

TSINGHUA NEWSLETTER

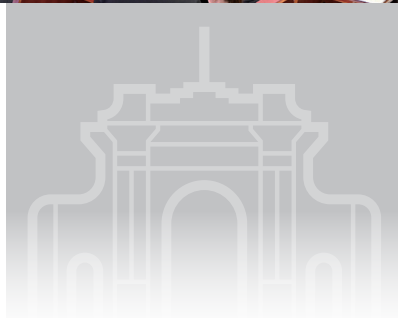
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ISSUE 3



清华大学
Tsinghua University



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FOCUS

11th World Peace Forum opens in Beijing

The 11th World Peace Forum, organized by Tsinghua University and co-organized by the Chinese People's Institute of Foreign Affairs, opened in Beijing on Sunday, July 2, 2023. China's Vice President Han Zheng delivered a keynote speech at the opening ceremony.

The forum took on the theme of "Stabilizing an Unstable World through Consensus and Cooperation." Liu Jianchao, minister of the International Department of the Central Committee of the Communist Party of China (CPC), delivered a speech at the lunch meeting.

Dilma Vana Rousseff, president of the New Development Bank (NDB) and former president of Brazil, Igor Ivanov, president of Russian International Affairs Council and former secretary of the Security Council of Russian Federation, and Hassan Wirajuda, former minister for Foreign Affairs of the Republic of Indonesia, as well as more than 400 attendees including diplomatic envoys from various countries in China, experts, and scholars, participated in the forum. Wang Chao, president of the Chinese People's Institute of Foreign Affairs, chaired the first plenary meeting.

Secretary of the CPC Tsinghua University Committee Qiu Yong attended the opening ceremony. Wang Xiqin, president of Tsinghua University and chairman of World Peace Forum, addressed the opening ceremony, hosted by Wang Hongwei, vice president of Tsinghua University. Yan Xuetong, secretary general of World Peace Forum, attended the forum. Jiao Yang, head of the 53rd Central Guidance Group for Themed Education on Studying and Implementing Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and former secretary of the CPC Fudan University Committee, Zhang Zongming, deputy head of the guidance group and second-level inspector of the Department of Personnel of the Ministry of Education, along with Zhu Guizhi and Dang Wanjiang, members of the guidance group, were invited to participate in the forum.



In his keynote speech at the opening ceremony, Han Zheng called on all sides to safeguard world peace and security.

Han said that in the face of profound changes in the international situation, China has put forward a series of major initiatives, such as the Global Development Initiative, the Global Security Initiative, and the Global Civilization Initiative, constantly enriching the connotation and practical path of the concept of building a community with a shared future for humanity, and injecting strong positive energy into world peace and development.

China is ready to work with other countries to safeguard world peace and security, seek global development and prosperity, advocate exchanges and mutual learning among civilizations, and share the fruits of human development, security, and civilization, Han said. He put forward four suggestions.

Firstly, he called for upholding independence and mutual respect, supporting all efforts to independently explore the path of democratic development, and respecting the exploration of the path of value realization by people in different countries.

Secondly, he stressed resolving conflicts through dialogue and consultation. The international community, especially influential major countries, should take a clear stand to promote peace talks

and mediation in light of the needs and aspirations of the countries concerned so as to build mutual trust, resolve disputes and promote security through dialogue, Han said.

Thirdly, he urged firmly upholding and practicing multilateralism to make global governance more just and equitable.

Fourthly, Han called on all sides to promote inclusiveness, mutual benefit, and win-win results. "We should work together to usher in a new stage of balanced, coordinated, and inclusive global development, promote international development cooperation, improve the well-being of the people of participating countries, and consolidate the social foundation for world peace," he said.

Han stressed that Chinese modernization follows the path of peaceful development, and China will unswervingly advocate, build and uphold world peace.



In his speech at the lunch meeting the same day, Liu Jianchao expanded on the keyword "peace" and shared his perspectives and insights with both domestic and international guests.

Peace has always been the shared aspiration of nations worldwide, Liu said. However, even today, humanity has not been able to break free from the historical cycle of war and peace. "Long-lasting peace and universal security remain scarce and highly sought-after."

Especially in the context of shifting profound changes unseen in a century, the international community faces increasing instability, uncertainty, and insecurity. The need for consensus, cooperation, stability, and peace on a global scale remains a task with heavy responsibility, Liu noted.

In his speech, Liu highlighted the inherently peaceful

nature of the Chinese nation, which has established a long-standing foundation for peaceful development of the country. "In the new era, General Secretary Xi Jinping has stood at the height of the future and destiny of all mankind, focusing on maintaining world peace, promoting common development, and promoting exchanges and progress among civilizations. He has successively put forward several major initiatives and propositions, including the concept of building a community with a shared future for mankind, as well as the Global Development Initiative, the Global Security Initiative, and the Global Civilization Initiative, which collectively shape the worldview and peace-oriented philosophy of the Communist Party of China.

Liu emphasized that illuminating the light of world peace is a collective endeavor of all humankind. He called for all parties to focus on common development and the establishment of a solid material foundation for peace, emphasize universal security to create the wings of peace and security, and promote cultural exchanges and mutual learning to strengthen the foundation of peace through civilization.



Wang Xiqin extended a warm welcome to the attendees and expressed gratitude to all those who have consistently supported the forum. He noted, "Those who share the same aspirations are not deterred by distance." In the past 11 years, the forum has become a major platform, playing an important role in promoting exchanges and cooperation in the realm of international security, he said.

The theme of this forum, "Stabilizing an Unstable World through Consensus and Cooperation," aligns with the current needs and aims to contribute to the establishment of a world that is characterized by lasting peace, universal security, shared prosperity, openness, inclusiveness, and environmental beauty, Wang said.

He affirmed that Tsinghua University will continue to make utmost efforts to sustain the forum's global impact, actively address major security challenges faced by the international community, and play an important role in building a community with a shared future for mankind and a global community of security for all.

He encouraged attendees to engage in open and candid discussions, freely express their thoughts, and strive to seek common ground and promote extensive cooperation. Amid complex and diverse circumstances, he also emphasized the importance of offering constructive proposals for stabilizing the international order, safeguarding world peace, and contributing thoughts and wisdom to enhance mutual learning and cooperation among different civilizations.



of global governance order, a resurgence of the Cold War mentality, the rise of hegemony, unilateralism, and protectionism, intensified competition and confrontation among major powers, and a growing number of uncertainties and unpredictable factors," he noted. "At the same time, the human pursuit of peace, development, cooperation, and win-win outcomes remain steadfast, with a stronger demand from the international community for a fairer and more just global order."

As the world stands at a crucial crossroads in history, the gathering of experts to discuss "A New World Order in the Making" carries significant importance, Wang added.

The forum comprises four major plenary sessions and 20 panel discussions and will touch on topics such as a new world order in the making, the evolution of multilateralism, major-power roles in international security, and regional cooperation in reform.

The World Peace Forum, founded in 2012, is a non-governmental annual forum on international security organized by Tsinghua University and co-organized by the Chinese People's Institute of Foreign Affairs.



At the plenary session themed "A New World Order in the Making" held in the morning following the opening ceremony, Dilma Vana Rousseff said the world today is facing multiple crises including the climate crisis, economic recession, protectionism and geopolitical conflicts. She called on all parties to promote inclusive and sustainable development, aiming to create an environment of shared prosperity and peace for people across nations.

Rousseff emphasized the need for collective action in reforming global governance to address the fractures within globalization, and counteract protectionism and unilateralism. She urged all parties to seek consensus on the basis of shared prosperity, condemning any form of "unipolar model," and working towards cooperative and mutually beneficial outcomes.

When presiding over the first plenary session, Wang Chao emphasized that the world is experiencing profound changes unseen in a century. "The international landscape is marked by a mix of intertwined, turbulent and changing complexities, including a slowdown and imbalanced development

Tsinghua University wins grand prize in the National Teaching Achievement Award for Higher Education

On July 24, the Ministry of Education announced the list of projects for the 2022 National Teaching Achievement Award. Tsinghua University, as the only independently reporting unit, was honored with the grand prize in the National Teaching Achievement Award for higher education (undergraduate) for its teaching achievement in "Implementing the 'Three-Pronged Approach', Cultivating Mission-Driven and Excellence-Pursuing Innovative Talents".

Tsinghua won a total of 26 awards in the National Teaching Achievement Award for higher education. These include one grand prize, three first prizes, and 15 second prizes at the undergraduate level, as well as two first prizes and five second prizes at the graduate level. Tsinghua also won two second prizes in basic and vocational education sectors.

The National Teaching Achievement Award is an award approved by the State Council, evaluated once every four years, representing the highest level of teaching work in China's higher education. It stands alongside the State Natural Science Award, the State Technological Invention Award, and the State Scientific and Technological Progress Award. In 2022, a total of 1,998 project achievements won the National Teaching Achievement Award for higher education, including seven grand prizes, 245 first prizes, and 1,746 second prizes.

In 2014, Tsinghua took the lead in initiating comprehensive reforms, with a series of innovative measures being introduced to address deep-rooted challenges hindering the university's development. The term "Three-pronged approach" first appeared at the 24th Educational Work Discussion Conference held at Tsinghua University, and was listed as one of the top ten news stories of Tsinghua University in 2014. Four years later, at the 25th Educational Work Discussion Conference, the "Three-pronged approach" talent cultivation model was formally established as an educational philosophy, becoming a rational understanding to guide the university's educational activities in the new era, and gaining widespread consensus among faculty and students.

As a new expression of the comprehensive development of educational philosophy in the new era, the meaning and significance of the "Three-pronged



approach" continues to evolve with Tsinghua's innovative practices in education.

"The 'Three-pronged approach' led by the shaping of values, especially emphasizes the shaping of values in the process of cultivating skills and imparting knowledge," said Qiu Yong, secretary of the CPC Tsinghua University Committee.

"The shaping of values" is the first and fundamental task of education; "The cultivating of skills" aims to provide students with broader growth space and greater development; "The imparting of knowledge" aims to give students a solid foundation with a broad range of core professional skills and interdisciplinary knowledge structures. The implementation of the "Three-pronged approach" aims to cultivate Tsinghua students into truly mission-driven and excellence-pursuing innovative talents.

From the time the "Three-pronged approach" was first proposed at the 24th Educational Work Discussion Conference, to its elevation as an educational philosophy at the 25th conference, and the introduction of 37 specific action plans, up to the eventual launch of the "2030 High-Level Talent Cultivation Plan" after the 26th conference, the connotation and scope of the "Three-pronged approach" continues to develop and evolve.

Under the guidance of the "Three-pronged approach", a series of educational and teaching reform measures have yielded significant results, playing a leading role in promoting the innovation of higher education philosophies, practices, and models in China.



Tsinghua holds opening ceremony to welcome new undergraduates

On August 24, Tsinghua University held an opening ceremony to welcome its incoming undergraduates. More than 3,800 undergraduates embarked on a new journey at Tsinghua in 2023.

Tsinghua University leaders Qiu Yong, Wang Xiqin, Yang Bin, Guo Yong, Zheng Li, Xiang Botao, Zhao Gang, Zeng Rong, Jiang Peixue, Xu Qinghong, Wang Hongwei and Li Luming attended the ceremony. Vice President Peng Gang moderated the ceremony.



Qiu Yong, secretary of the CPC Tsinghua University Committee, pinned a Tsinghua badge for the undergraduate student representative.



In his remarks, Tsinghua University President Wang Xiqin extended his heartfelt congratulations and warm welcome to all incoming freshmen on behalf of teachers, students, and staff. He remarked that “Actions Speak Louder Than Words” is Tsinghua’s ethos, and it is also a true portrayal of the pragmatic characteristics of Tsinghua, hoping that students can engage in less empty talk and more practical actions, diligently putting ideas into practice and making daily progress.

Wang gave three suggestions to freshmen. First, preparation is the cornerstone of success, preventing the pitfalls of failure. Wang underscored the significance of ethical character and alignment with national principles. He encouraged students to deliberate decisions, uphold patriotism, chase excellence, and contribute ardently to the new era’s anthem of youth.

Second, one must be persistent and refine one’s skills. A long journey can be covered only by taking one step at a time; a long river cannot be formed without accumulating small streams. Wang said that when

doing things, we should not evade details or be afraid to detail difficulties, only by facing challenges and forging ahead can we develop excellent skills and realize our dreams. He encouraged students to start from themselves from now on, fear no challenges, and go forward bravely.

Third, one must reflect on everything that has been done, and investigate the whys behind the consequences. Wang expressed his hope that students will always reflect, eliminate prejudice, cultivate aesthetic judgment, and seek true knowledge, starting with a pragmatic attitude, so that life will bloom brilliantly through unremitting endeavors for the motherland, the nation, the people and all mankind.

“Tsinghua is the new starting point of your life. I hope that you will live up to the University motto of self-discipline and social commitment, carry forward its style of being rigorous, diligent, truth-seeking and creative, and that you will make progress day by day and grow to become a young generation who are politically sound, professionally competent and perform the best results on the track of youth,” Wang said.



Professor Tian Ling from the Department of Mechanical Engineering, on behalf of all the faculty members, delivered a speech encouraging students to be brave in their studies and to actively explore new areas of knowledge.

Students need to be proactive when walking into labs and doing trials and experiments, and should look at the real problems and find real solutions, Tian said.

She called for students to become people with virtue, compassion, and a sense of responsibility, and to contribute their wisdom to the country’s development and human progress while crafting their own remarkable life journeys.



Xu Hui, president of the Student Union, extended his heartfelt congratulations to the incoming students on becoming the youngest owners of this beautiful campus. Xu shared with them how to find a sense of meaning in their university life. He encouraged the freshmen to strive continuously, face challenges head-on, and seek a sense of purpose through self-transcendence. He also emphasized the need for integrity, tolerance and devotion, and advocated for patriotism when embracing human destiny.

"Class 2023, we build resilience as we surpass ourselves. We find significance through service and contribution, and we go far by embracing the future along that path. I would like to travel with you," Xu said.



"As my long-held dream to be admitted to Tsinghua finally became a reality, I couldn't help thinking about how I should spend my time at the university. I found the answer in the long history of Tsinghua, and that is to be productive and self-motivated as young people," said Wang Shengjie, a freshman representative, and a student of clinical medicine.

As young people, we should earnestly pursue the truth, have passion for our motherland and always maintain a posture of continuous progress. Through unceasing efforts and unyielding vigor, we are bound to have a promising future, bearing aspirations of serving the country and bravely shouldering the responsibility of national rejuvenation, according to Wang.



The opening ceremony was held both online and offline, with the main venue located in the University Gymnasium and eight other sub-venues. It was also broadcasted simultaneously through the Rain Classroom platform.

Tsinghua holds opening ceremony to welcome new graduates

Tsinghua University held an opening ceremony to welcome its incoming graduates on September 2. More than 9,000 graduates embark on a new journey at the University in 2023.

Tsinghua University leaders Qiu Yong, Wang Xiqin, Yang Bin, Guo Yong, Zheng Li, Zhao Gang, Peng Gang, Zeng Rong, Xu Qinghong, Wang Hongwei and Li Luming attended the ceremony. Vice-President Jiang Peixue moderated the ceremony.



Qiu Yong, secretary of the CPC Tsinghua University Committee, pinned a Tsinghua badge on the graduate student representative.

In his remarks, Tsinghua University President Wang Xiqin extended his heartfelt congratulations and warm welcome to all incoming graduates on behalf of teachers, students, and staff members.

Wang said that as students are about to embark on a new academic journey, they should have a new understanding of "study" and "career". "Study" means to deeply understand the knowledge structure and form of their learning field, continuously improve



cognitive ability, and pass on and create knowledge. "Career" means to skillfully apply knowledge to solve problems in their specialty, continuously improve



practical ability, and serve the nation and society with intelligence and wisdom. Accurately grasping "study" and "career" is crucial for students to correctly understand and handle relationships between inheritance and innovation, independence and cooperation, theory and application.

In this regard, Wang put forward three requirements for the students.

First, to "study" one must strive for self-improvement, focusing on creating knowledge and pursuing truth. Students need to balance the relationship between self-creation and learning from others and predecessors, and gradually form their own knowledge system. They must continually break their own prejudices and achieve self-revolution. "I hope you will continue to strive for self-improvement and seek ceaselessly, treat science with a scientific attitude and pursue truth with a spirit dedicated to truth, and work hard to broaden and deepen your cognitive abilities and expand the boundaries of human knowledge," said Wang.

Second, to establish a "career" one must cultivate virtue, focusing on solving problems and serving the people. They should have a people-oriented mindset, putting the country first and the people above all else. They should be broad-minded and unite with others to overcome difficulties and achieve greater accomplishments. I hope you will cultivate virtue to bear great responsibilities, unleash youthful passion in united efforts, chase youthful dreams, pave the way and build bridges for the revitalization of the Chinese nation, and contribute to building a great modern socialist country in all respects," said Wang.

Third, for both "study" and "career", one must be versatile, focusing on drawing from multiple sources to refine and apply knowledge broadly. Building a career requires gathering knowledge from multiple disciplines. To study, one must collect practical data from multiple fields, know how to refine and apply it broadly, and return to the industry for verification. Career is based on study, and study yields career outcomes. "I hope you will widely explore various fields, integrate knowledge comprehensively, and keenly grasp opportunities for disciplinary transformation while genuinely solving real problems, and strive to produce original achievements," said Wang.

Wang encouraged the students, standing at a new starting point in life, to strive for self-improvement in study, cultivate virtue in career building, and promote the school spirit of "Actions Speak Louder Than

Words" and the essence of "humanities are ever-changing". Take on responsibilities courageously and forge ahead in the great journey of building a great modern socialist country in all respects and rejuvenating the nation.



Professor Xue Lan from the Schwarzman College, representing teachers, delivered a speech. He said, "You are about to enter a new era filled with challenges and hope. As graduate students, you will embark on a journey of deeper academic research, broader knowledge domains, and more diverse social interactions. This is not only a period of learning but also a crucial stage for self-discovery and personal growth." He shared some suggestions: strive for excellence and become climbers of scientific peaks; let actions speak louder than words, be diligent cultivators; embrace collaboration and sharing, be fellow travelers on the path of progress; and, uphold simplicity and truth, be inheritors of the University spirit.



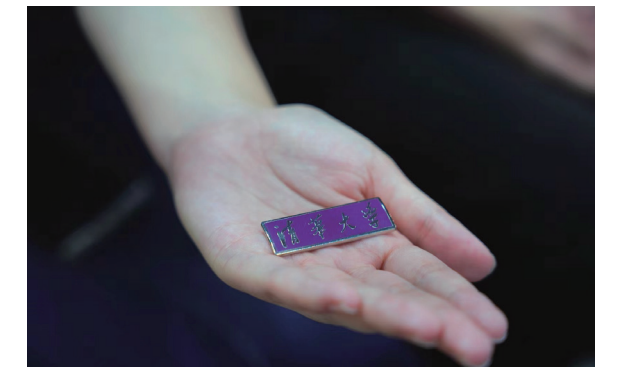
Chen Xing'an, PhD student from the Department of Hydraulic Engineering and president of the Graduate Student Union, stated that in the face of change, one should find unwavering belief through self-discipline; maintain steadfastness through repeated setbacks;

demonstrate unwavering commitment through choices that transcend the self. "Whether confronted with opportunities or challenges, I hope that we attain the breadth of mind and courage to move from excellence to even greater excellence in the pursuit of serving the nation and contributing to society."



A new PhD student Wu Jiajun from the Department of Engineering Physics, encouraged her peers to explore the unknown, to be filled with curiosity, and to innovate while facing challenges head-on. "I am immensely looking forward to my time at Tsinghua, where I can continue to tackle scientific challenges and scale academic heights, grow through the hardships of

learning, and achieve meaningful progress. To explore the unknown, we must have unwavering belief and stay dedicated to the right path. Our homeland needs our talents, our passion, and our perseverance. May we carry the desire to explore the unknown and seek true knowledge, set our aspirations high, remain resolute, and work relentlessly on this long journey of innovation and continuous progress."



The opening ceremony was held both online and offline, with the main venue located in the University Gymnasium and two other sub-venues. It was also broadcast simultaneously through the Rain Classroom platform.



Tsinghua launches Foundation Model Research Center

In its latest effort to explore the forefront of the science and technology of foundation models, as well as to promote the innovation and application of artificial intelligence across diverse fields, Tsinghua's Institute of Artificial Intelligence launched the Foundation Model Research Center in Beijing on June 30.

Wang Xiqin, president of Tsinghua University; Zhang Bo, academican of the Chinese Academy of Sciences and honorary dean of the Institute of Artificial Intelligence of Tsinghua University; Wu Jianping, academican of the Chinese Academy of Engineering, dean of the Institute for Network Sciences and Cyberspace of Tsinghua University, and director of the Zhongguancun Laboratory; Zhang Yaoxue, academican of the Chinese Academy of Engineering and director of the Institute of Artificial Intelligence of Tsinghua University; Jin Li, deputy director of Qinghai

Industry and Information Technology Department, and Shi Yuanchun, president of Qinghai University, attended the founding ceremony.

Professor Sun Maosong, executive vice director of the Institute of Artificial Intelligence of Tsinghua University, was appointed as the chief scientist of the research center during the ceremony. Professor Tang Jie from the Department of Computer Science and Technology was appointed as the director of the research center, along with appointed deputy directors professor Huang Minlie and professor Liu Zhiyuan from the same department. The research center will gather experts from various disciplines and departments within and beyond Tsinghua University to conduct collaborative research on foundation models in the future.



Wang Xiqin expressed his gratitude to all faculty and staff members who participated in the planning, design and organization of the research center. He pointed out that foundation models are crucial in advancing the development of the general artificial intelligence. Facing the world's frontiers of science and technology, the establishment of the research center by Tsinghua aims to strengthen team science and disciplinary development in related fields. It is hoped that the research center can strengthen overall planning and actively explore innovative governance modes. It is necessary to strike a balance between individual and collective interests, inheritance and innovation, applied and theoretical research, as well as coordinate development and security, and promote the integration of both science and the humanities. Wang emphasized the importance of fully leveraging the centralized and unified leadership of the Party, and promoting cooperation among the government, educational institutions, enterprises, and other stakeholders, while strengthening team science. He also hopes to see Tsinghua University harness its advantages in comprehensive disciplines to integrate resources and create more synergy between various departments and schools, to promote the innovation and application of foundation models for artificial intelligence, and to make significant contributions to the independent control of key core technologies in China and nurturing top-notch and innovative talent on our own.



Wu Jianping recognized Tsinghua's artificial intelligence scholars for their achievements regarding foundation models and encouraged them to pursue excellence and innovation. He encouraged the research center to make contributions and breakthroughs in artificial intelligence technologies, applications and security.



Zhang Yaoxue praised the Institute of Artificial Intelligence of Tsinghua University for its leading role in artificial intelligence research and education. He expects that the new center can further enhance the development of Tsinghua's artificial intelligence-related disciplines, research projects, and industrialization.

The ceremony also featured representatives of the Department of Computer Science and Technology, the Think Tank Research Center, Qinghai Industry and Information Technology Department, and Zhipu AI, to deliver speeches. They expressed their support and expectations for the center and their innovative research and application of foundation models. They also emphasized the importance of interdisciplinary and cross-sectoral collaboration in the field of artificial intelligence.

GLOBAL ENGAGEMENT

Tsinghua hosts 1st THU-NUS-QUT-KMUTNB Joint Workshop on Advanced Materials

The 1st THU-NUS-QUT-KMUTNB Joint Workshop on Advanced Materials, a collaborative initiative between Tsinghua University, the National University of Singapore, Queensland University of Technology, and King Mongkut's University of Technology North Bangkok, took place at Tsinghua on August 8. Organized by the School of Materials Science and Engineering, the forum was themed "Advanced Materials", serving as a platform for scholars across various disciplines to discuss and exchange ideas on breakthroughs in advanced materials research.

Lin Yuanhua, dean of the School of Materials Science and Engineering at Tsinghua University, shed light on the forum's development, emphasizing his aspiration to see an influx of universities participating in future discussions, seizing shared development prospects and fostering collaborative achievements. Professor Barbaros Özyilmaz, head of the Department of Materials Science and Engineering at NUS, Dongchen Qi, dean of the School of Chemistry and Physics at QUT, and Somrerk Chandra-ambhorn, vice president of KMUTNB, delivered speeches respectively, each expressing strong expectations for the academic forum and deep cooperation.



Scholars exchange insights.

Subsequent to the inaugural ceremonies, the academic presentations from all four universities commenced. The four scholars briefed the participants about their teaching philosophy, research dynamics, and recent advancements in their respective schools.

They were followed by 14 scholars who showcased their pioneering studies on materials. Their realms of expertise spanned energy conversion and storage, two-dimensional materials, structural ceramics, laser diagnostics, and stainless steel, among others.



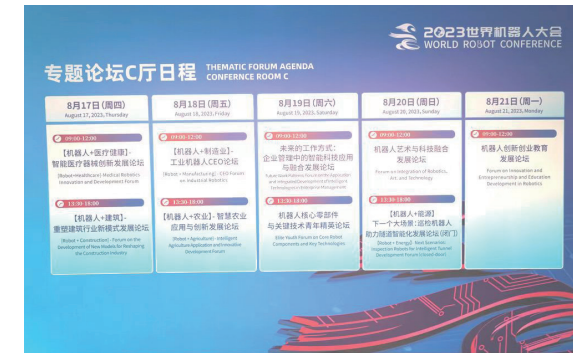
Report and exchange



Tsinghua SEM hosts WRC 2023 Special Forum

The World Robot Conference 2023 (WRC 2023) was held in Beijing from August 16 to 22. YIN Li, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and secretary of the CPC Beijing Municipal Committee, and WAN Gang, chairman of the China Association for Science and Technology, attended the conference. A special forum, themed "Future Work Patterns: Forum on the Application and Integrated Development of Intelligent Technologies in Enterprise Management" organized by the School of Economics and Management at Tsinghua University (Tsinghua SEM), was held on August 19.

This forum was the first time during the WRC where discussions on technology and organizational management took place. With a focus on organizational management, the forum explored the ways in which generative AI and other artificial intelligence technologies impact future work patterns. Professor LI Ning, chair of the Department of Leadership and Organization Management at Tsinghua SEM, and Professor T. Brad Harris, associate dean of MBAs at HEC Paris, served as the forum's chairpersons.



The forum drew approximately 150 participants, including experts, scholars, students, and professionals from various fields. Among them were Professor QIN Xin, associate dean of the School of Business at Sun Yat-sen University; Professor HE Wei, recipient of the National Science Fund for Distinguished Young Scholars and faculty member at Nanjing University Business School; Professor WEI Qiang, vice chair of the Department of Management Science and Engineering at Tsinghua SEM; ZHANG Jiayin, associate professor in the Department of Leadership and Organization Management at Tsinghua SEM and Director of the Research Center for Interactive Technology Industry; Professor LI Ning, Flextronics chair professor and department chair of the Department of Leadership and Organization Management; and Jerry Yang, vice president of Thundercomm, an IoT business joint venture between ThunderSoft and Qualcomm. They spoke to share their research findings and industry practices at the forum, which was presided over by LI Ning.

The forum focused on combining organizational management and AI technology applications. Experts and scholars spoke and shared their insights from theoretical and practical perspectives, and promoted exchange and cooperation between academia, industry, and the research communities involved in AI technology applications.



Inaugural "Tsinghua Global Youth Dialogue" concludes

On the afternoon of August 30, the inaugural "Tsinghua Global Youth Dialogue" successfully concluded amidst a chorus of Auld Lang Syne. Under the theme of "United Youth, Shared Future," the Dialogue attracted over 60 youth representatives from more than 30 countries and regions worldwide.

The opening ceremony took place on the afternoon of August 29. Wang Xiqin, president of Tsinghua University, and UN Resident Coordinator in China Siddharth Chatterjee, delivered speeches online. The opening ceremony was attended by distinguished guests, including Xu Lyuping, vice chairperson of the Chin NGO Network for International Exchange, Dong Xia, deputy secretary-general of the All-China Youth Federation, Chen Dali, deputy director of the Department of International Cooperation and Exchanges, Ministry of Education, Irwansyah Mukhlis, a minister counsellor of the Indonesian Embassy in China, Abdumurzayev Askhat, an educational counsellor of the Kazakhstan Embassy in China, Guo Yong, deputy secretary of the CPC Tsinghua University Committee, and representatives from Astana International University in Kazakhstan and Gadjah Mada University in Indonesia. After the opening ceremony, youth representatives engaged in discussions with Wang Hongwei, vice president of Tsinghua University.

Wang Xiqin emphasized that the world is undergoing profound changes unseen in a century, and dialogues among youths are indispensable for human beings to address common challenges and move towards a better future. Upholding the educational philosophy of integrating China and the world, bridging the past and the present, and blending arts and sciences, Tsinghua University gives high priority to cultivating global competence of young students. The "Tsinghua Global Youth Dialogue" aims to provide a multilateral mechanism for exchanges and cooperation among youths around the world and encourages youths to join hands to contribute to global development. He also encouraged young people to transcend the interdisciplinary barriers of different knowledge



systems, seek truth and goodness, and be capable of integration. They should transcend the value barriers of quick success and instant benefits, take a long-term view, and embrace global vision. In addition, he emphasized the importance of transcending the cultural barriers of different civilizations so that youth can better complement and help each other.



Xu Lyuping called for joint efforts to consistently strengthen cultural exchanges and mutual learning among civilizations, and to open up a new prospect of enhanced exchanges and understanding among different peoples to create better interactions and integration of diversified cultures. She encouraged young people to serve as bridges for exchanges between different civilizations with an inclusive attitude, engage in international cultural exchanges and cooperation with innovation, and contribute to making the garden of world civilizations colorful and vibrant.



As noted by Dong Xia, in a digital age where opportunities and challenges coexist young people should seize opportunities and face challenges. They also play a significant role in advancing the construction of a community with a shared future for mankind. She also presented the World Youth Development Forum project currently underway by the All-China Youth Federation. This forum aims to create a platform where global youth can work together towards global development and countries worldwide can jointly advance youth development.



According to Chen Dali, cultural exchanges between China and other countries are essential for global civilization dialogue. The Ministry of Education of the People's Republic of China will expand the opening-up of education to the outside world and engage in comprehensive, multi-level, and wide-ranging international educational exchange and cooperation with countries worldwide. It will pave the way for Chinese youth to connect with the world and for young people from around the world to gain deeper insights into China.



During an online speech, Siddharth Chatterjee, United Nations Resident Coordinator in China, pointed out that youth are a crucial force in addressing global challenges and enjoy unique advantages in the digital age, such as innovative mindsets, critical reasoning, and teamwork spirit. He also advised young people to have faith in their own potential, prioritize their responsibilities bravely, set good examples and take up leadership roles in their future positions. The UN will continue to support and stand with young people to help achieve the SDGs and shape a just and sustainable world.



Irwansyah Mukhlis highlighted that young people play an important role in making a difference in the world. He called on various countries to strengthen partnerships among global youths and empower them for mutual learning.



Abdumurzayev Askhat read a letter from Shahrat Nuryshv, Ambassador of Kazakhstan to China. Mr. Nuryshv expressed Kazakhstan's willingness to collaborate with China in advancing connectivity in infrastructure and youth development projects in the future.



Irsaliyev Serik Aztayevich, President of Astana International University, and Ova Emilia, Rector of Universitas Gadjah Mada, separately delivered speeches online.



Youth representatives shared their stories at the opening ceremony. Aditya Garg from India showed photos of air pollution taken in India, expressing his determination to participate in environmental protection. Aie Natasha from Indonesia narrated what youth representatives experienced in China, including traveling on clean energy transportation and experiencing autonomous driving in Shenzhen. Ana González from El Salvador said she witnessed a vivid example of coexistence between modern development and wildlife conservation at the giant panda base. Peng Shaohua from the United States expressed his passion for popular Chinese songs and Chinese TV dramas. Liao Yang from China shared her ideas on "United Youth", which are based on the enthusiasm of global youth representatives for mutual communication and group selfies.



Following the opening ceremony, 12 youth representatives engaged in discussions with Wang Hongwei. Prof. Wang encouraged youth representatives to become "inaugural cohorts" of the "Tsinghua Global Youth Dialogue", "friends of Tsinghua" who understand and care about Tsinghua, "experts of China" who pay close attention to China's development, and "open ambassadors" for international exchanges aimed at establishing a community with a shared future for mankind.



The keynote speech and round-table sessions took place on the afternoon of August 30. They focused on the themes of building civilization through innovation, development and dialogue. The keynote speeches were delivered by Zhang Yaquin, Dean



of the Institute for AI Industry Research (AIR) of Tsinghua University, Xue Lan, Dean of Schwarzman College and Co-Chairman of the Center for Industrial Development and Environmental Governance (CIDEG) at Tsinghua University, Erik Solheim, Chairman of the BRI International Green Development Coalition and former UN Environment Executive Director and Under-Secretary-General of the United Nations, Wang Hui, Dean of the Tsinghua Institute for Advanced Study in Humanities and Social Sciences, and Getachew Engida, former Deputy Director-General of UNESCO and Co-Chairman of the China-Africa Leadership Development Institute at Tsinghua University. Following keynote speeches, youth representatives also engaged in round-table discussions based on their individual experiences and thoughts.



At the end of the event, youth representatives from China, India, Hungary, and Zimbabwe read aloud the United Youth Initiative "Our Common Future." This initiative, based on the "time capsule" made by youth representatives, is generated with the assistance of AI technology developed by Tsinghua University. It calls on young people worldwide to actively cooperate and to contribute to building a more harmonious, inclusive, open, and sustainable world.

adhered to the concept of "diversity and integration". The Harmony Concert was co-presented by both the Tsinghua Student Art Troupe of Chinese Folk Music and foreign musicians, showing the charm of cultural exchange and integration through both traditional and modern Chinese instruments. At the closing ceremony, youth representatives sang Auld Lang Syne in multiple languages, expressing their desire to further strengthen youth communications and cooperation.



The "Tsinghua Global Youth Dialogue" is sponsored by Tsinghua University, co-organized by Astana International University in Kazakhstan and Universitas Gadjah Mada in Indonesia, and undertaken by the Tsinghua University Center for Global Competence Development and the Tsinghua University Student Association of the Belt and Road Initiative. The event aims to create a platform for global youth to engage in interactions and discussions and to provide them with an opportunity to explore China and discuss global issues together. Parallel dialogues are also held at Astana International University in Kazakhstan and Universitas Gadjah Mada in Indonesia.

The inaugural "Tsinghua Global Youth Dialogue" takes the form of "practice + dialogue". For the part of practice, young representatives from China and elsewhere visited Shenzhen, Chengdu, Deyang, Beijing and other cities to gain first-hand experience of China's innovation and immerse themselves in the charm of Chinese culture. The dialogue session

Asia Universities Alliance online education network debuts first meeting

On September 15, the Asian Universities Alliance online education network held its inaugural meeting via video link, with 20 participants representing 13 top universities across Asia.

Peng Gang, Tsinghua University's vice president and provost, delivered an opening speech, while the meeting was chaired by Wang Xiaoxiao, director of Tsinghua's Online Education Center.

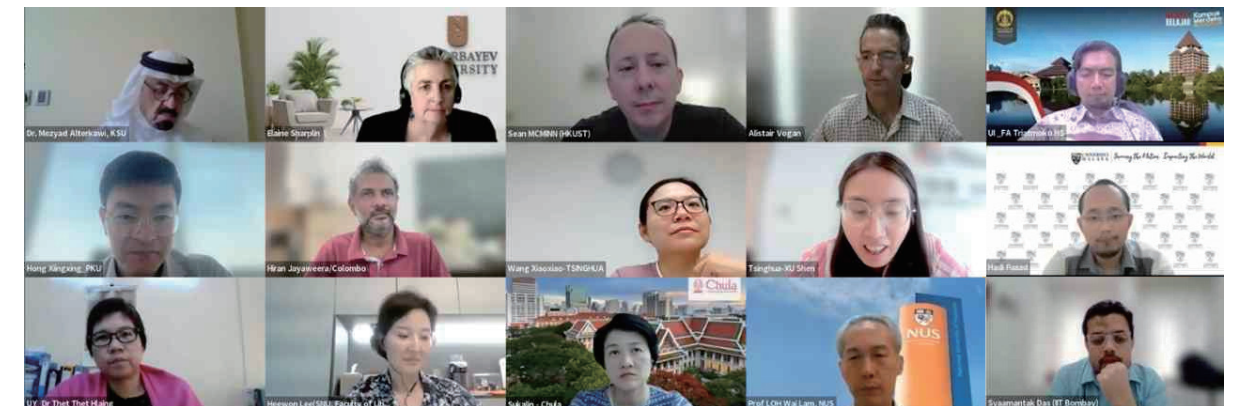


In his opening remarks, Peng warmly welcomed the university representatives. He underscored that the alliance, established by Tsinghua University in 2017, unites 15 member universities from 14 countries and regions, highlighting collaboration spirit in Asian higher education.

Peng recognized the rapid development of artificial intelligence (AI) technology, which is reshaping various fields. He outlined three expectations for the newly established online education network within the alliance. First, leveraging digital tools to enhance teaching methods and the overall quality of education, through initiatives such as global classrooms and student competitions. Second, facilitating the exchange of teaching staff to enhance their digital skills. Third, creating a platform for member universities to foster communication and idea exchange. This would involve organizing seminars and expert dialogues aimed at exploring the integration of AI and education.

Several collaborative initiatives were proposed, including dialogues among digital education experts, classrooms integrating global students, faculty development programs, and contests for digital learners.

During discussions, participants delved into the content and significance of these projects. They emphasized the need to improve teaching methods, enhance educators' digital competencies, and establish effective communication platforms. All participants agreed on the critical role of AI in higher education and expressed the hope for increased collaboration to drive digital transformation and elevate the quality of higher education across Asia.



European Commission Vice-President visits Tsinghua Institute for AI International Governance

On September 19, European Commission Vice-President Věra Jourová and the Ambassador of the European Union to China, Jorge Albiñana Toledo, visited Tsinghua University's Institute for AI International Governance. They engaged in substantive discussions with experts and scholars from Tsinghua regarding the governance and regulation of artificial intelligence. The delegation was welcomed by Tsinghua University Vice President Yang Bin.

During the meeting, Yang extended a warm welcome to Jourová and her delegation, emphasizing Tsinghua's commitment to advancing scientific research, technological innovation, technology governance, and ethical education in the field of artificial intelligence. In recent years, Tsinghua has established several prominent institutes, including the Institute for Artificial Intelligence, the Institute for AI International Governance, and the Institute for AI Industry Research. Additionally, Tsinghua has launched the International AI Cooperation and Governance Forum, which serves as an inclusive platform for international collaboration.

Notably, the 2023 International AI Cooperation and Governance Forum, jointly hosted by Tsinghua University and the Hong Kong University of Science

and Technology (HKUST), is scheduled to convene in December at HKUST. Yang expressed his hope that this forum will serve as an opportunity to further engage with European universities and institutions, collectively driving the responsible and wholesome development of artificial intelligence.

Jourová acknowledged the rising significance of AI governance and regulation on a global scale, particularly given AI's profound impact on various aspects of society, most notably in the realm of education. She underscored the pivotal role of universities in propelling AI scientific research and underscored the importance of research endeavors in the domain of AI ethics to steer technology on ethical and positive trajectories.

The event saw the participation of representatives from Tsinghua's Institute for Artificial Intelligence, the Institute for AI International Governance, and the Institute for AI Industry Research, as well as experts from the School of Law, the Department of Computer Science and Technology, and the School of Social Sciences.



Nobel laureate professor Joachim Frank awarded Honorary Doctorate by Tsinghua University



On the morning of September 21, Tsinghua University hosted a prestigious event, conferring an honorary doctorate upon Professor Joachim Frank, the recipient of the 2017 Nobel Prize in Chemistry. Prior to the conferment ceremony, Tsinghua Vice President Wang Hongwei met with Professor Frank, extended a warm welcome and congratulated him on behalf of Tsinghua University. During their discussion, Wang and Frank reflected on past collaborations and exchanged views on further strengthening cooperation in areas such as academic development, talent cultivation, and scientific research.



During the conferment ceremony, Wang presented Frank with the degree certificate.



In his address, Wang highlighted Frank's role in mentoring numerous outstanding experts in the field of cryo-electron microscopy. Some of these experts contributed to the establishment of Tsinghua University's cryo-electron microscopy facility. Over the years, Frank has maintained close academic exchanges and cooperation with Tsinghua University. Wang also emphasized Tsinghua University's commitment to advancing its 2030 global strategy, through which it aims to elevate international collaboration to new heights and build a more open, integrated, and resilient institution. The conferral of the honorary doctorate upon Frank is expected to further propel the development of Tsinghua's cryo-electron microscopy team, bolster academic research, enhance the global competitiveness of Tsinghua's structural biology discipline, and increase the international influence of related institutions of Tsinghua in the fields of structural biology research and biomedical science.

Frank expressed his delight at being awarded an honorary doctorate from Tsinghua University and welcomed the opportunity to further advance academic collaboration and exchange with Tsinghua University in the future.



Following the conferral ceremony, Frank delivered a Tsinghua Global Vision Lecture titled "The Determination of Molecular Motion by Cryo-Electron Microscopy."

Following the lecture, Frank fielded questions from the attending faculty and students.

Frank, born in 1940, is a distinguished German-American biophysicist and currently serves as a professor of Columbia University. He is a fellow of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Academy of Microbiology. He has received the Benjamin Franklin Medal in Life Science and was awarded the Nobel Prize in Chemistry in 2017.



SCIENTIFIC INNOVATION

Liu Yule team reveals the molecular basis of MeSA mediated plant airborne defense and the counter-defense mechanism of viruses

When plants are exposed to environmental stimuli, they produce volatile organic compounds (VOCs). These VOCs can be perceived by neighboring plants triggering defensive responses. This phenomenon is known as airborne defense (AD). Such plant-plant communication (PPC) and its biological and ecological significance have been observed in many species over decades. However, molecular genetic framework for the VOC-mediated PPC including AD is largely unknown. Moreover, with the exception of the receptor for ethylene, the receptors for mediating VOC-sensing system in plants have remained unidentified. Aphids are the most destructive agricultural and horticultural pests worldwide. They are phloem-feeding and cause extensive destruction to crop production due to their efficient transmission of more than 40% of plant viruses. Aphid-attack induces plant emitting VOCs which are mainly composed of MeSA. MeSA has been implicated in plant defense against herbivorous insects including aphids by repelling, attracting predators, or reducing survival fitness of these insects. However, how MeSA serves as an interplant communication signal to activate anti-aphid defense in neighboring 'receiver' plants has been a long-standing and unsolved question. For instance, whether plants possess receptor systems to sense and perceive airborne MeSA is unclear. Furthermore, it remains to be elucidated whether and how aphids and viruses can regulate AD.

On September 13, 2023, a research team led by Prof. Liu Yule published their research paper online in Nature titled "Molecular Basis of Methyl Salicylate-Mediated Plant Airborne Defense." This work identified SABP2 as a plant receptor for perceiving airborne MeSA, and revealed the molecular mechanism of

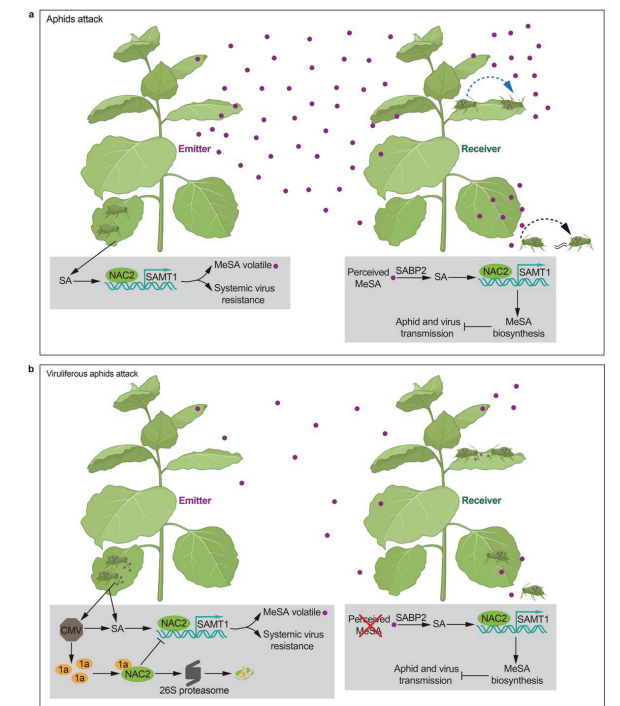


Figure 1. A Model of Interplant Communication Mediating Airborne Defense against Aphids and Viruses

MeSA-mediated plant airborne immunity as well as viruses' counter-defense mechanism. It provides new insights and research directions for disease and pest control.

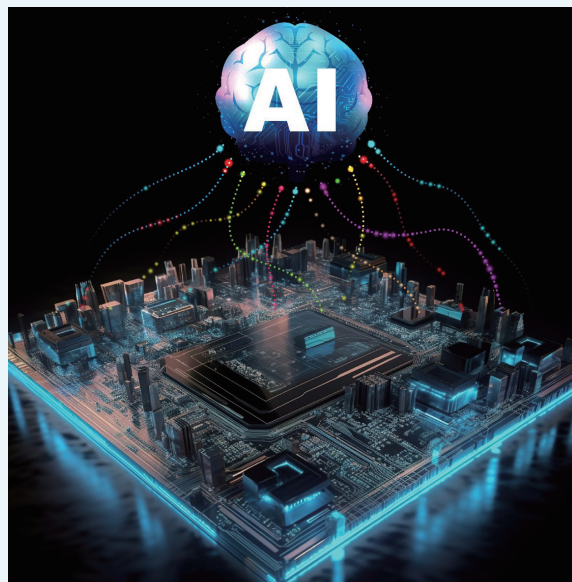
Most plant viruses rely on intermediaries such as insects for transmission. Upon insects' infestation, plants produce VOCs to repel the insects and attract insects' natural enemies. Additionally, VOC can serve as aerial cues and be perceived to elicit defenses in neighboring 'receiver' plants. The Liu Yule group

reported that aphid-attack induces plant MeSA production, and airborne MeSA is perceived and converted to SA by SABP2 in neighboring plants. SA then cascades signal transduction to activate the NAC2-SAMT1 module for MeSA biosynthesis to induce neighboring plants anti-aphid immunity and reduce virus transmission. Moreover, Liu Yule group also found that some aphid-transmitted viruses, such as cucumber mosaic virus and potato Y virus, encode proteins with helicase domains that interact with the NAC2 protein. This interaction alters the subcellular localization of NAC2, promoting NAC2 retained in the cytoplasm and degraded by the 26S proteasome system, subsequently negatively regulating MeSA mediated airborne defense (Figure 1). This study reveals the detailed molecular basis of plant airborne immunity and the counter-defense mechanism of viruses, shedding light on a novel mutualistic coevolution between aphids and viruses.

The corresponding author is Prof. Liu Yule of Tsinghua University. The first authors are Postdoctoral

researchers Gong Qian and Wang Yunjing of Tsinghua University. Prof. Hong Yiguo of Hebei Agricultural University, PhD candidates He Linfang and Huang Fan, Dr. Zhang Danfeng (former Postdoctoral researcher in Tsinghua University), Dr. Wang Yan (Research Associate in Tsinghua University), Dr. Wei Xiang (Senior Engineer in Tsinghua University), Prof. Deng Haiteng and Han Meng of Tsinghua University, Researcher Feng Cui and engineer Luo Lan of the Institute of Zoology, Chinese Academy of Sciences have made significant contributions to this research. In addition, we have received valuable advice and assistance from Prof. Kang Le of the Institute of Zoology, Chinese Academy of Sciences, Prof. Wang Xianbing of China Agricultural University, Prof. Li Xiangdong of Shandong Agricultural University, Researcher Guo Huishan, Researcher Ye Jian, and Dr. Zhao Pingzhi. of the Institute of Microbiology, Chinese Academy of Sciences. This work was supported by the grants including National Key Research and Development Program of China and the National Natural Science Foundation of China.

Tsinghua team reaches milestone in intelligent urban planning



Tsinghua University's Center for Urban Science and Computation, Department of Electronics Engineering has recently collaborated with the School of Architecture to reach a milestone in the field of intelligent urban planning. They have proposed for the first time a reinforcement learning model for urban planning, that realizes a collaborative urban planning workflow between human planners and AI, which provides a brand-new way of intelligent urban planning. The work has been published online in Nature Computational Science under the title "Spatial Planning of Urban Communities via Deep Reinforcement Learning". This work demonstrates the strong power of AI technique in solving complicated problems of urban planning, which provides efficient solutions for the "15-minute city", enabling the sustainable development of cities. In a concurrent

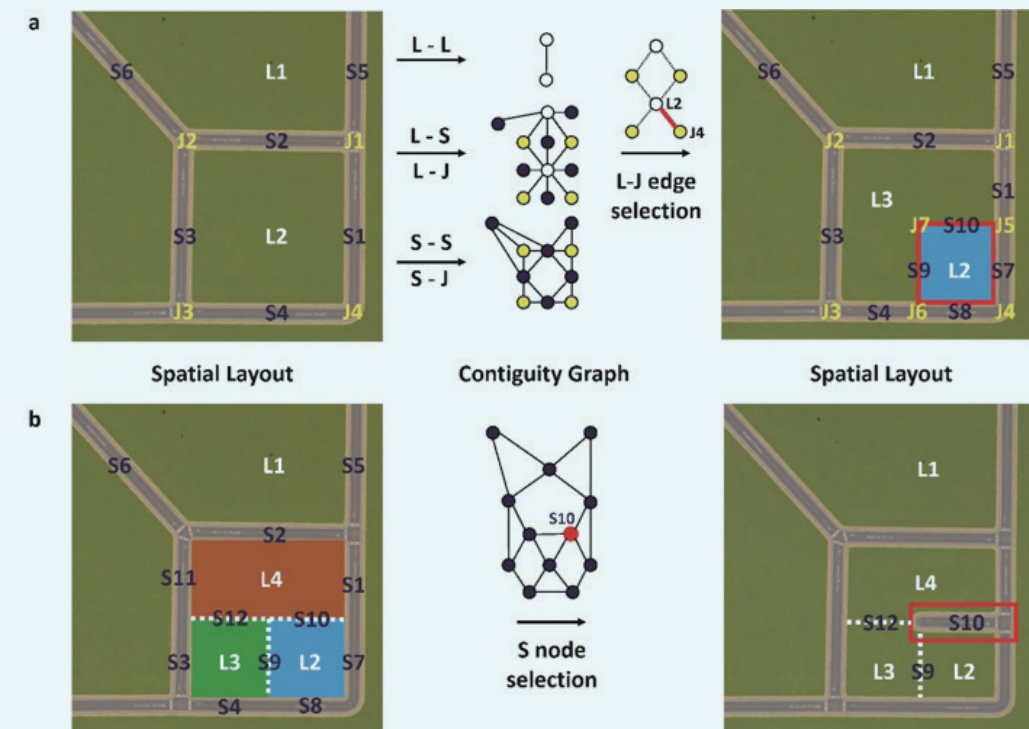
News & Views article, Paolo Santi, a principal research scientist at the MIT Senseable City Lab, commented, "While addressing important conceptual and computational challenges and demonstrating the feasibility of an integrated human-AI workflow for spatial layout planning, the work of Zheng et al. leaves many avenues open for future research."



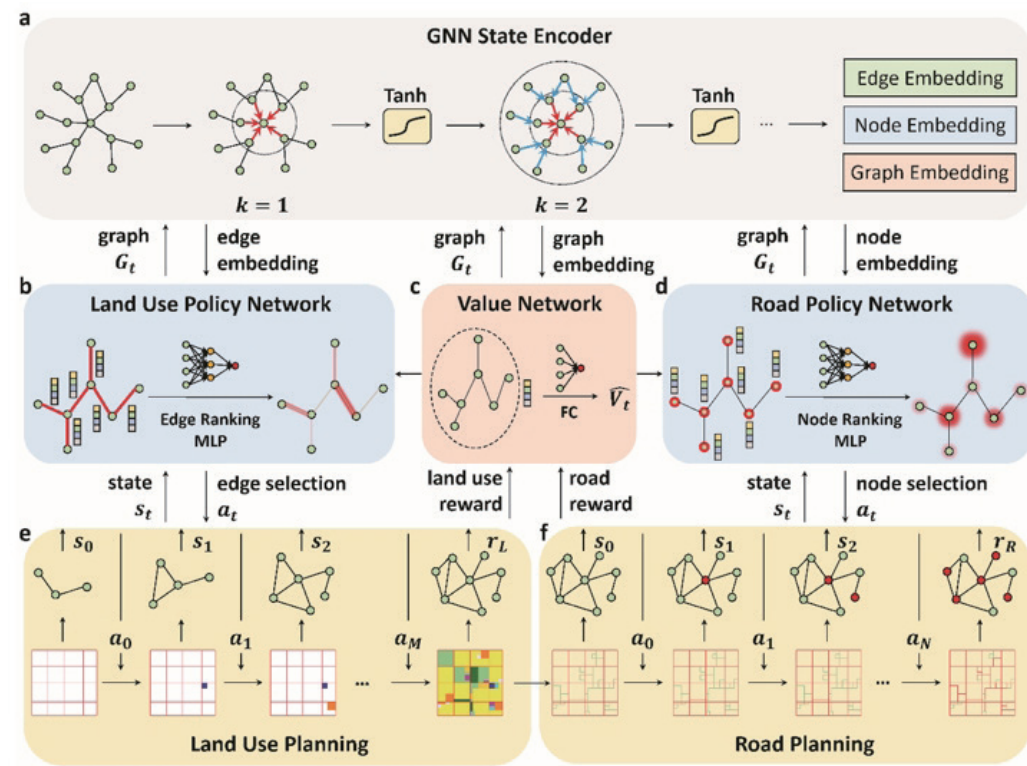
Urban planning is both an old and young discipline. It has existed since the birth of cities, while its theory and practice are constantly and rapidly developing and improving. Scholars in the field of urban science have been studying the automation of urban planning since the middle of the last century, striving to release urban planners from tedious tasks through the development

of computational urban models and planning support tools. For example, American system scientist JW Forrester proposed urban dynamics in 1970, and British urbanist Michael Batty proposed planning support tools in 1995. However, due to limitations in data, algorithms, and computing power, the layout of land use and road in current planning practice still relies heavily on the experience and intuition of human planners, far from automation.

With the breakthrough development of AI technology in the last decade, especially the powerful ability of reinforcement learning algorithms to perform multi-objective optimization in a huge solution space has been explored in solving many similar planning-type problems (For example in Go and chip design among other applications). that previously relied on human intuition, which makes it possible to utilize the powerful computational ability of AI for land use and road layout. The development of AI-enabled urban planning tools can be of great scientific and applied value by improving the productivity of human planners and allowing them to focus more on creative works.



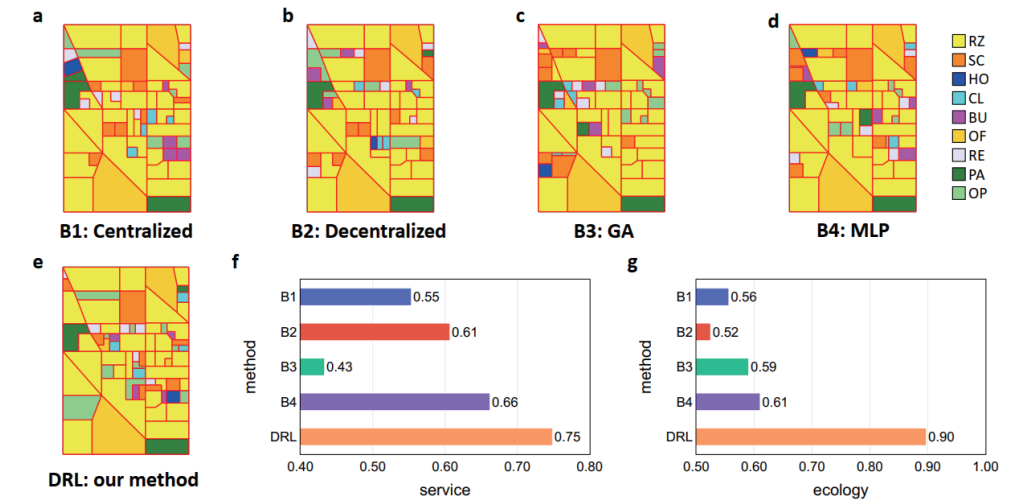
(a) graph reformulation of land use layout. (b) graph reformulation of road layout.



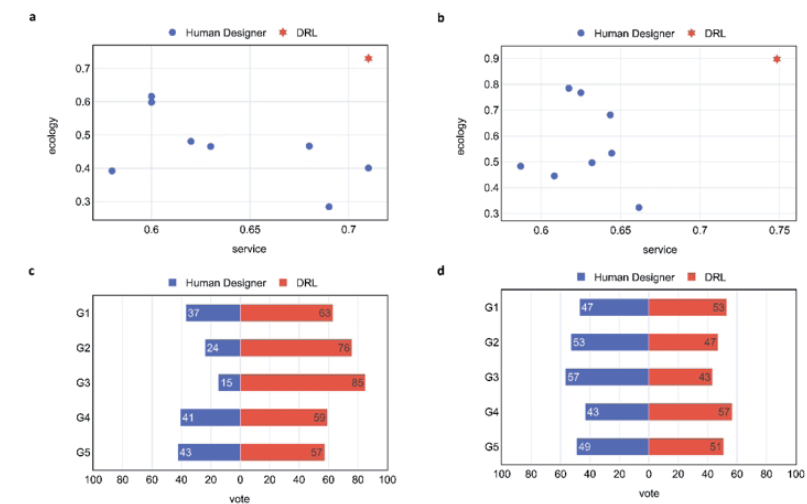
The proposed reinforcement learning approach (a) GNN state encoder (b) Land use policy network. (c) Value network. (d) Road policy network (e) Markov decision process on the graph for urban planning.

The Center for Urban Science and Computation Research at Department of Electronics, Tsinghua University, commenced the research on governance, planning and decision-making in urban complex environments in 2014. Led by Professor Yong Li of the Research Center, the group's doctoral student Yu Zheng and others, based on the group's technical accumulation in urban computational modeling and deep reinforcement learning algorithms, and in cooperation with Professor Tinghai Wu's team of the School of Architecture, the research center innovatively proposed a spatial planning method based on deep reinforcement learning for urban communities. Through millions of planning interactions with a simulated city environment, the proposed AI model can master the skills of urban planning from massive data, optimizing spatial efficiency and achieving super-human level performance. Meanwhile, since urban communities are diverse and irregular, making it inapplicable to use convolutional neural networks which have been

widely adopted in tasks with regular inputs such as Go and chip design. To address this challenge, the proposed model tackles urban planning from the topological level, which utilizes a graph representation to provide a unified representation of urban communities of arbitrary forms. After transforming urban planning into a Markov decision-making process on an urban contiguity graph, the proposed approach takes full advantage of the ability of deep reinforcement learning algorithms to efficiently search in huge solution spaces, achieving intelligent layout of land use and road for urban communities. Experiments on two communities in Beijing demonstrate that the proposed approach significantly outperforms existing methods and human experts. In addition, through a human-AI collaborative workflow, the proposed model can greatly improve the productivity of human designers and generate efficient spatial plans of different planning styles.



Comparison between the proposed method and existing approaches (a-e) spatial plans of different methods: a centralized heuristic, b decentralized heuristic, c genetic algorithm, d RL model with a multi-layer perceptrons, e the proposed method. (f-g) performance comparison with respect to metrics of "15-minute city": f service, g ecology



Comparison between the proposed method and human experts (a-b) Ecology and service performance for two communities in Beijing: a Huilongguan, b Dahongmen. (c-d) Subjective blind tests for two communities in Beijing: c Huilongguan, d Dahongmen.

Doctoral student Yu Zheng and associate Professor Yong Li from the Center for Urban Science and Computation Research at Department of Electronics, Tsinghua University, are lead author and corresponding author of this paper, respectively. Postdoctoral researcher Yuming Lin at Department of Electronics, Prof. Liang Zhao and Prof. Tinghai

Wu at School of Architecture, Prof. Depeng Jin at Department of Electronics co-authored this paper. This work was supported in part by The National Key Research and Development Program of China under grant 2020AAA0106000 to Yong Li, and the National Natural Science Foundation of China under U1936217, U20B2060, and 61971267 to Yong Li.

Scalable multipartite entanglement created by spin exchange in an optical lattice

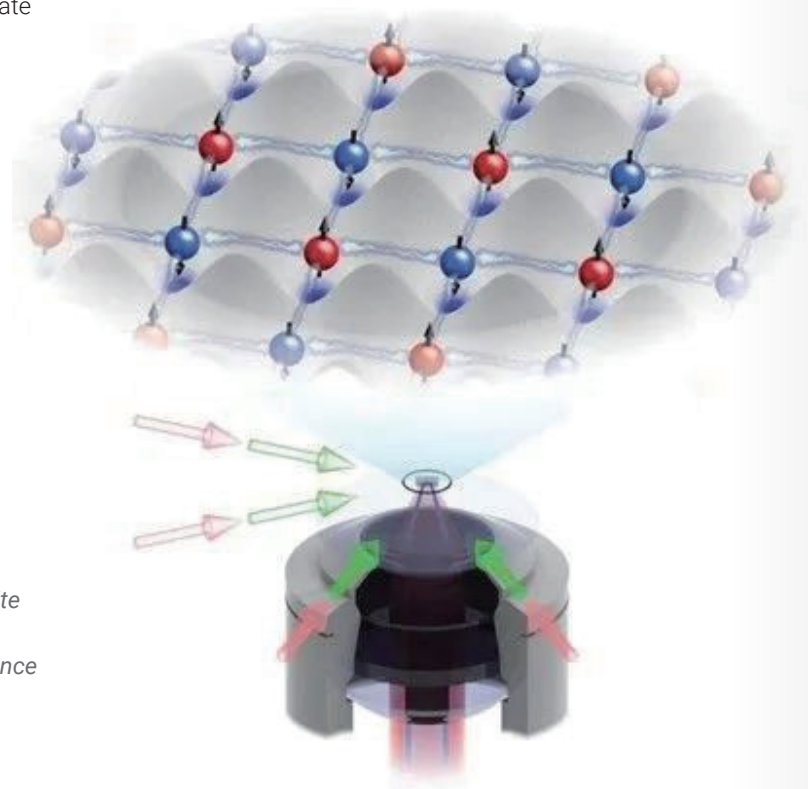
A milestone for optical-lattice quantum computing has been achieved. The research team, including IIS associate professor Xiongfeng Ma and collaborators from the University of Science and Technology of China (USTC) and Fudan University (FDU), created a scalable multipartite entanglement in the laser trap for ultracold atoms. This research has been published by Physical Review Letters and circulated widely in Chinese and foreign media.

Entanglement is the key resource for quantum information science. For instance, the computing power of quantum computers may grow exponentially with the increase of entangled qubits. Yet, previous works hit the bottleneck in connecting entangled pairs and testing multipartite entanglement due to the constraints in single-atom qubit control techniques and methods for determining multipartite entanglement.

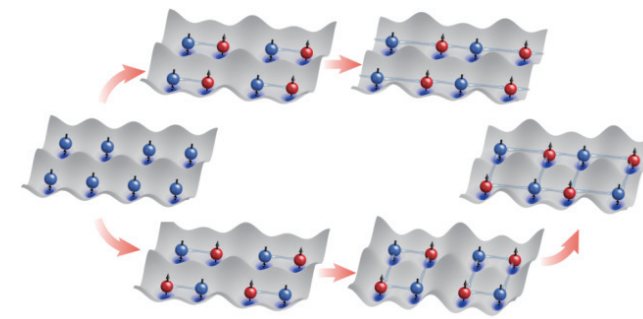
To overcome the obstacle, Prof. Ma's research team set the goal with collaborators to create and test multipartite entanglement in ultracold atomic optical lattices, which are considered an excellent platform for preparing multipartite entanglement and processing quantum information due to their reliability and precision in quantum control. However, this system faces challenges both theoretically and experimentally.

Based upon long-term exploration into the fundamental theories and applications of quantum entanglement, Prof. Ma's research team worked closely with collaborators and proposed theoretical schemes for entanglement preparation and measurement by extending the definition of stabilizer states. These theoretical works have laid a solid foundation for improving atomic entanglement fidelity, atomic parallel control capacity, and conducting quantum computing research.

The newly published work successfully prepared atomic two-dimensional arrays with a unity filling state as high as 99.2%. It selected 49 pairs of atoms to prepare highly entangled Bell states, with an average fidelity rate of 95.6% and a lifetime of 2.2 seconds, all



Quantum gas microscope and multipartite entangled states in optical lattices, diagram provided by the University of Science and Technology of China



Experimental preparation process for 1D and 2D entanglement, diagram provided by the University of Science and Technology of China

of which are at the forefront of the world. At the same time, the project used entanglement gate technology to connect neighboring entangled pairs, successfully preparing a 10-atom one-dimensional entanglement chain and an 8-atom two-dimensional entanglement block for the first time. This is a crucial step towards preparing and manipulating large-scale quantum entanglement.

The research Scalable Multipartite Entanglement Created by Spin Exchange in an Optical Lattice is published in Physical Review Letters. It has been reported by the Xinhua News Agency, the American Physical Society's Physics Magazine, and many other media.

Prof. Yong-Chun Liu's group made progress on exceptional-point-enhanced atomic magnetometer

Recently, a research group led by Prof. Yong-Chun Liu from the Department of Physics, Tsinghua University, has observed exceptional points in thermal atomic ensembles, and realized the sensitivity enhancement of atomic magnetometer. The work was published in Physical Review Letters under the title of "Observation of Exceptional Points in Thermal Atomic Ensembles", and was selected as "Editors' Suggestion" and "Featured in Physics".

Exceptional points (EPs), which are also called non-Hermitian degeneracies, are quite different from the Hermitian degeneracies, and have recently attracted wide interests in theory and spawned intriguing prospects for enhanced sensing. An EP occurs when two or more eigenvalues and the corresponding eigenstates coalesce, simultaneously, which is impossible for Hermitian Hamiltonians. In the vicinity of EPs, complex energies of a non-Hermitian system can lead to novel phenomenon which cannot appear in

their Hermitian counterparts. For example, when two degenerate eigenmodes are lifted by a perturbation, the eigenfrequency splitting satisfies a square-root law, which is very different from Hermitian cases where signals scale linearly with the perturbation strength. Obviously, this sublinear response signifies an enhanced measurement sensitivity in the small perturbation limit, which can be used to design EP-enhanced sensors.

The research team led by Prof. Yong-Chun Liu proposed that the atomic-rich energy level structure can be utilized, as shown in Fig. 1 (a), and dissipation can be constructed for the selected ground state by coupling the excited state with the laser (red arrow). Therefore, the three ground states have different dissipation, and then the three ground states can be coupled by the radio frequency (rf) field (blue arrow) to form non-Hermitian Hamiltonian. The eigenvalues and eigenstates are degenerate under

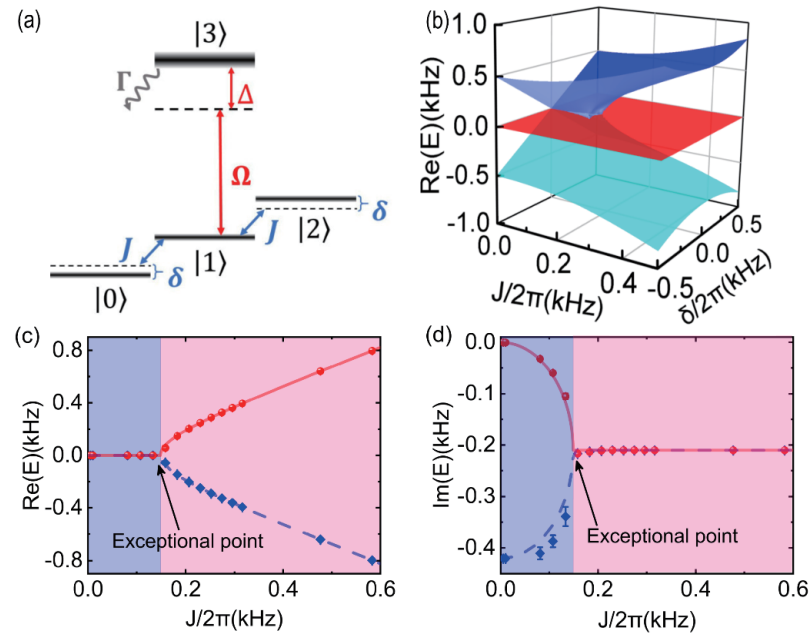


Fig 1 (a) Atomic energy level diagrams. (b) The real parts of the three eigenvalues of non-Hermitian Hamiltonian as a function of δ and J . (c-d) Experimentally obtained real (c) and imaginary (d) parts of the system eigenvalues as a function of rf Rabi frequency J . The red dots and blue squares are obtained from the experimental result. The red and blue curves are obtained from the theoretical model.

certain parameters, and the real parts of the three eigenvalues as a function of δ and J are shown in Fig. 1(b). Experimentally, they also measured the real part (Fig 1 (c)) and the imaginary part (Fig 1 (d)) of the eigenvalues and observed the EPs of the system.

Moreover, instead of measuring transmission spectrum in conventional studies, they propose a new protocol that relies on the optical polarization rotation signal to detect the resonance peaks splitting, as shown in Fig.2(a), which can enhance the frequency splitting and is robust to the noises. As shown in Fig.2(b), the sensitivity demonstrates an order enhancement in the proximity of the EP compared with the linear scaling away from EP, which is the same as the Hermitian case.

This work not only provides a new controllable platform for studying EPs and non-Hermitian physics, but also provides new ideas for the design of EP-enhanced sensors and opens up realistic opportunities for practical applications in the high-precision sensing of magnetic field and other physical quantities.

The first author of the paper is Ph.D. student Chao Liang, and the corresponding author is Associate Professor Yong-Chun Liu at Department of Physics.

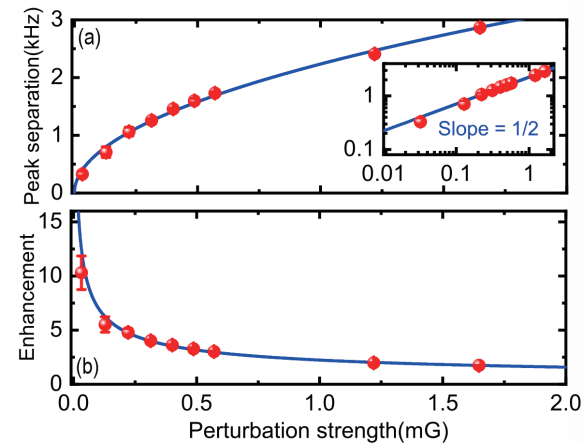


Fig 2 (a) The observed peak separation of OPR magnitude as a function of the perturbation strength. (b) Measured enhancement as a function of the perturbation.

Tsinghua University wins Distinguished Paper Award at USENIX Security Symposium

Tsinghua University won the Distinguished Paper Award at the 32nd USENIX Security Symposium, one of the most prestigious academic conferences in the field of information security. The paper, titled "An Efficient Design of Intelligent Network Data Plane", was co-authored by Guangmeng Zhou, Zhuotao Liu, Chuanpu Fu, Qi Li, and Ke Xu of the Department of Computer Science and Technology and the Institute for Network Sciences and Cyberspace at Tsinghua University. This is the first time that Chinese research institutions and scholars have won this award independently. As a result, Tsinghua University has become the leading domestic scientific research institution in terms of the number of award-winning papers in the four flagship academic conferences in the field of cybersecurity, and is also among the best in the world.

The paper introduces a new paradigm for jointly designing and deploying intelligent AI models and programmable network hardware, which can support a variety of tasks, such as network malicious traffic detection, secure routing, and network performance optimization. The paper first formally defines the Intelligent Network Data Plane (INDP), and builds an integrated software and hardware system that enables AI-powered network traffic processing and



forwarding at line-speed. The paper's anonymous reviewers, who were randomly selected from a world-class program committee specializing in cybersecurity, collectively believe that the deployment of AI models on network hardware devices has both important scientific significance and foreseeable engineering impact.

The USENIX Security Symposium is an annual conference that has been held since the early 1990s. It is considered one of the most prestigious conferences in the field of information security. The China Computer Federation recognizes the USENIX Security Symposium as a Class A international academic conference on information security. The 32nd USENIX Security Symposium was held in California, USA from August 9th to 11th, 2023.

New records of quantum-enhanced measurement precisions achieved in ultracold Bose-Einstein condensates

Recently, the research group led by Professor Li You from the Department of Physics in Tsinghua University has implemented a novel precision measurement technique in an atomic Bose-Einstein condensate. They demonstrated its potential application in microwave magnetic field sensing

with a spatial resolution of several micrometers. The research findings have been published in Nature Physics under the title "Quantum enhanced sensing by echoing spin-nematic squeezing in atomic Bose-Einstein condensate".

In quantum technology, the use of superposition states inevitably introduces projection noise during measurements. Employing entangled particles for detection can reduce projection noise along a specific direction, thereby enhancing the signal-to-noise ratio. One of the most prominent examples is the spin squeezed state in a spin-1/2 system. This kind of multipartite entangled state can be visualized on the surface of Bloch sphere, spanned by the collective spin operators J_x, J_y, J_z .

The hyperfine ground state of rubidium-87 ultracold atoms can be regarded as a spin-1 system, which possesses a richer structure compared to the spin-1/2 system. Depending on the relative strength of the quadratic Zeeman energy shift (q) and the spin-exchange interaction strength (c_2), the ground state of the spin-1 system may display three different phases: Polar (P), Broken-axis symmetry (BA), and Twin-Fock (TF) phases, separated by two quantum phase transition points at $q = \pm 2|c_2|$. Quenching through the phase transition points can generate entangled states that are useful for quantum precision measurements. During short-time spin-exchange dynamics, the number of atom pairs in the $m = \pm 1$ states remains significantly lower than that in the $m = 0$ state. The resulting quantum state is referred to as a two-mode squeezed vacuum, also known as a spin-nematic squeezed state. Analogous

to the spin-squeezed state, the spin-nematic squeezed state can be intuitively represented on the spin-nematic Bloch sphere (Figure 1b).

Applying multipartite entangled states to quantum enhanced measurements often requires the utilization of interferometers. An interferometer is composed of path splitting, phase accumulation, and path recombining processes. If both the path splitting and recombination parts consist of nonlinear dynamics, the interferometer is referred to as a nonlinear interferometer. Utilizing entangled states in the phase accumulation process theoretically allows achieving precision beyond classical limit. However, due to experimental limitations, especially in terms of atom number detection resolution, observing significant quantum enhancements remains challenging.

Previous studies have indicated that when the path splitting and recombining parts of a nonlinear interferometer are time-reversed with each other, the constraints of detection noise can be overcome. However, implementing time-reversal in large systems is extremely difficult. In view of this, the research work presents a novel approach that achieves effective time reversal using spin-nematic squeezed echoes in a spinor Bose-

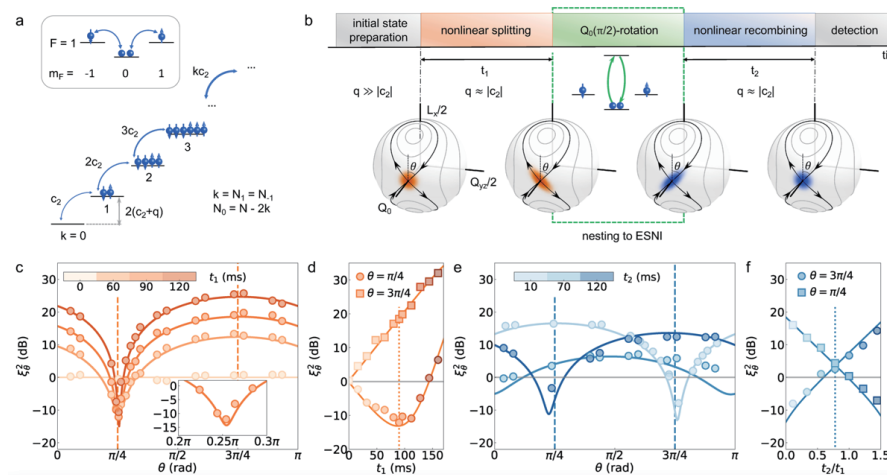


Figure 1. a, Structure of energy level in spin-1 atomic ensembles. b, schematic representation of effective time-reversal using state rotation. c-f, generation of spin-nematic squeezing and its effective time-reversal.

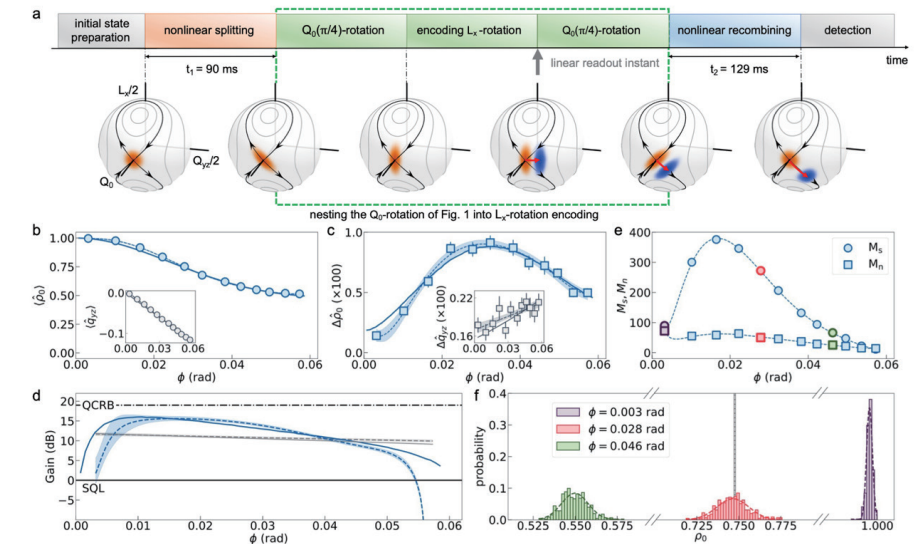


Figure 2. a, schematic of echo-based spin-nematic interferometry. b-e, dependence of averaged fractional population in $m=0$ state, standard deviation of population in $m=0$ state, metrological gain, signal and noise amplification factors on rotation angle. f, probability distributions of population in the $m=0$ state under various rotation angles.

Einstein condensate. Specifically, the researchers found that an effective time reversal can be realized by rotating the state to exchange the squeezing and anti-squeezing, after preparing the spin-nematic squeezed state (Figure 1c-f). This approach is efficient in overcoming the challenge of implementing time reversal in large systems, thereby enabling the utilization of spin-nematic squeezed echoes in interferometers for enhanced precision measurements.

To quantitatively characterize the measurement precision of the interferometer, the researchers employed radio-frequency coupling to induce small-angle rotations in the experiments. By measuring the population of atoms in the $m=0$ state and utilizing error propagation formulas, they achieved a record sensitivity of 15.6 ± 0.5 dB beyond the standard quantum limit (Figure 2). In comparison to linear readout results (11.7 ± 0.3 dB), this method effectively mitigated the impact of detection noise.

Finally, the research group applied this nonlinear interferometer to the detection of nearly resonant microwave fields, achieving a sensitivity enhancement of 16.6 ± 1.1 dB beyond the standard quantum limit. This enhancement surpassed the previous record set by the MIT group in 2022 using thermal atoms (12 dB) and currently represents the

highest benchmark in quantum interferometric phase measurements.

This research lays the foundation for precision measurement applications based on ultracold atoms. The approach of achieving time-reversal through echo dynamics can be directly extended to systems with similar phase space structures, such as the Lipkin-Meshkov-Glick (LMG) model. It provides a new avenue for implementing nonlinear interferometers in other spin systems, offering innovative possibilities for advancing the field of precision measurements in diverse contexts.

The co-first authors of the research paper are, Dr. Tian-wei Mao, a Ph.D student since 2017, and Dr. Qi Liu, who defended Ph.D in 2021 in Tsinghua University. Qi Liu, Professor Yi-xiao Huang from Zhejiang University of Science and Technology, and Professor Li You from Tsinghua University are the corresponding authors. The research was supported by the National Natural Science Foundation of China, the Natural Science Foundation of Zhejiang Province, the Key Area Research and Development Program of Guangdong Province, the State Key Laboratory of Low-Dimensional Quantum Physics at Tsinghua University, and the Frontier Science Center for Quantum Information.

The 2022-2023 Global Computing Index released



The 2022-2023 Global Computing Index was recently released in Beijing. It was compiled by a team from Tsinghua University's Department of Innovation, Entrepreneurship, and Strategy led by Professor Li Donghong, the vice-dean of Tsinghua Institute for Global Industry.

The report, jointly published by IDC, IEIT Systems, and Tsinghua Institute for Global Industry, aims to reveal the latest trends in global computing power development across countries and industries.

The report provides a comprehensive analysis of the evolving demands and future trends in global computing power development across three dimensions.

It covers 15 countries, including the United States, China, Japan, Germany, and India; 13 industries, such as internet, manufacturing, and finance; and emerging technologies.

Li emphasized that the improvement in computing power has a significant stimulating effect on a country's economic growth, and as the computing power index increases, the impact becomes even more significant. Currently, China's manufacturing industry is in the process of upgrading, with digitization playing a crucial role. China's manufacturing sector is the world's largest, with comprehensive categories and a complete industrial chain, making it rich in digital application scenarios and exhibiting diverse and tremendous potential for computing power demand. Increasing investment in computing power has become a new driving force for the country's economic growth.

TSINGHUA COMMUNITY

Tsinghua wins medals at Chengdu Universiade

Tsinghua University athletes have achieved excellence at the 31st FISU Summer World University Games in Chengdu, with a series of remarkable accomplishments. Three contestants demonstrated their prowess, securing two golds, one silver, and one bronze medal.



On August 1, in the women's 10,000 meters race, Xia Yuyu, a graduate student who enrolled in 2021 at Tsinghua's School of Social Sciences, also an alumna of Tsinghua's School of Economics and Management, clinched a gold medal for the Chinese delegation in track and field events with an impressive time of 33 minutes and 48.35 seconds.



The 2022-enrolled Tsinghua School of Social Sciences graduate student Wang Yuefeng proved his skill in the men's 50-meter rifle three positions on July 30, securing a gold medal along with his teammates. This marked China's eighth gold medal at the games. Wang's personal achievement earned him seventh place.



On August 1, the women's 50-meter rifle three positions saw further collaboration of Tsinghua's student-athletes. The team composed of undergraduate students Shi Mengyao and Wang Zeru, from the School of Economics and Management, claimed silver. Wang also secured an individual third place, while Shi claimed sixth position.

From farm to progress: Xiao Jingxin's efforts for SDGs

Editor's Note

Tsinghua University plays an active role in promoting the 17 UN Sustainable Development Goals (SDGs) by nurturing innovative talents, enhancing research, among many other important ways.

This piece will feature Tsinghua student Xiao Jingxin's efforts in promoting the SDGs and accelerating the transition to sustainable agriculture.



Jingxin at IFAD

Xiao Jingxin, a 2017 graduate from the Department of Foreign Languages and Literatures, was employed as a project operations intern at the Food and Agriculture Organization (FAO) in China from June 2021 to May 2022. She primarily facilitated domestic technical project operations, conducted research on food security and nutrition, and supported coordinating meetings and providing translation services. She has

also worked as an early career trainee at the World Economic Forum (WEF), assisting in nature-positive solutions and driving China's transition towards a nature-positive (climate-neutral) transformation and later in the Change, Delivery, and Innovation (CDI) unit of the International Fund for Agricultural Development (IFAD).



Agriculture and the Sustainable Development Goals (SDGs)

Jingxin has been committed to promoting the SDGs through her three internship experiences at the Food and Agriculture Organization (FAO), World Economic Forum (WEF), and the International Fund for Agricultural Development (IFAD).

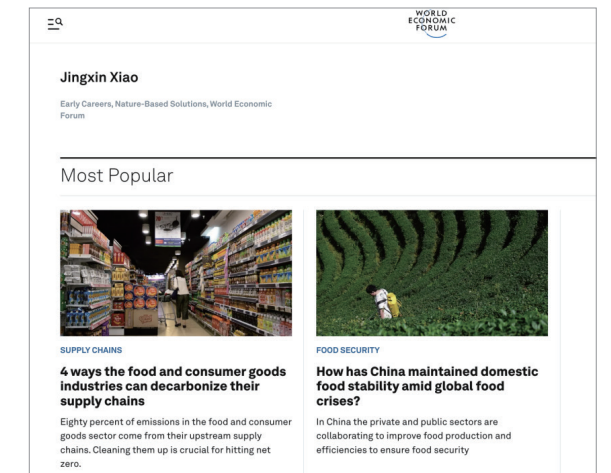
As an advocate for sustainable development, Jingxin embarked on a journey of professional growth at the Food and Agriculture Organization (FAO), a specialized agency of the UN that aims to achieve food security for all and ensure sustainable agriculture and rural development. Taking on the role of a project operations intern, she actively dived into supporting domestic technical cooperation projects and the Global Environment Facility initiatives.



Jingxin at the "Orange the World" gender equity campaign

With an unwavering commitment to her responsibilities, Jingxin was entrusted with the task of conducting research, publishing newsletters, and facilitating sustainable development and circular economy projects in China. Amidst the challenges of land resource scarcity, pollution, and pest control, Jingxin collaborated with colleagues at various government levels to map out strategies to eliminate those problems which became a beacon of change.

Jingxin also joined World Economic Forum (WEF) as an early career trainee in Nature-based Solutions. Here, she found herself at the forefront of advancing nature-positive solutions and driving China's transformation towards a nature-positive and climate-neutral trajectory. Jingxin immersed herself in unraveling the intricate dynamics of global supply chain research and examining the procurement standards of large corporations.



Jingxin's columns on WEF official website

Jingxin's dedication to driving global sustainability extended beyond her internships, as she actively participated in key events such as the New Champion Dialogues and the 15th Conference of the Parties (COP15) to the Convention on Biological Diversity. These opportunities allowed her to better understand international discussions and engage with experts and stakeholders in biodiversity conservation. Through these invaluable experiences, she realized that their contributions were instrumental in promoting nature-positive practices across sectors, despite the competing demands of food and water security and renewable energy development.

"Balancing the need for food and water security with the development of renewable energy infrastructure presented significant challenges and competing priorities," Jingxin said as she reflected on the insights acquired throughout this journey.



Jingxin at IFAD Innovation Day

Jingxin's internship in the Change, Delivery, and Innovation (CDI) unit of the International Fund for Agricultural Development (IFAD) also provided her with a dynamic and enriching experience. Focusing on institutional reform and cultural transformation, particularly in strategy and innovation, Jingxin's team contributed to the development of innovative methodologies, fostering an internal culture of innovation through activities such as operating an innovation lab, organizing talks, and networking events, and establishing a platform for knowledge sharing. Externally, they engaged in innovation challenges aimed at nurturing ideas into tangible products or field projects benefiting rural communities and smallholder farmers.

"I had the chance to visit our project sites in the field, which gave me a sense of accomplishment and a better understanding of the impact that IO's work was making on the ground," she said.

These internships also offered Jingxin invaluable insights into the political and complex nature of international organizations. She observed China's growing prominence and active engagement in global institutions by supporting projects that promote sustainable agriculture, biodiversity conservation, and nature-positive transformations, aligning with SDGs, from Life on Land to Climate Action and Zero Hunger. This inspiring discovery kindled her passion for fostering sustainable practices and promoting positive change on both national and global scales in the future.

Personal Growth and Social Contribution

When joining a new sector, Jingxin swiftly adapted herself to diverse working environments and embraced steep learning curves. Initially, she even struggled to understand the numerous abbreviations used in UN documents, but she quickly became capable of comprehending and drafting reports independently. She learned how different organizations engaged in complex and large-scale project.



Jingxin at Innovation talk

Tsinghua Professor Wong Tien Yin honored for contributions in translational research



Wong Tien Yin, vice provost of Tsinghua University and senior vice chancellor of Tsinghua Medicine, has been honored with the 2023 College of Clinician Scientists (CCS) Medal for Outstanding Contribution & Achievement in Translational Research at a launch & award ceremony held in Singapore on August 11. This event marks the first time the award has been established and conferred.

As one of Singapore's early clinician scientists and a leading pioneer in the field of translational research, Professor Wong was invited to deliver a keynote speech titled "The Clinician-Scientists Journey: Reflections in Four Countries". He shared his insight on the evolving role of clinician scientists and how they will shape the future landscape of healthcare in Singapore and across Asia.

Wong Tien Yin is also an academican of the National Academy of Sciences of Singapore and a foreign academican of the National Academy of Medicine. He graduated from the National University of Singapore with a bachelor's degree in medicine and received a presidential scholarship, later receiving a doctorate degree in public health from Johns Hopkins University.

His clinical work primarily focuses on macular degeneration and retinal diseases, and he is dedicated to research and innovation in retinal diseases and

ocular imaging (including artificial intelligence). He is a renowned clinical scientist and international expert in the field of retinal diseases, who has made groundbreaking contributions in the epidemiology, translational research, and clinical investigation of retinal diseases and ocular imaging.

Professor Wong has published more than 1,500 peer-reviewed papers, been invited to more than 500 international lectures, and has an h-index of 214. He was featured on Clarivate's global list of "highly cited scientists" in 2018, 2020, 2021 and 2022, ranking first in the global ophthalmology field.



Professor Zhang Jie elected as China's first honorary member of ICOMOS



Founded in Warsaw, Poland in 1965, ICOMOS serves as an advisory body of the World Heritage Committee for the implementation of the World Heritage Convention of UNESCO. It is the only global non-government organization working for the conservation and protection of cultural heritage places, dedicated to promoting the application of theory, methodology, and scientific techniques to the conservation of the architectural and archaeological heritage. As of the end of 2022, ICOMOS has 113

Professor Zhang Jie from Tsinghua University was recently awarded the Honorary Membership of ICOMOS for "making remarkable contributions to heritage conservation in Asia, particularly responding to rapid urbanization" at the ICOMOS 21st General Assembly and Scientific Symposium held in Sydney, Australia. He thus became the first ICOMOS honorary member in China.

National Committees and 30 International Scientific Committees. The title of Honorary Membership was established in 1975 as the highest honor and is awarded every three years to individuals who have given distinguished services at the international level to the conservation of cultural heritage. Honorary membership has been conferred so far on 115 ICOMOS members.

The jury for this year's ICOMOS Honorary Membership includes members from Japan, Norway, Mali, Argentina, and the United States. This year's conference was merged with the previous one, held after a six-year gap, with a total of 11 distinguished experts from around the world receiving membership.

Professor Zhang Jie is the founder and the current president of the ICOMOS International Committee on Historic Cities, Towns and Villages (CIVVIH) Asia-Pacific sub-committee. He also serves as the Vice President of ICOMOS China. Zhang has been dedicated to heritage research and practice for over thirty years,

With over 30 years of dedication to research, practice, and teaching in the field of heritage conservation and regeneration in China, he has played a vital role in exploring a protection system tailored to the Chinese



context and advancing sustainable approaches from multiple scales, including cities, communities, and buildings. His conservation projects such as the Sanfang Qixiang in Fuzhou and the Taoxichuan in Jingdezhen provide practical models for heritage conservation and sustainable development in Asia in the context of rapid urbanization.

As a member of ICOMOS China, Professor Zhang's award in this year's ICOMOS General Assembly reflects the elevation of the international influence of China's academic force of cultural heritage conservation. It also demonstrates enhanced international recognition of China's cultural heritage conservation achievements in recent years.

Hongbo Ma is 2023 AGU Earth and Planetary Surface Processes Section "Luna B. Leopold Early Career Award" and "Robert Sharp Lecture" recipient



Dr. Hongbo Ma was announced as AGU's 2023 Earth and Planetary Surface Processes Section "Luna B. Leopold Early Career Award" and "Robert Sharp Lecture" recipient on September 14. Being selected as a Section Honoree is bestowed

upon individuals for meritorious work or service toward the advancement and promotion of discovery and solution science. AGU, the world's largest and oldest Earth and space science association, annually recognizes a select number of individuals as part of its Honors and Recognition program.

Ma is recognized by the global Earth and space sciences community for his tremendous personal sacrifices and selfless dedication to advancing Earth and space sciences.

The Earth and Planetary Surface Processes Section chose Hongbo Ma as the Luna B. Leopold Early Career Award recipient to recognize his outstanding contribution that advances the field of Earth and planetary surface processes within ten years of receiving their PhD. Ma is also selected to present Robert Sharp Lecture which is given annually by the

recipient of either the Luna B. Leopold Award or the G.K. Gilbert Award.

Ma obtained his BS and PhD from Tsinghua University and conducted research overseas for multiple years before joining Tsinghua as an assistant professor. Ma investigates how river morphology, climate and human activities interact and influence each other such as how rivers change their shapes, deltas change coastlines and levees breach causing flood hazards. His group uses interdisciplinary approaches to quantify underlying factors behind river and delta geomorphic evolution and applies this knowledge to predict flood hazards and to inspire engineering practices to mitigate them. After notified, Ma said "It is my great honor to receive the Luna B. Leopold Early Career Award. It is not only a recognition of me and my colleagues' academic work in the past but also encourages me and my group carrying on our journey to reveal secrets of rivers and deltas, enrich our knowledge about them and figure out a better way of living with them in a rapidly changing world."

Honorees will be recognized at AGU23, which will convene more than 25,000 attendees from over 100 countries in San Francisco and online everywhere on 11-15 December 2023. This celebration is a chance for AGU's community to recognize the outstanding work of our colleagues and be inspired by their accomplishments and stories.

DIVERSE CAMPUS

National Conference on Protection and Utilization of Ancient Books in Higher Education Institutions held at Tsinghua University Library

On June 29, The National Conference on the Protection and Utilization of Ancient Books in Higher Education Institutions was held at the Tsinghua University Library. Over 60 participants, including library curators and responsible personnel for the preservation of ancient books from 24 universities across the country, attended the meeting.

Those who delivered speeches at the event were Feng Shixin, director of the publishing bureau of the Publicity Department of the CPC Central Committee and director of the Office of the National Leading Group for the Compilation and Publication Planning of Ancient Books; Xu Qingsen, director of the Department of Social Sciences of the Ministry of Education; Wang Bo, executive deputy director of the National Commission for Ancient Chinese Classics Editing and Research by Institutions of Higher Learning, MOE and vice-president of Peking

University; Xiang Botao, deputy secretary of the CPC Tsinghua University Committee; Zhang Zhiqing, executive deputy director of the National Library of China and deputy director of the China National Center for the Preservation & Conservation of Ancient Books; and Chen Jianlong, director of the Steering Committee for Academic Libraries of China, SCAL and head of Peking University Library.

During the meeting, Lu Wei, secretary-general of the National Commission for Ancient Chinese Classics Editing and Research by Institutions of Higher Learning; Lou Hansong, head of the Zhejiang University Library; Lin Ming, executive deputy director of the Sun Yat-sen University Library; Bie Liqian, deputy director of the Peking University Library; Liu Qiang, director of the Academic Committee of Tsinghua University Library; Sui Jun, director of the Department of Ancient Books of the Fudan University



Library; and Li Dan, director of the Department of Ancient Books of the Nanjing University Library delivered keynote speeches.

The participants also discussed such topics as "Improving the Mechanism for the Protection of Ancient Books in Higher Education Institutions," "The Synergy between Library Preservation and the Utilization of Ancient Books and Research on Ancient

Books in Higher Education Institutions," "Carrying out the Rescue and Restoration of Rare Ancient Books in Higher Education Institutions," and "Promoting the Compilation and Digitization of Special Collections of Ancient Books in Libraries." During the conference, the participants also visited the permanent exhibition "A Wealth of Books - Treasures from Tsinghua University Library" held at Tsinghua University Library.

Tsinghua holds 7th China Chem-E-Car Competition

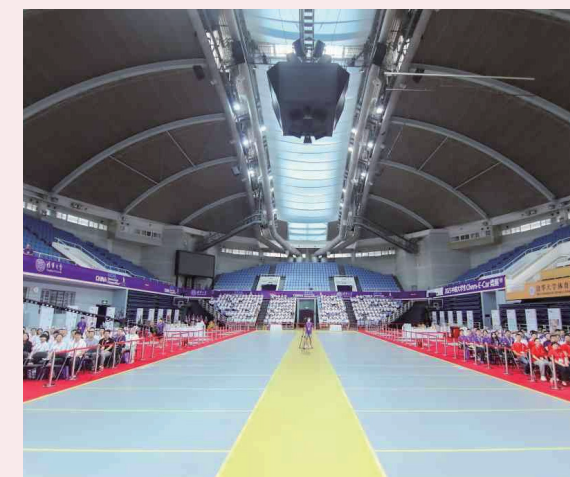
The 7th China Chem-E-Car Competition was held at Tsinghua University from July 29 to 30. The Tsinghua University team won the first prize, the Outstanding Sports Morality Award and Best Poster Award.

Wang Hongwei, vice-president of the University, Hu Jie, deputy secretary-general of the Chemical Industry and Engineering Society of China, experts from the CIESC, academic and business communities, and representatives from relevant supporting units attended the event.

More than 350 teachers and students from 30 universities across the country participated in the competition.

The Chem-E-Car Competition is an international competition initiated by the American Institute of

Chemical Engineers. The main participants are undergraduates. The Competition is aimed at improving the research and innovation ability of chemical engineering students and cultivating innovative talents in chemical engineering. The China Chem-E-Car Competition, sponsored by the CIESC and organized by Tsinghua University, has been held for seven consecutive sessions since 2017.



Tsinghua holds inaugural International Workshop of Excellent Cases of MBA Programs

From August 23 to 25, the inaugural International Workshop on Excellent Cases of MBA Programs was held at Tsinghua University. This event was organized by the China National MBA Education Supervisory Committee (hereinafter referred to as CNMESC) and the Chinese Society of Academic Degrees and Graduate Education. It was hosted by the China Business Case Center of Tsinghua University School of Economics and Management (Tsinghua SEM). More than 70 faculty members from more than 60 MBA programs across the country participated in the workshop to engage in discussions and knowledge exchange.



BAI Chong-En, vice chairman of the CNMESC and dean of Tsinghua SEM, extended a warm welcome and heartfelt thanks to the attendees of this event, including the experts and scholars actively engaged in case studies. BAI said the development and construction of cases play a crucial role in the advancement of MBA education. It has consistently been one of the major tasks highly esteemed and vigorously promoted by the CNMESC. In this new era of higher education, case studies will be an important tool for enhancing the quality of graduate programs with professional degrees in China.



LI Jizhen, vice dean of Tsinghua SEM, said that in recent years, other international business schools have shown growing interest in the Chinese experience. Simultaneously, business schools in China are motivated to share China's story on the international stage. With valuable opportunities and a broader outlook, case teaching is expected to flourish in China, pushing management education in the country toward high-quality and in-depth development. LI conducted a teaching demonstration on a case study titled "Golden Eagle Group: Resolving 'Not-In-My-Back-Yard' through Environmental Protection Innovation."



WANG Xueli, a tenured associate professor at the Department of Leadership and Organization Management at Tsinghua SEM, conducted a teaching demonstration using the "NetentSec" cases and shared her experience in case development.



Professor SU Ning from the Richard Ivey School of Business at the University of Western Ontario, Canada, shared his experience in case teaching and development. Drawing from his teaching experience and questions posed by attending faculty members, he gave insights into case writing, case teaching analysis, and related skills.



ZHAO Ziqian, administrative director of the China Business Case Center at Tsinghua SEM, delivered a keynote speech titled "Translation and Editing of English Cases."



CHENG Manli, director of the National Institute of Strategic Communication and Professor of the School of Journalism and Communication at Peking

University, delivered a keynote speech titled "New Situation and New Topics - Constructing China's International Communication Capacity."



The opening ceremony of the workshop was presided over by WANG Ping, director of the Secretariat Office of CNMESC.

The International Workshop of Excellent Cases of MBA Programs has the goal of advancing the global dissemination of cases with Chinese characteristics, enhancing global influence, improving case development and teaching methods, and fostering the high-quality advancement of management cases in China. This workshop centers on aspects like case teaching, writing, and international dissemination. It invites seasoned faculty members specializing in case studies from prominent domestic and international business schools to participate and share insights. The workshop is dedicated to providing opportunities for case study educators from MBA programs in China to engage in discussions about case writing and teaching capabilities. It aims to present the style of case writing and teaching both domestically and abroad, thereby promoting global exchange and development of China's management cases.

International freshmen explore Tsinghua Bamboo Strips



Liu Guozhong, deputy director of the Research and Conservation Center for Unearthed Texts, gives a lecture to the students.

On August 29, over 150 international undergraduate freshmen from 31 countries and regions had a lecture on the Tsinghua Bamboo Strips at the university's Research and Conservation Center for Unearthed Texts. The event aimed to introduce these newcomers to the rich cultural heritage and humanistic values of Tsinghua University.

Liu Guozhong, the center's deputy director, captivated the audience as he traced the history of ancient Chinese writing materials - specifically, bamboo and wooden strips - used prior to the invention of paper. Liu elaborated on the history, identification, organization, and cultural significance of the Tsinghua Bamboo strips. These Warring States-era Chu bamboo texts, which include approximately

2,500 pieces and 70 documents, possess immense academic and cultural value and are thus considered national treasures.

He also presented the characters of the Tsinghua motto — "Self-discipline and Social Commitment" with these bamboo strips.

After the lecture, the students eagerly asked questions and spent considerable time observing replicas of the Tsinghua Bamboo Strips. While touring the memorial room of Li Xueqin (1933-2019) - a distinguished Chinese historian, Tsinghua alumnus, professor, and the pivotal force behind the conservation and research of these bamboo treasures—the students expressed awe and respect for his monumental academic contributions. Many voiced their hopes of making their own impact on the university in the years to come.

This enlightening experience enabled international students to gain a profound understanding of both Tsinghua University's academic heritage and its broader cultural essence.



Students observe replicas of the Tsinghua Bamboo Strips.

Time to shine at the Student Association Fair



It's been a week since the start of this semester. Has the exhilaration of the new classes and new surroundings worn off yet? Well, brace yourselves for another round of excitement - the Student Association Fair of the 2023 fall semester is here!

This event falls on September 27th and 28th, in Zijing Student Area. With an array of more than 200 associations catering to all interests and passions, this fair promises to be an unforgettable experience for every student seeking to find new hobbies, make new friends and enhance their university life.

From academic and cultural organizations to sports clubs and community service initiatives, Tsinghua's

student associations offer a myriad of opportunities for students to connect, learn, and thrive.

In the fair, there are associations dedicated to music, dance, photography, animation, coding, and anything you can imagine! With such an extensive range of choices, you're bound to find an association that aligns perfectly with your interests and aspirations.

To find your associations, you can check the list of clubs and locate your prioritized ones on the map. Then, bravely walk to their booth and talk to the staff there to sign up. Or, you can simply wander around the fair to find the clubs that you gravitate towards. Trust me, there are surprises awaiting you!

So, mark your calendars and join us at Tsinghua University for the 2023 Student Association Fair! Together, let's embark on a brilliant adventure, forge friendships, and create memories that will last a lifetime.

And, if you are a good storyteller and enjoy sharing stories on Tsinghua social media platforms, come to visit the Student Journalist Group (Global Communication Office) stall at B14! We want to meet you!





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