为后代留住古代的文明。其实，这也符合工程经济的原理。

参与国际交流与合作办学

记者：您曾参与同济大学国际交流与合作办学方面的工作，这件事最早是什么时候开始的？

黄渝祥：早在 1987 年，我们就开始与欧洲学校交流学生，最早的交流生来自于德国的商学院，是一个很小的私立学校，就在莱茵河边上。他们的院长来中国访问时与我们谈好，可以考虑学生交流，互免学费，他们还可以为中国学生提供食宿。

学院就让我负责此事，我就一个人去了德国那所学校。那天正值假日，一个学生把学校的大门钥匙交给我就走了，当晚整个学校就我一个人。第二天，我和学校讨论了交流名额等事项，这件事就算定了。

记者：交流还顺利吗？

黄渝祥：立学校办事比较快，大约在 1987 到 1988 年交流了两批，每批 7-8 人，对方来的是学生，我们派出的是年轻教师。他们的学生英语水平很高，对工商管理知识已达到相当水准，而我们在这方面相对较弱，安排他们的学习可费劲了。

我给他们讲了中国的项目经济评价和影子价格，翟立林先生用德语教他们中国文化，例如“床前明月光”之类的。我还请一些官员为他们介绍中国的国情和中国经济政策，我做翻译。德国学生觉得很解渴，提了很多问题，对我来说收获也不少。

记者：您觉得国际交流给学生带来了什么？

黄渝祥：这对学生来说当然有很多好处，我觉得了解其他国家是怎么做的，我们自己又是怎么做的，能够促进文化之间的交流，至少能开阔眼界，没什么坏处。我一直主张要走向世界，走向开放，要多接触，这不仅有利于丰富自己的知识，也能够学习很多国外的长处。

Professor HUANG Yuxiang, who was born in Sichuan, regarded DENG Xiaoping, a Sichuan fellow-townsmen, as the person who changed his life.

Because in the late 1970s, when DENG Xiaoping urged the resumption of national college entrance examination, and also required a group of intellectuals to be sent to the Western countries to study advanced management and technology as “visiting scholars”. Its purpose is to reserve talents for the reform and opening-up. HUANG Yuxiang, as a young teacher of Tongji University at that time, was one of the beneficiaries.



HUANG Yuxiang
Dean of Tongji SEM (1995-1998)

The fortune of life happens by chance, but more has its inevitability. When HUANG Yuxiang was studying at Tongji University, he took an English course by chance, which made him one of the few qualified people to go abroad. From a historical perspective, opening the door to embrace the world is an irreversible necessity of the times. Perhaps the word “openness” was embedded in his life from the moment he boarded a Boeing 707 flying to Canada in 1980.

经济与管理学院
SCHOOL OF ECONOMICS AND MANAGEMENT

HUANG Yuxiang: Embrace the World and Adopt an Open Mindset

After returning to China, HUANG Yuxiang was employed as a consulting expert in the World Bank, introducing advanced technologies and ideas such as cost-benefit analysis and feasibility evaluation, etc. into China, and formulating a series of standards to guide local project construction.

Born in the 1940s, HUANG Yuxiang experienced the process from a planned economy to a market economy, which gave him a deep understanding of economic benefits and deep respect for market rules. When he participated in the decision-making consultation of many major projects such as the Nanpu Bridge and the Beijing-Shanghai high-speed railway, etc., these beliefs ran through all aspects of his work.

The reporter met HUANG Yuxiang in an ordinary flat building. Although there are many students all over the world and even many of his students are in high positions, Professor HUANG still leads a very simple life. The scenes of the past are vivid in his mind. Those glorious years of participating in China's construction and embracing the world became the treasure he cherished all his life.

Working as a carpenter at a construction site after graduation

Reporter: I have heard that you worked at a construction site after graduation, so how did it happen?

HUANG Yuxiang: I stayed as a teacher in our university after graduation in 1963. From 1964 to 1965, I went to work at a construction site, because it was stipulated by the Ministry of Education that: new teachers or teaching assistants must participate in professional internships, the batch of our young teachers who stayed as the teachers in the university went to the construction site, and I was assigned to do carpentry work at Wujing construction site.

Reporter: What did you do specifically at the construction site?

HUANG Yuxiang: At that time, we had to do physical work such as sawing saws, hammering nails and even carrying wood, etc. to build Wujing Chemical Plant. But I was in my 20s at that time, so I could do all this physical work.

Our later work was combined with our major, before we went to work at the construction site, the ordinary carpenters couldn't understand the drawings from the Design Institute, and only retired senior carpenters can understand them. But as we had taken an architectural drawing course, our ability to read the drawings became our advantage. The carpenters made me do this work exclusively. I was responsible for assigning tasks, and later, I became the head of this woodworking team. I worked at the construction site for one year, which helped me a lot. It was a real job at the frontline.

Conducting cost-benefit research in Canada

Reporter: What was your major while studying in Canada?

HUANG Yuxiang: I was the only teacher at Tongji University who went on further study at the University of Toronto. At that time, it was a little embarrassing that I taught Structural Mechanics at Tongji University before going abroad, not Economic Management. Therefore, it was a question of whether I should continue to study Civil Engineering or Economic Management in Canada. I was 40 years old at that time, and if I studied Economic Management again, the starting point was zero.

In the beginning, I went to the School of Engineering from the University of Toronto, and found that their professional equipment was not as good as Tongji's, so I chose the direction of Engineering Economy, mainly cost-benefit analysis. Regarding the benefit brought by Engineering Economics, it includes both engineering content and economic content. This major was called Technical Economics in China at that time, and in fact, the object of study was similar, namely the economic aspect of engineering technology. Engineering technology serves the social economy. Now, 5G, artificial intelligence and missiles and the like in China belong to the category of technology. Whether the technology serves the society or national defense, economic accounts must be calculated.

Reporter: Did it have anything to do with your teacher when you chose this major?

HUANG Yuxiang: Yes, it did. The old-timer of our School of Economics and Management is ZHAI Lilin, who has studied engineering economics and is also the founder of the management engineering discipline of Tongji University. Before I went abroad, he advised me to return to the field of economic man-

agement, because our country needs talents in this field. Although this major has no deep academic connotation, it is more practical. I also think that: Engineering Economics will be immediately available to a country with the task of rebuilding.

Reporter: What impressed you most about your study at that time?

HUANG Yuxiang: I'm impressed by the cost-benefit analysis, which is about the economic analysis of public projects or infrastructure projects. Unlike normal investment returns, the public project investment should consider its social and economic benefits. For example, we can't build high-speed rail, water infrastructure, museums, hospitals, schools and so on according to the commercial models, because some projects can't be quantified into money, and the private employers are reluctant to invest in them, we have to use another model of public spending to make an analysis, and this is what we have called the cost-benefit analysis.

Reporter: Can you give me some examples?

HUANG Yuxiang: At that time, the University of Toronto was working on the reuse of paper. In fact, there was a lot of wood in Canada and paper was not a problem, but they said they couldn't waste paper, they wanted to save the wood, and the professor took the lead in taking the waste paper out of the trash can for further use, which touched me a lot.

Going to Zhongnanhai to draft important documents

Reporter: When did you return to China?

HUANG Yuxiang: In 1982, I returned to China according to the regulations of the State. At that time, I was married, and my wife and children were in Shanghai. I thought, our country spent so much money for me to go out to study for two years, I should come back to work as soon as possible, and contribute to the development of our country, so I came back without a day's delay. When we got back, we were treated like the treasures of our university as well as the whole country.

Reporter: What did you do at that time?

HUANG Yuxiang: From 1982 to 1986, the situation of the whole country was open to the outside world. A large number of loan projects from the World Bank, the United Nations, Japan, the United States, Canada, and the United Kingdom at that time were coming in. According to the regulations, these projects were required to undergo an economic evaluation (that is, to do a feasibility study). As a matter of fact, the investment in a project or even the formulation of a policy requires a pre-decision study, generally speaking, whether the project is technically feasible and economically reasonable. At that time, I was mainly responsible for this kind of work.

Reporter: Was our country short of this kind of talent at that time?

HUANG Yuxiang: At that time, the government staff from the state down to the grassroots level were not very familiar with this kind of work, because in the planned economy period, the projects were often constructed after the completion of the project design, and even some decisions were made by "patting them on their heads". At that time, the western developed countries including the United States, welcomed and supported the policy of China's reform and opening-up, because they had a lot of capital but little labor force, while China had a lot of labor force but little capital. Investors were very willing to come to China, so they needed someone in China to help them communicate about the investment matters.



Reporter: What are the requirements for these jobs?

HUANG Yuxiang: First of all, you must have necessary English language skills. At that time, when many experts and professors from the World Bank came to our university, the teachers from the School of Foreign Languages failed to translate the industry terms included in the project, so I was assigned to receive experts and did a lot of translation work after returning to China.

Around 1985, while doing translation and feasibility studies, I was invited by the Development Research Center of the State Council located in Zhongnanhai, to draft the first edition of the Methodology and Parameters of Economic Evaluation on Construction Projects, which was published as a document of the State Development Planning Commission. This is a guidance document, and the construction project from the top to the bottom must refer to this document.

Participating in international exchanges and cooperation in jointly-managed schools

Reporter: You have participated in the work of international exchange and cooperation in jointly-managed school from Tongji University. When did it first start?

HUANG Yuxiang: As early as 1987, we started to exchange students with the universities in Europe. The first exchange students were from a business school in Germany, a small private university, right on the Rhine River. When the Dean of that private university came to China for a visit, he agreed with us that we could consider student exchanges and mutual tuition waiver, and their university could also consider offering accommodation to Chinese students.

Our School of Economics and Management put me in charge of this matter, so I went to visit that university in Germany alone. It was a holiday, and one of the students gave me the key to the gate of their university and left, leaving me alone that night. The next day, I discussed the student exchange quota and other matters with the responsible person(s) in that university, and the matter of international exchange and cooperation in running a school was settled.

Reporter: Did the communication go well?

HUANG Yuxiang: The private university was relatively quick to handle affairs. There were two groups of exchanges between 1987 and 1988, with 7 to 8 people in each group. The private university sent students for exchanges while we sent young teachers for exchanges. Their students were proficient in English, their knowledge of business administration had reached a considerable level, but we were relatively weak in this field, so it was hard to arrange their learning.

I told them about China's project economic evaluation and shadow prices, and Mr. ZHAI Lilin taught them about Chinese culture in German, such as "Before my bed a pool of night" and so on. I also invited some officials to introduce China's national conditions and China's economic policies to them, and I acted as an interpreter. The German students were hungry for knowledge and asked a lot of questions, which also benefited me a lot.

Reporter: What do you think international exchanges can bring to students?

HUANG Yuxiang: It certainly has a lot of benefits for students, and I think: understanding how other countries do it and how we do it by ourselves, can promote cultural exchange, at least it can broaden our horizons, and it does no harm. I have always advocated going to the world, opening up and contacting more, which can enrich your knowledge, but help you learn from the strengths of many foreign countries.

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学院成立前后的几个小故事

沈荣芳 同济大学经济与管理学院原院长

最早支持成立学院的领导

1984年初，国内一些大学正在酝酿成立管理学院，前国家教委也正在考虑批准在一些学校建立管理学院。当时，我是我校管理工程系的主任。大概是在1984年的4月份，我在南楼328室举行的一次校中层干部大会上，提出了在我校建立管理学院的建议。理由是管理学科有其本身的特点，同一般工程学科并不完全相同；管理学科具有巨大的发展潜力；与有关兄弟院校相比，我校已经具备了成立管理学院的条件。当时，同济大学还没有建立学院的先例。提出这样的建议有点突然。

坐在听众席上的校党委书记王零同志，听了我的发言后，好像在神思。大约过了20分钟后，他走到我的座位前对我说，你把刚才的发言，整理成一份书面材料，报给学校，由学校向国家教委打报告，申请成立管理学院。听了王零同志的这几句话，我当然很高兴，我想江景波校长一定会支持成立管理学院，现在又有了党委书记的支持，看来有希望了。果然，大概在1984年8月间，我校收到了国家教委批准在我校建立管理学院的批示。

哪一天是我们学院的生日

学过概率论的都知道，概率有三种定义，有概率的古典定义、统计定义和公理化定义。我想我们学院的生日，也可以有三种定义，即：可以把国家教委批准的日期作为我院的生日，也可以将校通过任命管理学院领导班子的日期作为生日，还可以将举行庆祝学院成立大会的那一天作为生日。

我赞成将原国家教委批准我校成立管理学院的那一天，作为我们学院的正式生日。

出席学院成立大会的嘉宾

要不要开一个学院的成立大会呢？当时大家的认识并不一致。一般地说，在学校里新成立一个系，也无需大张旗鼓地举行什么成立大会。所以在国家教委批准我校成立管理学院和校领导任命学院领导班子后，学院好像已经成立了。领导好像也没有再去想开什么成立大会。大概过了一个多月后，学校决定要召开学院的成立大会。

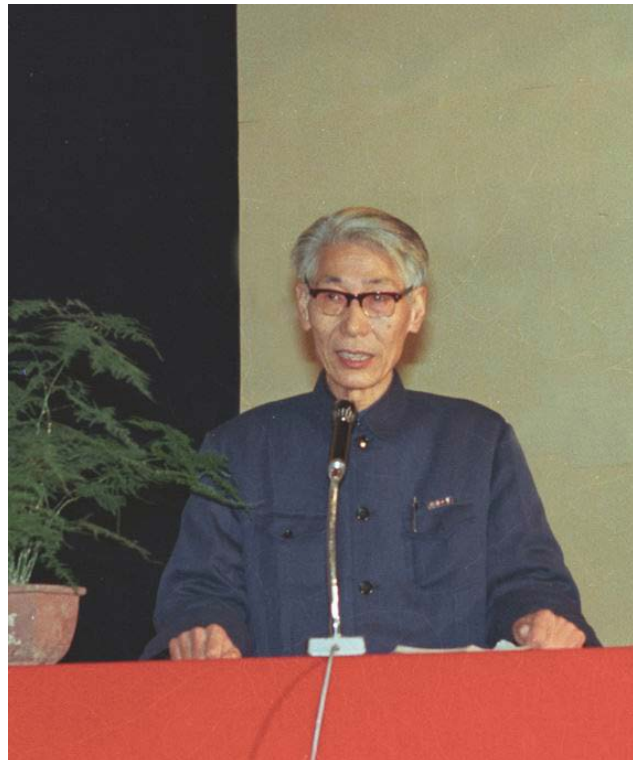
成立大会在“一·二九”礼堂举行，市里请当时人大常委会的副主任、我校前校长、原建筑工程部部长助理王涛同志作为代表出席大会并致贺辞。

考虑到我校管理学院具有重在建筑管理和对德联系的特点，成立大会还邀请了当时城乡建设部杨慎副部长和德意志联邦共和国驻沪总领事、经济学博士、韩特克先生作为特邀的嘉宾出席成立大会。

杨慎副部长特意从山东专程前来参加成立大会。由于时间较紧，当杨副部长赶到火车站的月台时，开车的铃声已响。月台正在检修，地面高低不平，杨副部长因走的太快而摔了一跤，把一套全新的哗叽中山装，在裤子的膝盖前磨破了一个洞。对此，我们感到十分抱歉，至今还耿耿于怀。

德国总领事韩特克先生接到我们的邀请后，在总领馆专门约见我。我向他介绍了成立学院的情况，以及成立大会的安排。他听了以后感到很高兴，但是没有表态是否接受邀请出席会议。然后他问，江景波校长是否出席成立大会？我说江校长是我院教授，他一定会出席大会。至此，总领事一口答应：“我一定参加成立大会。”在成立大会上，他还向管理学院赠送了一批经济管理方面的德文图书。





学院全名怎么叫

国家教委的批件中，说的是同意我校成立“管理学院”。当时已经到了退休年龄的名誉院长翟立林教授建议，我们的学院能否定名为“经济管理学院”，以适应我国从计划经济向有具有中国特色社会主义市场经济转变的新形势。于是，我们又向国家教委反映了我们的想法和建议。国家教委同意了我们的建议。鉴于此，我院正式定名为“经济管理学院”。在定正式的英文名时，胆子大了一点，定为“School of Economics and Management”。

当时有的大学的经济管理学院，把英文名定为”School of Economic Management”。1989年，中国管理学院院长代表团出访时，有好多位外国教授不明白什么叫“Economic Management”，当问到我，你们同济大学怎么叫时，我说我们学院叫”School of Economics and Management”，外国友人就点头说明白了。

据我所知，在此之后一些经济管理学院的英文名，也改为Economics and Management了。现在，我院经过重组，学院的中文名也已改为“经济与管理学院”。学院涵盖了经济和管理两大学科门类。



学院的规模该多大

值得一提的是在召开学院成立大会前，原建筑工程部教育局张哲民局长来访。我们记得，张局长在文化大革命刚结束，就竭力主张恢复我校在1956年创建的“建筑工程经济与组织专业”。并在1978年向当时同济大学的校长李国豪教授，正式提出了上述建议。那时，留在同济的、原来在该专业任教的很多老师，包括我自己在内，都不太愿意。后来虽然同意了，但是在专业的名称上，还是执意要定为“建筑工程管理自动化”。而张局长则主张在名称中保留“经济”两个字，即“建筑工程经济管理专业”。

从1978年我们不愿在专业名称中加进“经济”两个字，到1984年我们主动要求在学院名称中加进“经济”两个字，说起来只是区区两个字的差别，但是其含意却非常深刻。我在张哲民局长面前，亲自检讨了我们思想的转变，并向张局长表示了对他的敬意和谢意。感谢他的原因是，我们的运筹楼是在张局长亲自努力下筹措了全部经费而建成的。这座运筹楼，也是全国高校中第一幢管理学院大楼。

当时国家教委有一个原则，大学要设置学院，那么其学生人数应当达到一千人的规模。当时我们学院设有两个本科专业，一个专修科专业，学位研究生和研究生班，与当时的城乡建设部合办的总工程师培训班、城建局长培训班，以及与世界银行经济发展学院和城乡建设部三方合办的“住房建设”和“给水卫生”培训班，还有一部分函授生，等等。全部加起来大约就在一千人左右。我们当时感到，要稳住这一千人的规模，还很不容易呢。未料今日，学院已发展到有数千名学生了。

有这么一群人
他们面对工作任劳任怨、尽职尽责。
他们不断创新教育理念、专研科学研究。
他们呕心沥血、兢兢业业。
他们师风高尚、无私奉献。
他们是校园里最可爱的人
他们是我院的卓越之星

同济大学经济与管理学院颁发 2021 年
卓越服务奖、卓越教学奖
卓越科研奖、奉献奖
下面是新鲜出炉的获奖者名单
快来感受同济经管卓越人才的风采

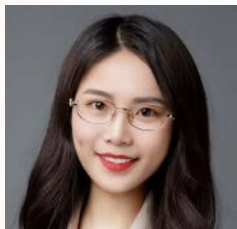
同济经管 2021 年度卓越榜新鲜出炉！

卓越服务奖



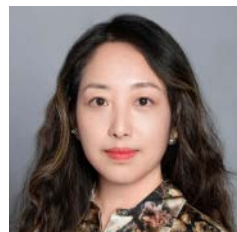
丁子平 学院办公室

在学院的每一次会议，每一场活动中，总能看到她辛勤服务的身影。立足岗位，以诚待人，她工作积极主动，凭借过硬的业务能力，良好的服务意识，端正的服务态度，饱满的工作热情赢得了全院师生的赞誉。76 场院级会议，77 次各系部活动，她任劳任怨，以满腔热情做好支持保障；对内服务师生，对外协调学校，她事无巨细，以踏实可靠彰显学院风貌。台前闪光灯虽亮，幕后工作者光荣。



季茂茂 学生党委

本科生辅导员、学生党支部书记、军训随训教师，她是奋斗在学生工作一线的思政工作者，用行动诠释着人生导师的责任担当。她肩负思想引领之重责，推进谈心谈话全覆盖，引导学生怀揣家国梦砥砺前行；她为学生办实事，修订完成学生工作制度文件 15 余项，明晰办事流程，提高办事效率；她冲在学院防疫前线，落实 2 小时学生排摸，高效完成疫情排查、离校返校等工作。细微之处践行立德树人，亦师亦友共绘青春画卷。



唐海燕 本硕博教学中心

8 年细心耕耘，她安排答辩博士 500 余名，申报博士学位近 400 名，送审教育部博士论文 400 余篇；13 年兢兢业业，她坚守研究生招生和教学培养一线工作，服务了 2000 多名硕博生。数量多、类型多，超期学生多，面对博士生培养的个性化特点，她坚持做好博士生“一对一”个人服务和管理，想学生所想、急学生所需，全身心助力博士生顺利完成学业。念念不忘必有回响，事无巨细奉献初心。

卓越教学奖



王广斌 建设管理与房地产系

他是一位博闻强识且重视实践的老师。课堂上娓娓道来，融会跨学科知识，贯通数字化、智能化理论，致力于培养高质量工程管理人才，主讲课程《虚拟设计与施工》被评为 2020 年上海市重点课程，获 2021 年同济大学教学成果特等奖；实践中敢想敢干，带领百十弟子力学笃行，攻克了多个重大工程建设管理项目，打造了产教融合、协同育人的工程教育示范样板。春播桃李三千圃，秋来硕果满神舟。



唐艳云 财务办公室

多项财务规章制度的起草和修订、最优薪酬发放方案的设计和实施，她用一个个不眠的日夜，一次次严谨的校对，将惠民生、暖师心融入学院日常财务工作中。较真、细致是她的工作原则，面对存疑事项，她积极沟通，及时更正，保护了老师安全，维护了学院利益；柔性、耐心是她的工作方法，心系教师利益，她研究政策，倾听心声，助力老师实现收入最大化。耕耘在凭单间，勤勉于计算中。



张玉臣 创新与战略系（筹）

他教授的课程深入浅出，有口皆碑，深受学院本硕博学生好评，录制的同济大学优质在线开放课程《智能时代的科技创新》，获得全校选修学生交口称誉；他积极推进创新创业教学工作，常抓不懈，久久为功，在教改项目《基于创业故事的创业管理解析》、《创新创业课程思政》中砥志研思，在同济大学教师教学创新大赛中精益求精。数度春风锻课程，几番秋雨练精品。



任浩 组织管理系（筹）

他将多年的研究与思考落在笔头，将经典的理论与要点引进课堂，主撰教材曾获上海市高校优秀教材二等奖、上海汽车工业教育基金会优秀著作二等奖、同济大学教材二等奖等多项荣誉奖项；他致力于打造有影响力的品牌讲座，深耕产业园区管理与发展领域，在中组部、商务部、国家发改委及各类国家开发区开展专题演讲，融合理论与实践不断提升同济大学影响力。字斟句酌细推敲，反复打磨撰教材。

卓越科研奖



段永瑞 管理科学与工程系

带着十年磨一剑的精神和足够的耐心，她以服务业发展中出现的新问题为研究出发点，深耕零售、开拓医疗，基于优化理论、机器学习和大数据分析等方法，做有深度的研究，在国际顶级期刊发表多篇论文，入选上海市曙光人才计划和上海市浦江人才计划，多次荣获上海市科技进步奖，自然科学基金项目在后评估中荣获特优。虚怀若谷，勇往直前，为数字经济背景下服务运营管理的发展尽其所长。



石建勋 经济与金融系

三年来，他完成了 30 篇决策咨询专报研究，所撰报告曾获第六届全国教育科学研究优秀成果二等奖，2014-2020 上海市教育科学研究优秀成果一等奖；三年里，他获批国家社科基金区域与国别研究重大专项课题，主持完成上海市教委决策咨询课题、上海市商委决策咨询研究、长兴岛开发办和开发公司战略咨询研究课题等，在权威媒体、核心期刊发表论文数篇，屡获表彰。鞠躬尽瘁为科研，日以继夜创佳绩。



陈强 管理科学与工程系

作为科技创新治理研究领域的深耕人，他时刻不忘为国家、为社会做贡献的初心使命，主持国家社科基金重大项目《新形势下进一步完善国家科技治理体系研究》等多项课题，承担科技部、上海市发改委、科委、经信委、科创办多项研究任务，2021 年受浦东新区人民政府委托完成的《浦东打造自主创新高地研究》获评上海市优秀智库报告。科研路初心如磐，新征程奋楫笃行。

奉献奖



获得“奉献奖”老师分别是

王 霞、陈志宗、贾广社、傅世杰、叶明海、彭 俊、郝晓彤、葛乃旭、宋晓满、徐莉芳、张迺英

他们日复一日不懈奋斗

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邱灿华 管理科学与工程系副教授



唐本苑 EMBA 中心员工

11 月 28 日上午，第二届全国供应链与运营管理学术年会顺利落下帷幕。会上，由中国管理科学与工程学会供应链与运营管理分会 (ISCOM) 倡议发起的 2020 年首届全国供应链与运营管理教学短视频竞赛奖项揭晓。

我院教师邱灿华、唐本苑的作品“运营战略 -- 企业灵魂三问”赢得“供应链与运营管理教学创新”教学短视频比赛二等奖，同时获得视觉效果奖、最具创意奖等两个单项奖项，成为本次比赛所获奖项最多的作品。

邱灿华老师学术成绩卓越，科研能力突出，先后依据国内外企业平台开展多个科研项目，发表和出版近二十篇论文和书籍，曾参与《运营管理》参与式教学方法教改项目。唐本苑老师绘画功底严谨扎实，风格灵活多变，以巧手妙思将抽象理论变得生动精彩。此次比赛高手如云、大咖云集，两位老师此次获奖不仅是对其个人能力的肯定，也是对我院积极改进教学方式方法的成果的肯定。



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经管视野

ECON
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ISSUE 012
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