TSINGHUA
2025 IN REVIEW

CONTENTS

A MOMENT IN TIME

Xi, Putin witness exchange of cooperation agreement between Tsinghua University and Russian institutions

In the presence of Chinese President Xi Jinping and Russian President Vladimir Putin, Qiu Yong, Secretary of the CPC Tsinghua University Committee, exchanged a cooperation agreement with Anatoly Torkunov, Rector of Moscow State Institute of International Relations (MGIMO University), and Kirill Dmitriev, CEO of the Russian Direct Investment Fund (RDIF), at the Kremlin in Moscow on May 8.

According to the agreement, Tsinghua University will deepen cooperation with MGIMO University and RDIF in the fields of education, science and technology, and talent cultivation, promoting collaborative development between the two countries in academia, industry, and research.

Through the establishment of joint degree programs, the three parties will strengthen collaborative research, enhance faculty and student exchanges, and carry out talent exchange and training initiatives to accelerate the cultivation of high-level professionals aligned with the needs of the China-Russia comprehensive strategic partnership of coordination for a new era. These efforts aim to enhance the cross-border cooperation and practical capabilities of professionals. In response to the shared development priorities of both countries in science and technology, energy, agriculture, infrastructure, and the digital economy, the collaboration will promote integrated innovation across academia, industry, and research, contributing wisdom and strength to addressing global challenges and advancing human development.

At the invitation of Russian President Vladimir Putin, President Xi Jinping arrived on Wednesday to pay a state visit to Russia and attend the celebrations marking the 80th anniversary of the Victory in the Soviet Union's Great Patriotic War. The two heads of state witnessed the exchange of more than 20 bilateral cooperation documents.

IN REMEMBRANCE OF PROFESSOR CHEN NING YANG

Tsinghua University pays tribute to Professor Chen Ning Yang. His connection with Tsinghua—rooted in scholarship, mentorship, and a shared pursuit of excellence—remains an enduring part of the University's academic heritage. Through this commemorative section, we honor his contributions, reflect on his extraordinary journey, and carry forward a legacy that continues to inspire new generations of thinkers.

Honoring the life and legacy of Professor Chen Ning Yang

Professor Chen Ning Yang, a world-renowned physicist, Nobel Laureate in Physics, Academician of the Chinese Academy of Sciences, Professor at Tsinghua University, and Honorary Director of the Institute for Advanced Study at Tsinghua University, passed away in Beijing on October 18 due to illness at the age of 103.

Professor Yang was born in Hefei, Anhui Province, in 1922 and moved to Tsinghua with his parents in 1929. In 1938, he enrolled at the National Southwest Associated University. He entered the Tsinghua Graduate School in 1942 and received his Master of Science degree in 1944. In 1945, he went to the United States and studied at the University of Chicago. After earning his Ph.D. in 1948, he remained at the University to pursue his career. In 1949, he joined the Institute for Advanced Study in Princeton, New Jersey, becoming a permanent member of the Institute in 1952 and a professor in 1955. In 1966, he became the Albert Einstein Professor at the State University of New York at Stony Brook, where he founded the Institute for Theoretical Physics (now named the C.N. Yang Institute for Theoretical Physics) and worked there until 1999. Starting in 1986, he served as Distinguished Professor-at-large at the Chinese University of Hong Kong. From 1997, he served as Honorary Director of the newly established Center for Advanced Study at Tsinghua University (now named the Institute for Advanced Study), and became a professor at Tsinghua University in 1999.

Professor Yang is one of the greatest physicists of the 20th century, having made revolutionary contributions to the development of modern physics. The Yang-Mills Gauge Theory, which he proposed with Robert Mills, laid the foundation for the subsequent Standard Model of particle physics. It is regarded as one of the cornerstones of modern physics alongside Maxwell's equations and Einstein's theory of general relativity. His collaboration with Tsung-Dao Lee on the groundbreaking concept of parity non-conservation in weak interactions earned them the 1957 Nobel Prize in Physics, making them the first two

Chinese Nobel Prize winners. He discovered the pivotal equation for one-dimensional quantum many-body problems, the Yang-Baxter equation, which opened up new directions in research in statistical physics, quantum groups, and related fields of physics and mathematics. He achieved numerous breakthroughs in particle physics, quantum field theory, statistical physics, and condensed matter physics, profoundly shaping the development of these disciplines. Professor Yang was elected member or foreign member of over ten national and regional academies of sciences, received honorary doctorates from more than twenty prestigious universities worldwide, and was honored with numerous awards, including the U. S. National Medal of Science, the Benjamin Franklin Medal, the Lars Onsager Prize, the King Faisal International Prize for Science, the China International Science and Technology Cooperation Award, and the Qiu Shi Lifetime Achievement Award.

Professor Yang was deeply devoted to his homeland, making remarkable contributions to China's scientific and educational developments. His visit to China in 1971 sparked a wave of visits by overseas scholars, earning him recognition as the pioneer in building the bridge of academic exchange between China and the United States. He later proposed the restoration and strengthening of basic scientific research to China's central leadership. He also raised funds to establish the "Committee on Educational Exchange with China", which has continuously sponsored nearly 100 Chinese scholars for advanced studies in the United States. These scholars later became the backbone of China's scientific and technological development. He undertook extensive work to promote China's scientific and technological exchange and progress, offering advice and exerting significant influence on major Chinese scientific projects and the formulation of science and education policies. After returning to Tsinghua University, he took on developing the Institute for Advanced Study as his new mission. He poured immense effort into advancing fundamental disciplines like physics and cultivating talents at Tsinghua, making tremendous contributions that greatly impacted the reform and development of Chinese higher education.

Professor Yang's life was an immortal legend in exploring the unknown and a profound embodiment of his love for his homeland. "Better to be genuine than clever; better to be simple than ornate" reflected both his academic attitude and his life stance. As his cherished verse says:

"A piece of literature

Is meant for the millennium

But its ups and downs are known

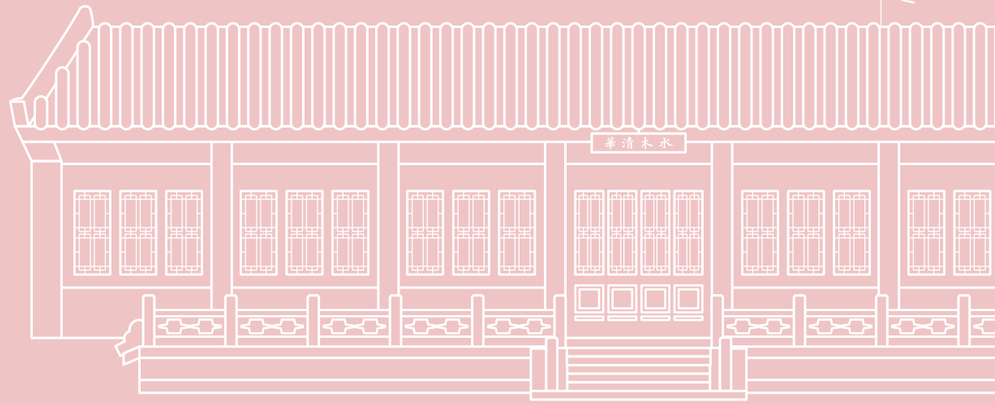
Already in the author's heart."

His life stands as a timeless chapter in human history—one that shines not only for China but for the global community of thinkers and innovators.

Professor Chen Ning Yang's legacy will live on forever.

ADVANCING INSTITUTIONAL EXCELLENCE

With over 114 years of academic heritage, Tsinghua University embodies a legacy of innovation and excellence. The establishment of new schools and departments, alongside the contributions of globally renowned scholars, underscores our unwavering commitment to being a transformative force—adapting to emerging trends, tackling new challenges, and shaping a brighter future for humanity.



Tsinghua establishes School of Education and hosts academic symposium on Major Relationships in Building a Leading Country in Education

On April 21, Tsinghua University established its School of Education, coinciding with the upcoming 114th anniversary of the university. This milestone underscores Tsinghua's renewed commitment to advancing the development of building a leading country in education, fostering high-caliber talent, and strengthening its educational disciplines. Concurrently, the academic symposium on major relationships in building a leading country in education was held.

Tsinghua University holds Tsinghua AI Agent Hospital Inauguration and 2025 Tsinghua Medicine Townhall Meeting

On April 26, Tsinghua University held an inauguration ceremony for Tsinghua AI Agent Hospital and the 2025 Tsinghua Medicine Townhall Meeting. The development of the Tsinghua AI Agent Hospital will proceed in phases. In the initial stage, the hospital system will be built leveraging the University's comprehensive AI infrastructure and interdisciplinary strengths in engineering and medicine. It will undergo pilot operations at Beijing Tsinghua Changgung Hospital and the Beijing Tsinghua Changgung Internet Hospital, starting with departments such as General Practice, Ophthalmology, Radiological Diagnostics, and Respiratory Medicine. Looking ahead, the hospital aims to create a closed-loop ecosystem of "AI + Healthcare + Education + Research," enhancing the efficient expansion and equitable distribution of high-quality medical resources. The ultimate goal is to provide more people with affordable, sustainable, and high-quality medical services.

Tsinghua inaugurates four residential colleges, explores talent cultivation pathways for the future

On May 30, the inauguration ceremony for Tsinghua University's four residential colleges—Wuqiong College, Zijing College, Ziqiang College, and Shuimu College— and the appointment ceremony for the college deans were held in the Main Building. The establishment of Tsinghua colleges is a momentous initiative for Tsinghua University. The initiative seeks to further stimulate the University's vitality through comprehensive reforms and address major national strategic needs and socio-economic development demands. It also aims to deeply integrate traditional engineering disciplines with artificial intelligence, enhance the quality and efficiency of independent talent cultivation, and pioneer new frameworks for holistic education.

Celebrating 100 years of Tsinghua Academy of Chinese Learning

On September 9, the opening ceremony of Chinese Cultural Subjectivity, World Vision: Centennial Symposium on the Tsinghua Academy of Chinese Learning and the Inheritance and Development of Chinese Civilization took place at the Tsinghua University Auditorium. The symposium aims to review the illustrious history of the Tsinghua Academy of Chinese Learning and promote the creative transformation and innovative development of China's outstanding traditional culture.

Following its founding in 1925, the Tsinghua Academy of Chinese Learning brought together four eminent scholars—Liang Qichao, Wang Guowei,

Chen Yinque, and Zhao Yuanren. This ushered in a golden era for Tsinghua's humanities disciplines, established an academic tradition of combining Chinese and Western scholarship while pursuing excellence, and cultivated numerous outstanding talents, profoundly influencing the development of modern and contemporary Chinese academy. Although it was suspended in 1929, its spirit has continued to guide the development of humanities at Tsinghua University and the broader field of Chinese humanistic studies. Since its reestablishment in 2009, the Tsinghua Academy of Chinese Learning has adhered to the principle of "Chinese Cultural Subjectivity, World Vision", responding to the questions of our times. It has been committed to promoting the creative transformation and innovative development of China's outstanding traditional culture and building an independent Chinese humanistic knowledge system. The Academy has achieved remarkable accomplishments in academic research, talent cultivation, and interdisciplinary integration.

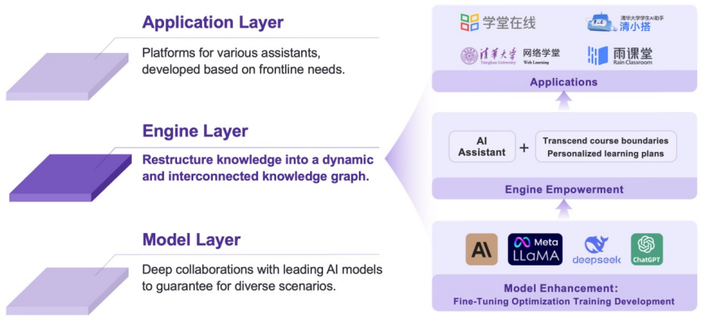
Tsinghua University releases comprehensive guiding principles for AI use in education

Recently, Tsinghua University released ***the Tsinghua University Guiding Principles for the Application of Artificial Intelligence in Education ("the Guiding Principles"),*** the institution's first comprehensive, university-wide framework that sets systematic, multi-level guidance and norms for the use of AI across campus.

The Guiding Principles are structured into three parts—"General Provisions," "Teaching and Learning," and, "Theses, Dissertations and Practical Achievements." Together, they offer a top-level framework supported by detailed, scenario-based guidelines that cover the core contexts of teaching and academic research.

The release of the Guiding Principles marks a new stage in Tsinghua University's exploration of AI–education integration—one that moves from "technology advancement" to "institutional support."

Importantly, the Guiding Principles are designed not to constrain innovation; rather, they aim to enable it. The General Provisions explicitly state that the University encourages and supports faculty and students to pursue innovative applications of AI in teaching and learning and will recognize and promote exemplary practices. In this sense, the Guiding Principles not only establish "red lines" but also illuminate "green lights" for responsible, meaningful experimentation.



Building a disciplinary knowledge engine to transcend the boundaries of curricula and classrooms.

Tsinghua University inaugurates Institute for Embodied Intelligence and Robotics

On November 30, Tsinghua University held the inauguration ceremony for its Institute for Embodied Intelligence and Robotics. The Institute is affiliated with the University's Research Institute and jointly developed by the Department of Automation, Department of Mechanical Engineering, Department of Electronic Engineering, and Department of Computer Science and Technology. It will bring together leading teams from both within and outside the University to conduct collaborative research, focusing on achieving "0 to 1" original innovation in the full-stack technology of "Robust Body + Intelligent Brain." Simultaneously, leveraging Beijing's industrial ecosystem resources, it will construct a full-chain transformation hub encompassing "technology R&D - pilot verification - scenario application" to accelerate the implementation of technological achievements. The Institute aims to build a globally influential talent hub and source of innovation, creating a virtuous cycle where "high-level research platform construction drives technological innovation, and technological innovation in turn feeds high-quality education." It will strengthen Tsinghua University's role as a core pivot within the national "Robotics Plus" strategy, provide a core driving force for China to seize the track in embodied intelligence and robotics and cultivate new quality productive forces, and help the nation gain strategic initiative in the new round of scientific and technological revolution and industrial transformation.

Tsinghua hosts launch of Chinese Alliance of Universities for Earth System Science

On December 8, the launch ceremony of the Chinese Alliance of Universities for Earth System Science (CAUESS) was held at Tsinghua University. Founding members include Tsinghua University, Nanjing University, Tianjin University, and The Hong Kong University of Science and Technology (HKUST). Representatives from the four founding universities signed a cooperation agreement at the signing ceremony.

AI Open Alliance launched to pool resources for innovation and application

The Artificial Intelligence Open Alliance was inaugurated in Guangzhou, Guangdong province, marking a significant step to pool resources for AI innovation and application. The alliance, initiated by 17 leading universities and eight top-tier tech enterprises and research institutions, was formed under the guidance of the Ministry of Education's department of science, technology, and informatization. The 17 founding universities include Tsinghua University, Peking University, Shanghai Jiao Tong University, Zhejiang University, and Beijing University of Posts and Telecommunications. The alliance's secretariat is based at Tsinghua University. Designed as an international, open, and nonprofit strategic collaboration platform, the alliance aims to undertake major national AI research tasks, build an independent and controllable AI infrastructure system, cultivate high-level AI talent, promote AI application in education and other fields, and develop an open-source AI technology community. To advance these goals, the alliance will focus on transforming education and teaching models, building a new talent cultivation system, organizing cutting-edge technology research, developing autonomous infrastructure, and promoting international exchanges.

Five specialized committees have been established, led respectively by Tsinghua University, Peking University, Shanghai Jiao Tong University, The Chinese University of Hong Kong, and The Hong Kong University of Science and Technology, covering AI in education, AI in research, fundamental AI engineering, AI ethics and governance, and international AI cooperation.

Tsinghua boosts talent strategy with top global scholars on board

Tsinghua University has recently achieved new progress in its core talent-driven development strategy, as three internationally leading scholars have joined the University on a full-time basis.

On April 28, 2025, Tsinghua University held a chair professor appointment ceremony at its Shenzhen International Graduate School, welcoming Charles M. Lieber, a world-renowned scientist in nanoscience and chemistry.

On August 30, the University appointed Liu Jun, an internationally acclaimed statistician, as a Xinghua Distinguished Chair Professor.

In September, Seeram Ramakrishna, a globally recognized expert in nanomaterials and flexible wearable technologies, also joined Tsinghua University as a full-time faculty member.

Tsinghua University attaches great importance to faculty development and is firmly advancing its core strategy of strengthening the University through talent development. By adopting more proactive, open, and effective talent policies, the University continues to intensify efforts to attract high-level professionals, bringing together a cohort of world-leading talents and top-tier scholars.

Through these efforts, Tsinghua University strives to build an academic community where talents feel a sense of belonging, purpose, and opportunity for long-term development.

Tsinghua University confers Honorary Doctorate on Nobel Laureate Professor Brian Kobilka

On March 30, distinguished physiologist and recipient of the 2012 Nobel Prize in Chemistry Professor Brian Kobilka was recently awarded an honorary doctorate by Tsinghua University. Kobilka is also a member of the National Academy of Sciences (US), fellow of the American Academy of Arts and Sciences, and professor of Molecular and Cellular Physiology at Stanford University.

On the same day, Professor Kobilka delivered an academic lecture titled “G Protein Coupled Receptors: Challenges and New Approaches to Drug Discovery” to an audience of over 300 students and faculty members from Tsinghua and partner institutions.

CELEBRATING ACHIEVEMENTS AND RECOGNITIONS

In 2025, Tsinghua faculty and researchers were recognized with prestigious honors. These accolades highlight Tsinghua's unwavering commitment to excellence in academic and scientific innovation.

Ten Tsinghua faculty members elected as academicians

On November 21, the Chinese Academy of Sciences (CAS) and the Chinese Academy of Engineering (CAE) announced the results of their 2025 academician election. Eight faculty members from Tsinghua University were elected to the CAS, including Professor Feng Xiqiao from the School of Aerospace Engineering, Professor Liu Yunhao from the Department of Automation, Professor Sun Hongbin from the Department of Electrical Engineering, Professor Sun Hongbo from the Department of Precision Instrument, Professor Li Jun from the Department of Chemistry, Professor Zhang Qiang from the Department of Earth System Science, Professor Lin Yuanhua from the School of Materials Science and Engineering, and Professor Luo Guangsheng from the Department of Chemical Engineering. Professor Caucher Birkar from the Yau Mathematical Sciences Center was elected as a foreign academician of the CAS. Professor Li Junhua from the School of Environment was elected to the CAE. In addition, according to incomplete statistics, seven Tsinghua alumni were elected as academicians of the CAS and the CAE, and two alumni were elected as foreign academicians of the CAE.

Tsinghua professor honored with 2025 Wolf Prize in Architecture

Professor Xu Tiantian from Tsinghua University has been awarded the Wolf Prize in Architecture "for her architecture that transformed villages throughout China economically, socially, and culturally".

Xu Tiantian earned her Bachelor of Architecture from Tsinghua University in 1997 and later obtained a Master of Architecture in Urban Design (MAUD) from the Harvard Graduate School of Design. Currently, Xu serves as a professor at Tsinghua's School of Architecture. In 2020, Xu was elected an Honorary Fellow of the American Institute of Architects (AIA), and in 2024, she became a member of the Akademie der Künste in Germany. Xu has received numerous prestigious awards, including the Swiss Architectural Award in 2022, the Berlin Art Prize in 2023, the Marcus Prize, the Holcim Award Gold for Asia Pacific, and UNESCO's Global Award for Sustainable Architecture. She has also served as a visiting professor at Yale University and the Accademia di Architettura di Mendrisio in Switzerland. In recent years, Xu Tiantian has focused on rural architecture in China, dedicating her architectural practice to rural vitalization. Through her approach, she strategically intervenes to invigorate the comprehensive development of rural culture, agricultural industries, and tourism economies.

Tsinghua's LHCb, ATLAS, and CMS teams share 2025 Breakthrough Prize in Fundamental Physics

The Breakthrough Prize Foundation announced the winners of the 2025 Breakthrough Prizes in Los Angeles, USA on April 5. Among the winners jointly awarded the 2025 Breakthrough Prize in Fundamental Physics were researchers from the Center for High Energy Physics at Tsinghua University participating in the LHCb, ATLAS, and CMS experiments. A total of 13,508 researchers from more than 70 countries are recognized for testing the modern theory of particle physics – the Standard Model – and other theories describing physics that might lie beyond it to high precision. This includes precisely measuring properties of the Higgs boson and elucidating the mechanism by which the Higgs field gives mass to elementary particles; probing extremely rare particle interactions, and exotic states of matter that existed in the first moments of the universe; discovering new hadrons and measuring subtle differences between matter and antimatter particles; and setting strong bounds on possibilities for new physics beyond the Standard Model, including dark matter, supersymmetry, and hidden extra dimensions. The winners represent four experimental collaborations at CERN's Large Hadron Collider (LHC) – ATLAS, CMS, ALICE and LHCb.

Tsinghua University joined the LHCb experiment in 2000, ATLAS in 2014, and CMS in 2017 respectively, contributing significantly to the detector construction, maintenance, operation, and upgrades. Key contributions include the LHCb experiment's outer tracker, trigger electronics, next-generation scintillating fiber tracker, and electromagnetic calorimeter; the ATLAS experiment's inner tracker; and the CMS experiment's GEM detector, High-Granularity calorimeter, and MIP timing detector.

Tsinghua Professor Wang Xiaoyun receives 2025 L'Oréal-UNESCO For Women in Science International Award

On May 26, UNESCO officially announced the five international laureates of the 2025 L'Oréal-UNESCO For Women in Science International Awards, recognizing their pioneering contributions to physical sciences, mathematics, and computer science. Among them is Professor Wang Xiaoyun, who holds the Chen-Ning Yang Professorship at Tsinghua's Institute for Advanced Study and is also a member of the Chinese Academy of Sciences.

Wang is rewarded for her significant contribution to cryptography and cryptographic mathematics, critical for secure data communication and storage, according to the UNESCO announcement. Her breakthrough work showed essential flaws in hash functions, which are widely used in communication protocols and led to the invention of the new hash function standards. Today, these standards are used for bank cards, computer passwords, and e-commerce. The visibility of her revolutionary work has encouraged many female students to pursue a research career in mathematics and network security. Wang is the ninth Chinese scientist to receive this award since its inception, and the third Chinese female scientist to be honored in the past four years.

Professor Kenji Fukaya from Tsinghua Yau Mathematical Sciences Center wins the 2025 Shaw Prize

The 2025 Shaw Prize was announced on May 27. Kenji Fukaya, Professor of the Yau Mathematical Sciences Center (YMSC), Tsinghua University and the Beijing Institute of Mathematical Sciences and Applications (BIMSA) was awarded the Shaw Prize in Mathematical Sciences. The award recognizes his pioneering work in symplectic geometry, in particular his foresight in anticipating the existence of what is now known as the Fukaya category, consisting of Lagrangians on a symplectic manifold. He also led the formidable effort to construct this category and subsequently made groundbreaking and far-reaching contributions to symplectic topology, mirror symmetry, and gauge theory.

Kenji Fukaya received his Bachelor's degree and PhD from the University of Tokyo, Japan in 1981 and 1986 respectively. He was a Research Assistant (1983–1986) and was appointed as an Associate Professor (1987–1993) at the University of Tokyo. He then moved to Kyoto University, Japan as a Professor (1994–2013) and became a permanent member of the Simons Center for Geometry and Physics at the State University of New York at Stony Brook, USA in 2013. He has been appointed as a Professor at YMSC and BIMSA since 2024. He is a member of the Japan Academy.

Tsinghua University's I-AIIG secures first UNESCO-Uzbekistan Beruniy Prize for Scientific Research on the Ethics of Artificial Intelligence

On November 6 (local time), the award ceremony for the First UNESCO-Uzbekistan Beruniy Prize for Scientific Research on the Ethics of Artificial Intelligence was held in Samarkand, Uzbekistan.

The Institute for AI International Governance of Tsinghua University (I-AIIG) was named the first research institution laureate on the winners' list.

The UNESCO-Uzbekistan Beruniy Prize recognizes individuals, institutions, or organizations that have made significant contributions to the field of AI ethics research and applications. Established at the initiative of the Government of Uzbekistan, the prize is awarded biennially to three laureates worldwide. Since its establishment, I-AIIG has been engaged in AI governance practices, promoting global collaboration and win-win outcomes and spearheading the development of AI governance frameworks and multilateral cooperation mechanisms.

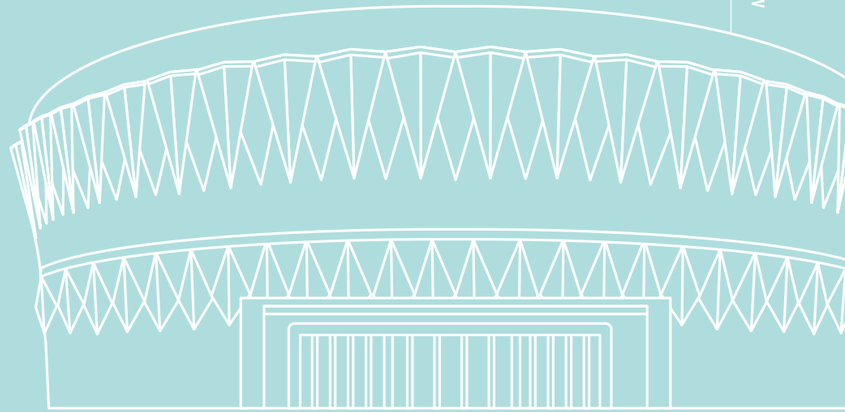
Tsinghua shines at Beijing Science and Technology Awards

On November 7, at the Beijing Municipal Science and Technology Awards Conference, convened by the Beijing municipal government, Tsinghua University, as the leading institution, claimed nine first prizes and 11 second prizes. Additionally, three of its faculty members were honored with the 2024 Zhongguancun Award for Outstanding Youth. The number of first prizes led by Tsinghua University ranked first among all award-applying institutions.

A total of 15 first prizes and 42 second prizes were conferred for the Natural Science Award, six first prizes and 18 second prizes for the Technological Invention Award, and 29 first prizes and 83 second prizes for the Science and Technology Progress Award. Additionally, 26 young scientists were honored with the Zhongguancun Award for Outstanding Youth.

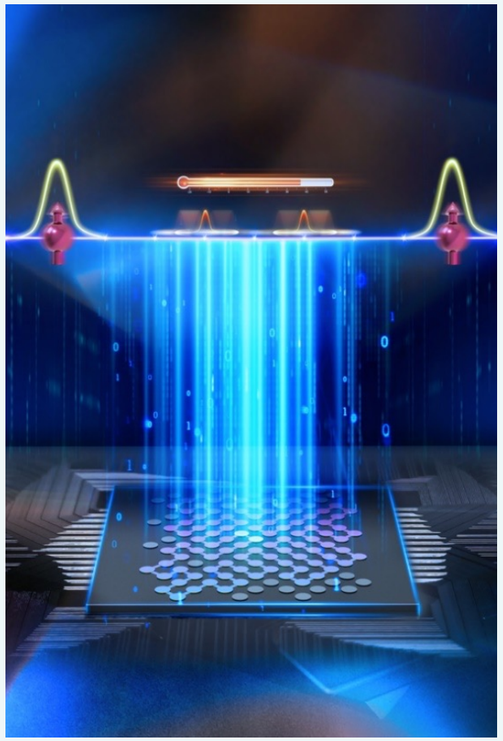
PIONEERING RESEARCH AND DISCOVERY

At Tsinghua, research transcends the pursuit of knowledge—it reflects our unwavering commitment to tackling humanity's most pressing challenges and pushing the boundaries of discovery. Through transformative innovation, Tsinghua reshapes possibilities and drives meaningful change. This year's breakthroughs exemplify our integration of academic rigor with impactful solutions, advancing progress toward a more sustainable and equitable future.



Deng Dongling led team realizes novel quantum topological edge states on a 100-qubit quantum chip

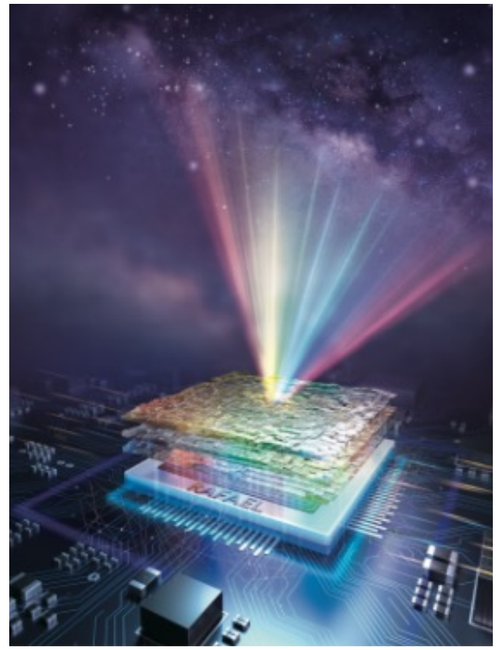
Topologically protected edge states are typically only stable near the zero-temperature ground state. However, when subjected to finite temperature environments, they tend to destabilize due to thermal excitation, leading to the loss of quantum information. Finding ways to effectively protect topological edge states under thermal disturbances is a critical challenge in condensed matter physics and quantum information science. The team led by Deng Dongling at the Institute for Interdisciplinary Information Sciences, in collaboration with other researchers, proposed a protection scheme based on a "prethermalization mechanism." Using a 100-qubit superconducting quantum chip, they successfully realized stable novel finite-temperature topological edge states and further utilized these robust topological edge states to encode and prepare logical Bell states. This approach does not require introducing disorder but instead relies on emergent symmetries within the system to provide extra protection for the topological edge states, thus suppressing their interaction with thermal excitations.

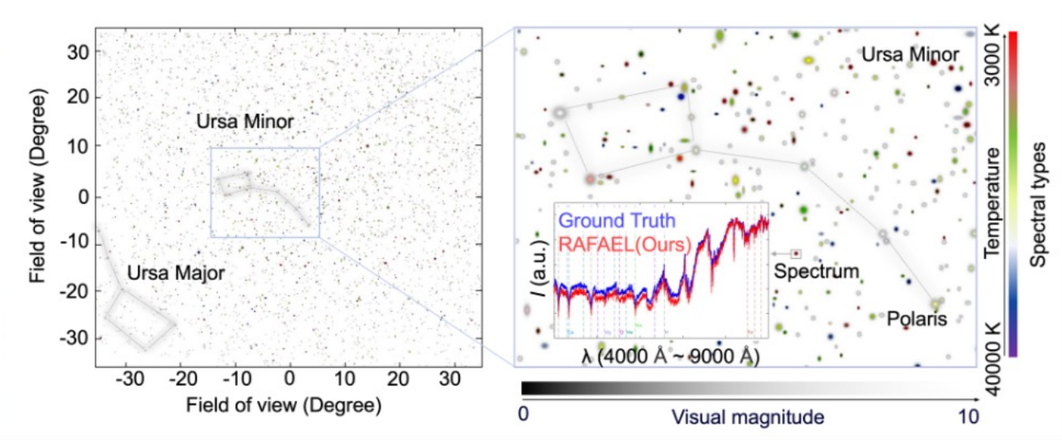


This research establishes a viable digital simulation method, offering a new experimental tool for exploring topological materials at finite temperatures. Additionally, it demonstrates a potential pathway for achieving long-lifetime, robust boundary qubits in disorder-free systems, providing a new approach for the development of noise-resistant quantum storage and control technologies.

Chip “YuHeng” achieves sub-ångström spectral imaging on a fingertip

Developed by Prof. Lu Fang’s team at Tsinghua University and published in the journal *Nature*, the YuHeng chip delivers full-frame hyperspectral imaging with sub-ångström spectral resolution and ten-megapixel spatial detail, all within a compact 2 × 2 × 0.5 cm package. It operates across the visible and near-infrared spectrum at up to 88 Hz, resolving wavelength differences smaller than ten-millionths-of-a-millimeter in real time. By overcoming traditional trade-offs between resolution, throughput and integration, YuHeng opens new possibilities in astronomical surveys, biomedical diagnostics, and intelligent sensing. For spectroscopic surveys of all stars in the Milky Way, it has the potential to reduce the timeline from thousands of years to less than a decade.



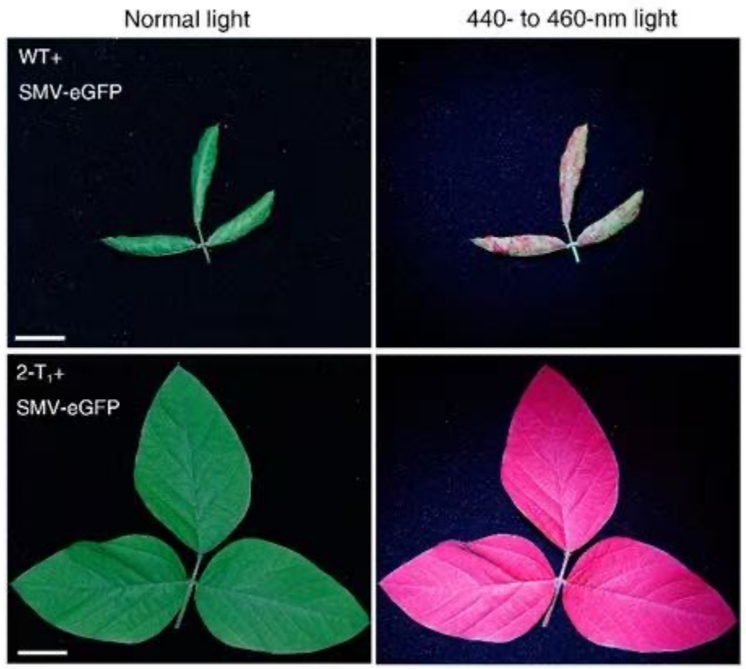


Researchers modify autoactive NLRs to achieve broad-spectrum plant immunity

Professor Yule Liu's team has pioneered and established a simple and highly efficient strategy for the rational design of plant disease-resistance genes. This approach has been successfully validated in both model plants and the important crop soybean, enabling plants to achieve complete immunity to multiple viruses, and holds great promise as a general strategy for protecting plants against viruses, bacteria, fungi, oomycetes, nematodes and pests.

Compared with existing methods, this strategy offers several key advantages: it is simple to implement, requiring modification of only a single NLR gene; it can be custom-designed to target different pathogens; it confers broad-spectrum, durable and strong resistance that is difficult for pathogens to overcome; and it is highly universal, applicable to virtually all crops. Moreover, it can be readily combined with genome-editing technologies to edit endogenous NLR genes, thereby endowing plants with broad-spectrum disease resistance. This work was published in the journal *Nature*.

This study represents a pioneering and transformative advance by proposing and realizing a novel disease-resistance gene design strategy based on autoactive NLRs. It demonstrates broad-spectrum, durable and complete immunity to multiple pathogens in both model plants and soybean. The findings provide a revolutionary technological route for crop disease-resistance breeding and have profound scientific significance and outstanding application potential.



Multi-source remote sensing big data: AI-enabled fusion advances global hydrological monitoring

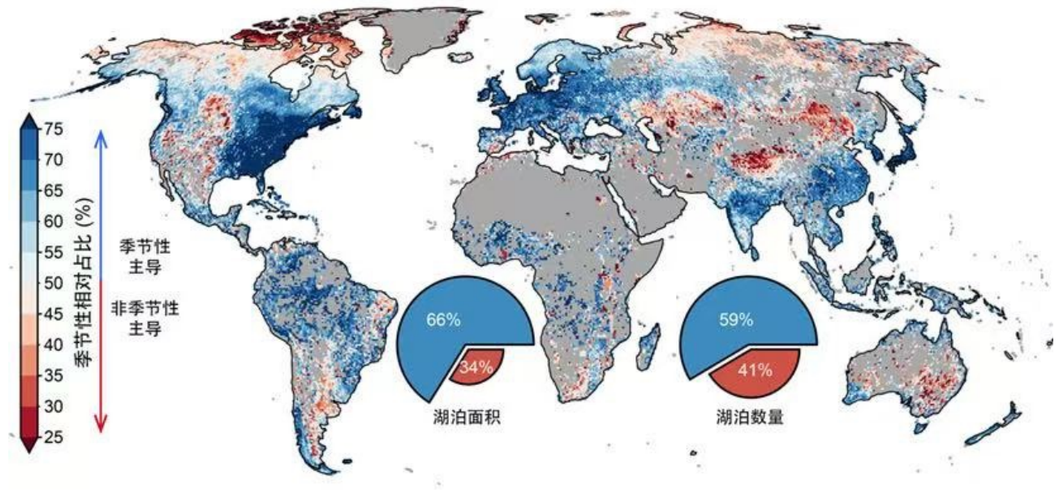
A long-standing challenge in remote sensing hydrology is the spatiotemporal trade-off, which has constrained the ability to achieve continuous monitoring of hydrological variables at both a high spatial resolution and large spatial scales. The research team led by Di Long at the Department of Hydraulic Engineering, Tsinghua University, has overcome this fundamental bottleneck by developing a comprehensive framework that integrates massive volumes of multi-source remote sensing data with strong prior physical constraints.

The team proposed a scalable spatiotemporal fusion framework for multi-source remote sensing big data, substantially enhancing the temporal and spatial completeness of global lake monitoring. Using this framework, the spatiotemporal coverage of state-of-the-art remote sensing observations of global lakes was increased from approximately 66% to nearly 100%. This breakthrough enables, for the first time, near-continuous, high-resolution monitoring of global lake dynamics at an unprecedented scale.

Based on this enhanced dataset, the study reveals that seasonality is the dominant driver of global lake dynamics, challenging the prevailing view that seasonal dominance is a localized phenomenon inferred mainly from long-term trend analyses. By explicitly resolving seasonal variability at the global scale, the research corrects long-standing misconceptions arising from limited temporal sampling in previous studies.

The findings were published in the journal *Nature* and represent a new research paradigm for AI-enabled remote sensing big data, highlighting the transition of the discipline toward greater intelligence, integration, and scalability. Beyond its scientific significance, the work holds substantial societal value, providing critical technical support for next-generation hydrological monitoring and water resource management in China.

By breaking through the spatiotemporal trade-off in remote sensing hydrology, this study establishes the most comprehensive global lake monitoring system to date, achieving the highest combined spatiotemporal resolution, the widest spatial coverage, and strongest temporal continuity. The framework is expected to significantly elevate national hydrological monitoring capabilities and offers a transferable solution for large-scale environmental monitoring globally.



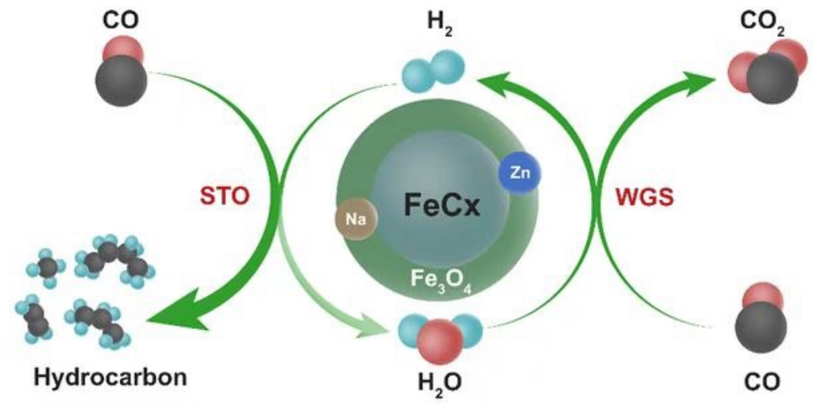
Ode to Bravery: sculptural group honoring border defenders guarding the Kunlun Mountains

Created by Ma Wenjia's Team at the Academy of Arts & Design, this sculptural group—modeled on martyr Chen Xiangrong—weaves patriotic spirit into commemorative artistic language, using a three-dimensional narrative structure that pairs the foreground figure with the Kunlun Mountains to deliver powerful emotional and artistic impact.

The six-month creation process spanned the full workflow, from sketching and digital modeling to clay enlargement, bronze casting, stone carving, and installation; by leveraging digital scanning and preview technologies, the project pioneered new pathways for technology-empowered art, fully showcasing the systematic approach and professional standards of artistic creation and research in higher education.

Guided by the principle of "educating through creative and research achievements," the project was completed under the leadership of counselors, with students who are members of the Communist Party of China and young artists working collaboratively. The process exemplifies the effective integration of ideological and political education with artistic practice. The work has been reported by Xinhua News Agency and other major media outlets, generating wide social impact. It stands as a representative example of using artistic practice to serve ideological and political education and to communicate the spirit of patriotism in contemporary China.

Centered on the theme of patriotism, the work employs a contrast between bronze and sandstone materials and incorporates digital technologies to portray the heroic image of martyr Chen Xiangrong and his spirit of bravery and fearlessness. Beyond its solemn and symbolic artistic expression, the project explores an innovative model of ideological and political education in universities by integrating artistic creation with ideological and political education, achieving the dual goals of ideological guidance and artistic innovation.



High hydrogen atom economy for olefin synthesis from syngas: A core-shell catalyst for syngas-to-olefin in-situ coupling of water-gas shift reaction

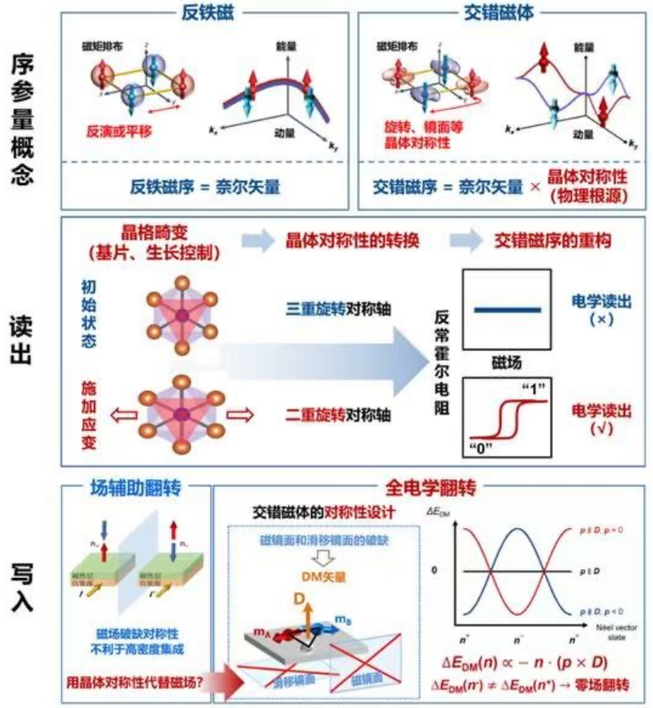
Led by Qian Weizhong's group at the Department of Chemical Engineering, a new study targets the cutting-edge international catalytic technology route of one-step olefin synthesis from syngas, with researchers developing a novel core-shell catalyst that in-situ couples the water-gas shift (WGS) reaction with syngas-to-olefin (STO) functionality. This innovative design enables the in-situ conversion of water produced during the process into hydrogen, boosting the hydrogen atom economy (HAE) of target products to 66%–86%—far surpassing the 50% theoretical HAE and 43%–47% practical values of traditional methanol-to-olefin routes. Critically, the catalyst also achieves high CO conversion and high olefin selectivity, marking a major leap forward in efficient syngas utilization.

Compared with conventional processes, the proposed technology reduced total steam consumption, significantly decreased total wastewater generation and CO2 emissions, and lowered the complete environmental factor by 46%. It was expected to significantly promote the utilization of syngas and the green transition of advanced coal chemical industry in China, while creating conditions for the efficient utilization of renewable green hydrogen. This research was published in the journal *Science*.

The process of producing olefins from syngas was a revolutionary chemical technology that has been widely promoted in recent years. By ingeniously coupling WGS and STO functionalities, Qian's group achieved high conversion, high product yield, low wastewater emission, and low CO2 emission. Furthermore, the technology could be expected to utilize green hydrogen generated by renewable electricity, reduced production costs and facilitated the large-scale application.

Cheng Song's team reveals crystal fingerprints of altermagnets, establishing a third magnetic material class

Conventional wisdom holds that the characteristics of ferromagnets and antiferromagnets are distinctly demarcated and mutually exclusive. The emergence of altermagnets challenges the prevailing viewpoint, since they combine the characteristics and advantages of both ferromagnets and antiferromagnets. It is the unique crystal symmetry that distinguishes altermagnets from conventional magnetic materials and generates the altermagnetic spin splitting. In sharp contrast to the significant attention to the spin fingerprints of altermagnets, the revelation and manipulation of the crystal fingerprints of altermagnets have remained elusive.



The team led by Cheng Song grew CrSb films, a new type of room-temperature altermagnet. The magnetic space group can be switched by the crystal distortion, thereby enabling control of the electrical read-out and write-in. They formulated a theoretical criterion for the all-electrical switching of altermagnetic order. Replacing the magnetic field with the unique crystal symmetry, they achieved the long-sought all-electrical manipulation of altermagnetism. Their work demonstrates that "altermagnetic order = Néel vector × crystal symmetry", and provides the critical experimental evidence for establishing the altermagnets as a third class of magnetic materials, separated from ferromagnets and antiferromagnets. The relevant work was published in the journal *Nature*.

The magnetization compensation and spin splitting are mutually exclusive in conventional magnetic materials, with ferromagnets and antiferromagnets as the representative examples. Altermagnets combine the characteristics and advantages of both ferromagnets and antiferromagnets, holding great promise for developing the next-generation magnetic memory technology. This work concentrated on the physical underpinnings of altermagnetism, as well as the revelation and manipulation of the crystal fingerprints of altermagnets. It not only lays foundations for promoting altermagnets to be the third class of magnetic materials, but also opens new avenues for developing altermagnet-based memories.

Spin configurations trigger breakthrough in antiferromagnetic quantum anomalous Hall effect

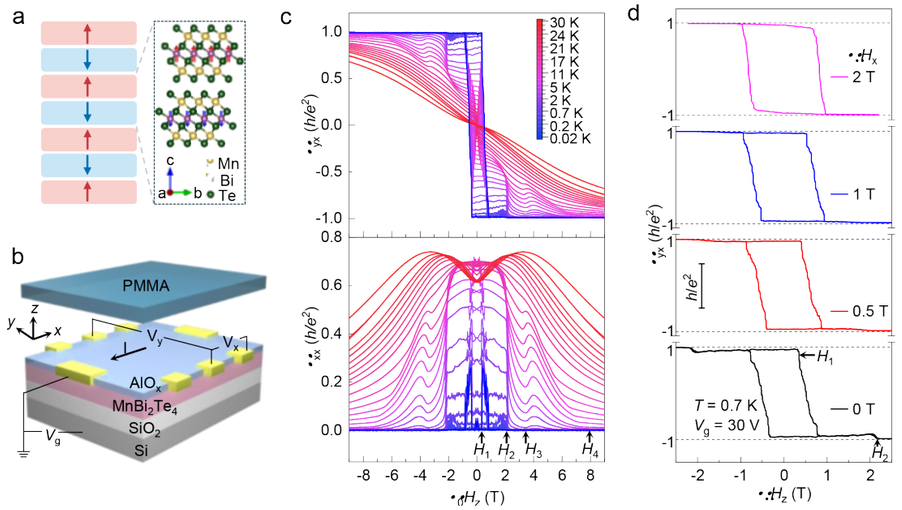
A research team led by Professor Yayu Wang from the Department of Physics has unveiled how manipulating spin configurations can control a unique quantum phenomenon, the quantum anomalous Hall effect (QAHE), in an antiferromagnetic material. This work overcomes a major experimental hurdle for QAHE device fabrication and opens new pathways for controlling topological quantum phase transitions.

The material at the heart of this study, MnBi2Te4, is a landmark system in condensed matter physics, uniquely combining a two-dimensional structure, intrinsic antiferromagnetic order, and topological electronic properties. Despite its promise, progress has been stalled for years due to difficulties in creating high-quality experimental devices.

After a five-year effort, Professor Wang's group, through refined single-crystal growth and advanced device fabrication techniques—notably the application of a protective AlOx capping layer—has dramatically improved device performance and reproducibility.

The team's high-quality devices, based on 7-layer MnBi2Te4, yielded several groundbreaking results. Most significantly, they observed a quantized Hall resistance plateau at zero magnetic field, a hallmark of the QAHE. Their research systematically demonstrates how the specific spin configurations (spin flips and flops) in a 2D antiferromagnet govern topological electron transport. Furthermore, they discovered that applying an in-plane magnetic field can surprisingly enhance both the stability and precision of QAHE quantization.

Published in the journal *Nature*, this research marks a landmark achievement in magnetic topological insulators. By solving persistent technical challenges and expanding the experimental toolkit, the work provides crucial insights into topological quantum phases. It also establishes a vital foundation for future applications in low-energy-consumption antiferromagnetic spintronics.



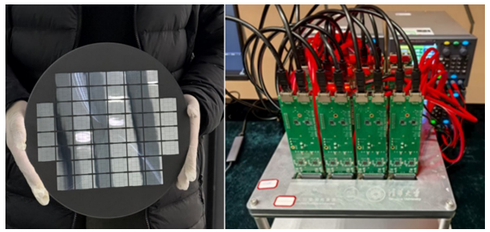
Pioneering "Storage-for-Compute": beaking barriers in high-performance LLM inference

Prof. Wu Yongwei's team at Tsinghua University's Department of Computer Science and Technology has achieved a breakthrough in AI infrastructure with their novel "Storage-for-Compute" and "Full-System Synergy" design paradigms. Addressing the critical "Memory Wall" challenge in Large Language Model (LLM) inference, the team has successfully developed a robust solution for high-performance computing.

In collaboration with leading industry partners, the team co-developed advanced inference systems such as Mooncake (https://github.com/kvcache-ai/Mooncake) and KTransformers (https://github.com/kvcache-ai/ktransformers). These innovations significantly enhance inference throughput and lower the deployment barrier for sparse models. The work has been recognized with the Best Paper Award at FAST 2025, a top-tier system conference, and the prestigious global "Olympus Award" in the storage domain.

Currently open-sourced with over 20,000 stars on GitHub, the core technology has been adopted by major Internet and AI enterprises. It is now deployed at scale on clusters exceeding tens of thousands of GPUs, powering the serving of trillion-parameter models.

Tsinghua researchers prototype wafer-scale chips for AI computing



A team of researchers led by Professor Shouyi Yin at Tsinghua University's School of Integrated Circuits has unveiled new research exploring wafer-scale approaches to large-area AI computing and system integration, with the team designing and evaluating a wafer-scale AI chip prototype and developing an architectural framework that addresses computing organization, on-wafer interconnect, and integration at an expanded physical scale. As computing systems continue to grow in complexity and scale, the work examines how architectural and system-level design choices can extend performance and efficiency beyond conventional single-die boundaries. The study establishes a coherent technical framework spanning architecture, interconnect, and advanced integration, and validates the feasibility of achieving high computing capability through coordinated design across these layers using mature semiconductor technologies.

The research further demonstrates how such a framework can support reusable design methodologies and structured design rules, enabling systematic exploration of wafer-scale implementations. Through academic–industry engagement, the work contributes practical insights into the alignment of architectural innovation with manufacturable design flows.

Overall, this study provides a reference framework for future investigations into large-scale AI computing architectures and offers a scalable perspective on system integration beyond traditional chip-level design.

BUILDING A COLLABORATIVE FUTURE

In 2025, Tsinghua University served as a global platform for academic collaboration, convening thought leaders to address critical issues such as climate change, digital health, world peace, and education innovation. These forums highlighted Tsinghua's role in fostering dialogue, advancing solutions, and shaping the future of science, society, and learning on a global scale.

Tsinghua University co-hosts 2025 World Digital Health Forum

On March 28, the 2025 World Digital Health Forum, jointly hosted by the Chinese Academy of Engineering and Tsinghua University was held in Beijing. An affiliate of the 2025 Zhongguancun Forum Annual Conference, the 2025 World Digital Health Forum was organized around the theme of "Innovation in digitalized intelligence: Vitalization of a new framework for healthcare." The focus of the event was the in-depth exploration of innovative ways in which digital and intelligent technologies can be utilized to harness the full potential of healthcare, cultivate interdisciplinary talent in smart health, and foster new industries and models.

Tsinghua University hosts Fifth Global Forum on Development of Computer

On April 12, the Fifth Global Forum on the Development of Computer Science (GFDCS), under the theme of "The Development of Computer Science in the AI Era," was held in a hybrid online and offline format at Tsinghua University. The Global Forum on the Development of Computer Science is an international forum for high-level development of the computer science discipline hosted by Tsinghua University. Since its inception in 2018, the forum has been committed to exploring the fundamental nature of computer science and promoting its global development, earning widespread recognition from the international computer science community.

2025 Tsinghua PBCSF Global Finance Forum held

On May 17, the 2025 Tsinghua PBCSF Global Finance Forum was held in Shenzhen, drawing global leaders and experts to address pressing economic and financial challenges. Held under the theme"A Shared Future: Building an Open and Inclusive Economic and Financial System", the two-day forum features 13 thematic panel discussions and two closed-door sessions. The dialogues seek to chart innovative pathways and drive actionable strategies for sustainable global financial growth.

2025 International Forum on Carbon Neutrality and Energy System Transformation held

From June 27 to 29, the 2025 International Forum on Carbon Neutrality and Energy System Transformation (CNEST) was held in Beijing. During the opening ceremony, the CNEST Beijing Initiative was released. The ceremony also featured the launch of Technology Review for Carbon Neutrality, an international journal that will serve as an open, neutral, and thoughtful global platform of communication on CNEST. As the inaugural international forum on the multilateral collaboration program CNEST, the event brought together over 400 participants from 19 countries.

13th World Peace Forum opens at Tsinghua, Chinese vice president addresses the forum

On July 3, the 13th World Peace Forum, jointly organized by Tsinghua University and the Chinese People's Institute of Foreign Affairs, opened in Beijing. Chinese Vice President Han Zheng delivered a keynote speech at the opening ceremony. The forum is themed “Advancing Global Peace and Prosperity: Shared Responsibility, Benefit, and Achievement.” The three-day forum comprises four major plenary sessions and 18 panel discussions and touches on topics such as international order and world peace, pan-securitization and global security predicament, the role of the global south in world peace and prosperity, and major power coordination and conflict resolution. The forum aims to harness global wisdom to explore ways to strengthen international cooperation, jointly shoulder the responsibility of safeguarding peace and promoting development, share the opportunities brought by globalization, and bring about common prosperity and lasting peace for all countries.

The third Tsinghua Global Youth Dialogue Main Forum concludes

On July 9, the third Tsinghua Global Youth Dialogue Main Forum concluded at Tsinghua University, gathering 70 young delegates from over 30 countries and regions under the theme “Illuminating the Unreached.” The Third Tsinghua Global Youth Dialogue commenced on June 29 in Shenzhen. After engaging in practical activities in Shenzhen and Guizhou, the youth delegates gathered in Beijing for a series of exchanges at Tsinghua University.

The 2025 International Congress of Basic Science opens in Beijing

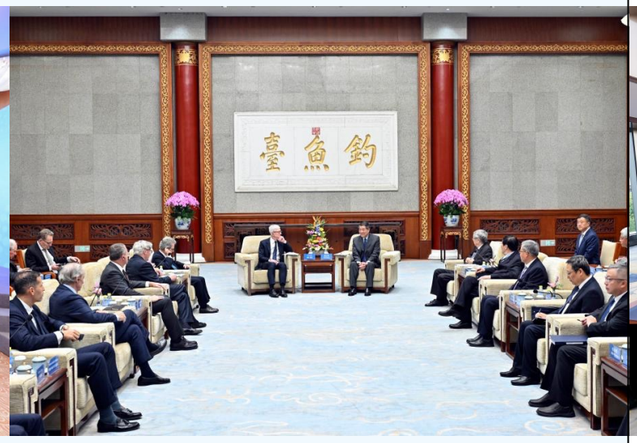
On July 13, the 2025 International Congress of Basic Science (ICBS) kicked off at the China National Convention Center in Beijing. Four Fields Medalists, three Nobel Laureates, and two Turing Award winners attended the congress. Six scientists were honored with the 2025 Basic Science Lifetime Award. The Congress also welcomed the prestigious recipients of the Shaw Prize, Wolf Prize, and Dirac Medal, along with more than 80 members of Chinese and international science academies, presidents, and delegates of mathematical societies from over ten countries, a total of nearly 1,000 experts, scholars, and students from research institutions, universities worldwide—together witnessing the opening of the event. The congress also conferred the Frontiers of Science Award (FSA) and recognized 118 outstanding papers in basic science.

Tsinghua co-hosts 19th International Conference on Topics in Astroparticle and Underground Physics

From August 25 to 29, the 19th International Conference on Topics in Astroparticle and Underground Physics was held in Xichang, Sichuan. Co-hosted by leading Chinese institutions such as Tsinghua University, Beijing Normal University, and the Chinese Academy of Sciences, this marks the first time that the conference has been hosted in China since its inception in 1989. The conference centered on key frontiers in fundamental physics, including neutrinos, dark matter, gravitational waves, and cosmic rays, featuring over 30 plenary lectures and more than 300 parallel sessions.

Tsinghua Medicine convenes International Advisory Council Meeting

On September 5, the Tsinghua Medicine International Advisory Council (TMAC) 2025 Meeting was held at the University's Main Building. Established in 2023, the Tsinghua Medicine International Advisory Council brings together internationally renowned leaders in medicine and health from Singapore, the U.K., the U.S., Australia, and beyond. The Council provides high-level strategic advice on medical education, research translation, clinical application, and campus development, aiming to further strengthen Tsinghua Medicine's global role in advancing human health.



Chinese vice premier meets Tsinghua University advisors

On October 16, Chinese Vice Premier He Lifeng, also a member of the Political Bureau of the Communist Party of China Central Committee, met with representatives of the advisory board of the Tsinghua University School of Economics and Management (Tsinghua SEM) in Beijing. The representatives, including Tim Cook, Apple CEO and chair of the advisory board, expressed strong confidence in China's development prospects and a commitment to further engage in the Chinese market and expand investment and cooperation in China.

Tsinghua SEM holds 2025 Advisory Board Meeting

On October 17, Tsinghua University School of Economics and Management (Tsinghua SEM) held its 2025 Advisory Board Meeting. It was the board's 26th annual meeting since its establishment. A total of 23 board members attended the meeting. Six board members also gave lectures in the Tsinghua SEM classrooms and interacted with faculty and students during the meeting.

Second International Academic Forum on "Paleography and Chinese Civilization" opens

On October 18, the opening ceremony of the Second International Academic Forum on "Paleography and Chinese Civilization" was held at Tsinghua University. The forum was hosted by Tsinghua University and organized by the Research and Conservation Center for Unearthed Texts and the Secretariat of the Paleography Program, and featured five parallel sessions: "Oracle Bones," "Bronze Inscriptions," "Warring States Characters," "Qin-Han Characters," and "Characters and Civilization." Over 180 scholars from more than 80 universities and research institutions across 14 countries and regions, including China, the US, Russia, and the UK, attended.

4th Tsinghua Higher Education Forum held

On October 18, the 4th Tsinghua Higher Education Forum in Conjunction with 2025 Asian Universities Alliance Academic Conference opened at the Tsinghua Southeast Asia Center. The forum, centered on the critical theme: “The Future of Internationalization in Higher Education: Markets, Geopolitics, and Epistemic Justice,” convened over 150 experts, scholars, and researchers from global educational institutions. Established in 2022, the Tsinghua Higher Education Forum continues to serve as a global observatory and think tank dedicated to addressing transformative trends in higher education worldwide.

2025 Beijing-Tsinghua Health AI Summit held

From October 23 to 25, the Beijing-Tsinghua Health AI Summit (BEIHAI Summit 2025) was held at the Beijing Economic-Technological Development Area under the theme “Bridging Innovation and Clinical Practice for Healthier Populations”. The forum featured four sub-forums focusing on New Era of Intelligent Healthcare; Clinical Implementation of AI in Healthcare; AI-Driven Innovations in Diagnostic and Therapeutic Technologies; and AI for Science. The event also featured the Tsinghua Medicine Future of Medicine Forum themed "Future of Medicine in the Era of AI," as well as the Center for Physician-Scientist Development (CPSD) Third Cohort launch and presentation of the Inaugural Tanoto Scholarship Awards.

2025 Lancet Countdown China Report offers valuable lessons for urban resilient and low-carbon development

As eight of 13 critical climate-health risk indicators hit record highs in China, the 2025 Lancet Countdown China Report offers valuable lessons for urban resilient and low-carbon development, launched on October 31 at Tsinghua University. Marking World Cities Day under the theme “Empowering Cities for Synergistic Action”, the report provides unprecedented city-level analysis, exposing a critical gap between national/provincial assessments and the unique risks facing individual cities. The launch featured experts from Singapore, India, Australia and China discussing practical urban solutions.

Tsinghua Global Youth Summit on Net-Zero Future highlights youth leadership in climate governance

On October 31, the Fifth Global Youth Summit on Net-Zero Future, hosted by the Global Alliance of Universities on Climate (GAUC), took place at Tsinghua University. The summit brought together young leaders, scholars, and practitioners from around the world to exchange insights on climate governance, innovative solutions, and youth contributions to global climate action ahead of COP30 in Belém, Brazil. The summit featured “Youth Climate Talks” and intergenerational dialogues. Participants underscored the importance of taking initiative, fostering collaboration, and developing critical skills in addressing climate challenges.

5th World Health Forum focuses on "Climate Change and Health"

On November 1, the 5th World Health Forum, hosted by Tsinghua University, commenced in Beijing. With the theme “Climate Change and Health: Responsibility, Governance and a Shared Future for Mankind,” this year’s forum brought together nearly 400 experts, scholars, representatives of international organizations and youth delegates from 22 countries and regions to jointly explore new paths and cooperation models for global health governance in the context of climate change. The two-day forum focuses on topics such as global health governance under climate change, scientific evidence chain and risk assessment, educational cooperation and academic innovation, youth and climate action, and includes three plenary sessions and one youth forum.

Tsinghua SPPM holds 2025 Global Advisory Board Meeting

On November 15, Tsinghua University School of Public Policy and Management (Tsinghua SPPM) convened its 2025 Global Advisory Board (GAB) Meeting. Focusing on the theme “Public Governance Towards 2030”, the GAB Meeting comprised an opening ceremony and closed-door meeting, adopting a hybrid online and offline format.

Tsinghua University hosts 2025 Modern Governance Forum

On November 16, Tsinghua University hosted the 2025 Modern Governance Forum, focusing on "Global and Public Governance in an Era of Transformation." The four parallel forums were conducted under the themes of "Geopolitical Shifts and the Governance of Global Economy," "Governance Digital Transformation and Global Digital Equity," "Socio-Economic Fluctuation and the Governance of Social Resilience," and "Global Flux and the Restructuring of World Governance," respectively. Some members and guests of the Global Advisory Board of SPPM, along with part of the faculty and students from SPPM, participated in the event.

2025 Tsinghua International Conference on Art & Design Education held in Milan

The 2025 Tsinghua International Conference on Art & Design Education (ICADE 2025), hosted by Tsinghua University and organized by the Academy of Arts & Design, Tsinghua University, the Tsinghua Arts and Design Institute in Milan, and the China-Italy Design Innovation Hub, was recently held in Milan, Italy. Under the theme Future Context: A New Paradigm for Art and Design Education, the conference featured eight keynote speeches, two leaders’ roundtables, four thematic forums, two parallel seminars, and a series of international art and design workshops. Participants engaged in deep cross-disciplinary and cross-cultural dialogue, shared insights spanning from theory to practice, and collectively explored the evolution and transformation of art and design languages in the AI era—reflecting on how to reconstruct educational paradigms within this emerging context.

2025 Global MOOC and Online Education Conference held in Mexico

From December 2 to 4, local time, the 2025 Global MOOC and Online Education Conference, themed "Breaking Boundaries and Reshaping Futures: Open and Intelligent Global Education," was held at the National Autonomous University of Mexico (UNAM). The *Infinite Possibilities: Report on the Digital Development of Global Higher Education (2025)* and *The Digital Development Index of Global Higher Education (2025)* were released. The conference also featured the release of the Mexico City Declaration and proposed the new concept of "Intelligent MOOCs" for the first time globally. In addition, it debuted a series of Intelligent MOOCs, including Tsinghua University's Chemical Engineering Thermodynamics. The event featured four plenary sessions, a Special Global Workshop titled "AI for Futures," and a dedicated Intelligent Higher Education Exhibition, showcasing innovative AI-empowered teaching outcomes across multiple dimensions.

WEAVING GLOBAL TIES

In 2025, Tsinghua University has made significant strides in expanding connections to the wider world and fostering meaningful partnerships. Driven by a commitment to academic excellence, Tsinghua has worked with leading institutions worldwide to create initiatives that benefit students, faculty, and the broader academic community. Through joint research, exchange programs, and innovation hubs, Tsinghua builds global partnerships, fosters cross-cultural understanding, and addresses critical global challenges.

UAE

Li Luming leads delegation to UAE

From January 14 to 15, Li Luming led a delegation to the United Arab Emirates (UAE). The delegation visited Dubai and Abu Dhabi, and held meetings with various sectors to promote the expansion of collaboration between the University and the UAE in the fields of education, research and talent development. During his visit, Li met with H.H. Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, expressing hope to deepen cooperation further, taking the 40th anniversary of the establishment of diplomatic ties between China and the UAE as a new starting point, and contribute to elevating the China-UAE comprehensive strategic partnership to new heights. Li also met with Khaldoon Khalifa Al Mubarak, UAE presidential special envoy to China, as well as chief executive officer and managing director of Mubadala Investment Company, Rima Al Mokarrab, the executive director of the Strategic Affairs Unit of the Executive Affairs Authority, and Reem Bint Ebrahim Al Hashimy, the UAE's minister of state for international cooperation. Li attended the Tsinghua-Khalifa University Joint Workshop on Matter, Energy, Safety and Health, MESH, co-organized by Tsinghua's Department of Engineering Physics and Khalifa University's College of Engineering and Physical Sciences, and talked with Ebrahim Saeed Al Hajri, president of Khalifa University on further cooperation. He also visited the Chinese Embassy in the UAE, where he met with Ambassador Zhang Yiming to discuss the further development of China-UAE higher education cooperation. He met with Fabio Piano, vice chancellor of New York University Abu Dhabi. In addition, Li attended the inauguration of the Tsinghua Alumni Association of the UAE, conveying congratulations and hope that alumni in the UAE will continue to contribute to China-UAE cooperation and global development.

Germany

Li Luming leads delegation to Germany, promoting practical cooperation

From January 17 to 18, Li Luming led a delegation to Germany. During his visit to the Technical University of Munich (TUM), Li met with President Thomas Hofmann, discussing topics such as leveraging artificial intelligence to empower education, exploring new pathways for clinical medicine development, and innovative models for advancing higher education. Li and the delegation also visited the Institute for Thermodynamics and its laboratories at TUM's Garching campus. While having a talk with Joachim Hornegger, president of the Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Li engaged in discussions on practical cooperation in areas such as medicine, carbon neutrality, and sustainable business practices. Li also visited the Adidas headquarters and met with Adidas CEO Bjørn Gulden. During his visit, Li and his delegation held a discussion with Tsinghua alumni living and working in Germany. He also engaged in discussions with faculty and students from the School of Vehicle and Mobility who were attending an overseas social practice program.

Switzerland

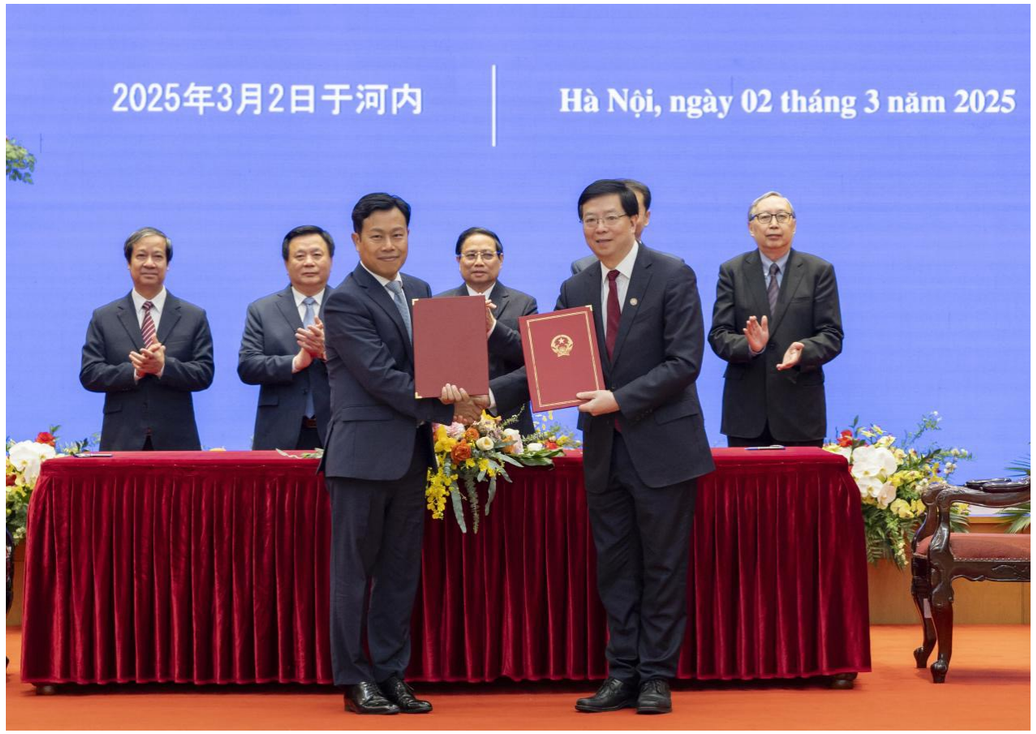
Li Luming visits Switzerland to promote multilateral cooperation

From January 20 to 21, Li Luming attended the World Economic Forum (WEF) Annual Meeting 2025 in Davos. During his visit, Li and his delegation held a series of bilateral and multilateral meetings with representatives from various sectors, further deepening international exchange and cooperation. Li held a multilateral meeting with Klaus Schwab, founder of the World Economic Forum, and presidents of leading global universities. He also attended the Global University Leaders Forum at the World Economic Forum and had discussions with leaders from renowned universities and research institutions, on how higher education can address global sustainable development challenges by fostering scientific research and innovation. He attended an event themed "Trust and Cooperation: A New Chapter in Globalization", where he delivered a speech on the topic of how artificial intelligence is reshaping higher education. Li also attended Board Meeting 2024-2025 of the Global Alliance of Universities on Climate (GAUC). During his visit, Li met with Stephen Schwarzman, Chairman, CEO and Co-Founder of Blackstone to review past collaborations and discuss Schwarzman College's future development. Li also met with academic representatives including Michael Spence, President & Provost of University College London; Anna Fontcuberta i Morral, President of the École polytechnique fédérale de Lausanne; Joël Mesot, President of ETH Zurich; Deep Saini, President and Vice-Chancellor of McGill University; and Victor Dzau, President of the US National Academy of Medicine, exchanging views on strengthening cooperation in talent cultivation and scientific research. During his visit, bilateral meetings were held with Jakob Stausholm, CEO of Rio Tinto Group; Marc Pictet, Managing Partner of the Pictet Group; and Cherie Nursalim, Co-Founder of the United in Diversity Public Welfare Foundation and Vice Chairman of Giti Group. Li also held a symposium with alumni working and studying in Switzerland.

Vietnam

Qiu Yong visits Vietnam, deepens university ties

This year marks the 75th anniversary of the establishment of diplomatic relations between China and Vietnam, as well as the China-Vietnam Year of People-to-People Exchanges. From February 28 to March 2, a delegation led by Qiu Yong visited Vietnam. This visit aimed to implement the important consensus reached by the top leaders of the two parties and countries, promote cooperation in education, science, and technology, as well as cultural exchanges between Tsinghua University and Vietnam, and contribute to building a strategically significant China-Vietnam community with a shared future. On March 2, Vietnamese Prime Minister Pham Minh Chinh met with Qiu Yong and his delegation in Hanoi and witnessed the signing of agreements between Tsinghua University and Vietnam National University, Hanoi; Vietnam National University, Ho Chi Minh City; and National Economics University. During his visit, Qiu attended the “Vietnam-China Higher Education Seminar: Opportunities and Challenges in the 21st Century – Digital Intelligence Era”, jointly held by Tsinghua and Vietnam National University, Hanoi, where he presented a keynote address titled “Innovation and Development of Higher Education in the 21st Century”. Qiu was also invited to give a special address to all staff at the Chinese Embassy in Vietnam.



Singapore Japan

Li Luming visits Singapore and Japan for multisector cooperation and exchange

From April 13 to 19, Li Luming led a delegation to visit Singapore and Japan. In Singapore, Li met with A*STAR Chief Executive Officer Beh Kian Teik, SingHealth Group Chief Executive Officer Ng Wai Hoe, and Nanyang Technological University President Ho Teck Hua, discussing enhanced cooperation in life sciences, AI-powered healthcare, and joint research. He delivered a keynote speech at the Think Asia Forum on contributing Asian wisdom to global governance. He also met Tsinghua alumni living and working in Singapore. In Japan, Li met with Teiji Tominaga, President of Tohoku University, and Naoto Ohtake, President of Institute of Science Tokyo, and signed a Memorandum of Understanding with Institute of Science Tokyo. At the Institute of Science Tokyo, Li Luming also had talks with Tsinghua students participating in the exchange programs. He met with Toshiaki Higashihara, Director and Executive Chairman of Hitachi Group, Eisaku Ito, President and CEO of Mitsubishi Heavy Industries, Ltd., and Yoshiki Takada, President and Chief Executive Officer of SMC Corporation. He also attended the 2025 Board Meeting and Presidents Forum of the Asian Universities Alliance, where he met with University of Tokyo President Teruo Fujii. He then took part in the "Resilience and Vitality: Strategic Choices for Sino-Japanese Cooperation in the International Economic and Technological Wave" forum—jointly organized by Tsinghua University and Nomura Research Institute and hosted by the Executive Education Center of Tsinghua's School of Economics and Management—delivering the closing address.

Russia

Qiu Yong visits Russia, deepens cooperation in education, science and technology

During President Xi Jinping's state visit to Russia and his attendance at the celebration marking the 80th anniversary of the Victory in the Soviet Union's Great Patriotic War, Qiu Yong visited Russia from May 7 to 10 (local time). In the presence of Chinese President Xi Jinping and Russian President Vladimir Putin, Qiu Yong exchanged a cooperation agreement with Anatoly Torkunov, Rector of Moscow State Institute of International Relations (MGIMO University), and Kirill Dmitriev, CEO of the Russian Direct Investment Fund (RDIF), at the Kremlin in Moscow. He visited Mendeleev University of Chemical Technology, where he held discussions with the university's Rector, Evgeny Vladimirovich Rumyantsev, and met with representatives of Chinese students studying there. Earlier, the two universities had signed a memorandum of understanding on cooperation. Qiu also met with Herman Gref, the CEO and Chairman of the Executive Board of Sber, with whom he signed a Memorandum of Understanding. Qiu visited the National Research University Higher School of Economics (HSE University), where he exchanged a cooperation agreement with the university's Rector, Nikita Anisimov. He also met with representatives of Tsinghua University alumni in Russia.

Ethiopia

Qiu Yong visits Ethiopia, promotes educational cooperation

On November 25 (local time), Qiu Yong visited Ethiopia to attend the Forum on Science & Technology Cooperation and Sustainable Development in the Global South. During the visit, Tsinghua University signed memorandums of understanding with Addis Ababa University and Mekelle University, contributing Tsinghua's strength to advancing the All-Weather Strategic Partnership between China and Ethiopia. The Forum on Science & Technology Cooperation and Sustainable Development in the Global South was hosted by Tsinghua University's Institute for Carbon Neutrality and the Department of Earth System Science. At the forum, Qiu and Fana Hagos Berhane, president of Mekelle University, signed a memorandum of cooperation. The two universities will strengthen collaboration in areas such as talent cultivation and joint research. Qiu visited Addis Ababa University and signed a memorandum of cooperation with President Samuel Kifle. During his visit to Ethiopia, Qiu Yong met with Jiang Feng, head of the Chinese Mission to the African Union. Their discussions explored the potential for universities to play a greater role in supporting China–Africa cooperation and achieving more fruitful outcomes.

Kenya

Qiu Yong visits Kenya, strengthens educational partnerships

From November 26 to 28 (local time), Qiu Yong visited Kenya, implementing the important consensus reached by the heads of state of the two nations. The visit focused on advancing high-quality Belt and Road cooperation, deepening educational and scientific collaboration as well as cultural exchanges between Tsinghua University and Kenya, and contributing Tsinghua's strength to building a China-Kenya community with a shared future in the new era. Qiu visited the University of Nairobi, where he met with Chancellor Patrick Verkooijen and Acting Vice Chancellor Margaret Jesang' Hutchinson. The two sides held discussions and signed a cooperation agreement between the universities. During his visit, Qiu delivered a speech titled "Universities in the Age of AI: Reflections, Responsibilities and Actions" at the University of Nairobi auditorium. Qiu Yong held separate meetings with Elizabeth Maruma Mrema, Deputy Executive Director of the United Nations Environment Programme (UNEP), and Anacláudia Rossbach, Executive Director of the United Nations Human Settlements Programme (UN-Habitat). Qiu and Rossbach also exchanged a Letter of Intent for cooperation between Tsinghua University and UN-Habitat. Qiu visited the Karen Base, the East and Southern Africa Regional Headquarters of the Power Construction Corporation of China (POWERCHINA) for an inspection. Together with Chen Guanfu, Member of the Standing Committee of the POWERCHINA's CPC Committee and Deputy General Manager of the Power Construction Corporation of China, he jointly unveiled the Tsinghua University Africa Center. Qiu also held discussions with Guo Haiyan, Chinese ambassador to Kenya, on advancing high-quality China–Kenya educational cooperation, and visited representatives of Tsinghua alumni in Africa.

Mexico Brazil

Li Luming visits Mexico and Brazil

From December 2 to 6 (local time), Li Luming visited Mexico and Brazil. During his visit to Mexico, Li attended the the 2025 Global MOOC and Online Education Conference, where he delivered a keynote speech titled "Dissolving Boundaries: Educational Innovation for a Future Learning Ecosystem". He also met with Chinese Ambassador to Mexico, Chen Daojiang, to discuss ways to further deepen China–Mexico cooperation in higher education. During his visit to Brazil, Li met with Maysa Furlan, Rector of São Paulo State University, and signed a Memorandum of Understanding between the two institutions. He met with Roberto Medronho, Rector of the Federal University of Rio de Janeiro and held separate meetings with Antonio Claudio Nobrega, Rector of Fluminense Federal University, and Anderson Antonio Pedroso, Rector of Pontifical Catholic University of Rio de Janeiro. During the meetings, he signed a Memorandum of Understanding with Fluminense Federal University and witnessed the signing of a Cooperation Agreement between Tsinghua Shenzhen International Graduate School and the Pontifical Catholic University of Rio de Janeiro. Li also met with Tian Min, Chinese Consul General in Rio de Janeiro, to discuss strengthening China–Brazil educational collaboration and talent exchanges. Together, they witnessed the inauguration of the Tsinghua Envision Center for Sustainable Development (Brazil). Li also visited the laboratory of the Tsinghua-UFRJ China-Brazil Center for Climate Change and Energy Technology Innovation at the Federal University of Rio de Janeiro, visited the headquarter of State Grid Brazil Holding S.A., and met with Tsinghua alumni working in Brazil.

France Greece

Qiu Yong visits France and Greece

From December 14 to 18 (local time), Qiu Yong visited France and Greece to advance educational and scientific cooperation as well as people-to-people exchanges between Tsinghua University and leading European universities and institutions. This visit contributed Tsinghua's strength to the development of the China–EU comprehensive strategic partnership. During his visit to France, Qiu Yong met with Khaled El-Enany, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO). He also visited Sciences Po and held talks with its President, Luis Vassy. The Tsinghua University Institute of Climate Change and Sustainable Development and the Sciences Po Paris Climate School signed a letter of intent on cooperation. Qiu also met with Deng Li, Chinese ambassador to France, to exchange views on advancing China–France cooperation in education. During his visit to Greece, Qiu Yong met with Gerasimos Siasos, Rector of the National and Kapodistrian University of Athens (NKUA) and signed a memorandum of understanding on cooperation between the two universities. He visited the National Technical University of Athens and held discussions with its Rector, Ioannis K. Chatjigeorgiou. During the visit, the two universities signed a student exchange agreement. Qiu also visited the Athens University of Economics and Business (AUEB), held discussions with its Rector, Vassilis Vasdekis, and following the talks, they signed a memorandum of understanding on cooperation between the two universities. Qiu was invited to engage with representatives from Greece's political, business, and academic communities and delivered a keynote address. The address was titled "Cultural Inheritance and Mutual Learning Among Civilizations in the Era of Artificial Intelligence". During the exchange session, Tsinghua University and the National and Kapodistrian University of Athens signed a letter of intent for cooperation. During the visit, Qiu Yong met separately with George Papandreou, former Greek Prime Minister and Dimitris Avramopoulos, a member of parliament in Greece, and visited the Port of Piraeus operated by the China COSCO SHIPPING Corporation Limited.

A THRIVING AND UNITED COMMUNITY

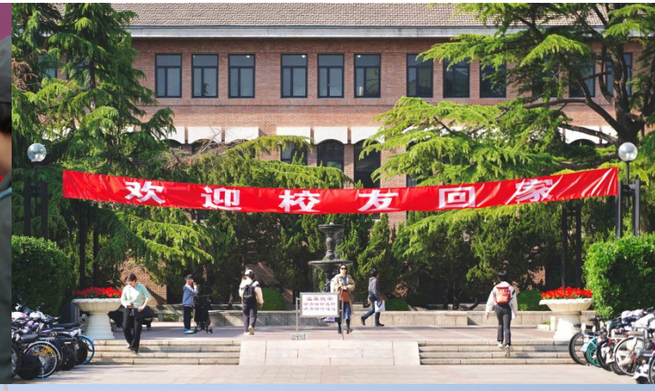
Tsinghua's 2025 was a year of unity and achievement. From festivals that showcased creativity and diversity to championship victories that inspired pride, these moments strengthened the bonds among students, faculty, and alumni. Together, they cultivated a vibrant sense of belonging, and deepened connections within the Tsinghua community.

Tsinghua takes part in China's V-Day commemorations

On September 3, a grand commemorative meeting to mark the 80th anniversary of the victory of the Chinese People's War of Resistance against Japanese Aggression and the World Anti-Fascist War concluded. During the commemorations, faculty, students, and alumni of Tsinghua University have tackled numerous technical challenges in areas including UAV design, navigation, control, and intelligent driving, and have also contributed to the planning and design of urban activity landscapes in Beijing. Their involvement extended beyond technological and design contributions, as a total of 189 students and faculty members from Tsinghua University participated in the V-Day commemorations as either choir members or volunteers.

114th Anniversary of Tsinghua

On April 27, Tsinghua University hosted alumni from around the world for a weekend of reunions and festivities. The event featured various exhibitions, performances, and activities organized by different departments of the University.



AADTHU design team praised for Asian Winter Games' lilac-shaped cauldron and more

On February 7, amid ice and snow, a blazing flame atop a newly unveiled cauldron marked the opening of the 9th Asian Winter Games in Harbin, Heilongjiang province. The torch tower was designed by teachers and students from the Academy of Arts & Design, Tsinghua University (AADTHU). This structure has become a new landmark at the Harbin Ice and Snow World Park on Sun Island. The AADTHU team was also behind the design of the Asian Winter Games' emblem, mascots and more.

Tsinghua wins 16th consecutive title in track and field

The 63rd Beijing University Students Track and Field Games, recently held at Beijing Information Science & Technology University, witnessed four days of fierce competition among 87 universities.

The Tsinghua University Track and Field team secured championships in the men's, women's, and team total score categories, with a remarkable total of 493 points-24 gold, 18 silver and nine bronze medals. Their consistent excellence secured their 16th consecutive title. In addition, they were awarded the Sportsmanship Award.

The annual competition, also the largest student sports event in Beijing, has been held for 63 years, with Tsinghua securing the team championship on 42 occasions.

Where cultures meet: A 2025 Global Village recap

On May 24, Tsinghua University welcomed the long-awaited annual Global Village, which has been one of its largest and most popular cross-cultural events since its inception in 2009. Nearly 8,000 participants gathered at the Zijing Sports Field, filling the atmosphere with excitement and enthusiasm. Under the theme of "Echoes of the World," the event provided a platform for embracing diversity and fostering cultural exchanges. This year, it featured three main sectors: Exhibition Booths, the Main Stage, and Interactive Booths, each offering a unique visitor experience.

Tsinghua's Student Cluster Team claims championship at ISC25

On June 12 (local time), the Tsinghua University Student Cluster Team emerged victorious at the ISC 2025 Student Cluster Competition after securing the overall championship and the Highest LINPACK Benchmark Score award. This marks Tsinghua's 19th win across the three major international student supercomputing competitions and their 8th championship in the ISC competition since its inception in 2012. The competition was held at the Congress Center Hamburg, Germany. The ISC25 competition, co-organized by the HPC-AI Advisory Council and ISC Group, stands as one of the world's top three student supercomputing contests alongside SC and ASC, featuring 10 teams from 10 countries or regions in the in-person finals.

2025 Graduation Exhibition of the Academy of Arts & Design held

The Class of 2025 Graduation Exhibition of the Academy of Arts & Design, Tsinghua University, was held at the Tsinghua University Art Museum this summer, showcasing the works of over 170 postgraduate students and more than 260 undergraduates. For the first time, the graduation works were presented in a national first-class museum, fully open to the public. The postgraduate exhibition ran from May 24 to June 1, while the undergraduate exhibition took place from June 7 to 19.

Tsinghua University claims historic first title at WEUFT

In July, the Tsinghua University men's football team won the championship at the 2025 World Elite University Football Tournament (WEUFT), held in Xi'an. The tournament brought together teams from eight prestigious universities worldwide, including the University of Oxford and the University of Cambridge. The victory marked a historic first-ever title in the tournament for Tsinghua University.

Tsinghua wins inaugural 5v5 soccer championship at World Humanoid Robot Games

On August 17, the 2025 World Humanoid Robot Games — the world's first comprehensive sports event featuring humanoid robots as competitors — wrapped up. In the 5v5 soccer final, Tsinghua University's Hephaestus Team edged out Germany's HTWK Robots + Nao Devils with a 1-0 victory, claiming the inaugural championship in a 5v5 humanoid robot soccer match. From August 15 to 17, various teams competed in 487 matches across 26 events, showcasing the latest advances in humanoid robots' intelligent decision-making and coordinated movement. Several teams from Tsinghua University competed in the 5v5 soccer tournament, including the Hephaestus Team and the Tsinghua Power Intelligence Team. Tsinghua Power Intelligence eventually advanced to the global top eight.

Tsinghua triumphs at 19th "Challenge Cup"

On November 3, the 19th "Challenge Cup" National College Student Extracurricular Academic and Technological Works Competition concluded at Nanjing University. The team from Tsinghua University achieved a remarkable feat by entering six projects in the finals and winning five top prizes and one first prize. In the special Leaderboard Challenge competition, four projects claimed the Champion title, while seven projects secured top prizes. In addition, Tsinghua University was awarded the Excellence Cup for the eighth time, maintaining its record for the most championships in the competition's history. This year's "Challenge Cup" attracted over three million students from more than 2,700 universities nationwide. The competition comprised 10 academic categories, including Mechanics and Control, Information Technology, Mathematics and Physics, Life Sciences, Energy and Chemical Engineering, Economics, Politics, Culture, Society, and Ecological Civilization Development.

Stage of cultures: Tsinghua Gala Night 2026

On December 19, the stage curtains unveiled the 2026 Tsinghua University International Students and Scholars' Gala Night at the New Tsinghua Xuetang. Once again, this annual tradition continues to highlight the rich cultural diversity at Tsinghua. The breathtaking performances encompassed more than 240 performers and volunteers across 27 different countries.

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