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2026 CIFTIS Boosts Openness, Shared Prosperity

By GONG Qian, WANG Xiaoxia & YAO Yian

China has deepened opening-up and cooperation in the service sector, fulfilling its responsibility in fostering the development of global service industries and trade in services.

Themed "Global Services, Shared Prosperity," the 2026 China International Fair for Trade in Services (CIFTIS), being held in Beijing from September 9 to 13, has brought exhibitors from 90 countries and international organizations, with more than 1,800 companies exhibiting on-site. It is also hosting a series of forums and business matchmaking.

The CIFTIS is expected to create many investment opportunities across conferencing, exhibition, infrastructure and digital services, Zimbabwean Vice President Constantino Chiwenga said at the Global Trade in Services Summit at the fair.

The summit was co-hosted by the United Nations Conference on Trade and Development and the World Intellectual Property Organization (WIPO) with China's Ministry of Commerce and the Beijing municipal government.

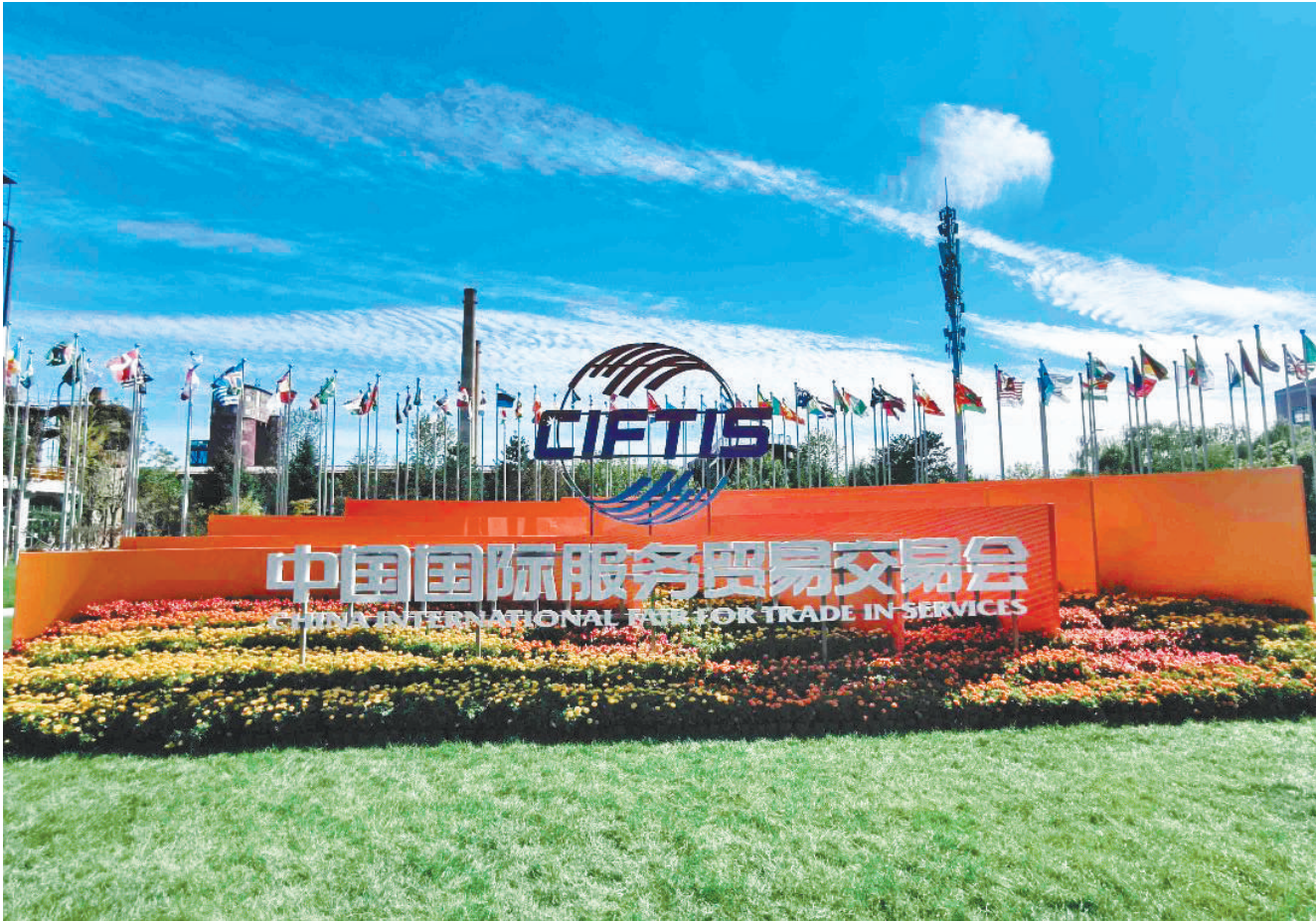
WIPO Director General Daren Tang said in his video address that in the first half of this year, China's service trade volume reached 3.8 trillion RMB, up over eight percent year on year, with exports of knowledge-intensive services, including intellectual property (IP)-related services, seeing strong growth. This is supported by China's IP and innovation ecosystem, Tang said.

Highlighting innovation and trade in services, more than 100 new products and services made their debut at the fair in fields such as information and communications, fintech, and digital and intelligent healthcare.

This year's CIFTIS not only offers a platform for showcasing and trading quality services from around the world and facilitating access to the Chinese market, but has also debuted "Go Global Service" zones across multiple themed exhibitions to support Chinese companies expand overseas and promote more high-quality "China Services" on the global stage.

In the Exhibition of Culture & Tourism Services, Yiyuan Digital (Beijing) Technology Group showcased a device that uses AI image matching and automated controls to give cultural relics a globally unique digital ID each, enabling identity data to be shared across platforms. Also on display are flagship cases of China's "new trio" of cultural exports — micro-dramas, domestic animation and online games — paired with AI multilingual translation and inbound travel products.

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The 2026 China International Fair for Trade in Services is held in Shougang Park in Beijing, from September 9 to 13. (PHOTO: SUN Jin / Science and Technology Daily)

Advancing Collaboration in Digital Age

By WANG Xiaoxia

Amidst accelerating global changes where technological disruption intertwines with geopolitical turmoil, the trend of peace, development and win-win cooperation remains unchanged, according to the Open Cooperation Forum, a core event of the 2026 China International Fair for Trade in Services (CIFTIS) held on September 9.

Participants from governments, international organizations and the business community underscored China's efforts to advance high-level opening-up with CIFTIS as a major platform, and shared their insights on open market and international collaboration.

This year's CIFTIS has brought to-

gether 90 countries, regions and international organizations, with more than 1800 enterprises taking part, a great demonstration of China's commitment to advancing high-level opening up for countries around the world to share opportunities, said Michael Parker, chairman of the Ireland-China Friendship Association.

As a new wave of technological and industrial transformation accelerates, data has evolved from a supporting resource into a key production factor, and digital trade has grown from a new business form into the most dynamic engine of international trade.

Beijing has launched its first cross-border platform for embodied AI data factors, offering cross-border data flow, trusted data spaces, model R&D support,

and compliance governance — turning data from silent assets into flowing capital, said Li Wenhua, executive deputy mayor of Beijing's Shijingshan district.

However, technology alone is not enough, said Murat Seitnepesov, president of the General Caspian Association (GCA), who pointed out that international expansion requires trusted networks, local knowledge and institutional coordination.

The GCA has partnered with the International Transport Association, the International Freight Association, the Bank of China (BOC), and UN bodies to promote trade and boost Belt and Road trade flows, said Seitnepesov, who especially thanked the BOC for its financial support. See page 4

International Cooperation

China-CEEC Innovation Cooperation Gains Greater Momentum

By LI Linxu & XIA Fan

As economic and trade cooperation reaches a new level, sci-tech innovation is increasingly emerging as a prominent focus and a new growth pole in the cooperation between China and Central and Eastern European Countries (China-CEEC), said Zhang Guangjun, vice minister of science and technology, at the opening ceremony of the 2026 China-CEEC Conference on Innovation Cooperation.

Themed "A Decade of Innovation, Building the Future Together," the conference was held in Ningbo, Zhejiang province and Nanjing, Jiangsu province, from September 9 to September 11.

At the opening ceremony on September 9, eleven agreements on industry-university-research cooperation projects and platform development were signed, and the second China-CEEC Youth Innovation and Entrepreneurship Competition was launched.

At a ministerial meeting, senior representatives discussed cooperation opportunities in key fields and proposed the China-CEEC innovation cooperation 2030 vision.

This year marks the 10th anniversary of the launch of the conference. Over the past decade, the bilateral sci-tech cooperation has matured steadily, with growing internal drivers.

"This conference stands as a testament to a decade of cooperation between our regions and serves as a reminder that, with sufficient commitment and a shared vision, strong partnerships can be successfully developed across different parts of the world," said Vladimir Simonak, state secretary of the Ministry of Economy of the Slovak Republic. "Our cooperation is built on a common aspiration to pursue shared goals, particularly by fostering a favorable environment for innovation, investment and collaboration among experts, government representatives, academia and the business community."

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WEEKLY REVIEW

Scientists Spot Pulsar in Tidal Tail of Dissolving Star Cluster

An international research team led by Chinese scientists has used the Five-hundred-meter Aperture Spherical radio Telescope, along with other telescopes in China and abroad, to identify a pulsar for the first time within the tidal tail of an open cluster being torn apart by the Milky Way. The findings were published in *Science Bulletin*.

Full Breakthrough in Longest Railway Tunnel's Land Section Achieved

On September 4, the land section of the Jintang undersea tunnel on the Ningbo-Zhoushan high-speed railway in East China's Zhejiang province was excavated through. The tunnel is a key project controlling the construction of the railway. With a total length of 16.18 kilometers, it is the longest undersea high-speed railway tunnel.

BepiColombo Begins Final Approach to Mercury

After nearly eight years in space, the Mercury Transfer Module recently separated from the spacecraft stack of BepiColombo, the joint European Space Agency (ESA)-Japan Aerospace Exploration Agency (JAXA)'s mission to Mercury, marking the start of its final approach to the planet. The ESA's Mercury Planetary Orbiter and JAXA's Mercury Magnetospheric Orbiter will enter orbit around Mercury on November 21, and separate from each other on December 9-10. The mission's science phase is set to begin in April 2027.

WMO Report Highlights Air Pollution and Climate Change Health Risks

On September 7, the World Meteorological Organization (WMO) released its latest report, which examines the complex links between air quality and climate. It highlights the health impacts of air pollutants such as fine particulate matter and ground-level ozone, as well as aerosols such as black carbon and microplastics, and calls for improved monitoring of these pollutants.

New Graphic



WECHAT ACCOUNT

E-PAPER



STI Frontier

50-year Quest for 'Unbreakable' Wheat

By Staff Reporters

In the summer of 2026, while relentless rain and a severe Fusarium head blight (FHB) outbreak devastated wheat fields across China's Yangtze River basin, a new variety stood firm. Yangmai 53 not only survived — it thrived, yielding over 600 kg per mu (1 mu equals 0.0667 hectares) in multiple demonstration plots. The planting area is expected to expand to one million mu in autumn.

Behind this success lies a half-century breeding marathon — one that finally broke the long-standing curse that high disease resistance and high yield could not coexist.

From dead end to new strategy

The journey began in the 1970s, when researchers discovered that known FHB-resistant genes came with a "chain drag" — they were tightly linked to undesirable traits like tall,

weak stalks and small, low-yield grains. Every planting attempt using these materials failed.

The breakthrough came when Cheng Shunhe, an academician of the Chinese Academy of Engineering, observed a phenomenon called "transgressive segregation": Crossing two moderately resistant but high-yielding parents occasionally produced offspring with FHB resistance surpassing both.

The team shifted tactics — instead of wrestling with flawed high-resistance materials, they focused on excellent high-yield parents and worked to stack multiple minor resistance genes. The 2012 FHB epidemic became an ideal screening test, recalled researcher Lyu Guofeng from Cheng's team.

Lyu and his colleagues worked day and night in fields in rain and shine, screening thousands of cross-combinations. "We came home soaked every

day — sweat mixed with rain," he reminisced. They selected over 40 superior resistant combinations, laying the groundwork for Yangmai 53.

New decision that changed everything

The next hurdle was tougher. The team's earlier success, Yangmai 158, had achieved moderate resistance with good yield, but as climate change made FHB outbreaks more frequent, moderate resistance was no longer enough.

The turning point came with a personal push. Researcher Gao Derong, who took over from his mentor Cheng, recalls his father's blunt complaint: "We don't plant Yangmai varieties anymore." That stung. Determined, Gao proposed combining their existing resistance genes with the major disease-resistant gene Fhb1, and applying intense selection across large populations.

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China Eyes 3,000 AI Service Providers by 2027

Policy Express

By TANG Zhexiao

To support in- depth implementation of the "AI Plus" action plan, China will cultivate AI application service providers and build a service provider resource pool, according to a special initiative launched by the Ministry of Industry and Information Technology.

AI application service providers are enterprises or institutions that deliver services including consultation and planning, delivery and implementation, operation management, and security governance for AI solutions for the intelligent transformation needs of client entities.

The initiative will drive the establishment of a service provider source pool and help strengthen providers' capabilities in technological innovation, solution integration and delivery, and security and compliance. This will foster a strong cohort of AI application service providers with a deep understanding of industry pain points, a solid grasp of technology fundamentals, keen awareness of security risks, and strong delivery



AI infrastructure maker Sugon exhibits its 100,000-card AI supercluster "Sugaron 8000" at the 2026 China International Big Data Industry Expo, Guiyang, southwest China's Guizhou province. (PHOTO: XINHUA)

ery and operational capabilities.

By the end of 2026, the number of service providers in the national resource pool is expected to exceed 2,000. A well- structured, multi- tiered ecosystem with clearly defined roles and strong collaboration will take shape, significantly strengthening providers' ability to deliver solutions for complex scenarios. By

the end of 2027, this number will reach at least 3,000, helping foster an AI application service ecosystem with full factor collaboration, end-to-end chain connectivity and full-scenario coverage.

The notice lays out four key tasks: establishing a service provider resource pool, elevating service supply capacity, advancing large- scale application, and

strengthening support and guarantees for service providers.

The relevant departments are required to send safety risk information and risk events related to AI software and hardware products to the service providers, guiding them to incorporate management requirements such as network security, data security and ethical governance into the entire process of R&D, deployment and application.

It calls for increased procurement of services such as large models, agents and tokens. Regions with favorable conditions will develop comprehensive "going out" service systems. Leveraging cooperation mechanisms and platforms including the Belt and Road Initiative, BRICS and China- ASEAN cooperation, high- quality AI application projects will be promoted for overseas deployment.

Colleges and vocational schools are encouraged to build training bases together with leading service providers. Service providers are also encouraged to set up forward deployment engineer teams to work on- site with clients and ensure successful real- world implementation of use cases.



Three-year Plan to Promote AI Startups

By CHEN Chunyou & CUI Shuang

China has released a new three- year action plan to support small and medium- sized enterprises (SMEs) in the AI sector from 2026 to 2028 by boosting innovation and entrepreneurship, as part of its drive to strengthen AI development.

The plan, released by the Ministry of Industry and Information Technology on September 4, is designed to create a more dynamic and diverse business environment.

According to the plan, by 2028, China aims to foster a large number of innovative and high- potential AI startups in key areas, such as industry applications, data services and intelligent computing.

Targets include cultivating more than 10,000 technology- and innovation-

focused SMEs, increasing the number of specialized "little giant" firms — a national designation for innovative niche- market leaders — that use advanced technology to over 2,000, and encouraging the emergence of a significant number of fast- growing "gazelle" companies and billion- dollar "unicorns" enterprises.

A gazelle enterprise is an SME with strong innovation capabilities, operating in emerging or specialized fields and with strong growth potential, that has entered a period of rapid growth driven by technological or business model innovation. A unicorn enterprise is a privately held startup company with a valuation of over one billion USD.

On the infrastructure side, the plan sets out goals to build high- standard technology business incubators for AI, national public service demonstration

platforms for SMEs, and new national SME clusters with distinctive features in the AI field, with 10 of each. The overall vision is to sustain strong entrepreneurial and innovative activity among AI- focused SMEs, with a landscape for AI- enabled high- quality development of SMEs beginning to take shape.

To achieve these goals, 15 specific measures have been outlined under four broad tasks — resources, entrepreneurship, open source and services. These include strengthening the supply of startup resources such as accessible computing power, high- quality data and real- world application scenarios; supporting new types of entrepreneurs, including sole proprietorships and independent developers who use AI tools flexibly; expanding open- source ecosystems to encourage collaboration; and improving startup services

through better incubation and public platforms.

Key actions under the plan include a special program to provide accessible AI computing power to SMEs, as well as building high- quality industry datasets in fields like smart manufacturing, materials research and biomedicine, and making them available to AI startups in a phased, well- regulated manner.

Local governments are encouraged to support micro- entrepreneurs and very small teams that use AI tools for agile development, and to set up AI- focused incubators, workshops where startups can combine AI models with industry data, and public service demonstration platforms.

The plan also calls for strengthening national open- source AI communities, such as AtomGit, a code- hosting platform under the OpenAtom Foundation, to help developers share code and resources more effectively.



China-Arab Action to Combat Desertification, Land Degradation

By CHEN Chunyou & MA Aiping

Drought, desertification and land degradation pose shared ecological challenges for both China and the Arab states, making their cooperation in these fields strategically significant. The two sides have unveiled a five- year action plan to deepen this cooperation, focusing on joint research, technology sharing and capacity building, according to China's National Forestry and Grassland Administration.

The action plan was launched at a meeting on the sidelines of the 17th session of the Conference of the Parties to the United Nations Convention to Combat Desertification (COP17) in Ulan Bator, Mongolia last month.

Over the next five years, China and the Arab states will advance practical cooperation on key areas, including

desertification and degraded land management, sandstorm monitoring, forecasting and early warning, grassland protection and sustainable use, biodiversity conservation, and wetland protection and restoration.

They will improve the China-Arab desertification- control network, and refine mechanisms for policy, technology and achievement sharing. They will also expand desertification control partnerships under the Belt and Road Initiative, and promote coordinated participation of multiple stakeholders including governments, research institutions, enterprises, social organizations and communities.

In addition, both sides will scale up sci- tech innovation and the commercialization of research outcomes. A platform for sharing technologies, data and project results will be established to facilitate

interdisciplinary joint research.

Technological products such as remote- sensing monitoring tools and intelligent land- degradation assessment systems will be developed, and demonstration bases established to pilot the implementation of the UN Convention to Combat Desertification.

International exchanges and capacity- building will be enhanced through youth expert exchanges, joint research, field demonstrations and technical training, so as to strengthen the overall effectiveness of China- Arab desertification- control cooperation.

The meeting was co- hosted by the National Forestry and Grassland Administration and the Secretariat of the League of Arab States, and organized by the Chinese Academy of Forestry and the China- Arab International Research Center on Drought, Desertification and

Land Degradation.

The center was inaugurated in August 2023 at an international desert- control forum, as an outcome of the first China- Arab States Summit in 2022. It provided the organizational framework for the action plan.

Over the past three years, the center has established a stable operational mechanism, facilitated regular technical exchanges, and launched several joint research initiatives between Chinese and Arab scientists.

The two sides have jointly developed earth- observation data tools and intelligent decision- support systems for land degradation. They have also identified and compiled 30 practical desertification- control technologies from China, grouped into six categories, all of which are applicable to Arab countries.

trade platforms, it will sign trade- in- services cooperation agreements with more countries, expand areas of cooperation and tap into cooperation potential.

More trade- in- services promotion platforms like CIFTIS will be established to help build international connection channels and support enterprises in participating in international competition and cooperation on a broader scale.

Vibrant China

Technology Safeguards National Granary

By Staff Reporters

Heilongjiang province in northeast China, the nation's major grain producing province, is leveraging scientific and technological innovation to strengthen the whole- chain grain production and consolidate national food security.

Breakthroughs in seed breeding
How can the dilemma of balancing yield and resistance with taste in cold- region rice breeding be resolved?

The answer lies in biological breeding technologies, such as molecular breeding and gene splicing. These techniques integrate genes for high resistance, high yield and excellent taste to cultivate new varieties boasting all three merits.

The biggest bottleneck for cold- region breeding is its single cropping growth cycle per year.

In the past, breeders traveled to warm Hainan province in south China in winter to advance generations before returning to northeast China for further trials.

Today, the experimental base of the Yazhou Bay grain and oil crops innovation platform is under accelerated construction in Hainan's Sanya. It will have specialized facilities for molecular testing, quality analysis and germplasm preservation, enabling integration between field trials and indoor research.

Efficient seeding
Although high- end foreign seeders boast superior performance, they cost two to three times more than domestic models. Also, once they begin to malfunction, getting spare parts and technical maintenance is a lengthy process, often taking several weeks. This frequently leads to missing the farming windows.

Du Mujun, chief engineer of Heilongjiang DEWO Technology Co., Ltd., said the firm holds independent intellectual property rights to most components of its large- scale seeder series and they are mass produced locally. The complete machines are exported to Russia, South Korea and other regions.

The manufacturing cost of DEWO's

high- end electric- drive seeder series costs is only 50 percent to 60 percent of the costs of their international peers.

Over the past three years, DEWO's intelligent electric- drive seeders have operated across more than three million mu (1 mu equals approximately 0.0667 hectares) in Heilongjiang, Jilin, Liaoning, Inner Mongolia autonomous region and Xinjiang Uygur autonomous region. At the Fuyu ranch alone in Qiqihar, the second largest city in Heilongjiang, one 18- row seeder covers over 12,000 mu in a single farming season.

Smart farming guarantees food security

In Jucheng, a village in Heilongjiang's Zhaodong city, science- driven farming ensures crops get sufficient water and nutrients, delivering stable yields and higher farm incomes.

To overcome the limitations of conventional planting, the village has promoted wide- ridge double- row planting and integrated water and fertilizer management, raising seedling density to 7,360 plants per mu, compared to 4,000- 5,100 plants under standard cultivation.

"We plant corn on both sides (of the ridges). With better ventilation and light penetration, higher planting density barely reduces the corn yield. We also sow wheat on the empty middle ridges, which gives us an extra harvest," explained Chen Yong, a professor at the College of Land Science and Technology at China Agricultural University and director of the Zhaodong Experimental Station.

Wheat in Jucheng, sown on March 25 and harvested on July 15, yielded 400kg per mu this year.

In addition, technologies including full straw return to farmland — an agricultural practice where crop residues are incorporated back into the soil after harvest — soil hydrothermal sensors and AI- powered intelligent analysis have enabled Jucheng to achieve green "tonne- grain fields" — farmland yielding one tonne or more of grain per mu annually — for three consecutive years starting from 2024.



The giant rice field painting in Heilongjiang province. (PHOTO: SONG Ziyang / Science and Technology Daily)

50-year Quest for 'Unbreakable' Wheat

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Then came the critical decision. In field trials, the team had two sister lines: "Yang 16- 158," which had higher yield but only moderate resistance, and "Yang 16- 157," which achieved consistent high resistance but average yield. The debate was tense. Gao made the tough call: "We would rather sacrifice some yield to secure high resistance. Otherwise, high- resistance breeding might never get a chance."

They chose Yang 16- 157 and relentlessly improved its plant architecture and grain traits over generations. In 2021, they released Yangmai 33 — China's first variety to combine high FHB resistance with good yield, proving the "see- saw" could be balanced.

A 'six- armed warrior' is born
Yangmai 33 still had weaknesses in lodging and quality. So the team pushed for the ultimate goal: high resistance, high yield and high quality.

The screening was brutal — over 1,000 crosses and 200,000 row plots annually, with a 99 percent elimination

rate. In one case, a promising line performed perfectly in the field, but lab tests showed it lacked quality genes. Gao scrapped it, despite the years invested.

The flowering period of wheat in late April is the golden window for artificial inoculation of FHB. Every year, Gao led the team into the field at dawn, manually inoculating each spike with fungus and recording data until dark. Year after year, they stacked genes: four FHB resistance genes, one powdery mildew resistance gene, and medium- strong gluten quality genes.

The result: Yangmai 53. In three consecutive years, it has delivered high FHB resistance, a 10.13 percent yield increase, and quality meeting medium- strong gluten standards. It survived the 2025 spring drought and the 2026 summer rains without lodging or disease.

Gao views this as a new start: "Breeding is a relay race with no finish line. Our goal is to make this path wider, so more 'Yangmai' varieties become farmers' favorites and a cornerstone for China's grain security."

2026 CIFTIS Boosts Openness, Shared Prosperity

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For the first time, there is a "China Services Case Showcase" exhibition area, presenting over 140 innovation cases spanning all 12 categories of services trade. They include the BeiDou Space- Time Information Service Platform,

ready for pilot operation in many countries, which is expected to advance their governance modernization and industrial digital transformation.

As global industrial chains undergo accelerated restructuring, digital- intelligent and green transition is picking up

pace. China's service sector has consolidated its foundation, bringing more opportunities for the development of trade in services.

According to the Ministry of Commerce, during the 15th Five- Year Plan period (2026- 2030), China will continue to deepen international cooperation on trade in services. Utilizing multilateral, bilateral and regional economic and

U.S. Has No Grounds to Target China-California Climate Collaboration

Clear Voice

By LIANG Yilian & HU Dingkun

Recently, U.S. Representative Young Kim, chair of the House Foreign Affairs Subcommittee on East Asia and the Pacific, and senators Rick Scott, Mike Lee and Marsha Blackburn sent a joint letter to Attorney General Todd Blanche and Secretary of State Marco Rubio, calling for an investigation into California's climate cooperation with China. In a statement, Kim said California's agreements with China "may violate the Constitution and undermine U.S. national security."

California has drawn the attention of these lawmakers because its state government has actively promoted climate cooperation with China in recent years, producing a series of positive results. These include signing memoranda of understanding (MOUs) with several Chinese ministries and provincial/municipal governments; establishing the California-China Climate Institute to facilitate research and exchanges on climate governance; and working with Shanghai to build a green shipping corridor and promote the decarbonization of the trans-Pacific shipping route linking Los Angeles, Long Beach and Shanghai.

"Unconstitutional" is one of the principal accusations leveled by Kim and her colleagues against California's climate cooperation with China. In their letter, they argue that agreements and other institutionalized engagements between California, including its state agencies and the University of California system, and Chinese entities may violate Article I, Section 10 of the U.S. Constitution, which prohibits any state from entering into any "Agreement or Compact" with a foreign power without the consent of Congress.

While this argument sounds plausible on the surface, it is in fact a deliberate misrepresentation. The Congressional Research Service (CRS), in a legal sidebar published in June 2017, noted that the constitutional restrictions at issue concern legally binding agreements. Legal research suggests that most climate-related declarations and MOUs between



Beneath the photovoltaic panels is the upgraded charging station at the Changxing Service Area on the G50 Shanghai-Chongqing expressway, January 7, 2026. (PHOTO: XINHUA)

U.S. states and foreign governments are not legally binding and therefore do not require congressional approval. The sidebar specifically cited the memorandum signed by California and China, noting that because its provisions were expressly nonbinding, it was "unlikely that this MOU would trigger the restrictions of Article I, Section 10."

Indeed, cooperation with foreign governments on climate and other matters is far from unusual among U.S. states. New York State has signed an MOU with Denmark to support collaboration on offshore wind energy development. The states of Oregon, Illinois and Washington have signed trade and economic cooperation MOUs with the United Kingdom that include support for the Paris Agreement and related cooperation. California itself has signed cooperation agreements with countries including Australia, Canada, the Netherlands and Norway. Given the sheer number of such agreements, the fact that these lawmakers have singled out only those with China makes it clear that their real concern has little to do with constitutionality — and everything to do with China.

The claim that California-China climate cooperation poses a threat to U.S. national security is even harder to substantiate. Whether it is clean energy cooperation or policy discussions on carbon

emissions, none of these efforts touch upon sensitive military or security technologies. Broadly invoking "national security" in this context amounts to an extreme expansion of the concept.

A 2022 study by researchers from the University of California, San Diego, published in *Science*, examined the economic and national-security risks of cooperation between the United States and China on five key low-carbon technologies: solar, wind, batteries, carbon capture and sequestration, and "green" steel. "Our findings reveal national security threats are muted across the various low carbon technologies," said the study's lead author Michael Davidson, an assistant professor at UC San Diego's School of Global Policy and Strategy and at the UC San Diego Jacobs School of Engineering. "A major benefit of integration is making these technologies more affordable, in addition to increased innovation."

California-China climate cooperation is by no means a one-way transfer of U.S. technology to China. It is a two-way process that can deliver mutual benefits. China has considerable technological and manufacturing strengths in areas such as batteries, solar power and wind equipment, while California has accumulated extensive experience in climate policy and regulation. It

makes little sense for U.S. lawmakers to focus only on what the cooperation might offer China while ignoring the benefits it can bring to the United States.

This point was underscored by a group of experts including former California governor Jerry Brown in a *Nature* article in 2024. The authors highlighted the important role of subnational cooperation. They noted that as California moves rapidly to initiate offshore wind projects, it has turned to Chinese wind-turbine manufacturers, while China has modeled its new green-building regulations on California's Title 24 standards. "By sharing expertise, the United States and China can help one another to address their challenges," the authors wrote.

California's climate cooperation with China not only benefits the low-carbon, green development of both countries but also holds promise for providing the world with much-needed technological and policy tools to address climate change. It should never be reduced to a tool for political manipulation. By smearing and investigating California's climate cooperation with China, these U.S. lawmakers are swimming against the tide of history. Their actions only reveal an irresponsible, unscrupulous and pathological "anti-China reflex" — and in the end, they are bound to fail.

'China Squeeze' Yet Another Attempt to Smear China

Opinion

By LIANG Yilian & LIU Yuanyuan

"The so-called 'China squeeze' narrative is based on zero-sum thinking and represents yet another attack and smear campaign against China. Its purpose is to preserve its own hegemony, attack and even deny other countries' legitimate right to development, and undermine global cooperation."

National Development and Reform Commission (NDRC) spokesperson Li Chao made the remarks at the NDRC's monthly press conference on August 28.

Recently, some foreign think tanks have floated the concept of a "China squeeze," arguing that China's manufacturing capabilities are not only putting pressure on developed countries but also squeezing the development space of other countries in the Global South. Li strongly rejected the narrative at the press conference.

"According to the 'China squeeze' narrative, all countries would have to pursue modernization using the same development model and the same standards; otherwise, they would be squeezing the development space of others. This logic is completely wrong," Li said.

China has completed in just a few decades an industrialization process that

took developed countries several centuries. This achievement was made possible by institutional innovation and exploring a development path suited to China's national conditions. Li said it has not only provided valuable lessons for other developing countries, but has also contributed Chinese solutions and wisdom to humanity's search for better systems of social development.

Li said proponents of the "China squeeze" narrative argue that countries are squeezing others' development space simply by not following the development paths of certain developed countries. This argument does not hold water.

As a country of more than 1.4 billion people, China has consistently pursued industrialization with the goal of meeting people's growing needs for a better life, while keeping the real economy at the center of economic development. At the same time, China has worked to optimize and upgrade its industrial structure while maintaining a reasonable share of manufacturing in the economy.

"We need to improve the quality and diversity of products and services to meet people's needs, while creating high-quality jobs so that the benefits of industrialization can be shared more broadly and equitably by all," Li said.

She said China has always been a companion on the modernization path to the rest of the Global South and a sharer of development opportunities,

supporting countries in pursuing modernization paths suited to their national conditions with pragmatic actions.

She cited a series of examples. China provides other developing countries with quality industrial equipment, products and services at competitive prices. It has helped some countries in Africa and Southeast Asia establish light manufacturing industries, including textile production.

China's exports of clean-energy products have helped drive down the global cost of wind and photovoltaic power generation by more than 60 percent and 80 percent, respectively, making the green transition more affordable and accessible.

In more than a decade of Belt and Road cooperation, over 30 Luban Workshops have been established around the world, offering more than

100 vocational programs and training over 160,000 students, providing local industries with a large pool of skilled technical personnel.

China has also helped other developing countries build a wide range of infrastructure, including railways, ports, water conservancy projects and green-energy facilities, helping them strengthen their development capacity and improve people's livelihoods.

"China has been 'setting up ladders' through concrete actions to support the industrialization and green development of developing countries," Li said.

In the first seven months of this year, China's imports from and exports to more than 180 countries and regions all maintained growth. "China will continue to make greater contributions to world development and human progress," she said.



The Luban Workshop at the Ain Shams University in Cairo, Egypt. (PHOTO: XINHUA)

Voice of the World

Turning New Page of Media Cooperation in the Asia-Pacific

Edited by QI Liming

The Asia-Pacific Media Forum, a key component of the APEC "China Year" series of events, was held in Shenzhen, Guangdong province in south China, on September 5. Over 400 representatives from more than 40 countries and regions, as well as United Nations agencies and international organizations, discussed deepening media cooperation across the Asia-Pacific region.

The topics included opening up and cooperation, digitized and intelligent green transformation, and media exchange. The participants sought to build consensus for development, amplifying their collective voice through dialogue and collaboration, and contributing media strength to promote growth and prosperity in the region.

Consensus on shared prosperity
Melissa Fleming, under-secretary-general for Global Communications at the United Nations, said in a video address that the media plays a central role in the conversations gathering voices from across the Asia-Pacific to discuss growth and prosperity and seeking solutions to the world's most pressing problems.

Kaewkamol Pitakdumrongkit, executive director of the Pacific Economic Cooperation Council International Secretariat, said the Asia-Pacific Media Forum enabled all parties to jointly reflect on how they can contribute to building an open, dynamic, resilient and peaceful Asia-Pacific community. Meaningful conversations help all parties to listen to diverse voices, and gain broader perspectives, thereby reducing misunderstandings, seeking common interests, enhancing the mutual trust necessary for cooperation, and jointly facing challenges with a longer-term vision.

Dmitry Gornostayev, deputy director general of the Rossiya Segodnya Media Group of Russia, said as global economic growth faces multiple challenges, the role of the Asia-Pacific as a growth engine has become even more prominent. Deepening cooperation through the APEC mechanism is of vital importance for regional development.

Artificial intelligence (AI) and digital platforms are profoundly altering the information ecosystem and the way people consume news, Felix Paz Quiroz, general director of the Peruvian news agency Andina, said. Technological innovation

has significantly enhanced the ability of information dissemination. The key lies in how to steadily carry out digital transformation while upholding the responsibility of journalism. Quiroz suggested the Asia-Pacific media share experiences in digital transformation, promote professional exchanges, and explore responsible applications of AI.

Sci-tech-enabled media evolution
Before the forum, the delegates visited various cities in south China and saw the achievements of China's modernization in practice as well as the powerful momentum of sci-tech innovation.

Tatyana Kaukhnova, a board member of Kazakhstan's Belt and Road Expert Club, said this visit made her realize how China is increasingly focusing on using sci-tech innovation to improve people's lives. These approaches and experiences are worth learning from.

Anish Chand, The Fiji Times' managing editor, digital, was keen to learn more about China's AI-powered robotics technology. "Its introduction could very well contribute to the industrial development of our country," he said.

The visitors also saw how China, in collaboration with its partners, is building an Asia-Pacific community, bringing tangible opportunities for regional and even global peace and development. John Wallace, executive director of the Asia Pacific Journalism Centre, Australia, said the positive values brought by China should be recognized and the reality of its continuous growth viewed objectively.

The Asia-Pacific region is home to extraordinary economic dynamism, technological innovation and cultural diversity. It connects countries and regions with different historical backgrounds, perspectives, and media traditions, Konstantinos Oikonomou, senior vice president of CNN, said during the forum. He said diversity should not be regarded as an obstacle; it should be transformed into a source of strength. This requires the media in the Asia-Pacific to deepen their cooperation through a stronger industry network, more extensive knowledge and experience exchanges, as well as collaborative approaches that transcend national boundaries and regions.

At the forum, 16 media organizations from China and abroad launched the Organizing Committee of the Asia-Pacific Media Partnership Program.

Hi-Tech

A 'Living Dress' Made of Mycelium

By QI Liming & LUO Yunpeng

Cordyceps militaris, commonly known as "chong cao hua" in China, is a fungus belonging to the Cordycipitaceae family and the genus *Cordyceps*. It is commonly used as both a food ingredient and a medicinal herb, and its mycelium can also be used in material manufacturing.

A research team from the Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, has established a living textile material platform with *Cordyceps militaris* mycelium as the structural scaffold. The platform is characterized by its formability, processability and functionalizability, while retaining biological responsiveness. The team successfully created a "living" dress using this platform, an achievement that offers promising new insights for the design of adaptive, sustainable living materials.

The researchers observed in their experiments that *Cordyceps militaris* can form relatively uniform mycelial balls rich in fibrous mycelium in liquid culture. These mycelial balls can naturally

connect into sheets after filtration and drying. They used *Cordyceps militaris* as the material base and constructed the mycelial balls into controllable two-dimensional and three-dimensional materials. To prevent the mycelium sheets from becoming brittle after drying, they were subjected to plasticization treatment to make them soft, so that they could be folded, cut and sewn.

A thin rope made by twisting four narrow strips of mycelium into a single strand can bear a weight of one kilogram, and is both flexible and structurally strong. The treated material has a texture closer to that of soft non-woven fabric or lightweight leather-like materials, without the "mushroom smell" usually found in previous fungus-based fabrics.

At the application level, this material can be applied in scenarios with controllable usage periods such as biodegradable packaging, artistic textiles and temporary display materials. It is expected to expand to responsive textiles, functional protective surfaces, environmental materials and some biomedical materials.

4

LIFE IN CHINA

A Scientist's Journey to Right Place at Right Time

Dialogue

By LONG Yun & BI Weizi

For years, brain-computer interface belonged to the realm of science fiction, a distant fantasy of minds communicating directly with machines. But for Professor Mohamad Sawan, a fellow of the Royal Society of Canada and the Canadian Academy of Engineering, this vision has been the focus of a lifetime of research.

In 2018, he made a decision that surprised many: he left his established career in Canada to join Westlake University in Hangzhou in Zhejiang province, east China, as a chair professor of microsystems and bioengineering and the founding director of the CenBRAIN Neurotech Center of Excellence. Eight years on, he sees that move as an inevitable step toward the future.

Sawan's path to China was not impulsive. Born in Lebanon and educated in Canada, he brought a naturally cross-cultural outlook to his work. For more than two decades, he visited China frequently for academic exchanges, yet those trips always felt too brief. Beneath his professional curiosity lay a deeper question: How is this ancient civilization now reclaiming its global standing with such speed?

When the invitation from Westlake University arrived, he felt it was almost destined. He had long dreamed of coming to China, and the offer struck him as tailor-made for his ambitions. He believed sci-tech innovation was growing very fast everywhere in China, and the future belonged to it. He wanted to be part of that future.



Professor Mohamad Sawan. (COURTESY PHOTO)

A university built for speed

That future, as Sawan soon discovered, was not an abstraction but a tangible reality, written in the explosive growth of Westlake University itself. As the second foreign professor recruited by the institution, he has witnessed it compress what typically takes two decades into just five years.

The university now hosts over 287 professors, all recruited globally, each a recognized leader in their field. There are also thousands of PhD students and postdoctoral fellows, hundreds of undergraduate students and thousands of other staff members. For Sawan, this is not incremental progress but a systemic leap, engineered by a society that knows how to prioritize.

But what has truly convinced him is the research infrastructure. His field, brain-computer interfaces, is inherently interdisciplinary, straddling biology and engineering. He finds the working conditions exceptional, and he credits China's high prioritization of brain-computer research for making it possible. In his view, he arrived at

precisely the right moment and in precisely the right place.

Indeed, in certain fields such as bio-circuit and biochip design, Sawan has witnessed a remarkable transformation over the past decade. What once lagged has now caught up, and in some areas, pulled ahead. He attributes this not to individual genius but to a broader systemic force.

From lab to life

Sawan's team focuses on seven major brain disorders, from stroke and epilepsy to Alzheimer's, Parkinson's and depression, with a single mission: to detect problems early, treat when possible, and use AI to predict disease progression.

At the core of their work are custom-built biochips, tiny devices no larger than a few square millimeters, that power wearable and implantable systems. "The heart of every system is a custom-built chip," he says. These chips record neural signals, identify biomarkers, analyze data through brain-inspired controllers, and deliver targeted stimulation to slow or stop disease. Several of these biochips have won international

recognition, as reflected in the group's steady stream of top-tier publications and awards over the past two years.

The cross-disciplinary model at Westlake University has given Sawan unusual autonomy, the ability to follow an idea from fundamental science all the way to engineering outcome. It also speeds up innovation and opens pathways to industry partnerships and clinical collaborations. This pipeline has already produced three startups, including Neuralicorn, a venture focused on language decoding that is now growing quickly.

A new home

In 2023, Sawan became one of the first foreign experts in Zhejiang to receive China's new version of the permanent residency card. The document did more than simplify travel. It deepened his sense of belonging. "My permanent resident status increases my motivation to integrate in China," he said.

What strikes him most about the China he has witnessed over these eight years is not any single policy or number, but three qualities woven into the fabric of daily life. "Equity, determination and confidence."

Equity means talent is judged on achievement alone. Gender and nationality do not matter. Everyone has the same chance to innovate. Determination is visible in everyone around him, from his graduate students to his senior colleagues, all driven to contribute not just to their personal growth but to the university they are building together. And confidence, which he finds the most striking. "It is amazing to witness that Westlake University is inspiring confidence in every member to work hard, maximizing efforts to show a difference in the magnitude of innovative contribution."

Chinese Encyclopedia Helps Europe's Sericulture Industry Weather Crisis

Traditional Eastern Wisdom

By BI Weizi

The ancient Silk Road not only facilitated the movement of goods, but also the dissemination of technology. Indigenous Chinese sericulture techniques traveled east to Korea and Japan, as well as west to Central and West Asia, eventually reaching Europe.

By the mid-19th century, Europe's sericulture industry was booming, with Italy and France producing 56,000 and 26,000 tonnes of cocoons per year, respectively. However, a crisis lurked beneath this prosperity. In the 1840s, silkworm populations in southern France began dying en masse. The larvae perished prematurely, and the survivors developed dark brown spots. Most were unable to spin silk or form cocoons.

This was pebrine, a disease that

swept across Europe with devastating force. France's cocoon production plummeted from 26,000 tonnes in 1853 to just 400 tons in 1865. The French silk industry suffered losses of 100 million francs that year alone. Governments were at a loss, forcing silkworm farmers to travel as far as then Turkey, Iran and the Far East to purchase healthy silkworm eggs.

In 1865, the French Ministry of Agriculture commissioned microbiologist Louis Pasteur to identify the disease's root cause. Pasteur used a microscope to identify the causative microorganisms; however, an effective prevention and treatment method remained elusive. Fortunately, France was prepared. In 1837, the sinologist Stanislas Julien was assigned to study Chinese ancient texts to discover the traditional Chinese methods for managing sericulture and treating silkworm diseases.

He translated and compiled sections on sericulture from the Tiangong

Kaiwu (The Exploitation of the Works of Nature), the famous 17th-century Chinese encyclopedia compiled by Chinese scientist and encyclopedist Song Yingxing, into a French volume titled *Résumé des principaux traités chinois sur la culture des mûriers et l'éducation des vers à soie*. In his preface, Julien noted that China had accumulated a wealth of comprehensive experience in sericulture and the prevention of silkworm diseases unmatched by any other nation.

The Tiangong Kaiwu provides detailed records of silkworm diseases and their symptoms. These findings aligned remarkably well with the pathogens Pasteur later identified. The text also offers complete prevention and control measures, such as isolating infected silkworms, disinfecting rearing equipment, selecting healthy eggs, and cleaning mulberry leaves.

By combining traditional Chinese experience with microbiological knowledge, Pasteur devised effective preven-

tion and control methods. He used science to explain the "why," while the Tiangong Kaiwu provided silkworm farmers with guidance on the "what" and "how."

Pasteur's methods for controlling silkworm diseases, together with the practical knowledge preserved in the Tiangong Kaiwu, helped revive Europe's sericulture industry. Within a decade, Stanislas Julien's translation had been rendered into seven other languages, including English, German, Italian and Russian.

Charles Darwin drew on Julien's work in his 1868 book *The Variation of Animals and Plants under Domestication*, citing Julien as his authority for the antiquity of sericulture in China. British historian of science Joseph Needham called Song Yingxing "the Diderot of China" after French philosopher Denis Diderot, and regarded the Tiangong Kaiwu as an important record of Chinese technological knowledge in the 17th century.

Tech+Culture

Decoding 'Spectral Fingerprints' of Yungang Grottoes

By YAO Yian & ZHAO Xiangnan

The newly released World Internet Conference Cultural Heritage Digitalization Case Collection (2026) presents the latest global achievements in digital heritage preservation, featuring 45 outstanding practices from 13 countries and regions. Among the highlighted projects is an innovative initiative that applies 3D hyperspectral data acquisition to Caves 7 and 8 of China's Yungang Grottoes. Marking a global first, the project systematically deploys hyperspectral technology for the digital conservation of large-scale three-dimensional stone relics, opening a new chapter in fine-grained grotto documentation.

Listed as a UNESCO World Heritage Site in 2001, Yungang Grottoes preserves 45 major cave complexes. The site launched its digital preservation program in 2003, yet early efforts relied merely on two-dimensional geometric recording, failing to deliver complete, accurate and detailed data for its complex 3D cave structures. Limited by conventional scanning tools, researchers long struggled with blurred observations, measurement inaccuracies and incomplete relic records.

Hyperspectral imaging has emerged as a game-changing solution, integrating high-precision spectral and spatial resolution to analyze rock compositions and capture invisible subsurface and surface relic information unrecognizable to the naked eye. Despite years of technical development, the technology had never been fully applied to large grotto sites before the Yungang project.

A collaborative team led by the Yungang Research Institute, together with the Sun Yat-sen University and a professional technology firm, developed customized acquisition equipment and a full-process technical system covering data collection, correction, fusion and analysis. Centered on constant-temperature, broad-spectrum, low-heat light-source data acquisition equipment, the new framework eliminates disturbances from temperature fluctuations and unstable lighting, acquiring stable, long-term and large-area data on fragile cave surfaces.



Caves 7 and 8 of Yungang Grottoes in Datong, Shanxi province, China. (PHOTO: VCG)

Advancing Collaboration in Digital Age

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The BOC has set branches in 64 countries and regions overseas, covering 45 Belt and Road partner countries, and enjoys a highly pronounced cross-border business advantage. At this year's CIFTIS, BOC opened a dedicated zone for corporate overseas expansion, showcasing its cross-border financial services, said Cai Xinghua, president of the bank's Beijing branch.

AI is becoming a major driver of the digital economy and it is increasingly obvious that AI development is not only a process of technological innovation, but also one of industrial collaboration.

Its pioneering 3D and hyperspectral fusion technology achieves high-precision alignment of geometric shapes, surface textures and spectral information. The world's first 3D hyperspectral data fusion analysis and visualization platform enables the deep integration and unified display of 3D models and hyperspectral data, as well as the three-dimensional spatial visualization of pigment composition and disease distribution.

In 2025, the team completed full data collection for Caves 7 and 8, Yungang's earliest twin caves featuring a blend of Greek, Gandhara and traditional Chinese architectural styles. Through optimized lighting designs, precise temperature control and multi-angle data supplementation, the team avoided thermal damage and scanning blind spots, adopting non-intrusive, low-impact operations to protect fragile relics.

The five-month field campaign harvested 29.2 terabytes of high-quality data across 1,465 square meters, recording millimeter-level 3D geometry and unique "spectral fingerprints" for stone and pigment remains.

While visitors to the Grottoes can observe only rough surface contours, the new digital model enables in-depth analysis including rotary viewing, sectional observation and shadow area restoration. It precisely identifies mineral components, salt stains, water erosion, early deterioration, residual pigments and historical restoration traces through exclusive spectral features.

Building on the findings, the Yungang Research Institute is constructing dedicated databases for cave spectra, pigment colors and relic diseases. By integrating hyperspectral results with 3D laser point cloud data, researchers support intelligent pigment analysis and disease identification, providing systematic data support for scientific grotto conservation.

The institute has also launched a digital preservation project covering Caves 38 to 45 and affiliated caves. By expanding 3D hyperspectral scanning, it aims to build a complete holographic digital archive, securing the millennia-old Yungang Grottoes for permanent digital inheritance.

China-CEEC Innovation Cooperation Gains Greater Momentum

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Under the framework of the China-CEEC innovation cooperation mechanism, policy dialogue, joint R&D, commercialization of outcomes and people-to-people exchanges have become deeply integrated.

"A changing global landscape, such as climate change, energy security and digital transformation, needs international scientific cooperation," said Nicolae-Victor Zamfir, vice president of the Romanian Academy. He told Science and Technology Daily that science can be a powerful instrument for peaceful cooperation and the dialogue in the conference is important for building trust and reaching agreement.

"Participating in the conference presents an exciting opportunity to foster significant convergence between research and industrial entities in Europe and China," said Mohamed Eldessouki, director of the Digital Innovation Center, an AI startup company in the Czech Republic. "Sustainable innovation flourishes when we establish robust, transparent connections among research ecosystems to address shared global challenges. This conference serves as a pivotal platform for creating such an ecosystem."

Around 450 government officials, diplomats, researchers, academics, entrepreneurs and young science and technology professionals from China and CEEC

attended the conference.

They called for stronger cooperation among industry, universities and institutes for collaborative innovation.

"Cooperation is based on trust, trust starts with meetings, particularly person-to-person meetings, and that's why such conference as this is important," said Jerzy Duszyński, member of the Polish Academy of Sciences and foreign member of Chinese Academy of Sciences.

"Technology transfer plays a critical role in sci-tech collaboration, because the research today is very much internationalized," said Jacek Kasz, director of the Center for Technology Transfer at the Cracow University of Technology.

"The CEEC and China need to work together in order to create agreeable practical solutions which would guarantee both sides an atmosphere of trusted collaboration while maintaining fair benefit sharing."

The networking area teemed with people and bustled with activity. Relevant parties from China and CEEC became acquainted with one another and explored potential areas for innovation cooperation.

"I established contacts with people from three companies," Angelos Moschopoulos, CEO of the Greek sportswear company Anthrax, told Science and Technology Daily. He said he would next hold talks with relevant Chinese companies on further cooperation.

The event was co-hosted by China's Ministry of Science and Technology and Slovakia's Ministry of Economy.