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CAST Newsletter

**CAST International Month 2025 concludes
with fresh momentum for global science and
people-to-people exchange**





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Headlines

CAST International Month 2025 concludes with fresh momentum for global science and people-to-people exchange



On November 26, CAST held a press briefing in Beijing to review the outcomes of International Month 2025. Launched in October, this inaugural month-long initiative dedicated to science and people-to-people exchange carried the theme “S.T.I. Bridges, Humanity Orient.” The program aims to foster an international scientific community and promote joint action in addressing global development challenges.

International Month 2025 unfolded across four major sections. The first featured four flagship conferences on science diplomacy, including the World Science and Technology Development Forum. The second centered on dialogues focused on science driving future development, like the World Materials Conference. The third section, People-to-People Exchange on Openness, Trust, and Cooperation, brought together fifteen events, including the Chinese-Russian Science and Technology Translation Contest. The fourth showcased cooperation, innovation, and mutual learning among civilizations through

twenty-one activities, such as the China-ASEAN Young Scientists Dialogue on Artificial Intelligence. Together, these events engaged more than 20,000 participants across science, education, and industry, creating a cross-border, cross-disciplinary, and cross-cultural platform for dialogue and cooperation.

Demonstrating a commitment to genuine multilateralism, International Month 2025 attracted more than 20,000 representatives from over 110 countries and regions, including more than 3,000 international guests. Over twenty international and national science organizations—among them the International Science Council and the ASEAN Federation of Engineering Organisations—collaborated in hosting events. In addition, ten international organizations established in China, including the International Hydrogen

Fuel Cell Association, convened another twenty activities.

Bilateral exchange was also significantly strengthened. Thirteen bilateral events were held over the course of the month, including the US-China Green Energy Forum, the Sino-UK Zero Emission Vehicle Cooperation and Development Forum, the Sino-German Forum on Development of NEV Industry, the China-Russia Engineering Technology Forum, the China-South Africa Young Scientists Roundtable Discussion, and engineering capacity-building programs for Egypt and Thailand.

Guided by shared aspirations for a future shaped by science, industry, sustainability, and global benefit, International Month 2025 presented more than fifty conferences across strategic emerging industries, advanced manufacturing, digital communication, energy and materials,

ecology, and space science. The program released nine consensus documents and rankings, including the *Hangzhou Declaration on Modeling and Simulation Shaping the Digital World* and the *Digital Earth Initiative for the Sustainable Development Goals*. It also delivered over sixty technical achievements, such as a series of standards on the reliability and safety of complex systems, along with more than ten new organizations, platforms, and cooperation initiatives, and over thirty bilateral and multilateral cooperation agreements. Together, these outcomes underscored the expansive opportunities for collaboration between China and the global scientific community.

(Source: chinanews.com.cn)

China and South Korea jointly hold commemorative events honoring mathematician Liu Hui



Entrance of the thematic exhibition commemorating Liu Hui's birth
Photo credit: *Science and Technology Daily*

On October 24, 2025, a series of commemorative events marking the anniversary of Liu Hui's birth, titled "Rhythm of Numbers Across Millennia · Dialogue with the World," opened in Seoul, South

Korea. Hosted by CAST, the program explored the theme “Algorithmic Thinking and the Shared Heritage of East Asia—From *The Nine Chapters on the Mathematical Art* to Modern Algorithms.” Through a thematic exhibition, an academic exchange session, and a dialogue on civilizations, the events showcased the extraordinary achievements of ancient Chinese mathematician Liu Hui and his lasting influence on mathematical development across East Asia.

Emphasizing lightweight design, artistic expression, and modular presentation, the exhibition illustrated Liu Hui’s pioneering work—including his calculation of pi and the double-difference method—through document reproductions, visual reconstructions, and interactive multimedia. It also highlighted the enduring impact of the algorithmic system found in *The Nine Chap-*

ters on the Mathematical Art on mathematics education throughout East Asia.

During the academic exchange session, scholars from China and South Korea held in-depth discussions on Liu Hui’s mathematical philosophy and its historical significance. The roundtable titled “Algorithmic Thinking and the Shared Cultural Heritage of East Asia” brought together experts from the economic, cultural, and educational sectors of both countries to examine the contemporary value of Liu Hui’s ideas and practical pathways for mutual learning in scientific culture and educational cooperation.

In November 2023, the 42nd session of the UNESCO General Conference approved the Liu Hui commemorative program recommended by CAST and designated 2024-2025 as the 1800th anniversary of Liu Hui’s birth. This marks China’s

first UNESCO-endorsed anniversary celebration centered on a scientist. In addition to China and South Korea, commemorative events have also been held in Italy, Azerbaijan, and other countries.

(Sources: xinhuanet.com and chinadaily.com.cn)

CAST and New York Academy of Sciences advance practical cooperation between Chinese and American scientific communities

On October 28, 2025, CAST Vice President Feng Shenhong met in Beijing with Nicholas Dirks, President and CEO of the New York Academy of Sciences and a recipient of the 2024 Chinese Government Friendship Award, and his delegation. Dirks was in China to attend the World Science and Technology Development Forum. The meeting focused on strength-

ening China-US science, technology and people-to-people exchange.

Both sides underscored the importance of sustaining and deepening collaboration between the scientific communities of the two countries. They emphasized the need for a more open and inclusive approach to cooperation, the expansion of dialogue channels for science and culture, and practical collaboration in areas such as academic exchange, science communication, and scientific publishing. They also highlighted the value of promoting regular interactions among young scientists and students to build mutual understanding, trust, and long-term partnerships—contributions that will support global scientific progress and the shared development of humanity.

Founded in 1817, the New York Academy of Sciences is a prestigious

nonprofit scientific organization in the United States, with more than 16,000 individual and institutional members worldwide.

(Source: Official website of CAST)

Academic Exchange

China-South Africa Center for Engineering Capacity Building delivers strong results since its launch

The China-South Africa Center for Engineering Capacity Building is a key initiative under the Memorandum of Understanding on Cooperation between CAST and South Africa's Department of Science, Technology and Innovation, signed in September 2024 in the presence of both heads of state. Jointly established by the China Society of Engineers (CSE),

SANY Group, and the Engineering Council of South Africa, the center focuses on construction machinery manufacturing, automation control, and other core engineering fields. Its mission is to support the continuing professional development of engineers and to provide a platform for bilateral cooperation in engineering standards development, technical problem-solving, and capacity building.

Since its inauguration in Johannesburg on March 19, 2025, the center has delivered five training modules covering gearbox and engine maintenance as well as component disassembly. It has also organized study visits to China for South African engineers, who toured intelligent production lines, observed tunnel excavation equipment assembly and testing, and received hands-on training in servicing wide-body mining dump trucks. Upon returning home,

these engineers have helped disseminate their newly acquired skills through a master-apprentice training model. During these exchanges, engineers from both countries also held in-depth discussions on advancing the mutual recognition of technical standards.

The Center for Engineering Capacity Building has quickly emerged as a flagship platform for CSE's international engagement, sharing China's experience and innovations in engineering construction and contributing to the professional growth of engineers across the Global South.

(Source: Official website of CAST)

2025 China-EU Geographical Indications Cooperation International Conference builds new bridge for partnership



2025 China-EU Geographical Indications Cooperation International Conference
Photo credit: Zhejiang Daily

On November 14, the 2025 China-EU Geographical Indications Cooperation International Conference was held in Qingtian County, Lishui City, Zhejiang Province—one of China's well-known hometowns of overseas Chinese. Hosted by the Chinese People's

Association for Friendship with Foreign Countries and the China-EU Association, the conference carried the theme “Mutual Recognition and Sharing: GIs Illuminate a New Landmark in China-EU Cooperation.”

The event brought together experts from both sides for discussions on a broad range of topics, including deepening GI dialogue and cooperation, strengthening GI product protection, promoting the sustainable development of GI brands, facilitating agricultural trade and cultural exchange, and enhancing matchmaking between Chinese and European enterprises. Participants also explored new models for China-EU GI connectivity, strategies for advancing the high-quality development of GI-related industries, and ways to expand the global influence of GI products.

This year marks the fifth anniversary of the sign-

ing and the fourth anniversary of the implementation of the *EU-China Geographical Indications Agreement*. Participants agreed that GI cooperation continues to exemplify the mutually beneficial and win-win spirit of the China-EU partnership. They emphasized the need for GI enterprises on both sides to strengthen practical cooperation, innovate new mechanisms for partnership, and work together to promote the high-quality development of the GI sector.

(Source: *Guangming Daily*)

International Awards

Professor He Qianjun of Shanghai Jiao Tong University elected ISHMB President



ISHMB council meeting to elect new members

From November 7 to 9, 2025, the International Conference on Hydrogen Medicine and Biology (ISHMB) was held at Juntendo University in Tokyo, Japan. During the conference, Professor He Qianjun of the Center for Hydrogen Science at Shanghai Jiao Tong University delivered a keynote speech titled “Hydrogen Medicine Materials.” He was also

presented with the Outstanding Researcher Medal and Certificate in recognition of his exemplary contributions to the advancement of hydrogen biomedicine.

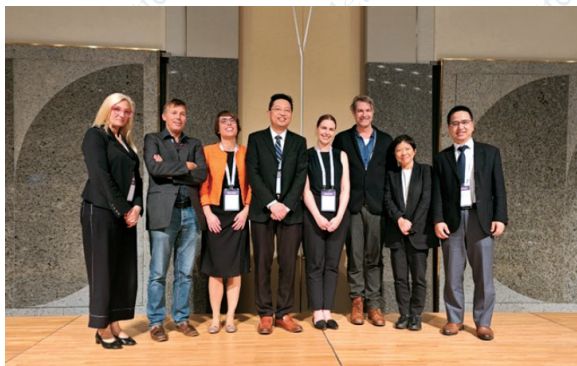
A ISHMB council meeting was held alongside the conference to elect new members. Following recommendations from the ISHMB Honorary President, Shigeo Ohta, and the inaugural President, Professor Qin Shucun, and with unanimous approval, Professor He Qianjun was elected President of the society’s second council.

Founded in 2017 by hydrogen biomedicine societies in China, Japan, and South Korea, with later participation from the United States and Europe, ISHMB is dedicated to promoting global academic exchange and collaboration in hydrogen biomedicine. The society works to strengthen the link between fundamental research and clinical

practice, advance the global dissemination of hydrogen science, guide the development of international standards for hydrogen-related biomedical applications, and support the healthy growth of the field.

(Source: Official website of School of Materials Science and Engineering, Shanghai Jiao Tong University)

Professor Liu Qiang of Tianjin Medical University General Hospital receives ISNI Mid-Career Award



Professor Liu Qiang with members of the award committee

Recently, the International Society of Neuroimmunology (ISNI) announced the recipients of its 2025 Mid-Career Award at the society's annual congress in Chiba, Japan. Professor Liu Qiang, Vice President of Tianjin Medical University General Hospital and a leading neurologist, was selected for this distinguished honor.

The ISNI Mid-Career Award recognizes exceptional mid-career scientists who have made significant contributions to neuroimmunology and demonstrated sustained leadership in the discipline. Only two

scientists worldwide are chosen each year—one in clinical neuroimmunology and one in basic neuroimmunology. Awardees and their research teams are highlighted across ISNI's official global communication channels to broaden their international visibility and impact.

ISNI Vice President Heinz Wiendl remarked that the award was more than a distinction and reflected the rapid evolution of the field. The awardees were already among the leading scientists of their generation and that the paradigms they established closely linked mechanistic research with clinical medicine. He added that their academic trajectories pointed clearly upward, suggesting that this moment was not a peak but the beginning of a new era.

Professor Liu noted that the award represents a new starting point for his work. He will contin-

ue advancing research at the intersection of bone marrow immunity and brain disorders and accelerate the clinical translation of next-generation cellular and anti-

body therapies for conditions such as multiple sclerosis, neuromyelitis optica, and myasthenia gravis, with the goal of bringing improved treatment options to more

patients.

(Source: Official website of Tianjin Medical University)

Scientist Profile

Yao Qiming puts a distinctive Chinese mark on track design



Yao Qiming serves as Deputy Chief Engineer of the Tongji Architectural Design Group, Director of both the Jennyao Motor Sports and Safety Research Center and the Shanghai Engineering Research Center of Road Safety and Smart Mobility, an expert member of the Federation of Automobile and Motorcycle Sports of China, and an Adjunct Professor at Tongji University. She is also the only Asian among the 12 FIA-licensed track designers worldwide. “We are committed to innovation,” Yao says, “ensuring that every track we design is truly unique and uninfluenced by past models.”

Yao Qiming on a racetrack
Photo credit: China Real Estate Business

Most recently, the 2025 Kumho FIA TCR World Tour China Round showcased her team’s work at the Zhuzhou International Circuit—an innovative track designed using their third-generation smart racetrack tech-

nology, which Yao has named “Under the Starry Sky.”

This system transforms track design into a data-driven engineering process: millions of data points are automatically

computed, and complete engineering plans can be generated with a single click. The technology removes nearly six months of manual drafting, delivers millimeter-level precision during construction, and

helps resolve complex technical challenges during construction.

Breaking barriers through determination

Today, the Pingtan Street Circuit, the Guangdong International Circuit, the Wuhan International Circuit, and the Zhuzhou International Circuit all stand as proof of the rapid rise of China's track design and motorsport industry. The story behind this progress can be traced back to a seemingly chance moment during the 2003 DTM Shanghai Street Circuit Race.

In 2003, as Formula 1 racing made its debut in China, Yao Qiming, then new to the field, was unexpectedly appointed chief designer for China's first DTM street circuit. She accepted without hesitation. Determined to move beyond FIA's traditional crash-barrier model, she immersed herself in research: developing

original designs that met FIA standards during the day and running motion-trajectory and impact-force simulations at night. Her work resulted in a dual-function crash barrier suitable for both racetracks and city streets, an innovation that not only improved safety but also reduced material costs by 25%.

The following year, while designing the Changchun Jihua Park Racetrack, Yao contacted several international institutions for guidelines. Their response was blunt: "Permanent-circuit design standards are our intellectual property. If you pay, we can design it for you." Instead of discouraging her, the reply strengthened her resolve to pursue independent innovation. Within three months, she developed China's first track safety simulation system with full domestic intellectual property rights. The system passed FIA safety certification, marking

a breakthrough that proudly stamped China's tracks with the label "Designed in China."

Designing tracks with a warm heart

"My father nearly became vegetative after a serious car accident. That fear has stayed with me my whole life," Yao recalls. While pursuing her master's degree in road and bridge engineering, she encountered a startling statistic: by 1996, global traffic fatalities had surpassed the combined death toll of the two world wars. From that moment on, "the collision between cars and walls" became the central focus of her research. "I want to build the safest roads possible—so others will never have to experience what my family went through," she says.

One of her signature achievements is the Wuhan International Circuit. Built along the Dongjing River,

the 4,290-meter track, named “Chasing Butterflies’ Dream,” features 17 curves and resembles a butterfly about to take flight. It is China’s first eco-friendly FIA 2 class circuit, and every curve, slope, and run-off area reflect deliberate safety-driven design. Yao explains her philosophy: “The two wings of the butterfly represent the two functions of a car—mobility and sport. Racers can chase speed, while everyday people can see what safety makes possible.”

In 2019, Yao and her team developed the precursor to the third-generation Smart Track Key Technologies, a system that combines intelligent track design with virtual reality. She extended this innovation beyond motorsport into the broader field of smart transportation safety. In 2020, she established the Shanghai Engineering Research Center of Road Safety and Smart Mobility, the first of its kind in China, with a mission to build a “safety coordi-

nate system” for China’s 500 million drivers and for future autonomous vehicles. In 2022, she oversaw the creation of China’s first full-scale pilot testing base for intelligent safety-driving systems, where real accident scenarios are recreated to strengthen drivers’ instinctive emergency responses.

“We can now simulate tens of thousands of extreme conditions, such as emergency evasive maneuvers on slippery roads or the glare of oncoming headlights at night,” Yao explains. “Our goal is to make autonomous driving safer and to help new drivers better prepare for unexpected situations.”

Today, the impact of Yao’s work shines across multiple fields, yet she continues to push forward, using her passion and perseverance to illuminate the future of China’s transportation-safety landscape.

(Source: *Science and Technology Daily*)

Upcoming Conferences

4th AsiaEvo Conference to convene in Kunming



Hosted by the Evolutionary Genetics Branch of the Genetics Society of China (GSC) and the Yunnan Society of Zoology, the 4th AsiaEvo Conference will take place from December 8 to 11 in Kunming, Yunnan Province. Themed “Biological Evolution and Interdisciplinary Frontiers,” this year’s conference will bring together leading scholars and emerging

young researchers from around the world for in-depth discussions on cutting-edge topics in the life sciences. The event aims to promote interdisciplinary collaboration, strengthen regional scientific cooperation, and advance dialogue on the latest discoveries and future directions in evolutionary biology.

The conference program spans a broad range

of fields, including genomics, paleontology, developmental biology, neurobiology, evolutionary ecology, phylogenetics, speciation, adaptive evolution, evolutionary theory, and emerging biotechnologies.

For more information, please visit: <https://2025asiaevoconf.casconf.cn>

(Source: Official website of GSC)

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Editor: Ying Wenqi
Proofreader: Bai Ge
Designer: Zhang Shan

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<http://english.cast.org.cn/>
newsletter@cast.org.cn