

TSINGHUA NEWSLETTER



2024 ISSUE 3



P01 Tsinghua holds Commencement Ceremony for Undergraduate Students

P07 12th World Peace Forum opens in Beijing

P09 Tsinghua inaugurates Department of Statistics and Data Science

P10 Qiu Yong leads delegation to Japan, Japanese Prime Minister Fumio Kishida meets with Qiu Yong



CONTENTS

FOCUS

- P01 Tsinghua holds Commencement Ceremony for Undergraduate Students
- P04 Tsinghua holds Commencement Ceremony for Graduate Students
- P07 12th World Peace Forum opens in Beijing
- P09 Tsinghua inaugurates Department of Statistics and Data Science
- P10 Qiu Yong leads delegation to Japan, Japanese Prime Minister Fumio Kishida meets with Qiu Yong
- P13 Qiu Yong leads delegation to Indonesia
- P15 Tsinghua holds opening ceremony and delivers first class to welcome freshmen
- P19 Tsinghua Professor Li Yadong wins Future Science Prize
- P20 Tsinghua holds opening ceremony and delivers first class to welcome incoming graduates

GLOBAL ENGAGEMENT

- P24 2nd Dialogue between Chinese and Foreign Librarians held in Beijing
- P25 The Confucius-Aristotle Symposium 2024 held in Beijing
- P27 The 2024 International Congress of Basic Science opens in Beijing
- P29 Tsinghua Summer Fellowship Program kicks off
- P31 2nd Tsinghua Global Youth Dialogue opens
- P33 3rd Tsinghua Higher Education Forum Opens
- P35 Fourth Global Youth Summit on Net-Zero Future held
- P40 China-Latin America Roundtable celebrates cultural exchange

RESEARCH

- P41 Tsinghua's super microscope set to broaden human understanding

TSINGHUA COMMUNITY

- P48 Tsinghua University men's basketball claims 26th CUBAL National Championship
- P49 Tsinghua professor Zhang Jie wins 2024 RIBA International Awards for Excellence
- P50 Renowned astronomer joins Tsinghua Department of Astronomy
- P50 Tsinghua research team receives accolades in 47th International ACM SIGIR Conference
- P52 Professor Kang Chongqing receives the Peter W. Sauer Outstanding Power Engineering Educator Award

DIVERSE CAMPUS

- P53 Tsinghua University holds 2024 Graduation Marathon
- P54 A Cultural and Intellectual Feast: A Thousand International Students Gather at Tsinghua University



FOCUS

Tsinghua holds Commencement Ceremony for Undergraduate Students

Tsinghua University hosted its 2024 Undergraduate Commencement Ceremony on the morning of June 29. The event was attended by university leaders, with Vice President Peng Gang presiding over the ceremony.

During the ceremony, 3,685 undergraduates received their bachelor's degrees. Additionally, 46 students were awarded second bachelor's degrees, while 267 students earned minor bachelor's degrees.

Secretary of the CPC Tsinghua University Committee, Qiu Yong, announced the commendation of outstanding classes and excellent graduates, expressing his heartfelt congratulations to all recognized individuals.

Qiu Yong shared his hopes and well-wishes with the graduates. As they now prepare to embark on new journeys and contribute to the nation's future, he encouraged them to always remember their roots; remain firmly connected with the soil that has nurtured them and the land beneath their feet. He urged them to not only study diligently but also to engage in practical learning, growing

both personally and academically through real-world experiences.

He emphasized the importance of staying true to themselves and safeguarding the beautiful homeland for the people. Qiu Yong advised the graduates to uphold a humble attitude, learn from everyday experiences, and pursue a state of selflessness, striving to be worthy of the people's trust. He also encouraged them to cultivate a deep appreciation and respect for the rich traditional Chinese culture, drawing wisdom and spiritual nourishment from the profound history and civilization of our great nation, continuously accumulating the strength needed for personal growth.

Li Luming, Tsinghua President and Chairman of the Academic Degrees Evaluation Committee, delivered a speech emphasizing the immense power of faith. He stated that faith, when it transcends personal gains and losses, can accomplish great things. Faith is demonstrated through actions and further elevated through its transmission to others.



Qiu Yong announces the commendation of outstanding classes and excellent graduates, and conveys expectations and well-wishes to the students.



Li Luming delivers a speech.

He noted that dreams and great causes are never easily realized, and they require continuous and strenuous efforts. By starting with oneself, excelling in every small task, and seizing every moment, one's actions can become firm and lasting under the guidance of faith. This faith will shine even brighter as it is passed on to others.

He called on everyone to remember the school motto of "Self-discipline and Social Commitment," promote the Tsinghua spirit of dedication to the country and pursuit of excellence, and integrate their personal aspirations with the great mission. He encouraged graduates to uphold the school ethos of "Actions Speak Louder Than Words", contributing through actions to the great cause of building a strong nation and achieving national rejuvenation, thus writing an unforgettable chapter of their youth.

"Tsinghua is the harbor where your dreams set sail and your eternal home. Your alma mater will always care for you. Congratulations on your graduation!" Li Luming said.

Zhang Fan, a graduate of Tsinghua School of Environment and researcher of the Institute of Tibetan Plateau Research, Chinese Academy of Sciences, shared in her speech that her days at Tsinghua will forever be among her warmest memories. She said that she will always remember the school motto, "Self-Discipline and Social Commitment," and is committed to diligently handling every small task, continuously accumulating professional knowledge, enhancing practical skills, and achieving steady growth. She encouraged the graduates to contribute their passion and strength to the prosperity and growth of the motherland.



University leaders award badges of honor to the excellent graduate representatives.



Peng Gang presides over the ceremony.

Zhang Fan delivers a speech.

Cui Jiajun speaks at the ceremony.

Cui Jiajun from Weiyang College, speaking as the representative of the undergraduate students, shared his experience at the ceremony. He highlighted how his studies have laid a strong foundation and how his research explorations have taught him the importance of perseverance.

"Looking ahead, only through hard work can we shoulder the mission of our times," said Cui. He expressed his hope that graduates will always stay true to their original aspirations and make

meaningful contributions to building a great country and achieving national rejuvenation.

Following the conclusion of the ceremony, university leaders proceeded to the Gymnasium to continue with the Degree Conferment Ceremony. The graduation ceremony was broadcast live in both Chinese and English on the "Rain Classroom" platform, allowing graduates who were not physically present on campus and their family members to attend online.



Qiu Yong confers degree certificates to the graduates.



Li Luming confers degree certificates to the graduates.



Graduates celebrate following the Commencement Ceremony.



Tsinghua holds Commencement Ceremony for Graduate Students

Tsinghua University hosted its commencement ceremony to honor the graduate class of 2024 on June 30.

Leaders of the University attended the ceremony. Tsinghua Vice President Jiang Peixue presided over the ceremony.

During the ceremony, 3,608 graduates were conferred doctoral degrees, and 6,667 graduates were awarded master's degrees.

Secretary of the CPC Tsinghua University Committee Qiu Yong announced the decision to commend the excellent PhD and Master's graduates, expressing his expectations and well-wishes for the students. "Dear students, today you are about to embark on a new journey in life. On this challenging yet infinitely scenic path, only through belief, character, and hard work can you steadfastly pursue lofty life goals," he said.

Qiu Yong added that he hopes graduates will stay true to their original aspirations, drawing strength from their beliefs to confront life's challenges and pursue lofty ideals. He encouraged them to cultivate self-discipline, uphold integrity, value

moral principles, and maintain moral excellence. He urged them to actively engage in practical work, remain passionate, strive for the honorable cause of serving the motherland, and achieve great accomplishments.

Tsinghua President Li Luming delivered a speech titled "Confronting the Era of Change and Pursuing Timeless Values." On behalf of the University, he extended his warm congratulations to the graduates who have successfully completed their studies at the graduate level and are about to embark on a new chapter in their lives.

Li Luming said that, at present, mankind is in an era of major development as well as profound transformation and change. Changes in the world order, economy, society, science and technology, and ideologies and cultures profoundly impact everyone's life, making the future full of uncertainties. However, there are always timeless values worth pursuing that allow us, regardless of our circumstances or the difficulties we face, to maintain inner fulfillment and determination. These values inspire us to strive for a life of greater heights, broader horizons, and deeper significance.



Qiu Yong announces the commendation of excellent PhD and Master's graduates, and conveys expectations and well-wishes to the students.



Li Luming delivers a speech.

Li also noted that cultivating a noble character and seeking true knowledge are enduring values worth pursuing. The foremost priority in life and work is to cultivate virtue and strive for self-improvement. A sense of devotion to one's country and humanity are also timeless values worth pursuing. Aligning personal development with national needs and societal progress has been the life choice made by generations of Tsinghua graduates. Pursuing timeless values requires both seizing the present and maintaining a long-term commitment. Though a person's life is brief, the impact and value of that life can be everlasting.

Li hopes that the graduates will cultivate virtue, serve their country, and embrace the world as they face an era of change. He urged them to pursue timeless values with a sense of urgency and responsibility, seizing the moment. He also encouraged them to shine brightly through continuous effort and sincere dedication in their youth.

Alumnus Pan Shilong, who graduated from Tsinghua Department of Electronic Engineering and is now the executive dean of the College of Electronic and Information Engineering at Nanjing University of Aeronautics and Astronautics as well as the director of the National Key Laboratory of Microwave Photonics, shared three kinds of love in his speech. First, love for one's work. Only through passion can one endure long years and achieve brilliant results. Second, self-reliance and self-love. Tsinghua's spirit embodies facing challenges with wisdom and courage and believing in one's infinite potential. Third, love for the country. He reminded everyone that generations of Tsinghua alumni have shown that it is our duty to serve the nation's needs and aspirations.

Chen Qiang from the Tsinghua Department of Chemical Engineering, as the representative of graduate graduates, gave a speech titled "Three Moments at Tsinghua." He recounted



Jiang Peixue presides over the ceremony.



Pan Shilong delivers a speech.



Chen Qiang speaks at the ceremony.

stories of growth, perseverance, and decision-making, establishing a steadfast commitment to scientific research, cultivating the courage to overcome challenges, and affirming a dedication to teaching and nurturing. Chen expressed his gratitude to mentors and peers and announced his future commitment to teaching and research at Southwest University, aiming to contribute to the development of higher education and technology in the western regions of the country. He urged his fellow graduates to cherish this moment, embody

the Tsinghua spirit, and shine brightly for the nation and its people.

Following the conclusion of the ceremony, university leaders proceeded to the Gymnasium to continue with the Degree Conferment Ceremony. The graduation ceremony was broadcast live in both Chinese and English on the "Rain Classroom" platform, allowing graduates who were not physically present on campus and their family members to attend online.



Qiu Yong confers degree certificates to the graduates.



Li Luming confers degree certificates to the graduates.



University leaders award badges of honor to the excellent graduate representatives.



The Degree Conferment Ceremony venue

12th World Peace Forum opens in Beijing



Chinese Vice President Han Zheng addresses the opening ceremony of the 12th World Peace Forum in Beijing, capital of China, July 6, 2024.

The 12th World Peace Forum, organized by Tsinghua University and co-organized by the Chinese People's Institute of Foreign Affairs, opened in Beijing on July 6. Chinese Vice President Han Zheng delivered a keynote speech at the opening ceremony.

Themed "Improving Global Security Governance: Justice, Unity, and Cooperation," the forum has drawn more than 400 attendees including former foreign dignitaries, senior diplomats, and experts and scholars from over 80 countries. Areas of discussion include how to achieve common ground, promote new cooperation, restore stability in international order, and safeguard world peace in the context of de-globalization. Secretary of the CPC Tsinghua University Committee Qiu Yong attended the opening ceremony.

Chinese Vice President Han Zheng addressed the opening ceremony of the 12th World Peace Forum on Saturday, calling for joint contributions to improving global security governance, safeguarding fairness and justice, and promoting international security cooperation.

Noting that the world is undergoing profound changes unseen in a century, Han said that China, as a permanent member of the UN Security

Council and an important member of the Global South, will always stay on the right course in the changing world. He put forward three proposals.

First, adhering to peaceful coexistence. This year marks the 70th anniversary of the Five Principles of Peaceful Coexistence, Han said, adding that China will always adhere to its foreign policy purposes of safeguarding world peace and promoting common development, and inject greater stability and certainty into the world.

Second, advocating common security. China advocates a concept of common, comprehensive, cooperative and sustainable security, and will actively explore and practice solutions with Chinese characteristics to address hotspot issues and strive to solve global security challenges, Han said.

Third, promoting openness and inclusiveness. To promote world peace and development, all countries should uphold the concept of openness and inclusiveness. China is ready to work with other countries to jointly safeguard world peace and stability, Han said.

The Chinese nation loves peace, and China has always been a builder of world peace, a contributor to global development and a defender of the international order, he said.



Li Luming delivers a welcome speech.

He expressed the hope that all participants will fully exchange views, build consensus, and contribute wisdom and strength to improving global security governance, safeguarding fairness and justice, and promoting international security cooperation.

Li Luming, president of Tsinghua University and chairman of the World Peace Forum, extended a warm welcome to all the guests. He said since its inception in 2012, the World Peace Forum has become an annual event widely attended by global strategic security experts, playing a positive role in promoting exchange and cooperation in the international security field.

As the host of the forum, Tsinghua University is committed to cultivating globally competent talents, producing innovative results with global influence, and leveraging the university's unique role in promoting cultural exchange and mutual understanding, Li added.

He said he hopes participants can engage in frank discussions on peace, offering valuable insights to strengthen communication, understanding, and cooperation in the international community. Li also



Dominique de Villepin delivers a speech.

reaffirmed Tsinghua University's commitment to working with global peers to address challenges and advance global security cooperation, contributing to a community with a shared future for mankind.

At the plenary session themed "Towards Peaceful Coexistence and Common Security" held in the morning following the opening ceremony, former Japanese Prime Minister Yukio Hatoyama, stressed that as international relations become more complex and challenging, direct, honest, and constructive dialogue is increasingly necessary. He also emphasized the importance of acknowledging differences in ideas and systems, fostering mutual understanding and assistance.



Yukio Hatoyama delivers a speech.

Dominique de Villepin, former Prime Minister of France, highlighted that peace can be deeply "rooted in our common humanity," stating that Cold War or bloc confrontations are not inevitable outcomes. He underscored the urgent need to predict, control, and resolve various crises. De Villepin called for strengthened international cooperation, enhanced diplomatic trust, and a steadfast commitment to peace, development, and justice to lay the foundation for a better world.

The forum comprises four major plenary sessions and 18 panel discussions and will touch on topics such as the role of middle powers in preserving world peace, equity, and justice, major power responsibility for peace and security, and the Global South's role in maintaining peace.

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.

Tsinghua inaugurates Department of Statistics and Data Science



Inauguration ceremony of the Department of Statistics and Data Science

Tsinghua University established the Department of Statistics and Data Science on July 10. This is an important initiative by Tsinghua to optimize its disciplinary layout and serve national strategies.

The new department will be dedicated to developing statistical ideas and methods with significant social impact. Leveraging Tsinghua's strengths in engineering and business, it aims to advance statistical methods in areas such as internet technology, big data analysis, and artificial intelligence. It will also focus on cultivating top-tier talent in statistics and data science.

Tsinghua University President Li Luming expressed the hope that the department will continuously enhance its capabilities in fundamental research and original innovation, mobilize high-quality resources to make breakthroughs in core big data technologies, comprehensively improve the quality of independent talent cultivation, and strive to become a world-class discipline in statistics and data science.

A seminar on statistics and data science development coincided with the inauguration ceremony.

Over a hundred experts, scholars, and representatives from the National Bureau of Statistics, the Chinese Mathematical Society, the Institute of Mathematical Statistics, Harvard University, the University of Pennsylvania, Princeton University, Peking University, and other institutions and associations attended the event.

Tsinghua's statistics discipline has a strong foundation. Over the years, it has been the incubator of numerous outstanding statisticians. Looking forward, the department will adopt a global perspective, benchmark itself against world-class standards, and strive to become a renowned integrated academic hub for industry, academia, and research both domestically and internationally.

Qiu Yong leads delegation to Japan, Japanese Prime Minister Fumio Kishida meets with Qiu Yong



Japanese Prime Minister Fumio Kishida (right) meets with Qiu Yong, Secretary of the CPC Tsinghua University Committee.

Qiu Yong, secretary of the CPC Tsinghua University Committee, led a delegation to Japan from July 27 to August 1. He engaged in in-depth discussions with representatives from Japan's political, business, and academic fields.

Japanese Prime Minister Fumio Kishida met with a delegation led by Qiu Yong at the prime minister's office on August 1.

During his meeting with Natsuo Yamaguchi, Leader of Japan's Komeito Party, Qiu expressed gratitude for his continued support of Tsinghua. He looks forward to further strengthening people-

to-people exchanges and cultural interactions between the two sides. Yamaguchi praised Tsinghua's role in promoting Sino-Japanese friendship and affirmed that the New Komeito Party would continue to build more friendly connections between the two countries.

During the visit, Qiu met with Shuhei Kishimoto, Wakayama prefecture governor, Kōichi Shiota, Kagoshima prefecture governor and Yuriko Koike, Tokyo governor. He

introduced the latest development of Tsinghua and its global strategy, discussing with them deepening cooperation in areas such as talent cultivation, education, science and technology, culture, industrial innovation, and sustainable development. They also exchanged views on promoting student-scholar exchanges to enhance bilateral cooperation.

An exchange meeting between Tsinghua and the Japan Business Federation (Keidanren) was held in Tokyo on July 30. The meeting was attended by Koji Nagai, vice chair of Keidanren and chairman of the board of directors, Nomura Holdings, Inc., Yasuhiro Sato, vice chairman of Keidanren and chairman of



Qiu (left) meets with Natsuo Yamaguchi, leader of Japan's Komeito Party.



Qiu Meets with Kōichi Shiota (right), the governor of Wakayama prefecture.



Qiu meets with Tokyo Governor Yuriko Koike (right).

development and reform from academic and industrial perspectives.

Qiu and Masanori Togawa, chairman of Daikin Industries, along with Takashi Matsuzaki, president of the company, witnessed the signing of a memorandum of understanding to deepen cooperation between the two sides. He also held discussions with Fujio Mitarai, Canon's chairman and CEO, Motoya Okada, AEON's chairman and Shigeru Hayakawa, Toyota Motor Corporation's vice chairman of the board of directors, on the role of universities and enterprises in innovation and the acceleration of cultivating new driving forces.

the China Committee, and Senior Advisor of Mizuho Financial Group, and over 50 representatives from Keidanren member companies.

Qiu expressed in his speech that Tsinghua University has always been committed to reform and sustained efforts to deepen international exchanges and cooperation, constantly improving the quality and caliber of its educational programs. Standing at a new starting point, Tsinghua University will uphold its motto of Self-Discipline and Social Commitment, consciously prioritize reforms, consistently promote the opening up of high-level education, and further advance the integration of educational reform, scientific and technological advancements, and social development. He looks forward to further strengthening mutually beneficial cooperation with various sectors in Japan and continuing to contribute to the consolidation of social and public support for the development of Sino-Japanese relations. During the meeting, Li Jinliang, professor at the School of Economics and Management of Tsinghua University, Ni Zhengdong, Tsinghua alumnus, founder and chairman of Zero2IPO Group, shared insights on China's economic



Qiu addresses the exchange meeting.

To promote the Sino-Japanese educational cooperation and academic exchanges, Tsinghua reached agreements with several Japanese universities during this visit. These included a student exchange agreement with the University of Tokyo, the establishment of a World Peace and Development Research Center with Soka University, the co-establishment of an academic exchange center with Chuo University, and the joint hosting of the Koyasan Forum with Koyasan University. A memorandum of understanding was



Japan Business Federation (Keidanren) holds a meeting to exchange views.



Qiu engages in discussions with Fujio Mitarai, Canon's chairman and CEO.



Qiu Yong signs Student Exchange Agreement with University of Tokyo president Teruo Fujii (left) in August, 2024.



Qiu meets with Soka University president Masashi Suzuki (left) in August, 2024.



Qiu signs a memorandum of understanding with Ryusho Soeda (left), president of Koyasan University.

also signed with Kagoshima University to further expand pragmatic cooperation between Tsinghua and Japanese universities. Qiu also attended the opening ceremony of the Arts and Crafts Artworks Exhibition of the Academy of Arts and Design, Tsinghua University, in Wakayama Prefecture, and participated in the establishment ceremony of the "Hiroko Sakamoto Library" at Tsinghua. The library is named after Professor Hiroko Sakamoto, an eminent scholar in Chinese philosophy and intellectual history, whose family donated her extensive collection of books to Tsinghua.

The "Tsinghua Sun Yat-sen School" is a training program for top executives of leading companies in Japan, organized by the Tsinghua Japan Research Center. The program aims to enhance participants' understanding of China's economy, politics, and culture, and to promote dialogue between business leaders from both countries. Qiu, together with Wu Jianghai, China's Ambassador to Japan, Shinya Katanozaka, president and CEO of ANA Holdings Inc., and Shinji Fukukawa, president of Toyo University and former vice-minister of Japan's

Ministry of Economy, Trade, and Industry, attended the "Tsinghua Sun Yat-sen School" program exchange summary meeting on July 31. They engaged in discussions with program graduates, student representatives, and Tsinghua alumni in Japan, focusing on deepening mutually beneficial cooperation and promoting stable and long-term Sino-Japanese relations.



Qiu takes a group photo with ambassador Wu Jianghai and Shinya Katanozaka, president and CEO of ANA Holdings Inc



Chinese and Japanese guests appreciate the arts and crafts masterpieces from Tsinghua University's Academy of Arts & Design on 31 July, 2024.

Qiu and his delegation also visited the Chinese Embassy in Japan, where they met with Ambassador Wu Jianghai and former Japanese Prime Minister Yasuo Fukuda and explored the deepening of cooperation and exchanges between Tsinghua University and various sectors in Japan.

The visit included participation from representatives in Tsinghua including the School of Economics and Management, the Department of Foreign Languages and Literature, the Academy of Arts & Design, the Research and Development Affairs Office, the Office of International Affairs, the Tsinghua University Library, the Tsinghua University Education Foundation, and the Research Center for Japanese Studies.

Qiu Yong leads delegation to Indonesia



Qiu Yong (second from left) and Luhut Binsar Pandjaitan (second from right), Indonesia's coordinator for cooperation with China and coordinating minister of maritime affairs and investment, witness the signing of the cooperation agreement.

between his country and the University, pushing for deeper and more practical cooperation.

Witnessed by Qiu and Luhut, Tsinghua and the Indonesia Endowment Fund for Education signed a cooperation agreement focusing on the cultivation of master's students in finance.

During his meeting with Budi Gunadi Sadikin, health minister of Indonesia, Qiu introduced the progress Tsinghua has made in advancing the layout of cutting-edge disciplines, such as AI.

They also discussed expanding cooperation in research innovation and scholar exchanges. The two parties signed a memorandum of understanding (MOU) focused on leveraging AI to enhance the development of medicine and healthcare.

Qiu met with Hasanuddin Haliman, vice-rector of Universitas Terbuka, as well as Paulina Pannen, founding chairman of the Indonesia Cyber Education Institute (ICE Institute), and Rahayu Dwi Riyanti, Chairman of ICE Institute.



Qiu (right) and Budi Gunadi Sadikin (left), the minister of health of Indonesia, sign a memorandum of understanding.

Qiu Yong, secretary of the CPC Tsinghua University Committee, led a delegation to Indonesia from August 2 to 3.

Qiu met with Luhut Binsar Pandjaitan, Indonesia's coordinator for cooperation with China and coordinating minister of maritime affairs and investment, on Aug 2 in Jakarta, the capital of Indonesia.

He hailed the enthusiasm of Luhut, a friend of Tsinghua University, in promoting the friendship between the two countries and in fostering cooperation between Tsinghua and Indonesia over the years.

Qiu conveyed his willingness to fully implement the important consensus reached between the heads of state of both countries and to strengthen cooperation with Indonesia, an important partner country of Tsinghua, thereby contributing to an even brighter future for bilateral relations. Areas of cooperation include talent cultivation, educational development, and cutting-edge technologies like artificial intelligence (AI).

Affirming the achievements of Tsinghua's development, Luhut expressed his commitment to continuing to promote exchanges and interactions



Global MOOC and Online Education Alliance and Indonesia Cyber Education Institute sign an agreement.

They witnessed the signing of a MOU between the Alliance and the ICE Institute, aiming to further promote the integration of global higher education resources, innovative ideas, and advanced information technologies in Indonesia within the framework of the Alliance.

The Global MOOC and Online Education Alliance was initiated by Tsinghua and co-founded by 17 universities and three online education institutions worldwide.

It aims to promote innovation in educational concepts, models, and technologies, and to advance equitable and inclusive lifelong education. In December 2023, the Alliance expanded for the first time to include three new members, with ICE Institute being one of them.

On August 3, Qiu met with Airlangga Hartarto, Indonesia's coordinating minister for economic



Qiu takes a photo with Airlangga Hartarto (third from left), Indonesia's coordinating minister for economic affairs, and Cherie Nursalim (second from right), the co-founder of the United in Diversity Foundation and vice-chairman of GITI Group.

affairs, and Cherie Nursalim, the co-founder of the United in Diversity Foundation and vice-chairman of GITI Group. They discussed the future development of the Tsinghua Southeast Asia Center (Tsinghua SEA).

The Tsinghua SEA was founded in 2018 on Kura Island in Bali, Indonesia, and was officially opened in 2023. The center is based in Indonesia and aims to reach out to Southeast Asia to conduct talent training and promote cultural and academic exchanges.

Qiu and his delegation also met with Mochtar Riady, founder and chairman of Lippo Group, to express their gratitude for his long-term support for Tsinghua. They also visited Sinar Mas Group, where they, along with the group's Chairman and Chief Executive Officer Franky O.Widjaja, witnessed the signing of a MOU on cooperation in such areas as education and training, and AI development.



Qiu (left) engages with Mochtar Riady (right), founder and chairman of Lippo Group.



Qiu (second from left) and Franky O.Widjaja (second from right), chairman and chief executive officer of the Sinar Mas Group, witness the signing of the memorandum of understanding.

Tsinghua holds opening ceremony and delivers first class to welcome freshmen

Tsinghua University held an opening ceremony to welcome its incoming undergraduates on August 15. More than 3,000 undergraduates embarked on a new journey at Tsinghua in 2024.

Leaders of the University attended the ceremony. Tsinghua Vice President Peng Gang presided over the ceremony. Qiu Yong, secretary of the CPC Tsinghua University Committee, delivered the first class to the new undergraduate students.

At the opening ceremony, a special segment featured the presentation of Tsinghua University badges to new students. Qiu Yong pinned a Tsinghua badge for an undergraduate student representative.

Tsinghua University President delivered a speech. In his remarks, Tsinghua University President Li Luming extended his heartfelt congratulations and warm welcome to incoming freshmen on behalf of teachers, students, and staff. He said that as

students of Tsinghua University in the new era, they are at a crucial juncture in the great rejuvenation of the Chinese nation. Therefore, they must establish themselves with strong moral character, broaden their horizons and outlook on life, help others, and make the most of their youth. It takes strong moral character to be forgiving of others while being strict with oneself. By being disciplined, accepting others, ready to learn from others' strengths, and skilled at making amends for their own shortcomings, Li hopes that the freshmen will contribute to the creation of a harmonious, inclusive, and positive society.

Having a strong moral character also necessitates a broad mindset—interacting with others openly and without reservations. Li hopes the freshmen will have the virtues of generosity, consistency in words and deeds, fearlessness and selflessness, purity and transparency, and a sincere sense of patriotism at all times.



Qiu Yong (right) pins a Tsinghua badge for a new student representative.



Li Luming addresses the ceremony.

With morality as the foundation and talent held to be of importance, only those who excel in both virtue and ability can shoulder great responsibilities. Li hopes the freshmen will cultivate their character and enhance their abilities, striving to excel in both ideological and professional aspects, achieving well-rounded development, and becoming socialist builders and successors with ideals, skills, and a sense of responsibility.

Li Luming encourages the freshmen to actively participate in the great cause of building a great country and rejuvenating the nation, allowing their youth to blossom brilliantly in the pursuit of progress for the country, the nation, the people, and humanity.

Professor Liang Xidong from the Department of Electrical Engineering and dean of Tsinghua's Weiyang College, on behalf of all the faculty members, delivered a speech encouraging students to actively communicate and engage

with their teachers, carry forward Tsinghua's fine traditions, and align their personal growth with the nation's development.

Zhong Tianyu, president of the Tsinghua Student Union, reflected on his four years of university life. He reminisced about the precious friendships, excellent academic atmosphere, and sincere patriotism that left the deepest impression on him. He encouraged the freshmen to embody genuine sincerity in their interactions, uphold integrity in their studies, and pursue pure dedication in their careers.

Shen Chenxin, a freshman representative and a student of Tsinghua's Xinya College, shared his growth experience and feelings about coming to the Tsinghua campus. He aims to carry forward Tsinghua's spirit of patriotism, dedication, and pursuit of excellence in the coming years of his university life, contributing to the building of a great country and the rejuvenation of the Chinese nation.



Liang Xidong delivers a speech.



Zhong Tianyu delivers a speech.



Shen Chenxin delivers a speech.



Qiu Yong delivers the first class to freshmen.

Chinese path to modernization, providing direction for the development of the Party and the country. As we embarked on a new journey, the University convened meetings to deeply study, promote, and implement the spirit of the session. The University aims to align closely with national strategic needs and meticulously plan major reform measures to advance its pursuit of high-quality development.

"The mission of comprehensively advancing the great rejuvenation of the Chinese nation on all fronts through Chinese path to modernization falls upon the new generation of Chinese youth. It is a prosperous era for youth, and it is the right time to strive." Qiu Yong emphasized that this year marks the 75th anniversary of the founding of the People's Republic of China, an era full of hope and challenge. As students are at a new stage in their lives and at an important moment in the development of Tsinghua University, they should consciously align their personal growth with the country's development and become witnesses, pioneers, and builders of the new era.

Qiu Yong reviewed Tsinghua's history of more than a century, and emphasized that Tsinghua University has always been in sync with the times and the country since its inception. Ahead of the 110th anniversary of the founding of the University, General Secretary Xi Jinping visited the University and fully affirmed Tsinghua's achievements and

Following the ceremony, Qiu Yong delivered the first class of the semester for the 2024 undergraduate students on the theme of "Establishing ambitious ideals, continuing glorious traditions, and contributing youthful strength to the building a modern socialist country in an all-round way."

Qiu Yong extended a warm welcome to the new undergraduate students on behalf of the University. He noted that the third plenary session of the 20th Central Committee of the Communist Party of China made systematic strategic plans for further deepening reforms and advancing the



The first class in the new term

excellent traditions over the past century. Qiu Yong pointed out that Tsinghua will keep in mind the instructions, seize the opportunity, adhere to the principle that "first-class undergraduate education is the foundation of a first-class university," and strive to open up a new situation of high-quality development for world-class universities with Chinese characteristics.

As the students are about to embark on a new journey at Tsinghua University, Qiu Yong expressed his hope that they would inherit the University motto of "Self-discipline and Social Commitment", practice the school spirit of "Actions Speak Louder Than Words," carry forward the spirit of patriotism,

dedication, and pursuit of excellence, and become qualified Tsinghua people. He encouraged the students to keep in mind President Xi Jinping's instructions, live up to their youth, write a magnificent chapter in their lives in this great era, and contribute their youthful strength to building a modern socialist country in an all-round way.

Related department, school and college heads, award-winning faculty representatives, and newly appointed faculty members attended the opening ceremony. The opening ceremony is also broadcasted online through the "Rain Classroom" platform. Besides the main venue at the University Gymnasium, 10 venues were set up across campus.

Tsinghua Professor Li Yadong wins Future Science Prize

The Future Science Prize winners were announced on August 16. Professor Zhang Tao, an academician of the Chinese Academy of Sciences from the Dalian Institute of Chemical Physics, and Professor Li Yadong, also an academician of the Chinese Academy of Sciences and a professor in the Department of Chemistry at Tsinghua University, jointly won the Future Science Prize in Physical Sciences. They were recognized for their seminal contributions to the development and application of Single-Atom Catalysis (SAC).

In 2011, Zhang Tao, Li Jun and Liu Jingyue reported the synthesis, characterization, and catalytic properties of a single-atom Pt catalyst embedded in the FeOx substrate. This breakthrough established practical methods for the effective synthesis and rigorous characterization of a solid catalyst with isolated single Pt atoms as the active centers and demonstrated that such catalysts exhibit superior activity and selectivity for CO oxidation. Zhang and his team coined the term "Single-Atom Catalysis (SAC)" and subsequently extended SAC to a variety of metals, supports, and reactions. Zhang's groundbreaking work has since marked a milestone, catalyzing a surge in research efforts aimed at developing SAC for a diverse array of chemical reactions.

Li and co-workers systematically advanced the deterministic and controlled synthesis of single-atom catalysts with structurally-defined morphology and coordination environment of the metal center. These methods enable the large-scale production of single-atom catalysts with high metal loading and uniform structural features, moving Single-Atom Catalysis one step closer to industrial production. The methods developed by Li are widely adapted all over the world for the development of single-atom catalysts with desirable activity and selectivity, significantly broadening the scope and bolstering the impact of SAC in chemical transformation, energy conversion, environmental protection, and materials discovery.



Zhang and Li's seminal contributions to SAC have paved the way for understanding the nature of active sites in supported metal catalysts and controlling the structure of solid catalysts with atomic precision. Their pioneering work has brought SAC to the forefront of heterogeneous catalysis and technology. Furthermore, their innovations have enabled environment-friendly and energy-efficient production of commodity chemicals, such as chloroethylene, acetic acid, and propanol. These advancements highlight how SAC contributes to fostering a sustainable society.

Prof. Li Yadong was born in 1964 in Anhui province. He earned his Ph.D. in 1998 from the University of Science and Technology of China.

Founded in 2016, the Future Science Prize, which includes categories for Life Sciences, Physical Sciences, and Mathematics and Computer Science, has been awarded to 39 scientists.

Tsinghua holds opening ceremony and delivers first class to welcome incoming graduates

Tsinghua University held an opening ceremony on August 23 to welcome its incoming graduates. More than 9,000 students embarked on a new journey at Tsinghua in 2024.

Secretary of the CPC Tsinghua University Committee Qiu Yong, Tsinghua University President Li Luming, and other leaders of the University attended the ceremony. Tsinghua Vice President Jiang Peixue presided over the ceremony. Li Luming delivered the first class to the new graduate students.

At the opening ceremony, a special segment featured the presentation of Tsinghua University badges to new students. Qiu Yong pinned a Tsinghua badge for a graduate student representative.

Li Luming extended a warm welcome to the incoming graduate students on behalf of the

University. In his speech titled "Shouldering the Mission and Advancing the Path of Innovation," he emphasized that innovation is the central theme of graduate studies and life. He pointed out that innovation has always been a crucial force driving social progress. He further noted that self-discipline leads to excellence, and innovation shapes the future. Therefore, Tsinghua students should align their efforts with the country's top priorities. Moreover, he stressed that innovation is the strongest embodiment of resilience in the new era. On the path of innovation, they must forge ahead with determination and courage.

He stated that the relentless pursuit of expanding the boundaries of knowledge and advancing civilization keeps the momentum of innovation alive. He expressed his hope that the students will carry forward Tsinghua's traditions of patriotism, dedication, and the pursuit of excellence. He





Qiu Yong (right), pins a Tsinghua badge for a new student representative.



Li Luming addresses the ceremony.

urged them to aim at the forefront of international academia to develop innovative ideas and focus on national strategic needs to seek innovative propositions.

Furthermore, he stressed that focusing on interdisciplinary integration and maintaining collaboration will broaden the path of innovation. He added that Tsinghua promotes the fusion of Eastern and Western perspectives, the linkage of historical and contemporary knowledge, and the merging of sciences and humanities. These efforts provide platforms for interdisciplinary exchange and international collaboration. By exploring widely, learning from diverse sources, and embracing a global perspective, he hopes

students will broaden their horizons and enhance their innovative capabilities through inclusiveness and mutual learning.

He emphasized that adhering to ethical standards and upholding academic integrity will ensure steady and sustainable progress on the path of innovation. He expressed the hope that students will strictly follow academic regulations, continue the tradition of academic excellence, and let actions speak louder than words, making their steps in innovation more confident and solid.

In addition, he urged students to cultivate a strong academic mindset, hone their skills, and uphold integrity. He encouraged them to excel in innovation, contributing to the great rejuvenation



New Tsinghua Xuetao sub-venue



Tsinghua Shenzhen International Graduate School sub-venue

of the Chinese nation and the building of a community with a shared future for mankind.

Shi Songhai, dean of the School of Life Sciences at Tsinghua, delivered a speech on behalf of all the faculty members. He encouraged students to think independently throughout their academic journey, stay confident and focused, shoulder social responsibilities, and strengthen their commitment to society. He wished they would become who they aspired to be.

Wei Yifan, president of the Tsinghua Graduate Student Union, shared insights from his own experience at Tsinghua. He urged his fellow students to stay humble yet determined, face challenges with focus, make decisions with confidence, and remain committed to their goals. In doing so, he encouraged them to create a meaningful and impactful life story.

Luo Kairong, a doctoral student from the Department of Computer Science and Technology, spoke as a student representative. He shared his excitement about joining Tsinghua and staying committed to upholding the responsibilities that come with being a Tsinghua student. He vowed to make the most of his time here, pushing himself and his peers to achieve their best as part of the new generation of Tsinghua students.

After the opening ceremony, Li Luming delivered the first class to the new students. He noted that in a world experiencing unprecedented changes, students should contemplate how to make greater contributions to addressing global challenges such as climate change and the emerging wave of technological revolution.



Shi Songhai delivers a speech.



Wei Yifan delivers a speech.



Luo Kairong delivers a speech.

As China enters a new era of socialism with Chinese characteristics, the Third Plenary Session of the 20th Central Committee of the Communist Party of China has called for comprehensive reforms in education, science, technology, and talent development. Tsinghua University must meet these higher standards by deepening reforms and contributing to a strong educational system through talent, research, and innovation. In this new era, Tsinghua must uphold its responsibilities and lead the high-quality development of a world-class university with Chinese characteristics.

Li Luming explored Tsinghua's history and traditions from three perspectives: the university's development journey, its culture and heritage, and the choices of Tsinghua students. He emphasized that "Self-Discipline and Social Commitment" has been the guiding principle for Tsinghua students for over a century. The University has always prioritized fostering virtue through education.

Throughout its history, Tsinghua has remained committed to nation-building, scientific research, global leadership, and responsibility. Generations of Tsinghua teachers and students have embodied this spirit, integrating their personal growth with the nation's development and humanity's progress.

He outlined three essential expectations for the students as they begin their new journey: First, they should commit to their studies with diligence, integrity, and ethical standards. Second, they should cultivate a strong academic mindset by understanding the balance between learning and research, embracing uncertainty, and pursuing meaningful work. Third, they should integrate their personal goals with the nation's development, aim high, persevere in long-term efforts, and boldly explore uncharted territories in this transformative era.

Li Luming urged students to take on the responsibilities of their generation and make meaningful contributions toward achieving the second centenary goal, realizing the Chinese Dream, and advancing human civilization.

Tsinghua University held the opening ceremony in a hybrid online and offline format. Besides the main venue at the University Gymnasium, other



Li Luming delivers the first class to the incoming graduates.

venues like New Tsinghua Xuetang and Mong Man Wai Concert Hall were set up across campus. The event was also live-streamed on the "Rain Classroom" platform.

Nearly 1,800 new graduate students from the Tsinghua Shenzhen International Graduate School attended the ceremony online, along with the new students' families, faculty, alumni, and friends from various sectors who support the University's development.



The first class for graduates in the new term

GLOBAL ENGAGEMENT

2nd Dialogue between Chinese and Foreign Librarians held in Beijing

The 2nd Dialogue between Chinese and Foreign Librarians, co-hosted by Tsinghua University and China National Publications Import & Export (Group) Co., Ltd, was recently held in Beijing.

Jin Jianbin, director of Tsinghua University Library, presided over the event, which attracted more than 80 representatives from over 70 libraries and publishers worldwide.

The dialogue, themed "AI FOR SERVICE-AI is Transforming the Library and Publishing Industry", was part of the 30th Beijing International Book Fair (BIBF), which ran between June 19 and 23. It focused on how AI technology profoundly influences

and shapes the future of the publishing industry and libraries. It also delved into the challenges and development opportunities faced by the publishing industry and libraries amidst the current wave of AI development, the application prospects of new technologies in library and research services, and the significant impact of changes in readers' reading habits and preferences on international publishing and library development.

Since its inception in 2023, this event has become a highly anticipated and distinctive academic activity during the BIBF.



The Confucius-Aristotle Symposium 2024 held in Beijing

The Confucius-Aristotle Symposium 2024, co-organized by the Tsinghua Institute for Advanced Study in Humanities and Social Sciences, the Mencius Foundation, and the UN Sustainable Development Solutions Network (UN SDSN), was held in Beijing on July 11-12.

Themed "The Commons in Intellectual Traditions and Future Practice," the two-day event was attended by 101 scholars from 17 countries, including China, the United States, the United Kingdom, and Greece, with 66 international participants.

The forum aims to expand thinking on the concept of "community" and explore solutions to various contemporary global challenges, such as unequal development, changes in the international order, ecological and climate crises, and technological iterations through discussing how to draw upon the wisdom of ancient civilizations in the East and West.

Qiu Yong, secretary of the CPC Tsinghua University Committee, Jeffrey Sachs, president of UN SDSN, and Meng Liang, chair of the Mencius Foundation, delivered keynote speeches at the opening ceremony.

In his opening speech, Qiu remarked that the current changes in the world and this era are



Qiu Yong addresses the Confucius-Aristotle Symposium 2024

unfolding in unprecedented ways. To address the common challenges facing humanity, it is essential to harness the power of cultural dialogue to eliminate discrimination and prejudice, enhance understanding and trust, promote people-to-people connectivity, and strengthen unity and cooperation.

"The profound and enlightening thoughts of Confucius and Aristotle, as outstanding representatives of ancient Eastern and Western civilizations, transcend the course of history," Qiu said.

Hailing the event as a cross-temporal dialogue of civilizations and an academic feast of cultural exchanges, Qiu said his university is willing to play an active role in promoting educational exchanges and contributing to the creation of a better future for humanity.

Sachs argued that ancient Eastern and Western philosophical thoughts, especially the concept of "harmony in diversity" embodied in Confucianism, hold significant relevance in addressing present-day challenges. He also called for collaborative efforts to develop a shared understanding of what content in the ancient Eastern and Western philosophies should be taught to students in the 21st century.



Jeffrey Sachs delivers a keynote speech



Meng Liang delivers a keynote speech

Meng saw a strong similarity between Mencius' teachings and Aristotle's theories of "justice" and "virtue", both still holding great relevance to contemporary governments and political leaders.

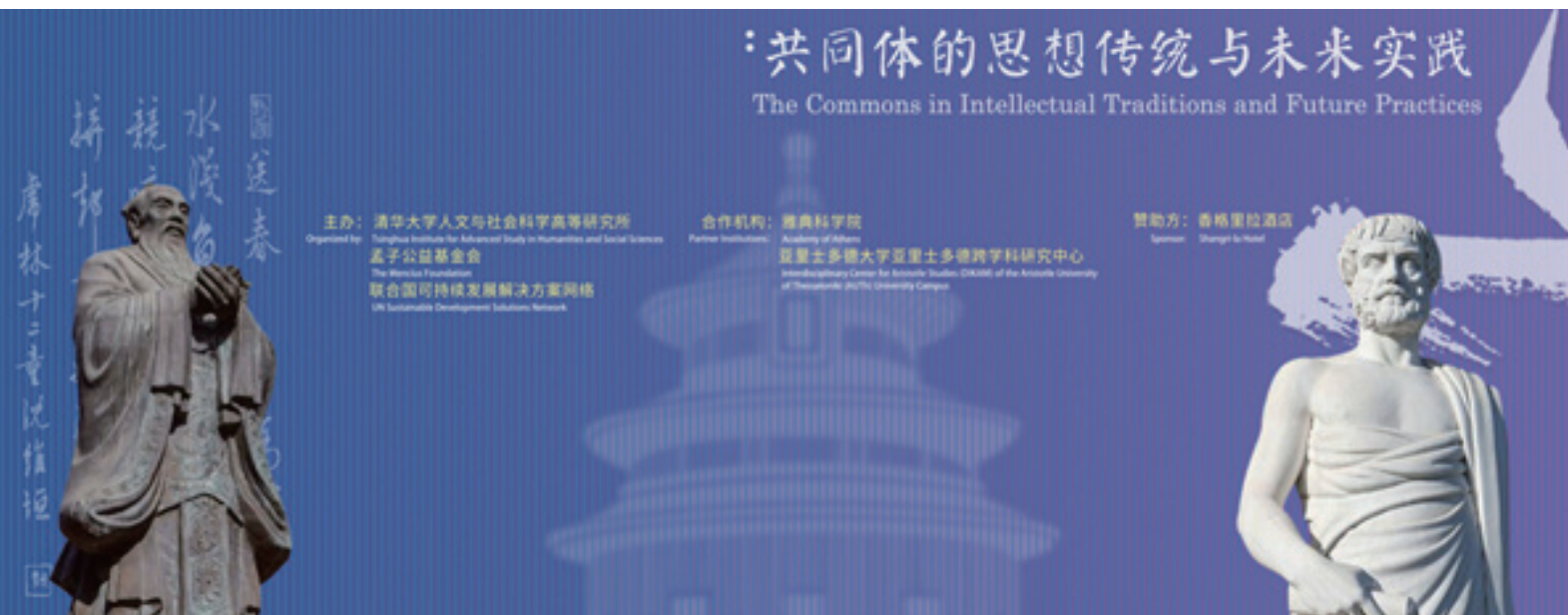
Keynote speakers including Jomo Kwame Sundaram, a Malaysian economist; Zhang Zhiqiang, director of the Institute of Philosophy, Chinese Academy of Social Sciences; and Chen Xiaoxia, a professor with Nishan World Center for Confucian Studies; shared their insights into the rich connotations of "community," the transcendent nature of Chinese civilization, and the contemporary value of the concept of "community."

The symposium included five panels: Civilization in History: Principle, Transfiguration, and Rebirth; The Public in Pre-Modern Polity: Governance, Wealth, and Ethnic Groups; Indra's Net: Ecology as a Methodology; Sustaining the Mind: From Embodied Skills to AI Platforms; Historical and Philosophical Perspectives on the Commons and Contemporary Practices of Commoning.

During the panel discussions, conference participants delved into the theory and practice of "community" from various dimensions such as classical studies, political philosophy, ecology and religion, artificial intelligence, and public policy-making.

The event also featured a holographic dialogue between Mencius and Aristotle presided over by Sachs and Meng.

Jointly initiated by UNSDSN and the Athens Academy, the Confucius-Aristotle Symposium was first held in Athens in 2019 and has since been organized three times.



The 2024 International Congress of Basic Science opens in Beijing

The 2024 International Congress of Basic Science (ICBS) opened in Beijing on July 14, bringing together leading scientists from around the world to promote collaboration and knowledge exchange.

Under the theme of "Advancing Science for Humanity," the Congress focuses on three branches of basic science: mathematics, theoretical physics, and theoretical computer and information sciences. Over the next two weeks, the event will feature over 500 academic reports and satellite meetings, aiming to share cutting-edge achievements in the field of basic science and envision the future development of fundamental research.

Chen Jiachang, a member of the leading Party members group of the Ministry of Science and Technology and vice-minister; Luo Hui, a member of the leading Party members group of the China Association for Science and Technology and director general of the Department of International Affairs of CAST; Jin Wei, a member of the Standing Committee of the Communist Party of China Beijing Municipal Committee and vice-mayor of the capital; Li Luming, deputy secretary of the CPC Tsinghua University Committee and Tsinghua President; as well as Fields Medalist Shing-Tung Yau, attended the opening ceremony.

Four Fields Medal winners, including Edward Witten, Andrei Okounkov, Artur Avila and Caucher Birkar; three Turing Award winners, including Adi Shamir, Leslie Valiant and Andrew Chi-Chih Yao; Nobel Prize winner Eric Maskin; International Mathematical Union President Hiraku Nakajima; and more than 70 academicians from various countries attended the opening ceremony. Over 800 scientists and scholars from home and abroad attended the event.

In his address at the opening and award ceremonies of the 2024 ICBS, Tsinghua University President Li Luming said that the International Congress of Basic Science, initiated by Shing-Tung Yau, is a top-tier academic conference in the field of basic sciences held in China. It has established a world-class platform for academic exchange, garnering widespread attention and recognition from the international academic community. In recent years, Tsinghua has continually increased its investment in basic research, achieving significant results in the development of disciplines and talent cultivation in the fields of mathematics, physics, and information science. In the future, Tsinghua will continue to support Shing-Tung Yau's efforts to promote the development of mathematics and basic sciences in China, striving to foster a strong foundation for future research, produce major original achievements, and expand international exchange and cooperation with a more open mindset and initiatives. Tsinghua aims to contribute its wisdom and strength to the development of basic sciences and the progress of human civilization globally.

Professor Shing-Tung Yau, president of the ICBS, stated, "Basic science is the cornerstone of humanity's quest to explore the unknown, providing the fundamental theories and methods to understand natural phenomena and solve real-world problems."

An integral part of the ICBS is the recognition of outstanding achievements within the scientific community through prestigious awards. The Basic Science Lifetime Awards (BSLA) honor individuals



Shing-Tung Yau delivers a speech.



Edward Witten (centre) wins Basic Science Lifetime Awards.



Andrew Wiles (second from right) wins Basic Science Lifetime Awards.

who have made significant contributions over the past 30 years, while the Frontiers of Science Award (FSA) acknowledges the best papers published within the last 10 years across forty-two subareas of mathematics, theoretical physics, and theoretical computer and information sciences.

Andrew Wiles, Richard Hamilton, Edward Witten, Alexei Kitaev, Andrew Chi-Chih Yao, and Leslie Valiant, six distinguished contemporary scientists, are winners of 2024 Basic Science Lifetime Awards.

The conference also awarded the Frontiers of Science Award. A total of 139 outstanding papers in the field of basic sciences, from universities, research institutions, and enterprises in more than 20 countries and regions, were selected. Among these, 88 were in the field of mathematics, 24 in theoretical physics, and 27 in theoretical computer and information sciences.

Fields Medalist and U.S. National Academy of Sciences member Edward Witten expressed his anticipation: "I look forward to my trip to Beijing

and believe this will be an inspiring academic event. I am eager to hear the latest insights from scientists worldwide."

Nobel Laureate in Economics and U.S. National Academy of Sciences member Eric Maskin said: "In these complex times, scientists must advance international exchange and cooperation. The International Congress of Basic Science will significantly promote global collaboration."

Fields Medalist Andrei Okounkov, attending the congress for the second time, noted: "The conference proves that science knows no borders. I am impressed by China's rapid progress in mathematics and find discussions with talented young Chinese scholars extremely beneficial."

To inspire younger participants and foster interest in basic science research, a series of special events will take place: The "Evenings of Mathematics, Physics, and Computer Science" will feature roundtable forums and peak dialogues with multiple international award winners discussing



Leslie Valiant (second from right) wins Basic Science Lifetime Awards.



Alexei Kitaev (centre) wins Basic Science Lifetime Awards.



Richard Hamilton (centre) wins Basic Science Lifetime Awards.



Andrew Chi-Chih Yao (right two) wins Basic Science Lifetime Awards.

scientific frontiers. The "Basic Science and Artificial Intelligence Forum" will focus on the latest advances in AI and explore its connections with basic science. The "Academic Poster Exhibition" for university and high school students will enable them to present their research to international scholars, fostering mutual learning and growth. The "Face-to-Face with Scientists" event will allow outstanding youth to engage with top scientists, gaining insights and discussing future research paths. During "Tsinghua Day," numerous scientists will visit Tsinghua University to share their life experiences and wisdom with student representatives.

The 2024 ICBS is jointly funded and hosted by the Beijing Municipal People's Government, the China Ministry of Science and Technology, the China Association for Science and Technology, and the International Consortium of Chinese Mathematicians. Co-organized by the Beijing Municipal Science and Technology Commission, the Management Committee of Zhongguancun Science Park, the Beijing Association for Science and Technology, the Beijing Huairou District People's Government, the Management Committee of Beijing Huairou Science City, and the Yanqi Lake Beijing Institute of Mathematical Sciences and Applications (BIMSA), and supported by the Yau Mathematical Sciences Center, Tsinghua University.

Tsinghua Summer Fellowship Program kicks off

Forty young representatives from 17 international universities, including Cambridge, Harvard, MIT, Oxford and Yale, participated in the opening ceremony of the Tsinghua Summer Fellowship Programme on August 17. The event was hosted by Tsinghua's Cyrus Tang Center for Student Global Development and the Center for Global Competence Development.

The academic backgrounds of the young participants span various fields, including computer science, biology, regional studies, public policy, international relations, economics, medicine, public health and neuroscience.

Li Tingting, director of the Development Planning Division at the Ministry of Education's China Center for International People-to-People Exchange, addressed the ceremony, which was chaired by Zhang Runzhou, deputy director of the Center for Global Competence Development.

In his speech, Tsinghua Vice-President Yang Bin emphasized that young people are an indispensable force in international cooperation, playing a significant role in cultural exchange and technological innovation. He noted that the summer camp provides a valuable platform for Chinese and international youth to jointly



Yang Bin addresses the opening ceremony.

explore crucial topics such as global development, cultural innovation and mutual learning between civilizations.

Yang said he hoped the Tsinghua Summer Fellowship Programme would help young people from China and abroad enhance their mutual understanding, develop cross-cultural communication skills and strengthen their global competence, contributing to the building of a community with a shared future for mankind.

On the opening day of Tsinghua Summer Fellowship Programme, the young representatives visited the Schwarzman College at Tsinghua University, where they gained insight into the college's environment and educational model. They also toured the Summer Palace and the Temple

of Heaven Park, immersing themselves in Beijing's rich cultural heritage and experiencing the unique charm of Chinese civilization.

On August 19, the young representatives traveled to Shanghai and then to Guizhou, Zhejiang and Inner Mongolia to explore China's economic vitality, social development, technological innovation and cultural diversity.

The students will conclude their visit with a series of exchanges at Tsinghua University in Beijing from August 27 to 30.



Li Tingting addresses the opening ceremony.



Students exchange gifts at the opening ceremony.



Tsinghua presents certificates to young representatives at the opening ceremony.

2nd Tsinghua Global Youth Dialogue opens



Liu Kai addresses the forum.



Siddharth Chatterjee addresses the forum.



Zhang Zhixiang addresses the forum.



Li Tingting addresses the forum.

On August 29, 2024, Tsinghua University inaugurated the main forum of the Second Global Youth Dialogue, bringing together 100 participants from 35 countries and regions.

This forum is dedicated to showcasing the fresh perspectives of Chinese youth in the new era, promoting a deeper understanding among international youth, constructing a network for collaborative exchanges, and encouraging youth worldwide to engage in international affairs with innovative approaches. This gathering serves as a crucible for ideas where dynamic young minds collaborate to forge pathways toward world peace and sustainable development, working together to forge a promising future for all.

Liu Kai, deputy secretary-general of the All-China Youth Federation; Siddharth Chatterjee, UN resident coordinator in China; Zhang Zhixiang, member of the Strategic Advisory Committee of the International Cooperation Center Joint Council; Guo Yong, vice chairperson of Tsinghua University Council; and Li Tingting, director of the Development Planning Division at the China Center for International People-to-People Exchange, Ministry of Education attended the opening ceremony.

Liu Kai noted that holding intercultural dialogues among youth from various nations, discussing issues of shared concern, and proposing innovative solutions is crucial in increasing mutual understanding and friendship.

Siddharth Chatterjee stated that, in recent years, through the joint efforts of multiple parties, engagement and cooperation among young people have been significantly enhanced. He expressed his hope that more young people will come together to build a better future for all.

Zhang Zhixiang called on international youth to unite and work together to participate in global governance and address global challenges.

Li Tingting expressed her hope that, in the future, all those present at the forum would build more bridges for communication among students from different countries, fostering greater youth collaboration.

Guo Yong shared a list of the Top Ten Issues of Youth Global Concern.



Guo Yong shares the Top Ten Issues of Youth Global Concern.



Shi Zongkai addresses the forum.

The Second Tsinghua Global Youth Dialogue, led by the Center for Global Competence Development of Tsinghua University, aims to scientifically reflect the thoughts and concerns of young people, respond to their demands, and support global youth development. In pursuit of this mission, a comprehensive survey was conducted, drawing from 1,362 participants from 78 countries and regions. This initiative successfully identified the ten most critical issues facing today's global youth. These pivotal concerns, which include artificial general intelligence, renewable energy, peace and security, poverty, unemployment and social welfare, globalization, economic growth, digital revolution, climate action, bio-medicine and human enhancement, and cultural diversity and inclusion, were prominently announced at the

forum, highlighting the dialogue's proactive role in fostering an informed and responsive global youth agenda.

"We hope that this dialogue will serve as a platform to establish a regular network for global youth exchange and cooperation, thereby continuously cultivating and expanding a stable international youth community. This community would promote in-depth exchanges, build consensus, and foster mutual growth among young people from various countries, enabling them to face challenges together and contribute to the development of human society," said Shi Zongkai, vice chairperson of the Tsinghua University Council.

At the opening ceremony, international youth representatives Noah Shenoy, Akhomsanh Chanmany, and Liu Jiabin shared their insights on the practice of Chinese-style modernization in Zhejiang, Guizhou, and Inner Mongolia provinces, respectively.

Liao Yang, Zhang Wenjun, Tang Leyan, Sun Jingyao, and Wu Mengjie, graduate students from Tsinghua University, shared their insights and gains during the preparation period as representatives of the secretariat of the "Tsinghua Global Youth Dialogue".

Thematic sub-forums on "Civilizational Innovation," "Civilizational Development," and "Civilizational Exchange" were held in succession on August 29th.

The Second Tsinghua Global Youth Dialogue was organized by Tsinghua University, held by the Center for Global Competence Development and the Cyrus Tang Center for Student Global Development of Tsinghua University, and supported by the JD Foundation.



3rd Tsinghua Higher Education Forum Opens



Li Luming delivers a speech.

The third Tsinghua Higher Education Forum, initiated by Tsinghua University, commenced on August 30 under the theme "Boundaries of Possibility: Empowering Higher Education with Artificial Intelligence." Li Luming, President of Tsinghua University, Lin Huiqing, Vice President of China Association of Higher Education, and Song Yi, Director General of the Department of Higher Education, Ministry of Education attended the opening ceremony and delivered speeches. Stefania Giannini, UNESCO Assistant Director-General for Education, delivered the video address. Yang Bin, Vice President of Tsinghua University, presided over the opening ceremony.

Li Luming pointed out that higher education has not only played a nurturing and supporting role in the development of artificial intelligence, but is also being shaped and influenced by the rapidly advancing new generation of AI technologies. AI has made individualized learning more widely available by pushing the boundaries of student learning. Conversely, AI has broadened the scope of education and made it possible for high-quality education to be widely disseminated. Furthermore, AI has made it possible to embrace intelligent governance by extending the boundaries of university governance. However, he also cautioned that AI may bring unprecedented challenges to higher education, and therefore higher education institutions should approach these developments with an optimistic, open, yet cautious attitude, and strive to explore the potential boundaries of AI's role in strengthening education. Li also highlighted that Tsinghua University has taken proactive steps

to advance various AI-empowered education initiatives. These include the launch of pilot courses for AI-empowered teaching, the introduction of AI-related general and advanced courses at various levels, the development of AI growth assistants with intelligent learning support functions, and the establishment of the School of Artificial Intelligence.

Lin Huiqing emphasized that artificial intelligence, as a strategic technology driving the technological revolution and industrial transformation, is reshaping educational structures, teaching models and research paradigms, and pushing education to new heights of high-quality development. She put forward four initiatives: First, to adapt to prevailing trends and change mindsets, attaching great importance to the revolutionary impact of AI on education; second, to deepen application and optimize practices, promoting the deep integration of AI with higher education; third, to emphasize ethics, mitigate risks, and develop intelligent education that is both humane and well-regulated; and fourth, to strengthen international exchanges and cooperation, building a global community for the development of intelligent education.



Lin Huiqing delivers a speech.

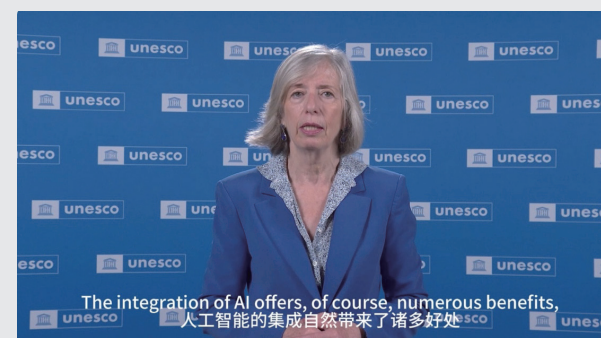
Song Yi stated that it has become an important mission of higher education to grasp the global development trend of artificial intelligence, identify breakthroughs and supporting directions, and cultivate a large number of high-level talents who understand artificial intelligence and possess innovative capabilities and a cooperative spirit. The



Song Yi delivers a speech.

Ministry of Education attaches great importance to the digital development of higher education, and is committed to promoting the deep integration of AI into education and teaching. The higher education community should act quickly to fully equip education and teaching with AI technology and innovate talent cultivation methods. It is necessary to meet different needs and classify the cultivation of AI talents with both general and specialized knowledge, strengthen the core elements and comprehensively upgrade AI teaching resources, and deepen theoretical research to support and lead AI reform and innovation.

Stefania Giannini extended her warm congratulations on the convening of the forum. Giannini noted that artificial intelligence is rapidly changing the way we live and work, with profound implications for higher education. On the one hand, AI facilitates personalized learning experiences, enhances inclusivity, and promotes collaborative learning models. On the other hand, higher education institutions need to recognize and address the limitations of AI. She introduced



Stefania Giannini presents a video speech.



Yang Bin presides over the opening ceremony.

UNESCO's guidelines on AI and its extensive recommendations on ethical issues, calling for a human-centered approach to the rise of generative AI and ensuring that its use adheres to ethical standards.

At the opening ceremony, the research team from the Institute of Education at Tsinghua University released the report "Beyond the Horizon: The Global Development of AI-Empowered Higher Education." The report analyzes the current state and challenges of AI-empowered higher education worldwide and provides in-depth reflections and forecasts on future development trends.

Keynote speeches were then delivered by Jean-Gabriel Ganascia, a computer scientist and philosopher from the Sorbonne University, Yang Zongkai, President of Wuhan University of Technology, Michael A. Peters, Professor at the



Professor Wen Wen, deputy head of the expert group that prepared the research report and director of the Division of Higher Education at the Institute of Education, presented the main contents of the report.

University of Illinois, USA, and Xue Lan, Senior Professor of Liberal Arts at Tsinghua University, to explore the challenges and opportunities of AI-enabled higher education.

More than 500 experts, scholars and researchers from global educational institutions such as the European Institute for Educational and Social Policy (EIESP), the Sorbonne University, the University of Cambridge, University College London (UK), Syracuse University (USA), and Tsinghua University, Peking University, and the University of Hong Kong (HK), participated in the forum.

The third Tsinghua Higher Education Forum was

held over two days, with keynote speeches and parallel forums. The parallel forums will focus on "Re-examining Higher Education in the AI Era: Values, Purpose, and Ethics", "AI and Higher Education Governance", "AI-Enabled University Courses, Teaching, and Assessment", "AI and Talent Cultivation: Interdisciplinary Round Table" and "Disruptive Innovations in Higher Education Empowered by AI: Conceptions and Practices."

Founded in 2022, the Tsinghua Higher Education Forum originates from China while embracing both domestic and international perspectives, striving to become a watchtower and think tank for global higher education reform.

Fourth Global Youth Summit on Net-Zero Future held

The opening ceremony of the Fourth Global Youth Summit on Net-zero Future, jointly hosted by the Global Alliance of Universities on Climate (GAUC) and the UNESCO Regional Office of East Asia, was held at Tsinghua University on September 12. Young delegates and invited guests from 26 countries participated in the summit. Representatives from global stakeholders such as UNESCO, the World Bank Group, the Asian Development Bank, the Mercedes-Benz Star Fund,

and the China Youth Development Foundation joined the summit to engage in exchanges and discussions with young people. The summit aims to gather youth forces to promote climate action and voice youth perspectives and innovative solutions for the upcoming 29th United Nations Climate Change Conference (COP29) to be held in Baku, Azerbaijan. The opening ceremony attracted over 270,000 online viewers.



Liu Zhenmin, China's Special Envoy for Climate Change, spoke highly of the commitment and contribution of youth climate actions in his opening remarks. He highlighted the urgency and complexity of global climate governance, calling on the global community to form tighter partnerships in order to meet the goals set by the Paris Agreement. Liu stated that China is committed to the national strategy of combating climate change, through various measures including the development of new energy, improving energy efficiency, and increasing carbon sinks. He also stressed that young people are not only the inheritors, but also the architects of a carbon-neutral future. He encouraged youth to take their participation in the summit as a starting point, to continue contributing to global climate action, and to demonstrate their commitment to global sustainable development through actions.

Shahbaz Khan, Representative and Director of the UNESCO Regional Office for East Asia, praised the passion and responsibility shown by youth in addressing climate change and their innovative contributions to sustainable development. He emphasized the need for scientific and innovative



solutions to climate change, driving societal green transformation through education, culture, and technology. Cultivating the next generation of leaders equipped to tackle climate change is particularly crucial. Professor Khan introduced UN initiative The International Science Decade for Sustainable Development (2024-2033), which leverages science to achieve the United Nations' Sustainable Development Goals (SDGs). He expressed the intention to strengthen cooperation with Tsinghua University and GAUC in climate change and science education issues, empowering global youth to engage in climate action through technological innovation.



Li Zheng, Dean of the Institute of Climate Change and Sustainable Development at Tsinghua University and Secretary-General of GAUC, noted that climate change is one of the greatest challenges facing the world today, and youth, as future leaders, is the backbone of the net-zero future. "We recognize the pivotal role that young leaders and climate activists play in shaping our collective future. The climate journey ahead of the young people will be challenging. This summit stands as a manifesto of the collective efforts of global higher education." Li emphasized. He then shared the climate actions and research progress of the Tsinghua University. "I have personally witnessed Tsinghua University elevate its low-carbon mission to a strategic imperative, leveraging our campus as a living laboratory to assess and refine our strategies for mitigating the impacts of climate change," he said.



Zhang Jian, Deputy Secretary-General of GAUC, moderated the opening ceremony.

An Najiang, Program Officer of GAUC, introduced GAUC's mission and history. Since its establishment in 2019, GAUC has conveyed the collective strength of leading higher education institutions and spared no effort in addressing climate change challenge through joint research, talent cultivation, campus decarbonization, societal implementation, and public engagement. Through GAUC's 'Climate X' Campaign and the Global Youth Climate Week which GAUC launched with more than 100 global partners, over 1,000 youth from more than 80 countries and regions have received training and have organized over 300 climate events in their local communities, impacting about 40,000 individuals. She invited global youth to actively participate in innovative climate actions during COP29, contributing youth wisdom to global climate governance.



Representatives of the summit's student organizing committee introduced event schedule. The youth organizers of this summit, hailing from various universities across countries, embody

the action philosophy of "by Youth, for Youth". Spanning three days, the summit comprises four challenge themes centered on "clothing, food, shelter, and transportation," as well as a "My Zero Carbon Diary" creative short video contest. These initiatives encourage youth to influence the sustainable practices of businesses and social organizations through action, participating in practical solutions within the realm of climate change and sustainability. This process elevates the motivation, sense of mission, and leadership skills of outstanding climate talents, showcasing youth's responsibility and commitment to global climate leaders, policymakers, and stakeholders interested in climate governance.



The opening ceremony was followed by two panel discussions between youth representatives and leading experts from the industry, themed "Mitigating Climate Change" and "Adapting to Climate Change". The first panel discussion featured contributions by Mr. Lee Ming Tai, Head of Portfolio Management Unit, PRC Resident Mission from the Asian Development Bank (ADB), Mr. Liu Jianguo, Deputy Director of the International Cooperation Center of the Energy Research Institute of the Chinese Academy of Macroeconomic Research, and Mr. Li Xiaojian, Project Manager of Innovation & Sustainability at the Mercedes-Benz Research & Development Tech Center China. The second panel discussion featured contributions by Professor Miranda Schreurs from Technical University of Munich, and Mr. Rajesh Koirala, Senior Environmental Specialist at the World Bank Group. Eight young representatives from China, Bangladesh, Vietnam, German and Spanish attended the panel discussions.

Li Xiaojian introduced Mercedes-Benz's "2039 Vision" and its tailored initiatives in the Chinese market. He shared the company's measures to achieve a low-carbon transformation across its entire value chain, including using sustainable materials, employing green electricity and self-generation through solar panels, reducing waste in manufacturing and logistics, and utilizing a closed-loop recycling system for decommissioned power batteries. Mr. Lee Ming Tai presented the ADB's green financing projects, sharing progress and success stories of over 70 green initiatives implemented in China and demonstrating how collaboration with local communities can facilitate the realization of zero-carbon emissions. Mr. Liu Jianguo outlined China's challenges and opportunities in the energy transition. Despite a continuously growing energy demand, China is actively promoting the development of renewable energy sources.





Professor Miranda Schreurs underscored that the impacts of global climate change have profoundly affected the livelihood of human beings, particularly vulnerable groups in developing countries. She called for collaboration across sectors, leveraging the innovative and research capabilities of universities to drive effective policies and technologies aimed at adaptation. Mr. Rajesh Koirala discussed the World Bank Group's (WBG) efforts in supporting developing countries' adaptation to climate change from a financial

institution's perspective. He introduced the WBG's financing mechanisms and multi-stakeholder collaboration models, emphasizing that adaptation to climate change and economic development are not mutually exclusive but rather complementary.

The 2024 Global Youth Summit on Net-zero Future is sponsored by Tsinghua University Education Foundation, Mercedes-Benz Star Fund, and China Youth Development Foundation.

China-Latin America Roundtable celebrates cultural exchange

On September 24, 2024, the China-Latin America Youth Thinkers Roundtable took place at Tsinghua University, uniting aspiring youth leaders from both regions to foster dialogue and cultural understanding. This vibrant event showcased the unique perspectives of Tsinghua students alongside their Latin American counterparts.

The roundtable aimed to create a platform for young thinkers to explore shared challenges and opportunities. Student representative Larissa Lima highlighted the significance of cultural exchange, noting that in recent years, more Chinese youth have traveled abroad with an open mindset to explore Latin America and beyond. "It is precisely because of China's cultural inclusivity that the friendship between China and Latin America has begun and continues to thrive," she said.

Cultural heritage was a focal point of the event, with representatives sharing insights into traditional Chinese arts. Yang Yue, a paper-cutting inheritor, highlighted the importance of preserving cultural legacies, saying, "The art of paper-cutting is a bridge between generations, connecting our past with the present." Lan Suihong, a PhD student, introduced "Zhuang Gao Ren," a unique dough figurine art from Quanzhou, showcasing its rich history and contemporary relevance.

Personal stories added depth to the discussions. Pablo Manuel Velazquez Perez, a Cuban student, reflected on his transformative journey in China since 2019. He faced initial struggles but embraced the challenges. He said, "I am deeply grateful to China for opening doors that have changed my life." Similarly, Gustavo Pedro Cadiz Quispe from Bolivia shared his six-year journey, emphasizing the power of collaboration across cultures. "Our diverse backgrounds can lead to innovative solutions," he noted.

The roundtable's theme, "Cultural IP from the Perspective of International Communication," resonated throughout the discussions. Professor Zhao Yuezhi, Humanities Chair Professor at Tsinghua University, illuminated the potential of youth in shaping the future. "We live in an era



filled with both crisis and hope," she said. "Young people today possess greater knowledge, creativity, and action than our generation. If global youth, especially from the Global South, unite, we can create a brighter future."

Latin American youth representatives brought their enthusiasm to the conversation. Leydi Amaya Varela from Colombia addressed the cultural differences between the regions, emphasizing the need for mutual understanding. She stated, "Our most influential cultural product is magical realism, enriched by literary giants like García Márquez. We must ensure that our creative expressions are protected and celebrated."

Alfer Unamo, a Venezuelan journalist, expressed hopes for deeper cultural cooperation. "As countries that have shared a strong friendship for 50 years, we look forward to more cross-cultural interactions with Chinese youth," he said.

As the roundtable concluded, participants left with a renewed commitment to collaboration, setting the stage for future exchanges between China and Latin America. This event celebrated the transformative power of youth in building a more interconnected world.



RESEARCH

Tsinghua's super microscope set to broaden human understanding

"If a craftsman wants to do good work, he must first sharpen his tools."

— Confucius, *The Analects*

Scientific instruments are vital for humanity to understand the world and explore the unknown. As Mendeleev stated, "Science begins where one begins to measure," and instrument innovation is a cornerstone of scientific breakthroughs. It's also a key area for China to become a global scientific and technological powerhouse and develop new productive forces.

Technologies like X-ray diffraction (Nobel Prize in Physics, 1914 and 1915), super-resolution fluorescence microscopy (Nobel Prize in Chemistry, 2014), and cryo-electron microscopy (Nobel Prize in Chemistry, 2017) allow us to study the structure and function of various proteins and organelles within individual cells with unprecedented precision. This has greatly advanced life sciences and medicine. However, these techniques can only cover a small field of view, making it difficult to dynamically observe a large number of cells in a living environment, much like "looking at a leopard through a tube."

CT imaging (Nobel Prize in Physiology or Medicine, 1979) and magnetic resonance imaging (Nobel Prize in Physiology or Medicine, 2003) can provide a large imaging field of view, enabling the study of the heterogeneity of different organs at the macroscopic scale in living organisms. These techniques have been widely used in clinical medicine, making significant contributions to human health. However, their imaging resolution is far from reaching the single-cell level.

Cells are the fundamental units of life. At every moment, a symphony of interactions between different types of cells is taking place within the human body. However, there is a significant technological gap at the mesoscale, which connects the microscopic and macroscopic worlds. This makes it challenging for current research to simultaneously observe the spatiotemporal heterogeneity of a large number of cells in different physiological and pathological states at the organ scale in living mammals. This greatly limits the development of fields such as neuroscience, immunology, oncology, and pharmacology.

In neuroscience, for example, the interaction and function of a large number of neurons give rise to functions such as intelligence and consciousness. Understanding the structure and activity patterns of neural circuits is essential for unraveling the workings of the brain. However, traditional microscopes with single-neuron identification capabilities typically have only a millimeter-level field of view, allowing them to cover only a single or a few brain regions in mice and record neural signals dynamically on a single plane. Functional MRI, while capable of three-dimensional whole-brain observation, lacks the spatial resolution to identify individual cells. Consequently, the U.S. BRAIN Initiative, launched in 2013, listed "large-scale neural network recording technology" as one of its nine major funding areas.

Similarly, in oncology, only by combining a large field of view with high resolution can we comprehensively capture the entire process of tumorigenesis and development. This enables more precise research into different drug responses and the discovery of new drug targets.

Ten years it takes to grind a sword, its frosty edge has yet to be tested.

Targeting this international frontier challenge, Professor Qionghai Dai 's team at Tsinghua University received support from the National Natural Science Foundation of China's Major Scientific Instruments Development Project as early as 2013. They pioneered research in the field of mesoscale in vivo microscopic imaging and successfully developed the world's first gigapixel mesoscale fluorescence microscope, RUSH, in 2018. RUSH is capable of simultaneously achieving centimeter-level field of view and subcellular resolution.

Although RUSH was hailed by international peers as a pioneer in mesoscale microscopic imaging, its complexity and high cost limited its use to only a few scientists at the time. Moreover, the RUSH system still faced a series of bottlenecks, including: how to achieve high-speed three-dimensional imaging using a two-dimensional sensor; how to avoid cell damage (i.e., phototoxicity) caused by prolonged laser exposure, enabling long-term, high-speed observation; how to overcome

optical aberrations and background interference caused by complex imaging environments; how to improve signal-to-noise ratio under low-light conditions; and how to efficiently process large-scale mesoscale data. Each of these technical bottlenecks is an international challenge in the field of biomedical imaging. Simultaneously addressing these in vivo imaging barriers within a single system is even more daunting.

"The world's wonders and extraordinary sights often lie in remote and perilous places, rarely reached by humans. Thus, only those with determination can reach them." This is an ancient poem by Anshi Wang from the Song dynasty. In the following six years, Professor Qionghai Dai 's Imaging and Intelligent Technology Laboratory, aiming for the peak of in vivo mesoscale microscopic imaging, persevered and continuously tackled these international frontier challenges. They successively proposed key theories and technologies such as scanning light field imaging principles, digital adaptive optics architecture, virtual scanning algorithms, confocal scanning light field architecture, and self-supervised denoising

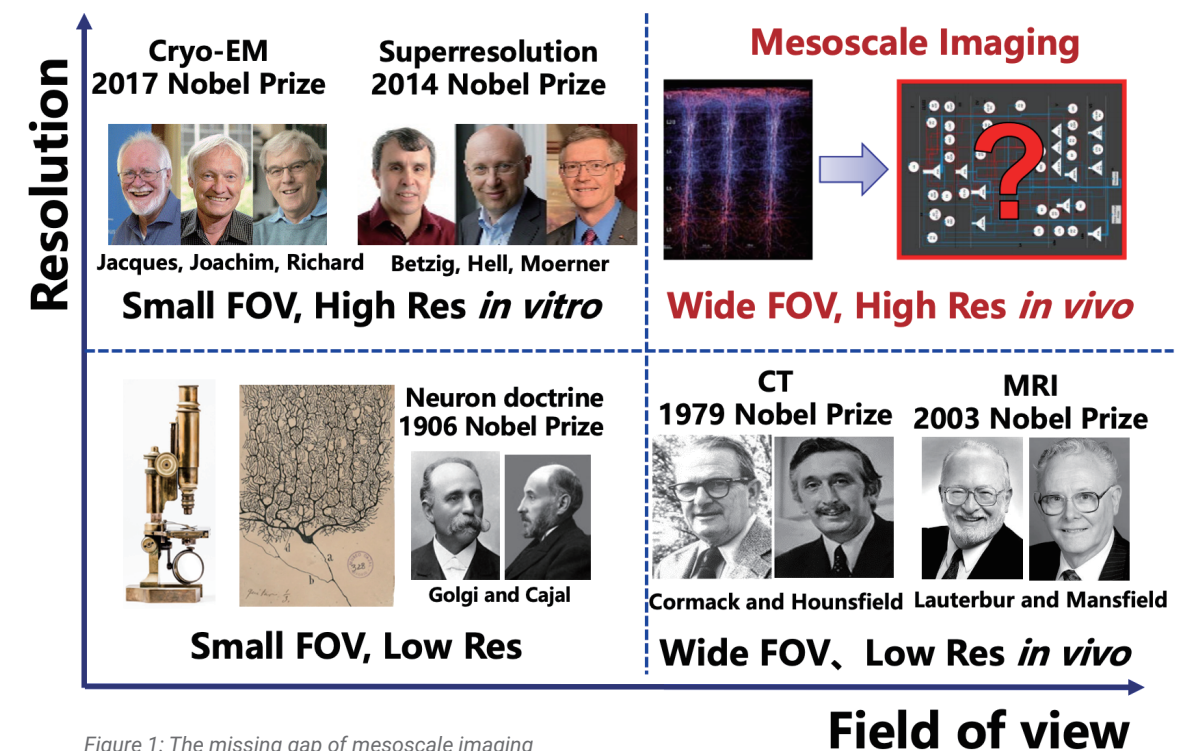


Figure 1: The missing gap of mesoscale imaging

algorithms. These achievements were published in prestigious international journals like Cell, Nature, Nature Biotechnology, and Nature Methods, addressing a series of barriers in mesoscale in vivo microscopic imaging and laying the foundation for a new generation of mesoscale in vivo microscopes.

Because all these technological developments shared a common goal—to achieve truly practical in vivo mesoscale microscopic observation—they seamlessly integrated within the same system architecture, leading to a revolutionary improvement in overall performance.

Building the Pillars of a Great Power

On September 13, 2024, a new study titled "Long-term mesoscale imaging of 3D intercellular dynamics across a mammalian organ" was published in Cell, with Qionghai Dai, Zengcai Guo, and Jiamin Wu from Tsinghua University as co-corresponding authors. The study announced the advent of the next-generation mesoscale in vivo microscope, the RUSH3D system. This remarkable instrument not only boasts a centimeter-level three-dimensional field of view and subcellular resolution but also achieves continuous low-phototoxicity observation for up to tens of hours at a high-speed three-dimensional imaging rate of 20 Hz. Compared to the most advanced commercial spinning disk confocal microscopes currently available, RUSH3D offers a nearly hundredfold increase in imaging field area at the same resolution, a tenfold increase in three-dimensional imaging speed, and a hundredfold reduction

in phototoxicity (resulting in a hundredfold increase in effective observation duration). This unprecedented multi-scale imaging capability across space and time provides a fresh perspective for studying complex biological processes. With this system, researchers can, for the first time, dynamically observe tissue heterogeneity at cellular resolution on the mammalian organ scale in a panoramic manner, opening the door to studying the interactive behavior of large-scale, diverse cells in vivo.

The interdisciplinary research team utilized RUSH3D to achieve high-speed three-dimensional observation covering layers 2/3 of the cerebral cortex in live mice at single-cell resolution. They captured the response patterns of various cortical regions under multi-sensory stimulation and tracked large-scale neural responses with single-neuron precision for several consecutive days. Additionally, they observed the immune response in multiple brain regions after acute brain injury, revealing the migration and reflux of numerous neutrophils from non-vascular areas into the brain. For the first time, they simultaneously observed the formation of multiple germinal centers within lymph nodes and the migration of T cells between different germinal centers during the immune response in mice. These preliminary experiments merely scratch the surface of RUSH3D's potential applications, showcasing its vast prospects for cutting-edge research in neuroscience, immunology, oncology, and pharmacology.

The development and commercialization of this instrument (by Zhejiang Hehu Technology Co.,



Figure 2: RUSH3D system overview

Ltd.) fills the gap in mesoscale in vivo observation of complex life phenomena. It advances novel computational imaging theories and key technologies, significantly enhancing China's research and application capabilities in high-end scientific instruments. RUSH3D provides a new "killer app" for uncovering new phenomena and mechanisms in neuroscience, oncology, and immunology, enabling Chinese life scientists and medical researchers to take the lead in addressing major fundamental research questions using domestically developed high-end instruments.

Computational imaging is a novel concept that overturns the age-old notion of "what you see is what you get." By utilizing multi-dimensional computational methods such as computational coding and computational acquisition, computational imaging has evolved from "what you see is what you get" human vision to "what you compute is what you get" machine vision. This has led to a series of new features that surpass the physical limitations of acquisition hardware, including ultra-fast frame rates, ultra-high resolution, and ultra-high signal-to-noise ratio.

The RUSH3D system integrates a series of imaging and intelligent technology theories and

key technologies previously developed by the team. Based on the principle of scanning light field imaging, it can achieve high-speed three-dimensional imaging within an axial range of 400 microns while maintaining low phototoxicity. To address the issue of optical aberrations severely affecting the system's imaging resolution, RUSH3D acquires ultra-fine four-dimensional spatial angle data across the entire field of view. It constructs a wave optics-based digital adaptive optics architecture (wDAO) that does not require additional wavefront sensors or spatial light modulators in the optical system. This allows for large field-of-view, multi-region adaptive optics aberration correction at the backend, thereby improving the spatial resolution and signal-to-noise ratio of three-dimensional imaging in complex environments. This design enables effective overcoming of spatially non-uniform system aberrations and sample aberrations using only conventional-sized objective lenses, achieving uniform high spatial resolution gigapixel imaging across the entire field of view. This significantly reduces the size and cost of mesoscale imaging systems, making high-resolution in vivo mesoscale microscopic imaging systems more widely accessible.

Cell

CellPress
OPEN ACCESS

Resource

Long-term mesoscale imaging of 3D intercellular dynamics across a mammalian organ

Yuanlong Zhang,^{1,2,3,4,10} Mingrui Wang,^{5,10} Qiyu Zhu,^{4,6,7,10} Yuduo Guo,⁵ Bo Liu,^{6,7,9} Jiamin Li,^{4,6,7} Xiao Yao,^{4,6,7} Chui Kong,⁸ Yi Zhang,^{1,2,3,4} Yuchao Huang,^{4,6,7} Hai Qi,^{6,7,9} Jiamin Wu,^{1,2,3,4,*} Zengcai V. Guo,^{4,6,7,*} and Qionghai Dai^{1,2,3,4,11,*}

Furthermore, in in vivo fluorescence imaging, background fluorescence severely affects the signal-to-background ratio. RUSH3D employs a multi-scale background removal algorithm to separate background signals from in-focus signals, accurately filtering out out-of-focus background and thereby improving the signal-to-background ratio, recovering fluorescence signals submerged in the fluorescent background. Further integration with confocal scanning light field will enable confocal imaging fidelity while maintaining high-throughput mesoscale observation capabilities.

Pioneering imaging technology enables efficient neuroscience Research

RUSH3D, with its multi-scale imaging capabilities across space and time, significantly broadens scientists' understanding of the brain. The neuronal network in the cerebral cortex is considered a crucial and complex information processing center in the nervous system of higher animals, playing a key role in generating biological intelligence and even consciousness. Previous research has revealed that functional differentiation in the cortex leads

to the formation of cortical regions that regulate various types of information. The functional activities and information exchange between neurons in different cortical regions are essential for the cortex to perform its functions. However, due to limitations in observation techniques, most current research can only simultaneously record neuronal activity in one or a few cortical regions in experimental animals, making it difficult to further study the joint dynamic changes of cortical neuronal networks. By leveraging the advantages of RUSH3D's large field of view, three-dimensional high resolution, and high frame rate, the interdisciplinary team has pioneered long-term recording of near 100,000 neurons in 17 brain regions of the dorsal cortex in head-fixed awake mice. They can also perform multi-trial recordings of the same group of neurons across multiple days. Using this recording method, they confirmed that neurons responding to sensory stimuli and regulating movement are not limited to a single sensory cortex or motor cortex but are widely distributed across various cortical regions. However, the ability of neurons in different regions to encode, integrate, and distinguish sensory information varies. Furthermore, they discovered a caudal-to-rostral propagation pattern in the mouse

cortical neuronal network during the initiation of spontaneous motor behavior. This result suggests that the integration of information from visual, tactile, and other sensory cortical neurons and the diffusion of signals across the entire cortex may be key factors in triggering spontaneous movement. This will help unravel the mysteries of brain consciousness, advance research on neurodegenerative diseases, and further promote brain-inspired artificial intelligence research.

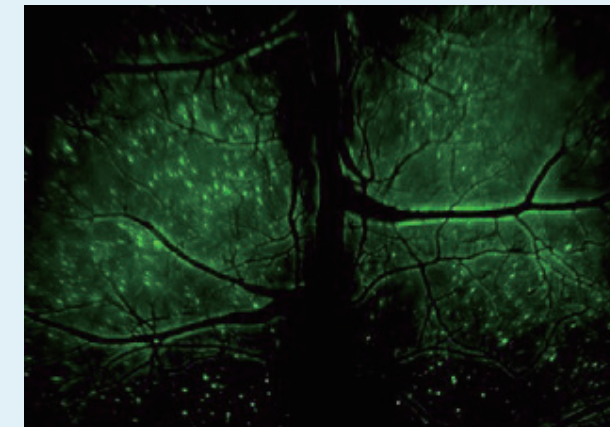


Figure 4. Cortex-wide neuronal imaging

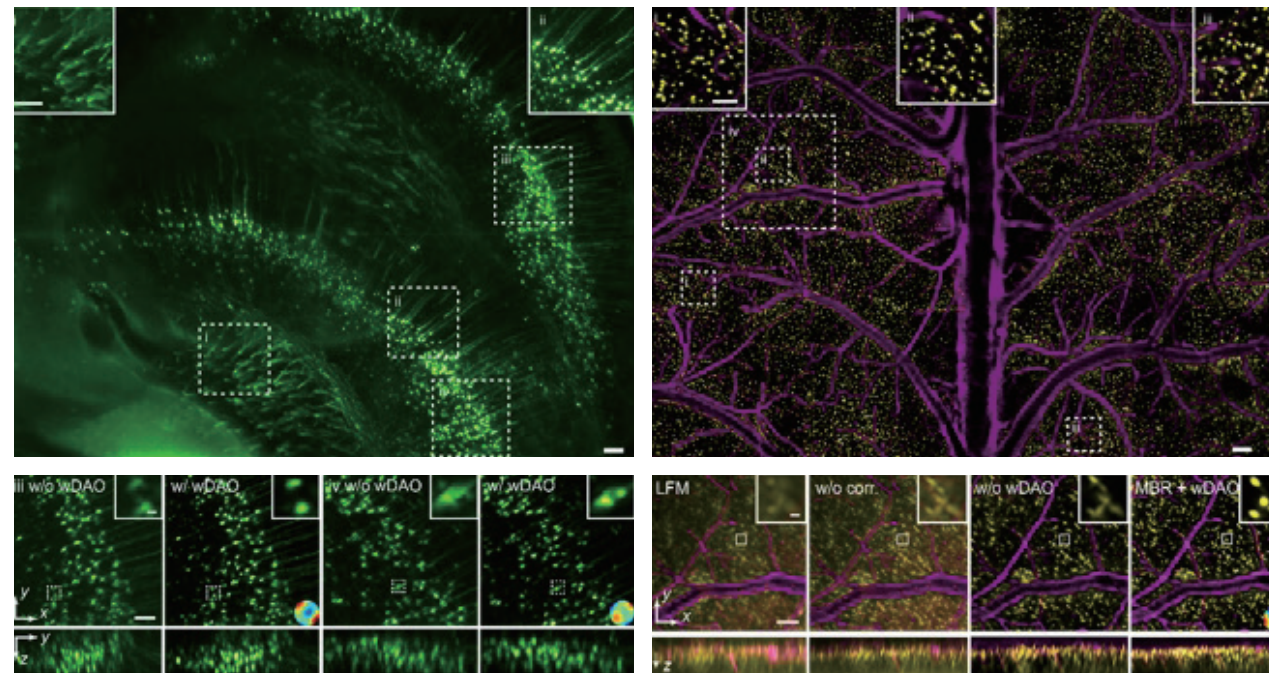


Figure 3. RUSH3D imaging results across whole field-of-view

Breaking through in vivo imaging bottlenecks drives new discoveries in immunology

The RUSH3D system provides an unprecedented tool for studying large-scale cell interactions. For example, germinal centers (GCs) are structures formed by the aggregation of antigen-activated B cells under the guidance of chemotaxis. Due to limitations in field of view and recording duration, the process of how immune cells participate in the generation of multiple GCs and migrate between them has never been continuously recorded. The team used RUSH3D to perform high-speed three-dimensional imaging of lymph nodes near the inguinal region of mice during an immune response for over ten hours, spanning approximately 85 hours. This allowed them to completely record the process of B cells participating in the generation of multiple GCs. Simultaneously, they observed the complete

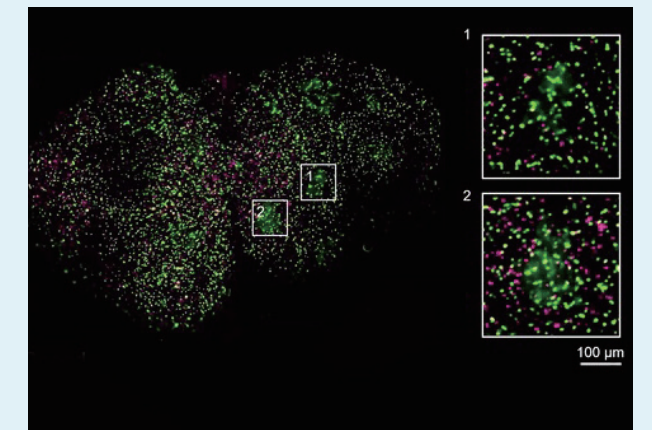


Figure 5. RUSH3D captured multiple germinal centers (GCs) formation

migration of some T cells between multiple GCs 145 hours into the immune response, after the GCs had fully formed. This suggests that T cells may be involved in information exchange and transmission between GCs. RUSH3D has achieved, for the first time, continuous in vivo observation of immune responses at the whole-organ scale, particularly the entire process from tumorigenesis to immune response and tumor growth, fully revealing the immune activation response triggered by tumors. RUSH3D's observation of messenger T cells exchanging information between different germinal centers is expected to uncover new immune mechanisms and unveil the mystery of tumor metastasis from a mesoscale in vivo perspective for the first time.

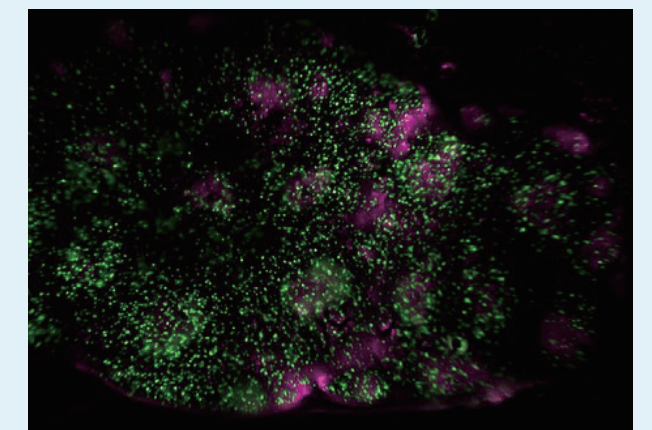


Figure 6. Migration of T cells over multiple germinal centers

Revolutionary cross-scale precise analysis for medical research

The multi-scale imaging capabilities across space and time of RUSH3D significantly improve experimental efficiency. For instance, drug screening experiments can achieve significantly higher efficiency in a single experiment, eliminating the need for multiple trials. Moreover, because RUSH3D can provide sufficient data for statistical analysis, cross-individual differences can be effectively mitigated in a single experiment. Additionally, rare events such as tumor metastasis will no longer be random occurrences under RUSH3D observation but rather routinely visible phenomena. With its advantages in low-phototoxicity three-dimensional observation, the system can also simultaneously observe long-distance communication between cells and, by tracking millions of cells over extended periods, reveal the physical laws of collective cell behavior and the mechanisms of functional emergence. As an initial exploration of RUSH3D in the medical field, researchers observed, for the first time, the migration of neutrophils throughout the entire cerebral cortex after acute brain injury. When a mouse's brain is impacted, a large number of neutrophils flow from the perivascular non-vascular areas into the brain parenchyma. There are also rare cases of cells flowing back from the brain parenchyma into blood vessels, suggesting that some cells may enter the brain parenchyma through the glymphatic system and flow back into blood vessels to transmit information to other parts of the body. Notably, this mesoscale in vivo long-term observation of the brain injury repair process is the first of its kind internationally. RUSH3D's facilitation of in-depth analysis of immune cells in brain injury will aid in developing specific therapies to prevent brain dysfunction caused by tissue edema after acute brain injury. It is also expected to provide new perspectives in a wide range of medical fields.

Technological achievement transformation, safeguarding people's health

Based on the core patents of this series of achievements, Tsinghua University has established

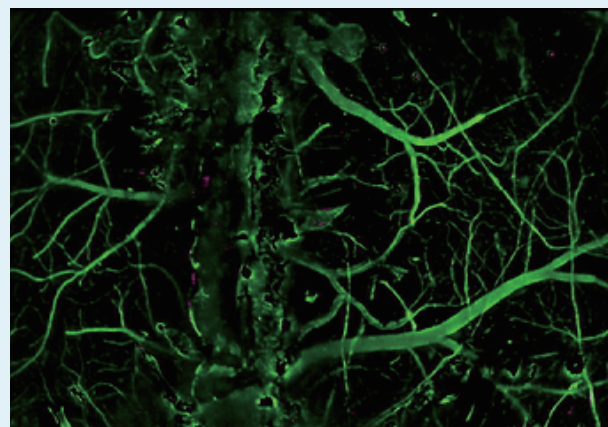


Figure 7. RUSH3D captured migration of neutrophils

a domestically owned and controlled advanced microscope company, Zhejiang Hehu Technology Co., Ltd. The company is dedicated to developing and producing high-end optical microscopes with internationally leading performance and promoting their cutting-edge applications in life sciences and other fields. It has already supported over 20 innovative life science research projects in oncology, immunology, neuroscience, and other fields at top domestic research institutions such as Tsinghua University, Peking University, Beihang University, Beijing Normal University, and Tongji Hospital, serving the biopharmaceutical industry. One typical example is Professor Yu Li's team at Tsinghua University, who utilized this instrument to discover, for the first time in mammals, the generation process and function of a new organelle called "migrasome" in tumors and immunity, providing a new path for early tumor diagnosis and treatment.

Yuanlong Zhang, Mingrui Wang, and Qiyu Zhu from Tsinghua University are the co-first authors of this paper. Professor Qionghai Dai, Professor Jiamin Wu, and Professor Zengcai Guo from Tsinghua University are the co-corresponding authors. Yuduo Guo, Bo Liu, Jiamin Li, Xiao Yao, Chui Kong, Yi Zhang, Yuchao Huang, and Hai Qi participated in the research and made significant contributions. This work was generously supported by the National Natural Science Foundation of China, the National Key Research and Development Program of the Ministry of Science and Technology, and the Brain-X Program of Tsinghua University.

TSINGHUA COMMUNITY



Tsinghua University men's basketball claims 26th CUBAL National Championship

Tsinghua University defeated Taiyuan University of Technology 86-81 on June 30 in the men's basketball final of the 26th CUBAL, securing the national championship title.



Tsinghua professor Zhang Jie wins 2024 RIBA International Awards for Excellence

The Royal Institute of British Architects (RIBA) announced in June that Professor Zhang Jie of Tsinghua's School of Architecture won the 2024 RIBA International Awards for Excellence for his project Jingdezhen Pengjia Alley Compound.

Jingdezhen is regarded as the center of Chinese ceramic craftsmanship. Situated in the core protection area of the Imperial Kiln Site, the Pengjia Alley Compound stands as a model of the courtyard-style ceramic workshops that flourished for centuries. The award-winning comment for this heritage regeneration project reads, "The project is an outstanding example of excellence in practice in building preservation and reinvention."

The RIBA International Awards for Excellence were established in 2016, recognizing projects worldwide that stretch the boundaries of architecture and standards of excellence. The winners then go on to be considered for the RIBA International Prize.

This year, RIBA announced there were 22 winning projects, two of them from China. From private homes and studios, to museums and schools, each project is an example of the highest caliber of architectural response to social, cultural, and environmental challenges.



Renowned astronomer joins Tsinghua Department of Astronomy

The Department of Astronomy enrolled a new member - Prof. Li Di, a renowned astronomer and chief scientist of the 500-meter Aperture Spherical Radio Telescope (FAST) on July 12. His joining marks the further development of Astronomy at Tsinghua University in terms of scientific research strength.

Prior to joining Tsinghua University, Prof. Li Di was a researcher at the National Astronomical Observatories, CAS. He has been the project scientist of FAST since 2008 and the chief scientist of FAST since 2018, focusing on astrophysics and space science, and is an internationally renowned radio astronomer. He has made original contributions in observational studies of star formation, radio instruments and techniques, astrochemistry and spectroscopy, pulsar search and fast radio bursts, and data analysis algorithms.

Prof. Li Di has received the National Innovation Award, the National Science Council Scholar Award, the Outstanding Scientific and Technological Achievement Award of the Chinese Academy of Sciences, the "Science and Technology Person of the Year" award of the 2023 Influential People, and was recently awarded the 17th Marcel Grossman Award on July 9, 2024 (CET).



Li Di was awarded the Marcel Grossman Award on July 9, 2024

The joining of Prof. Li Di will fill a major gap in the field of radio astronomy in the Department of Astronomy at Tsinghua University. Prof. Li's joining is also of great significance in promoting complementary synergies between radio astronomy and other wavelength probes, and enhancing the scope and international influence of the department.

Tsinghua research team receives accolades in 47th International ACM SIGIR Conference



SIGIR Test of Time Award

The 47th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2024) was held in Washington, D.C., USA, from July 13 to 18. Faculty members and students from the Information Retrieval Lab (THUIR), Department of Computer Science at Tsinghua University received multiple awards at the conference.

The paper titled Explicit Factor Models for Explainable Recommendation based on Phrase-level Sentiment Analysis, published in 2014 by Yongfeng Zhang (PhD student) and Guokun

Lai (undergraduate student) from THUIR and Dept. CS&T, supervised by Professor Min Zhang, Professor Yiqun Liu, and Professor Shaoping Ma, received the sole Test of Time Award in ACM SIGIR 2024. This paper is the first study defining the problem of explainable recommendation, and has developed effective sentiment analysis algorithms to address this technical challenge. With nearly a thousand citations, the paper has continuously played a pivotal role in research and applications in recommendation systems since its publication. The Test of Time Award is selected by the SIGIR committee annually for academic papers published at the SIGIR conference over ten years ago to acknowledge their significant and enduring impact to the field. This year marked the first time that a research institution from the Chinese mainland has received the honor.

The paper titled Scaling Laws for Dense Retrieval, authored by Yan Fang (MS student), Jingtao Zhan (Ph.D. student) and others from THUIR and Dept. CS&T, supervised by Assistant Professor Qingyao Ai and Professor Yiqun Liu, received the SIGIR'24 Best Paper Award. It investigates the scaling laws in dense retrieval models, an area not fully explored compared to language generation. By implementing models with varying parameters, training them with different amounts of annotated data, and introducing a continuous metric for performance evaluation, this paper reveals that dense retrieval models' performance adheres to a power-law scaling with respect to model size and annotation quantity across various datasets and methods. These findings help optimize training processes, particularly under budget constraints, and provide valuable insights for future design of information retrieval systems such as search engines and recommendation systems. This is the first time the award has gone to a research institution from the Chinese mainland.



Best Paper Award



SIGIR Early Career Researcher Award

Assistant Professor Qingyao Ai from THUIR, Dept. CS&T has been selected to receive the SIGIR Early Career Researcher (ECR) Award for Excellence in Research. This award, accompanied by a plaque and honorarium, is exclusively granted to young scholars who have received their doctoral degrees within the past seven years. It acknowledges their significant impact on information retrieval research, community engagement, or DEI (i.e., Diversity, Equity, and Inclusion). The SIGIR ECR award for Excellence in Research also marks the first time a researcher from the Chinese mainland has received this honor.

Information Retrieval is a research field focused on collecting, processing, organizing, and storing information for retrieving and utilizing information based on user needs. It belongs to interdisciplinary research fields such as computer science, information science, cognitive psychology, etc. Technologies derived from information retrieval, such as search engines, recommendation systems, and conversational systems, have become the foundations of information societies.

The ACM Special Interest Group on Information Retrieval (ACM SIGIR) is the most famous international academic organization in the field of information retrieval. It hosts prestigious international conferences such as SIGIR, CIKM, and WSDM, and is widely recognized in both academic and industrial communities. Notably, the International ACM SIGIR Conference on Research and Development in Information Retrieval has a history of 47 years, serving as the primary platform for researchers worldwide to present cutting-edge research in this field. It is also recognized as an A-level conference by both the China Computer Federation (CCF) and the Chinese Association for Artificial Intelligence (CAAI).

Professor Kang Chongqing receives the Peter W. Sauer Outstanding Power Engineering Educator Award

Professor Kang Chongqing from Tsinghua University's Department of Electrical Engineering was granted the Peter W. Sauer Outstanding Power Engineering Educator Award (Graduate Category) on July 23 at the IEEE PES General Meeting.

He is the first Chinese recipient in the award's 35-year history.

Kang was awarded for his contribution to education and mentoring in low-carbon power systems engineering.

In his acceptance speech, Professor Kang mentioned that the new generation of young power engineers will play a crucial role in achieving low-carbon and sustainable development goals. He also noted that Tsinghua's commitment to academic innovation and encouragement of a global perspective has greatly contributed to the development of its faculty.

Established in 1989, the Peter W. Sauer Outstanding Power Engineering Educator Award recognizes outstanding educators in the field of electrical engineering.



DIVERSE CAMPUS

Tsinghua University holds 2024 Graduation Marathon

Tsinghua University hosted its annual Graduation Marathon on June 24. This event, part of a series of commemorative activities for the graduation season brought together approximately 2,500 graduating students who embarked on a nostalgic run through the campus scenery.



A Cultural and Intellectual Feast: A Thousand International Students Gather at Tsinghua University



offering Amgen scholars an enriching platform for scientific research and learning.

The Summer School of the Department of Electronic Engineering also kicked off on July 1, offering students insights into the department's academic achievements and key projects, fostering international exchanges, and broadening their global perspectives.

The Chemistry Class of Tsinghua Xuetang Talents Program launched its Summer School on July 6, bringing together chemical elites from around the world to jointly delve into the mysteries of chemical science.

A Recap of 2024 Tsinghua University Global Summer School

Tsinghua University unveiled its 2024 Global Summer School, attracting nearly a thousand international students from across the globe. This event served as a vibrant platform, fostering cross-cultural understanding and academic growth among its diverse participants.



"Ice-Breaking" of Summer School hosted by the Department of Electronic Engineering

A Feast of Interdisciplinary Fusion: Exploring the Boundless Realm of Knowledge

Tsinghua's Global Summer School, which boasts a strong academic foundation and an open international perspective, covers a wide range of fields in its 2024 event, including computer science, electrical engineering, finance, pharmacy, foreign languages, chemistry, electronics, art and design, neuroscience, nuclear science, industrial engineering, and advanced manufacturing.

On June 13, the School of Pharmaceutical Sciences launched the 2024 Tsinghua Amgen Scholars Program and the International Summer School,



Participants visit the Laboratory of Center for Combustion Energy (CCE).



WNU-THU Week 2024

The 2024 Tsinghua-Princeton-Combustion Institute (CI) Summer School on Combustion, started on July 7, focuses on the frontier of combustion science, presenting students with valuable opportunities for international research participation.

Hosted by the Tsinghua Laboratory of Brain and Intelligence (THBI), the CNeuro 2024 Theoretical and Computational Neuroscience Summer School began on July 8. This program facilitated students' exploration of neuroscience, sparking their keen interest in intelligent technology.

The Industrial Engineering and Data Analytics (IEDA) Summer School, organized by the Department of Industrial Engineering (IE), wrapped up on July 14, equipping students through hands-on learning with practical skills essential for their future careers.

The China-Italy Joint Laboratory on Advanced Manufacturing (CI-LAM) Summer School, hosted by the Department of Electrical Engineering (EEA), showcased a deep collaboration between China and Italy in advanced manufacturing, impressing upon students the significance of international cooperation in technological innovation.

The 2024 World Nuclear University-Tsinghua Week (WNU-THU Week 2024) gathered global scholars and students on July 15 to explore the peaceful utilization and sustainable development of nuclear energy, providing students with an international exchange opportunity to gain deeper insights into the field of nuclear science.

On July 1, the Department of Foreign Languages and Literatures (DFLL) launched a series of lectures



Group Photo of the 8th Financial Leaders of Tomorrow Summer Program 2024 of Tsinghua PBCSF

on literature, history, philosophy and art, bolstering cross-cultural understanding among the students.

The 2024 Global Summer School of Tsinghua SIGS (Shenzhen International Graduate School) was also held, with participants engaging in a diverse array of activities spanning academic seminars, workshops, corporate visits and cultural excursions over a two-week period.

The succession of these varied global summer schools underscores Tsinghua University's profound expertise across disciplines and highlights its diverse initiatives to nurture innovative talents with a global outlook. These endeavors allowed students to transcend disciplinary boundaries, immerse themselves in multicultural experiences, and cultivate global competencies, laying a solid foundation for their future academic pursuits and career development.

Convergence of Academic Luminaries: A Wellspring of Diverse Wisdom

Renowned experts and scholars from around the globe bring a wealth of academic resources and teaching expertise, offering students invaluable learning opportunities to tap into cutting-edge technological thinking and practical experience.

THBI-hosted CNeuro2024 featured top scholars globally, such as Professor Nathaniel Daw from Princeton University and Professor Naoshige Uchida from Harvard University. They not only offered captivating courses but also served to foster an insatiable curiosity about intelligent technologies.

The Financial Leaders of the Tomorrow Summer Program 2024 of Tsinghua PBCSF gathered seasoned experts from academia and industry,



Course "Reinforcement Learning: Basic Algorithms, Brain, and Behavior" and "Advanced Reinforcement Learning: Replay, Temporal Abstraction, and Function Approximation" by Nathaniel Daw



Course "Dopamine and Reinforcement Learning (I)" and the cutting-edge topic "Dopamine and Reinforcement Learning (II)" by Naoshige Uchida



Course on Financial Technology by Zhang Xiaoyan, Associate Dean of Tsinghua PBCSF and Chair Professor of Finance

including Sabino Fornies Martinez, Minister Counsellor of EU Delegation Beijing.

These experts combined theory and practice to address the students' questions on current issues and career development in the financial sector. The comprehensive, high-quality curriculum and the integration of full-time and adjunct faculty have become the program's defining features, deeply appreciated by students.

The Tsinghua-Princeton-CI Summer School on Combustion invited distinguished scholars in the field of combustion to offer lectures, including Professor Chung K. Law at Princeton University, Professor Henry Curran at the National University of Ireland Galway, Professor Andreas Dreizler at Technische Universität Darmstadt, and Professor Tianfeng Lu at the University of Connecticut.

These important interactions provided students with opportunities to engage face-to-face with academic

masters and delve deep into combustion science.

During The Summer School of the Department of Electronic Engineering, Professor Wee Peng Tay, Associate Chair (Academic) of the School of Electrical and Electronic Engineering, Nanyang Technological University, encouraged the students to approach their academic journey with an open mind, actively engage with renowned mentors within their field, embrace challenges to scale the peak of knowledge and proactively forge life-long friendships.

The Academy of Arts & Design (ENAD) Summer School featured a keynote address entitled "Convergence: New Forms of Collective Intelligence" by Christopher Grant Kirwan, a professor at King Saud University in Saudi Arabia. He explored how design, technology, nature and self-actualization intertwine in the rapid advancement of AI technology, jointly giving "birth" to new forms of collective wisdom.



Wee Peng Tay shares insights.



Christopher Grant Kirwan delivers a keynote speech.



The Tsinghua-Princeton-CI 2024 Summer School on Combustion

Multicultural Exchange with a Global Perspective

Thousands of young minds gathered at Tsinghua spanning dozens of prestigious institutions, including Columbia University, the University of Cambridge, the University of Tokyo, the National University of Singapore, the University of Geneva, and RWTH Aachen University.

The Tsinghua-Princeton-CI Summer School on Combustion welcomed 220 participants from 13 countries and regions.

The 2024 Tsinghua SIGS Global Summer School attracted 110 international students from 63 universities in 34 countries. The 2024 Summer School for Future Power and Energy System (FPES) of EEA was participated by 20 students from 15 different institutions in 12 countries.

In addition to enriching students' academic horizons, the Summer Schools also built an international platform for cooperation and exchange, promoting interactions and camaraderie among students from diverse cultural backgrounds.

A Fusion of Cultures: Merging Chinese Spirit with World Cultures

Carefully curated cultural exchange activities served as a "spiritual feast", allowing participants to explore traditional Chinese culture while experiencing the blend and harmony between Chinese and foreign cultures, revealing the infinite charm of cultural exchange within the Tsinghua University campus.



Group photo of EEA's 2024 Summer School for Future Power and Energy System (FPES)



Students of Financial Leaders of Tomorrow Summer Program at Tsinghua PBCSF showcase their paper-cutting artworks.

The Financial Leaders of Tomorrow Summer Program of Tsinghua PBCSF served as an important platform for global students to deeply delve into financial knowledge, complemented by cultural experiences like paper cutting, calligraphy and martial arts, enabling them to personally experience the vastness and unique charm of Chinese culture.

A visit to the Mutianyu Great Wall further enriched their journey, allowing them to trace the historical footprints along its winding expanse.

The SIGS Global Summer School comprises of a series of events for experiencing Chinese culture. During the introduction and demonstration of dough figurine and clay sculpture, a traditional

Chinese folk art, the students got hands-on experience in traditional handicrafts by molding pandas of various shapes, gaining a deeper understanding of China's traditional culture and folk arts, and fostering interest and identification with Chinese culture.

Maxim Alexander Baumgärtel, a student representative from Technical University of Munich, Germany, shared his experience. Maxim said that this was his first trip to China, and through participating in the Summer School, he had met like-minded friends from diverse cultures and majors around the world.

In the IE Summer School, a visit to historical attractions such as the Forbidden City and the



Maxim Alexander Baumgärtel delivers a speech.



A student makes a panda dough figurine.

Summer Palace was arranged for the students, as well as immersion in traditional Chinese cultural items like calligraphy, paper cutting, and tea ceremony. These activities not only enriched their summer school life but also deepened their understanding of China's historical and cultural heritage.

At the DFL Summer School, Keir Swift, a sophomore in History at the University of Exeter (UK), remarked, "Our courses ranged from Chinese paper cutting and calligraphy to Tai Chi and traditional medicine, from dialects to literature, and from history to philosophy. The professors' insights were invaluable. Everything about the Summer School was incredible."



Barr Yotam from California State Polytechnic University on the Great Wall

Expanding Global Horizons: A Cradle for Cultivating International Talents

By participating in the Global Summer Schools, Chinese and foreign students not only acquired valuable knowledge and skills but also learned respect, understanding, and inclusiveness through cross-cultural exchanges. These experiences helped them gain a comprehensive understanding of the world, and enhance their adaptability as well as leadership skills in a globalized context.

Zubair Verachia, a master's student from the University of Cambridge, shared at the Financial Leaders of Tomorrow Summer Program, said, "I gained an incredibly valuable experience at the camp, substantially enriching my insights and comprehension of key trends in global and Chinese finance."

During the World Nuclear University-Tsinghua Week program, Babar Iqbal from Harbin Engineering University said, "The intelligence and dedication of Chinese students have left a lasting impression on me. Our friendship and joy broke down language barriers, greatly enriching my research experience."

Barr Yotam, a student in IE's IEDA Summer School, represented California State Polytechnic University, said, "Technologically, I noticed China's remarkable development speed in many engineering fields. Here, every student is passionate and we have formed friendships during this Summer School. It's an incredible experience."

The intellectual and cultural "feast" has provided a platform for students from all over the world to probe deeply into varied cultures, disciplines, and ideologies; it also presented an international stage for them to showcase themselves, learn from each other and attain individual development.



Babar Iqbal



清華大學
Tsinghua University



www.tsinghua.edu.cn

©2024 Global Communication Office, Tsinghua University. All Rights Reserved

