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**International Knowledge Centre
for Engineering Sciences and Technology
under the Auspices of UNESCO
联合国教科文组织国际工程科技知识中心**

Newsletter

June 2018 No. 2

International Knowledge Centre for Engineering Sciences
and Technology under the Auspices of UNESCO

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The International Knowledge Centre for Engineering Sciences and Technology (shortened as "IKCEST") is a category 2 centre under the auspices of the United Nations Educational, Scientific and Cultural Organization (shortened as "UNESCO"). IKCEST was established on June 2, 2014. The Chinese Academy of Engineering is responsible for the operation and management of the IKCEST.

Under the auspices of UNESCO, IKCEST is a comprehensive and international knowledge centre devoted to the engineering sciences, technology and applied technology. IKCEST aims at connecting engineering sciences and technology institutions globally, assembling various digital resources relating to engineering sciences and technology, building up a public data service platform and corresponding service environment, and coordinating the building of various professional knowledge systems, thus providing knowledge-based services at a global scale in the form of consultancies, scientific research and education for policy-makers and engineering science and technology professionals in the world, with particular reference to the developing countries.

The specific tasks and functions of IKCEST are as follows: to establish an international engineering and technology resources hub; to establish a public data service platform, and to develop the technology for mining and analyzing knowledge from big data; to cooperatively build professional knowledge service systems, and to build capacity in developing countries; to foster interdisciplinary engineering talents with big data processing ability; and to assist UNESCO to fulfill its aims and support its action plans.

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IKCEST Silk Road Training Base held the 5th and 6th (the 29th and 30th in total) Training Program for Silk Road Engineering Science and Technology Development of 2018

The International Knowledge Centre for Engineering Sciences and Technology (IKCEST) Silk Road Training Base held the 5th and 6th (the 29th and 30th in total) Training Program for Silk Road Engineering Science and Technology Development of 2018, i.e. "Training on Information Technology Frontiers" and "Training on Finance and Data Analysis". More than 100 trainees from 30 countries including Pakistan, Kyrgyzstan, Bangladesh, Tanzania, Nigeria and Timor-Leste participated in the training from April 13 to April15, and April 20 to April 25.

The Training on Information Technology Frontiers was held at Xidian University. The courses included overview of the fifth-generation mobile communication system and network, introduction to artificial intelligence, cloud computing and big data analysis, and history and future of the Belt and Road. The program included both lectures and interactive studies, as well as a visit to ZTE Xi'an Research Institute, making the training course a rewarding and interesting experience for the international students. Zeng Liqing, an international student from Thailand, spoke at the opening session of the program, in which she explained the positive impact of the Belt and Road Initiative on the economic and social development of neighbor-

The IKCEST Training Program for Silk Road Engineering Science and Technology Development
Xidian University, April 2018

ing countries with the example of China-Thailand cooperation.

The training on Finance and Data Analysis included subjects such as financial engineering, analysis of financial issues under the Belt and Road, health and economic growth and economic development, and overview of traditional Chinese culture, and a technical visit to Xi'an International Trade & Logistics Park.

At the end of the training program, the co-organizers conferred graduation certificates on qualified trainees.

The launch meeting of the planning and construction of the IKCEST Knowledge Service Systems from 2019 to 2021 held in Beijing

The launch meeting of the planning and construction of the knowledge service systems from 2019 to 2021 of the International Knowledge Centre for Engineering Sciences and Technology (IKCEST) was held in the Chinese Academy of Engineering on April 26, 2018. Han Qunli, former Executive Director of the Natural Science Sector of UNESCO and Executive Director of the International Project Office of the Integrated Research on Disaster Risk (IRDR), Xuan Zengpei, former Director of the Information Communication and Space Technology Division of the United Nations Economic and Social Commission for Asia and the Pacific and Deputy Secretary-General of the China Associa-

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tion of Inventions, Cai Zhiyong, Senior Engineer at China National Chemical Information Centre, Song Dexiong, Director-General of the Department of General Administration of the Chinese Academy of Engineering, Liu Chang, Director of Division of International Cooperation of IKCEST, Research Fellow Wang Juanle and Associate Research Fellow Wang Shuqiang at the Institute of Geographic Sciences and Natural Resources Research under the Chinese Academy of Sciences, the undertaking institution of the research project, and Li Yang, Librarian at the National Science Library under the Chinese Academy of Sciences, and other members of the project team took part in the meeting. The meeting was presided over by Wang Juanle.

Song Dexiong started with an introduction to the background and requirements of the project.

Wang Juanle reported on the implementation of the planning and construction task of the knowledge service systems from the perspectives of construction background, research objectives, content break-down, construction approach, technical routes, current progress and implementation plans. Members of the expert team conducted extensive exchanges and heated discussions on the planning of the new knowledge service systems, and proposed the priorities for consideration. Song Dexiong wrapped up the expert discussion with a summary of the main points, emphasizing the need to understand the needs of UNESCO, and combine UNESCO's objectives with China's unique features and advantages, in order to fully leverage China's strengths and influence in related fields.

IKCEST DRR held meeting with IRDR International Project Office

The team of Disaster Risk Reduction Knowledge Service System of the International Knowledge Centre for Engineering Sciences and Technology (IKCEST DRR) visited the International Project Office of the Integrated Research on Disaster Risk (IRDR) to discuss cooperation with the aim of building a partnership between the two sides on May 4, 2018. Han Qunli, former Executive Director of the Natural Science Sector of UNESCO and Executive Director of the IRDR International Project Office, Wang Juanle, representative of the IKCEST DRR and Researcher Fellow at the Institute of Geographic Sciences and Natural Resources Research under the Chinese Academy of Sciences, Fang Ying from the IKCEST Secretariat, Lian Fang, Lucy and Lang Lang from the IRDR team and Yuan Yuelei, Han Xuehua, Wang Yujie and Wang Yanjie from the IKCEST DRR team also took part in the exchange.

Han Qunli welcomed the IKCEST DRR team to IRDR. He introduced IRDR's main research objectives, organizational structure, mission of the working group, major achievements in recent years, and vision for post-2020. Wang Juanle gave a presentation on DRR's orientation, scientific mission, overall objectives, progress in 2017 and plan for 2018, and future vision. The two sides had extensive exchanges and discussions on cooperation in building partnership, linking websites, sharing expert resources, jointly organizing training, conducting meetings and publishing research results. The meeting produced a host of tentative ideas for cooperation between IKCEST DRR and IRDR, laying a solid foundation for the two sides to build up consensus, deepen cooperation and jointly enhance international influence.

IKCEST Silk Road Training Base held the 7th to 9th (the 31st to 33rd in total) Training Program for Silk Road Engineering Science and Technology Development of 2018

The International Knowledge Centre for Engineering Sciences and Technology (IKCEST) Silk Road Training Base held the 7th to 9th (the 31st to 33rd in total) Training Program for Silk Road Engineering Science and Technology Development of 2018, respectively on the themes of artificial intelligence, HSK level-2 training and legal frontier from May 5 to May 9, May 11 to May 16, and May 25 to May 30 respectively. A total of 173 trainees from 42 countries including Nigeria, Kazakhstan, Yemen, Kyrgyzstan and Egypt participated in the training program.

The 31st training course was on the subject of artificial intelligence. The contents were divided into two parts: artificial intelligence (introduction to artificial intelligence, Internet of Things and intelligent life, introduction of brain-computer interface, brief history of China's foreign exchange, autonomous driving of intelligent autonomous vehicle), and "Belt and Road" (history and future of the Belt and Road). A visit to ChinaSoft International was also arranged for the trainees.

The 32nd training program was focused on HSK level-2 exam. Course subjects included: listening practice and test of HSK level-2 phonetic basics, practice and test of 300 basic words in the HSK level-2 syllabus, HSK level-2 grammar functions and scenario-based explanation.

The 33rd program mainly included cutting-edge legal knowledge, i.e, witness of exchanges between Eastern and Western civilizations; comparative study on the legal protection of underwater cultural heritage along the maritime Silk Road; protection of foreign copyright in China; the "Belt and Road" Initiative, China's institutional rise and domestic governance; China's traditional judicial reasoning and its impact on modern China; challenges to the investment protection along the Belt and Road and recommended solutions; a community of the people, by the people and for the people; interpretation of the Belt and Road from the legal perspective. In addition, a visit to the Zhong Yin Law Firm in Xi'an was also arranged.

At the end of the training program, the co-organizers conferred graduation certificated on qualified trainees.

The 31th IKCEST Training Program for Silk Road Engineering Science and Technology Development
XJTU. May, 2018

IKCEST and UNESCO held video conference on DRR

The video conference on the Disaster Risk Reduction Knowledge Service System (DRR) was held at the Chinese Academy of Engineering on May 18. Mr. Soichiro Yasukawa, Coordinator for Earth Sciences and Geo-Hazards Risk Reduction Section at the Natural Science Sector of UNESCO, Ms. Jutta May, expert on information/knowledge management, Ms. Fang Ying from the Secretariat of the International Knowledge Centre for Engineering Sciences and Technology under the Auspices of UNESCO (IKCEST), Wang Juanle, Research Fellow and Executive Director of DRR, and members of the project team Cheng Kai, Wang Yujie and Zhou Yezhi attended the meeting. Mr. Soichiro Yasukawa chaired the meeting.

Wang Juanle first gave a summary of the first International Conference on Disaster Risk Reduction Knowledge Service System, particularly the progress DRR made after the conference in improving user services, conducting big data analysis, expanding thematic services and building international and domestic cooperation networks, and then provided an introduction to the preparations for the second international conference on DRR. The participants had a lively discussion on the details of this year's international conference, international training, promotion of metadata standards, application of big data methods and sharing of application cases, and reached consensus. Mr. Soichiro Yasukawa pledged that UNESCO would continue to support and participate in the conference and expressed appreciation to the IKCEST team for their efforts and contributions to disaster risk reduction.

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IKCEST Secretariat attended preparatory meeting of IKCEST International Symposium 2018 in Deqing

The preparatory meeting for the "East Asia Round Table Meeting of Academies of Engineering (2018) and IKCEST International Symposium 2018 of the International Knowledge Centre for Engineering Sciences and Technology under the Auspices of UNESCO (IKCEST)" was held in Deqing on May 19. Ren Hongtao, Director of the International Cooperation Department of the Chinese Academy of Engineering, Liu Chang, Director of Division of International Cooperation of IKCEST, Fang Ying, from the IKCEST Secretariat, Xiong Zhuoyue, Director of the Intelligent Eco-city of Deqing County, Dong Hong, Director of the Coordination Office of the Intelligent Eco-city and hotel managers attended the meeting.

Ren Hongtao and Liu Chang respectively provided a briefing on the East Asia Round Table Meeting of Academies of Engineering and the 2018 IKCEST International Symposium. The two sides discussed the plan of conference organization and agreed that the logistical support to be provided by the People's Government of Deqing County, and reached consensus on cooperation, conference services and security arrangements. In addition, the IKCEST Secretariat visited the hotel to check the facilities, settings and meeting rooms. The preparatory work of the seminar was fully launched after the meeting.

Philippe Pypaert, Programme Specialist of UNESCO Beijing Office, paid a visit to IKCEST

Mr. Philippe Pypaert, Programme Specialist for Natural Sciences Sector, UNESCO Beijing Office, and Ms. Li Ang from UNESCO Beijing Office visited the International Knowledge Centre for Engineering Sciences and Technology under the Auspices of UNESCO (IKCEST) on May 25, 2018. Song Dexiong, Director-General of the Department of General Administration of the Chinese Academy of Engineering and Executive Deputy Director of IKCEST, greeted the visiting delegation. Liu Chang, Director of Division of International Cooperation of IKCEST, Wang Juanle, Research Fellow and Executive Director of the IKCEST Disaster Risk Reduction Knowledge Service System (DRR), Ma Yingchen,

Zhang Ye and Fang Ying from the IKCEST Secretariat and members of the DRR team attended the meeting. Liu Chang presided over the meeting.

Liu Chang first introduced IKCEST's founding philosophy, mission and development progress, and played a video on the overview of IKCEST. Wang Juanle then gave a presentation on IKCEST DRR from the perspectives of its background, mission, main functions, implementation progress, challenges and future possible cooperation, and conducted an online demonstration.

Mr. Philippe Pypaert and the IKCEST team had extensive exchanges and in-depth discussions on policy formulation and its impact, transformation of knowledge theories into actions of sustainable development, scientific decision making in disaster risk reduction, problems of urban disasters, climate change and potential threats along the Belt and Road, and application of online knowledge. Liu Chang thanked Mr. Philippe Pypaert and his colleagues for their visit, and expressed IKCEST's willingness to strengthen exchanges and cooperation with the UNESCO Beijing Office.

IKCEST Silk Road Training Base held the 10th to 12th (the 34th to 36th in total) Training Program for Silk Road Engineering Science and Technology Development of 2018

The IKCEST Silk Road Training Base held the 10th to 12th (the 34th to 36th in total) Training Program for Silk Road Engineering Science and Technology Development of 2018 from June 1st to June 3rd, 8th to 13th, and 9th to 10th. Over 130 trainees from 21 countries including Russia, Kazakhstan, Ethiopia and Tanzania participated in the training.

The 34th training program was held in Xinjiang University, which was also the second international training program on the "Silk Road" of the university. More than 50 foreign students from countries along the Belt and Road participated in the training with Chinese undergraduate and postgraduate students on international Chinese language education. The program included history of China's foreign exchanges, Internet of Things and intelligent life, protection of foreign copyright in China, introduction and development of big data analysis, and featured online and offline interactions to help the students better understand China's culture, history and thinking, as well as the latest development of international relations and science and technology.

The 35th training course focused on electrical frontiers, including generic technologies for the perception and control of electrical robots; protection of intellectual property rights under the Belt and Road and a brief introduction to electrical and electronic technologies; harnessing electric energy with grace; research on post-Gettier cognitive luck; past, present and future of high voltage technology. And general technical guidelines for microgrid planning. The training course was main-

ly lecture-based, with teacher-student interaction, and a visit to the State Key Laboratory of Electrical Insulation of Electric Power Equipment was also arranged, which was well-received by the students.

The 36th training course was held in Ningxia Medical University, which was also the second international training program on the "Silk Road" of the university. The courses included: knowledge of Chinese history and culture, frontier legal knowledge, big data of Internet of Things, etc.

At the end of the training program, the co-organizers conferred graduation certificated on qualified trainees.

Ronnie Green, Chancellor of the University of Nebraska-Lincoln, and the Confucius Institute Delegation attended the 13th Training Program for Silk Road Engineering Science and Technology Development in 2018 (the 37th in total) at the IKCEST Silk Road Training Base

Ronnie Green, Chancellor of the University of Nebraska-Lincoln, and the Confucius Institute delegation visited Xi'an Jiaotong University and participated in the IKCEST Training Program for Silk Road Engineering Science and Technology Development on the morning of June 11. President Wang Shuguo of Xi'an Jiaotong University met with the trainees.

Wang Shuguo welcomed Ronnie Green and the Confucius Institute delegation. He encouraged the younger generation to actively engage in

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multi-cultural learning and exchange as they grow up, and seize the opportunity of studying abroad to broaden their horizons. Ronnie Green agreed with Wang's point and looked forward to further expanding cooperation through the platform of Confucius Institute jointly built by the two universities.

From June 12 to 16, the delegation of Nebraska-Lincoln Confucius Institute had a five-day program in Xi'an and participated in the training at the IKCEST Silk Road Training Base. The event is sponsored by the Confucius Institute Headquarters (Hanban), undertaken by the IKCEST Silk Road Training Base, organized and implemented by the College of Continuing Education and the Institute of International Education of Xi'an Jiaotong University. The purpose of the event is to help the members of the delegation get a full picture of China's time-honored history and the rapid development of contemporary China, and strengthen educational exchanges between China and the United States. Members of Congress from Nebraska, principals and provosts of local primary and secondary schools, Vice-Chancellor of Nebraska-Lincoln Uni-

versity, and Dean of the School of Media attended the event.

During the training, the delegation took courses on China's economy, education and national conditions, updated their knowledge about the development of China's education, economy and culture, visited Shaanxi Blower (Group) Co., Ltd. and National Engineering Research Center of Rapid Manufacturing, and gained deeper understanding of the IKCEST Silk Road Training Base. Ronnie Green expressed the hope to launch more cooperation projects through the joint efforts of the two sides.

IKCEST Silk Road Training Base held the 14th and 15th (the 38th and 39th in total) of the Training Program for Silk Road Engineering Science and Technology Development in 2018

From June 25 to June 29, and June 29 to July 1, the IKCEST Silk Road Training Base held the 14th and 15th (the 38th and 39th in total) Training Program for Silk Road Engineering Science and Technology in 2018. Some 100 trainees from 28 countries including Pakistan, Yemen, Cambodia and Vietnam participated in the training.

The two training program were both on Chinese language proficiency, respectively on HSK level-3 pre-exam training and HSK level-3 + HSK level-4 pre-exam training. The program included lectures and mock exams on HSK level-3 and HSK level-4, as well as Belt and Road and the Chinese culture. The training course was mainly lecture-based, with teacher-student interaction, and a visit to the Shaanxi Institute of Metrology Science was also arranged, which was well-received by the students.

At the end of the training program, the co-organizers conferred graduation certificated on qualified trainees.

Delegation of Jalal-Abad University Education Officials attended the 16th Training Program for Silk Road Engineering Science and Technology Development in 2018 (the 40th in total) at the IKCEST Silk Road Training Base

The education delegation led by ZHANYBAI ARYNBAEV, Vice President of the Jalal-Abad University of Kyrgyzstan, visited Xi'an Jiaotong University and participated in the IKCEST Training Program for Silk Road Engineering Science and Technology Development on the afternoon of June 29, 2018. Xi Guang, Vice President of Xi'an Jiaotong University, met with the trainees.

Xi Guang briefly introduced the history and current status of Xi'an Jiaotong University, and expressed the hope for more cooperation between the two universities in student exchange. ZHANYBAI ARYNBAEV thanked Xi Guang for his reception and looked forward to more cooperation and exchange with Xi'an Jiaotong University in medical and cultural fields. He also consulted the cooperation model with the "IKCEST Silk Road Training Base" and expressed the hope to deepen exchanges and promote common development of the two universities.

From June 28 to July 3, the education delegation of the Jalal-Abad University and Confucius Institute had a six-day program in Xi'an and participated in the training at the IKCEST Silk Road Training Base. The event is sponsored by the Confucius Institute Headquarters (Hanban), undertaken by the IKCEST Silk Road Training Base, organized and implemented by the College of Continuing Education and the Institute of International Education of Xi'an Jiaotong University. The purpose of the event is to help the members of the delegation get a full picture of China's time-honored history and the rapid development of contemporary China, and strengthen educational exchanges between China and Kyrgyzstan. Vice President and Provost of Jalal-Abad University and Vice Principals of local secondary schools attended the event.

During the training, the delegation took courses on China's national conditions, China's education and economic development of contemporary China, which further strengthened their understanding of the development of China's education, economy and culture. They also visited Xi'an Land-port Group and 3D printing industry base, and got a deeper understanding of the IKCEST Silk Road Training Base. ZHANYBAI ARYNBAEV expressed the hope to launch more cooperation projects through the joint efforts of the two sides.

CKCEST News

The China Knowledge Centre for Engineering Sciences and Technology (shortened as "CKCEST") is a significant part of and vital support for the International Knowledge Centre for Engineering Sciences and Technology (shortened as "IKCEST").

First working meeting of CKCEST in 2018 held in Beijing

On March 22, 2018, the first working meeting of China Knowledge Centre for Engineering Sciences and Technology (CKCEST) in 2018 was held in Beijing. At the meeting, Pan Yunhe, Executive Vice President of Chinese Academy of Engineering (CAE), and Chen Zuoning, Vice President of CAE, listened to reports and gave instructions on work. The meeting was held with the focus on summarizing the achievements of the CKCEST in 2017, setting forth the work tasks in 2018, and accelerating the integrated advancement of the general platform and its sub-platforms. The attending experts gave full recognition of the progress in 2017 and reached agreement on the work plan for 2018.

CAE Member Chen Zuoning stated that the CKCEST has reached the decisive stage, marked by the transition from parallel advancement of individual components to the integrated advancement of the general platform and its sub-platforms. To effectively accelerate the integrated advancement, it is necessary for the project management office, the chief engineer team, the technology research center, and the sub-centres to fully communicate and effectively collaborate in order to achieve the best results. The AI technologies developed by the technology research center and the data resources aggregated by the general platform are essential assets, and the resources of the sub-centres are also needed by the general platform and the technology research center. The technology research center should advance the actual engineering-based application of its technologies, including by putting them on trial at select sub-centres and making improvements on them based on user feedback. CAE Member Pan Yunhe fully recognized the achievements of the CKCEST and offered specific recommendations on the CKCEST development in 2018 and beyond: 1) continue to advance the interoperability of databases; 2) deepen data applications; and 3) expand the project's international influence.

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CKCEST live broadcast connected to
CAE international symposium for the first time

CKCEST live broadcast, in collaboration with the CAE Academic and Publishing Office and Division of Energy and Mining Engineering for the first time, broadcast live the Deep Volatiles, Energy and Environments Summit held from March 13 to 14, which received 30,000 views. CKCEST live broadcast is the first knowledge service platform highlighting live academic broadcast in China. Featuring high-level CAE academic events and aggregating high-level academic videos across sources and being publicized and promoted in different ways and through different channels, CKCEST live broadcast is committed to building a leading academic live broadcast brand, increasing the influence of CKCEST, and expanding the CAE's academic presence. The live broadcast of the summit was successfully implemented based on a full range of measures including pre-event publicity, channel expansion and technology integration, which laid a solid foundation for future broadcasts. In the coming four to five months, CKCEST live broadcast will broadcast six academic events including the Chinese Congress of Holistic Integrative Medicine and the Global Intelligent Industry Conference to magnify their reach and influence.

CKCEST active push deployment meeting
held at Beijing Conference Center

The CKCEST active push deployment meeting took place at Beijing Conference Center on March 22, attended by representatives of 18 CKCEST sub-centres. To further support the CAE's strategic advisory research, CKCEST active push will be implemented in three ways, i.e. data service, project push etc., in 2018. The meeting briefed on CKCEST's call for data service requirements and, based on the requirements collected, discussed and determined that the strategic advisory projects are to be supported by the various sub-centres in 2018. The CKCEST active push is expected to serve 102 CAE Members, more than 40 service projects and more than 1,000 strategic advisers in 2018.

Meeting held to construct Nutrition
and Health Knowledge Service System

On the morning of March 26, 2018, a meeting was held to start constructing the Nutrition and Health Knowledge Service System. The meeting was attended by Song Dexiong, Director of CKCEST Project Management Office, and Sun Baoguo, CAE Member, who gave speeches at the meeting. The project team briefed the meeting on the system's overall positioning and plan, the construction, service and promotion of the nutrition and health knowledge system, the project management and institutional development, project

progress and priorities in 2018. The attending experts had discussions on the positioning and vision of the system, construction of knowledge organization system in specialized fields, construction of typical service scenarios, development of unique applications and key technologies, and identification of core users, and made specific suggestions.

Agriculture sub-centre and CKCEST live broadcast publicize China Agricultural Outlook Conference

From April 20 to 21, 2018, the 2018 China Agricultural Outlook Conference was held in Beijing. The meeting was supported by the Market Early Warning Expert committee of the Ministry of Agriculture and Rural Affairs and sponsored by the Agricultural Information Institute of Chinese Academy of Agricultural Sciences. The conference released the China Agricultural Outlook which offers supply-and-demand forecasts and outlook on major agricultural products in China in the coming decade. The agriculture sub-centre of CKCEST and CKCEST live broadcast joined hands to broadcast and cover the conference, serving as an important promotional channel of the event and taking advantage of the event to publicize and promote themselves as well.

CKCEST live broadcast is the first high-level academic live broadcast platform in China, drawing upon CAE Members, nearly 100 high-level academic meetings held by the CAE, the CKCEST platform, and 36 national research institutes. The CKCEST live broadcast of the event, including the opening ceremony and China Agricultural Outlook released on April 20 and the parallel sessions (on big data and monitoring early warning, smart agriculture outlook, frontier agricultural technology, and resource environment outlook, respectively) on April 21, received 46,345 views and posted more than 30,000 simultaneous visitors on-line.

The conference was attended by nearly 1,000 people, including government officials, experts and scholars, researchers, and agricultural enterprise representatives. The agriculture sub-centre of CKCEST introduced the unique features and strengths of CKCEST by way of color prints and pull-up banners, which received wide attention and expanded the influence of CKCEST.

The live broadcast marked the first live broadcast cooperation between CKCEST and a CKCEST sub-centre. It represented a beneficial exploration and accumulated valuable experience in integrated advancement and collaborative promotion of CKCEST and its sub-centres and brought about a new situation for sharing of high-quality resources between CKCEST and its sub-centres.

Meeting held for specialized resource metadata specifications formulation launch and training

To advance the formulation of metadata specifications of specialized resources of CKCEST, a meeting was held on April 26, 2018 for the launch of and training on specialized resource metadata specifications formulation, which was attended by metadata specification formulation technicians from the various

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sub-centres. The project team briefed on the implementation plan and development guidelines. The CKCEST Project Management Office required the sub-centres to formulate the metadata specifications of their specialized resources in accordance with the unified schedule and ensure delivery before December 30.

Meeting held for sub-centre assessment

On the morning of May 3, 2018, a sub-centre assessment launch meeting was held in Meeting Room 219 of the CAE, attended by Song Dexiong, Director of CKCEST Project Management Office, Han Wei, Assistant General Manager of China Iron & Steel Research Institute Group, and assessment experts. Dong Cheng from the sub-centre assessment project team briefed on the implementation plan, and had discussions with attending experts on assessment details. Song Dexiong emphasized the importance of the assessment work and put forward several requirements: 1) the assessment should serve the purpose of promoting project development and increasing the initiative of the sub-centres; 2) the assessment should be fair, just and open; 3) the assessment should be strict and well documented; 4) the assessment should be conducted by an expert group within a sound, scientific framework; and 5) the assessment experts should sign a statement to ensure objective and effective assessment.

Strategic Research Project on IT Support System of National Think Tank on Engineering Science and Technology approved

The "Strategic Research on IT Support System of National Think Tank on Engineering Science and Technology", a key advisory research project, was proposed in accordance with the instructions of the CAE leadership for the purpose of further advancing the development of the CAE as a national think tank and strengthening the role of IT in supporting this effort. The project, geared to improving the quality of development of the CAE as a national engineering think tank and having the IT support system for think tank research in terms of data, tools, methods and mechanisms as its objects of research, will comprehensively analyze the current status of China's high-level think tank development and the pressing needs for IT support, clarify the development goals of China's IT support system for high-level thinks, examine and draw upon mature practices and advanced models of leading domestic and overseas think tanks, and propose policies and measures for improving the IT support system for the CAE as a national engineering think tank.

The project was officially adopted and approved at the eighth Board Meeting of the CAE in 2018.

⟫ Top News for Big Data Era

MIIT to introduce more measures this year to promote further implementation of national big data strategy

It has been recently learned from the Ministry of Industry and Information Technology ("MIIT") that MIIT will introduce more measures this year to push forward the further implementation China's national big data strategy. These measures will include: promoting the implementation of big data industry development pilot and demonstration projects, improving the big data standards system, deepening big data applications in industries, vigorously developing industrial big data, boosting the construction of national big data comprehensive pilot zones and big data demonstration bases, guiding localities to develop big data according to their specific conditions, and speeding up the building of big data industrial and value chains and ecosystems

Since 2015, China has unveiled various policies and measures to vigorously push forward the development of the big data industry and the implementation of a national big data strategy. The State Development and Reform Commission and other authoritative bodies have predicted that by 2020 China's total data will exceed 800 billion PB, accounting for 20% of the global total, and China's big data market will exceed RMB800 billion. China will then become the world's largest data resources country and global data center. The information economy represented by big data will play an increasingly important role in promoting the upgrading of traditional industries and fostering new growth momentums.

Research and surveys conducted by MIIT, the Development and Reform Commission and other authoritative departments show that China's big data industry ecosystem has been on continuous improvement. Big data technology, trading, open sharing, industrial big data and other industrial chains are gradually extending vertically, while industrial layouts in key regions have been effectively pushed forward. By 2020, industrial big data is expected to account for 6.64% of industrial applications. Chen Xinhe, Deputy Secretary-General of the Zhongguancun Big Data Industry Alliance, remarked that there has been a trend of linkage between the government and enterprises in the development of China's big data industry. In recent years, a number of big data innovation enterprises have been cultivated in China, all with strong growth momentums.

However, sources in the industry have also reported various issues in China's big data industry, such as low data openness, weak technology, shortage of talent, and superficial industry applications. As China further implements industrial promotion measures, these issues are expected to be resolved step by step. Er Weinan, Member of the Chinese Academy of Sciences and Dean of the Beijing Institute of Big data Research, said that theoretically there are a lot of data in China, but it is actually very difficult to use them for analysis. Sources at the Guiyang Big Data Exchange revealed that quite some enterprises are unwilling to

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trade their data on the grounds of protecting trade secrets or saving data processing costs. Some government departments also lack the impetus to disclose data. Some have already used data for commercial applications, but are reluctant to share them.

Speaking on the issue of data openness in the big data industry, Pan Wen, Director of the Software Institute of CCID Research Academy, MIIT, suggests that efforts should be made to establish and improve mechanisms for the coordinated development of big data, speed up the opening and sharing of government data, and steadily promote the opening of public data resources. At the same time, there is a need to make overall planning for the construction of big data infrastructure, promote the formulation of institutional documents for the protection and opening of public information resources, strengthen the top-level design of big data standardization, and gradually improve the standards system.

Excerpted from Big Data China

Xi Jinping: deepening integration of Internet, big data and AI with the real economy

On May 28, the 19th General Assembly of the Chinese Academy of Sciences and the 14th General Assembly of the Chinese Academy of Engineering were held at Jingxi Hotel, Beijing. These are grand gatherings in the Chinese science and technology circles after the 19th National Congress.

Xi Jinping attended the meeting and delivered an important speech.

At the meeting, Xi Jinping reviewed the historical achievements made in the development of science and technology in China since the 18th National Party Congress, and pointed out that there are still some outstanding issues to be solved in the field of science and technology. He called upon Chinese science and technology workers to leverage the overall environment, catch new opportunities, embrace challenges, aim at science and technology frontiers globally, take the leading position in driving science and technology development, shoulder the responsibilities entrusted by history, and be pioneers of science and technology innovation in the new era.

Xi Jinping said that since the beginning of the 21st century, science and technology innovation has entered an unprecedented period of intensive activity. A new round of science and technology revolution and industrial transformation is restructuring the global innovation landscape and reshaping the global economic structure. New-generation information technologies represented by AI, quantum information, mobile communications, IoT and block chains have accelerated in breakthrough and application. New changes have been bred in the field of life sciences, as represented by synthetic biology, gene editing, brain science and regenerative medicine. Advanced manufacturing technologies that integrate robots, digitization and new materials are accelerating the transformation of the manufacturing industry in the intelligent, service-oriented and green directions. The accelerated development of energy technology aiming to achieve clean, efficient and sustainable development will lead to global energy changes. Space and ocean technologies are expanding new frontiers for human survival and development.

The world is entering a period of economic development led by the information industry. We should grasp the opportunity of the integrated development of digitalization, networking and intellectualization, and cultivate new growth momentums with the leverage of informatization and intellectualization. We should give priority to cultivating and vigorously developing a number of strategic emerging industrial clusters, and

build new pillars of the industrial system. We need to promote the deep integration of the Internet, big data and AI with the real economy, and make the digital economy bigger and stronger. We should take intelligent manufacturing as the main direction of work to promote the change, optimization and upgrading of industrial technology, promote the fundamental transformation of manufacturing industry models and enterprise form, drive "change" forward through "innovation", drive stock with increment and push Chinese industries to the middle and high ends of the global value chain.

Excerpted from www.xinhuanet.com

General Office of the State Council issues Administrative Measures for Scientific Data

On March 17, 2018, the General Office of the State Council issued Measures for Scientific Data Management (hereinafter referred to as the "Measures") with a view to further strengthening and standardizing the management of scientific data, safeguarding the security of scientific data, raising the level of opening and sharing, and providing support for China's science and technology innovation, economic and social development and national security.

Guided by Xi Jinping's thought on socialism with Chinese characteristics in the new era, the Measures are designed to carry out the spirit of the Nineteenth Party Congress, profoundly grasp the development trend of scientific data in the era of big data, fully leverage the advanced experience and mature practices at home and abroad, strengthen the lifecycle management of scientific data, prioritize data security, highlight the sharing and utilization of scientific data, innovate institutional systems, focus on weak links, and strengthen and standardize scientific data management. The Measures are of great significance in enhancing scientific data work in China, fully leveraging the output benefits of national financial inputs, and boosting science and technology innovation, economic and social development, and national security supporting and safeguarding capacities.

The Measures specify the general principles, main responsibilities, data collection and storage, sharing and utilization, confidentiality and security of scientific data management in China, and mainly put forward specific management measures from five aspects, namely, 1. specify the division of responsibilities among all parties, strengthen the principal responsibilities of legal entities, define the responsibilities of the competent departments, and embody the principle of "whoever owns data assumes data responsibility" and "whoever opens up data benefits"; 2. In line with the principle of "level-by-level categorical management and guarantee of security and controllability", the competent departments and legal entities shall determine the confidentiality and conditions for opening of scientific data according to law, and strengthen the supervision of scientific data sharing and utilization; 3. Strengthen the protection of intellectual property rights, standardize the conduct of users and producers of scientific data, and show respect for the intellectual property rights of scientific data; 4. Require the compulsory collection of scientific data generated by projects funded by science and technology programs, make standard management and long-term storage through scientific data center, and strengthen the accumulation and open sharing of data; 5. It is proposed that legal entities should establish incentive mechanisms for post setups, performance-based income and academic title evaluations, and strengthen the capacity building on scientific data management.

Excerpted from China Big Data Industry Observation

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