

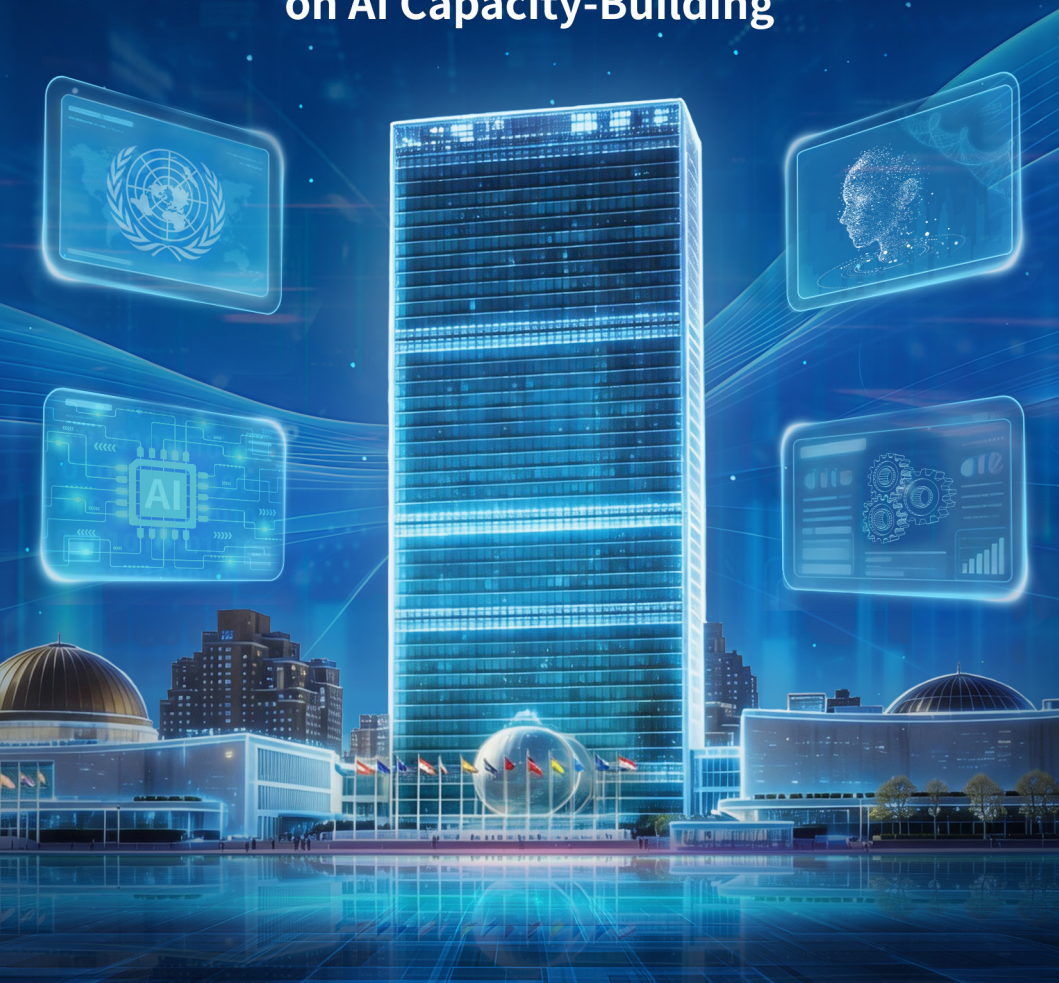


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CAST Newsletter

CAST Attends Group of Friends Meeting for International Cooperation on AI Capacity-Building



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Headlines

CAST attends Group of Friends meeting for international cooperation on AI capacity-building



Participants at the Group of Friends meeting for international cooperation on AI capacity-building

On May 5, 2026, the meeting of the Group of Friends for International Cooperation on AI Capacity-Building was held at United Nations Headquarters, bringing together more than 120 representatives from over 50 countries and international organizations.

Fu Cong, China's Permanent Representative to the United Nations, noted that since its establishment more than two years ago, the Group of Friends has promoted digital transformation and capacity building through a range of practical cooperation initiatives. He said China will continue to uphold a people-centered approach and multilateralism, with a focus on tangible outcomes to ensure that artificial intelligence serves the common good and benefits all.

Luo Hui, Director-General of the CAST Department of International Affairs, said CAST is ready

to work with all parties to foster an open and inclusive ecosystem for AI capacity building that delivers shared benefits. She emphasized the importance of moving from broad framework agreements to deeper, sector-specific cooperation, and supporting the Global South in participating in intelligent transformation on an equal footing.

Chola Milambo, Zambia's Permanent Representative to the United Nations, stressed the importance of aligning AI development with the priorities of the Global South. Amandeep Singh Gill, the UN Secretary-General's Special Envoy for Digital and Emerging Technologies, called for strengthening three pillars of international cooperation: policy, science, and capacity building.

Guo Huadong, Wang Jian, Song Haitao, and other experts serving on the CAST UN consul-

tative committees were invited to attend the meeting. They shared updates on international cooperation in areas including AI-enabled engineering capacity building, deep-space computing, and disaster risk reduction, as well as China's practical experience in leveraging AI to support the Global South. Representatives from international organizations, including the World Federation of Engineering Organizations (WFEO), also attended. Delegates from various countries participated actively in the discussions, speaking highly of the role of the Group of Friends and China's scientific community. They expressed hope for further strengthening cooperation frameworks and taking concrete steps to ensure that AI development remains inclusive and beneficial to all.

(Source: Official website of CAST)

ECBAP participates in multiple STI Forum sessions and side events

From May 5 to 8, 2026, the 11th Multi-stakeholder Forum on Science, Technology and Innovation for the Sustainable Development Goals (STI Forum) was held at the United Nations Headquarters in New York.

During the forum, the African Engineering Capacity Building Program (ECBAP), jointly launched by CAST and the World Federation of Engineering Organizations (WFEO), participated in a series of sessions and side events on agriculture, water resources, digital infrastructure, and AI governance. ECBAP engaged in in-depth exchange with representatives from UN agencies, international engineering organizations, research institutions, and industry. The program also played an active role in coordinating activities and facilitating partnerships, holding discussions with international organizations and partners on local project implementation, expanding global partnerships, and identifying priority areas for future training.



Side event on "AI Empowering Engineering Capacity Building"

ECBAP took part in the side event “AI Empowering Engineering Capacity Building,” co-hosted by the Permanent Mission of China to the United Nations, the Permanent Mission of Zambia to the United Nations, and CAST. The event explored practical pathways for leveraging AI to strengthen capacity building, with discussions focusing on inclusive and sustainable solutions for all countries, particularly developing nations. Nahla Al Qassimi, a member of the WFEO Executive Council, shared ECBAP’s experience in international cooperation and capacity building. She noted that the program has received support from initiatives such as the United Nations International Decade of Sciences for Sustainable Development. With support from partners including CAST, ECBAP has organized AI-enabled engineering training programs in Kenya, Uganda, and Cabo Verde, providing

capacity-building support to more than 200 local engineers and policy-makers. Looking ahead, ECBAP plans to further expand the reach of its training programs and continue supporting digital transformation and sustainable development across Africa.

Gong Ke, Chair of the ECBAP Task Force, was invited to attend the side event “AI for the 2030 Agenda and Beyond: Inclusion, Accessibility and Equity,” where he delivered a keynote address titled “Capacity Building: A Key Enabler for Beneficial, Safe, and Fair AI Development.” In his remarks, Gong highlighted ECBAP’s AI capacity-building initiatives for engineers across Africa, aimed at strengthening digital and AI-related competencies and helping African countries integrate into the global AI landscape. Drawing on ECBAP’s practical experience, he called on the international community to deepen coop-

eration in AI capacity building and promote AI development that is more inclusive, safe, and equitable, thereby supporting the implementation of the 2030 Agenda for Sustainable Development.

WFEO President Seng Chuan Tan also participated in the main forum session “Transforming Water Systems with Science, Technology and Innovation.” He outlined ECBAP’s work in advancing urban water system transformation, strengthening engineering capacity, and promoting digital transformation. He also introduced plans for a new round of engineering capacity-building initiatives for small island developing states, aimed at expanding engineering cooperation networks across the Global South and fostering a more open, inclusive, and sustainable global innovation ecosystem.

(Source: Official WeChat account of the China

Center for International Science and Technology Exchange)

Academic Exchange

2026 IEEE 9th International Electrical and Energy Conference focuses on new power systems



Participants of CIEEC 2026 in a group photo

From May 15 to 17, the 2026 IEEE 9th International Electrical and Energy Conference (CIEEC 2026), jointly organized by the China Electrotechnical Society (CES), the IEEE Beijing Section, and Tianjin University, was held in Tianjin. The conference brought together more than 600 experts and scholars from 11 countries and regions, including China, Italy, the United Kingdom, Portugal, Greece, Ireland, and South Africa. Participants held in-depth discussions on key topics such as new-type power systems, smart power distribution and utilization, power electronics and energy conversion, electrical machines and their control, as well as intelligent electrical apparatus and

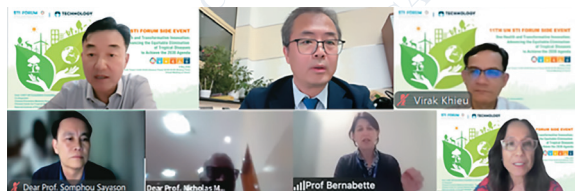
equipment.

During the keynote session, experts presented the latest research on a range of cutting-edge issues, including community engagement and smart infrastructure in urban energy transitions; the impact of extreme climate events on power systems; wide-area monitoring and protection against cyberattacks and cascading failures; the application of AI models in energy system management and electricity markets; and grid-forming control and multi-frequency oscillation monitoring.

Founded by CES, the IEEE International Electrical and Energy Conference aims to provide a global platform for researchers and professionals worldwide to present their work, promote the translation of research into real-world applications, and foster collaboration across the electrical and energy sectors.

(Source: Official website of CES)

11th STI Forum hosts side event on “One Health and Transformative Innovation”



Panelists at the virtual side event on “One Health and Transformative Innovation”

Recently, during the 11th STI Forum, a virtual side event themed “One Health and Transformative Innovation: Advancing the Equitable Elimination of Tropical Diseases to Achieve the 2030 Agenda” was held. The event was co-organized by the CAST UN Consultative Committee on Life Science and Human Health (CCLH) and the Chinese Preventive Medicine Association (CPMA). More than 130 global public health leaders, interdisciplinary experts, and policymakers from 19 countries and regions gathered online to explore practical pathways for accelerating the equitable elimination of tropical diseases through a One Health approach and inclusive innovation.

During the panel discussion, experts emphasized that eliminating tropical diseases is not only a public health challenge but also an issue of development equity. Four key points were highlighted. First, One Health innovations must be inclusive and equitable, ensuring that the most affected communities are not left behind. Second, integrated monitoring and evaluation systems across human, animal, and environmental health should align with WHO elimination verification standards. Third, China’s experience in multi-sectoral coordination and whole-of-soci-

ety governance offers valuable lessons for strengthening disease prevention. Fourth, participants stressed the need to guard against “algorithmic extractivism” by strengthening global governance of health data and preventing inequalities in the use of digital tools.

Building on these discussions, Zhou Xiao-Nong, Vice Chair of CCLH and Chair of the One Health Working Group of the World Federation of Public Health Associations (WFPHA), summarized the outcomes in the report *Expert Consensus on Promoting One Health Innovation in the Elimination of Tropical Diseases*. The Consensus outlines five strategic priorities: shifting from reactive responses to upstream risk prevention; ensuring that inclusive innovation delivers full coverage of public health services; accelerating the development of integrated, cross-sectoral surveil-

lance systems; scaling up successful local practices into globally applicable models; and significantly increasing investment in workforce development in low- and middle-income countries. The Consensus also calls for aligning national tropical disease strategies with One Health approaches, strengthening equitable frameworks for science and technology innovation, and leveraging the implementation of the *WHO Pandemic Agreement* to institutionalize upstream disease prevention and control measures.

(Source: Official WeChat account of CPMA)

International Awards

Tsinghua University Professor Chen Deliang elected co-chair of Future Earth



Chen Deliang (first from left) responds to media questions on behalf of Future Earth at COP30

The global sustainability science initiative Future Earth has recently completed a new round of leadership appointments, with Chen Deliang, Xinghua

Distinguished Chair Professor at Tsinghua University and a member of the Chinese Academy of Sciences, elected as co-chair.

Professor Chen has long conducted research on climate change, Earth system science, and sustainable development. He has made internationally recognized contributions in areas including extreme climate events, climate risk, and Earth system interactions, while also playing an active role in advancing international scientific collaboration and global science governance.

Future Earth is one of the world's leading platforms for sustainability science collaboration. Jointly initiated by the International Science Council (ISC), the United Nations, and other international organizations, it promotes interdisciplinary research and global collaboration across fields such as Earth system science,

climate change, environmental studies, and sustainable development. The platform brings together leading researchers from the natural and social

sciences, engineering, and policy communities, and plays a key role in supporting the United Nations Sustainable Development Goals (SDGs), the *Paris*

Agreement, and broader global environmental governance.

(Source: tsinghua.edu.cn/news.htm)

Scientist Profile

From Earth to space: The remote sensing journey of Guo Huadong



Guo Huadong is a member of the Chinese Academy of Sciences and a foreign member of the Russian Academy of Sciences, the Finnish Society of Sciences and Letters, the World Academy of Sciences (TWAS), and the International Eurasian Academy of Sciences. His research focuses on space-based Earth information science, with major contributions to remote sensing mechanisms, radar Earth observation, and Digital Earth science.

Photo credit: Official website of AIRCAS

He currently serves as Chair of the Academic Committee of the Aerospace Information Research Institute of the Chinese Academy

of Sciences (AIRCAS), where he is also a professor and doctoral supervisor. He is Honorary President of the International Society for

Digital Earth, a member of the UN Ten-Member Group on Technology Facilitation Mechanism for the SDGs, and Director of the UNESCO

International Centre on Space Technologies for Natural and Cultural Heritage (HIST). In addition, he serves on the Scientific Committee of the Integrated Research on Disaster Risk (IRDR) program, chairs the Digital Belt and Road Program (DBAR), and is an advisor to the China National Expert Committee on Big Data. He is also Editor-in-Chief of the *International Journal of Digital Earth* and *Big Earth Data*.

Recently, Guo received one of the highest honors in the global astronautics community. In an official letter from Paris, International Astronautical Federation (IAF) President Gabriela Arrigo wrote: “I am delighted to inform you that the International Astronautical Federation has selected you to receive the 2026 IAF Hall of Fame Award for your outstanding contributions to the advancement of astronautics... Please

accept my heartfelt congratulations on this well-deserved distinction.”

The award marks a historic moment for China’s remote sensing community. Behind the honor lies Guo Huadong’s nearly half-century journey of scientific exploration from Earth to space.

The path of remote sensing-based mineral exploration

In the 1980s, China’s demand for mineral resources was rising rapidly, yet the extent of reserves in many regions remained unclear. Traditional geological prospecting methods were often slow and inefficient, akin to searching for a needle in a haystack. Determined to accelerate mineral exploration, Guo Huadong, newly returned from an overseas academic visit, assembled a team of several dozen scientists and launched a pioneer-

ing effort in remote sensing-based prospecting.

At the time, many conventional geologists were skeptical of applying remote sensing technologies to mineral exploration. Rather than engage in debate, Guo led a team of 46 researchers into mountainous regions to carry out fieldwork. By day, they conducted geological surveys and collected samples under the scorching sun; by night, they worked in tents analyzing remote sensing data and mapping prospective mineral targets. Even when suffering from illness, the team continued refining their methods.

“We first used satellite remote sensing to identify areas favorable for mineralization, narrowing the search to several thousand square kilometers,” Guo later recalled. “But that was still far too large an area, so we had to narrow it down further.” Combining

airborne remote sensing with on-site geological verification, the team progressively refined the target zones, layer by layer, like peeling an onion.

After five years of sustained effort, the team delineated 14 promising mineralization zones and exploration targets, identifying proven gold reserves of 18.8 tons and prospective reserves estimated at 70 tons. Equally important, Guo's research established a replicable theoretical and technical framework for remote sensing-based mineral exploration.

Making remote sensing the only “eye” on the disaster zone

On May 12, 2008, a devastating earthquake struck Wenchuan, Sichuan Province. Just two minutes after the disaster, Guo Huadong, then Director of the Center for Earth Observation and Digital Earth at the Chinese Academy

of Sciences (CAS), launched an emergency response operation. Drawing on the center's satellite ground stations and airborne remote sensing capabilities, he coordinated satellite observations and dispatched aircraft to the disaster zone. With communications severed and roads blocked by landslides, remote sensing became the only effective “eye” on the affected area.

On May 15, two airborne remote sensing aircraft had transmitted the first batch of imagery data. The following evening, researchers analyzing the images identified an “SOS 700” distress signal on the rooftop of a primary school in Caopo Township in Wenchuan. Guo immediately reported the discovery, enabling the successful rescue of all 700 trapped villagers. On May 21, CAS formally established a remote sensing emergency command center

for earthquake relief, along with a dedicated task force for disaster monitoring and damage assessment. Under Guo's leadership, researchers across the academy rapidly built an around-the-clock, all-weather remote sensing observation system. The effort significantly improved the speed of earthquake disaster monitoring and played a critical role in emergency response and relief operations during multiple major seismic disasters in the years that followed.

DBAR: China's commitment written in space

Guo Huadong has never stopped looking toward new frontiers. In 2016, he led the launch of the Digital Belt and Road Program (DBAR), an international scientific initiative that applies space-based observation technologies to environmental monitoring and disaster risk reduction across Belt

and Road countries. By June 2025, the program had established multiple international centers of excellence for scientific cooperation.

In 2021, the Sustainable Development Science Satellite 1 (SDGSAT-1), for which Guo served as chief scientist, was successfully launched. Designed specifically to support the United Nations 2030 Agenda for Sustainable Development, the satellite provides openly accessible data to users around the world. To date, 116 UN member states have utilized data from this Chinese satellite.

By 2025, the team had completed seven consecutive editions of the *Big Earth Data in Support of the Sustainable Development Goals* report. The reports have been published on official United Nations platforms as well as the website of China's Ministry of Foreign Affairs. Meanwhile, the team's inde-

pendently developed Big Earth Data platform has provided specialized services to 174 countries and regions worldwide.

Reflecting on his scientific career, Guo once said: "When you dedicate yourself to scientific research and make it your life's work, you can spend three days without leaving your home, or an entire week focused on a single experiment. From that dedication comes conviction—and perseverance. Only with genuine passion can you truly excel and continue pushing forward in the pursuit of discovery."

(Source: qianlong.com)

Upcoming Conferences

7th World Photonics Conference to convene in Beijing



The 7th World Photonics Conference (WPC 2026), jointly organized by the Chinese Society for Optical Engineering (CSOE) and the International Society for Optical Engineering (SPIE), will be held from July 17 to 19 at the China National Convention Center in Beijing. The conference will bring together leading experts, scholars, and industry representatives from around the world in the field of optoelectronics. It will feature 19 specialized sessions covering fron-

tier topics such as laser technology, infrared and terahertz science, micro- and nano-optics, fiber optics, quantum optics, intelligent photonics, optical communications and networks, biomedical photonics, and energy photonics. A range of side events—including technical workshops, industry-academia roundtables, a young scientists forum, and CSOE member salons—will also be held, creating a comprehensive international platform for academic exchange, industry collaboration, and the presentation of technological innovations.

The 15th Applied Optics and Photonics China (AOPC 2026) and the 17th Photonics Expo will be held concurrently with the conference. The exhibition will

showcase key areas such as lasers and intelligent manufacturing equipment, infrared and terahertz technologies, optical communications and sensing, precision optics and testing, optoelectronic imaging and display, emerging technologies and experimental achievements, as well as new drivers of advanced productive forces. The event will highlight some of the most dynamic application areas in the optoelectronics industry.

For more information, please visit:

https://b2b.csoe.org.cn/meeting/WPC2026.html#1088_1089

Submission Guidelines

Conference papers will be formally published by SPIE and indexed in EI

Compendex. Authors are required to first submit an English-language abstract of 300-500 words through the conference website. Following review by the Conference Academic Committee, acceptance notifications will be sent by email. Authors of accepted abstracts will then be invited to submit full English-language manuscripts through the SPIE submission system. The organizing committee may also recommend selected papers for publication in SCI-indexed journals, EI-indexed journals, or other leading academic journals.

Abstract submission portal:

<https://b2b.csoe.org.cn/submission/WPC2026.html>

(Source: Official WeChat account of CSOE)

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