UNESCO | IKCEST

**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

December 2015 No. 4

**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 Platform Construction Workshop held in Beijing

The International Knowledge Centre for Engineering Sciences and Technology ("IKCEST") Platform Construction Workshop was held at the Chinese Academy of Engineering in Beijing on September 22, 2015. The meeting was chaired by Yi Jian, Deputy Director-elect of IKCEST. Zhou Jiagui, Deputy Secretary-General of the Chinese National Commission for UNESCO, Zhang Ning, former Chinese science and technology counselor to Denmark and Sweden, Wang Yang, Division Chief of China Science and Technology Exchange Centre, Chen Jiangang, Deputy Division Chief of the Planning & Development Bureau of the State-owned Assets Supervision and Administration Commission, Hong Tianhua, Executive Deputy Director of International Centre on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO, and Du Yang from UNESCO Beijing Office, attended and made speeches at the workshop. Organized by secretariat of IKCEST, the meeting invited officials from the Chinese National Commission for UNESCO, representatives of a number of UNESCO category 2 centres in China and other relevant experts to share their opinions on and suggestions for IKCEST platform construction work.

All the attending experts fully affirmed the great significance of establishing IKCEST and expressed their hope that IKCEST play an active role in enhancing foreign exchanges, in serving UNESCO and developing countries, and especially in providing engineering science and technology information and knowledge services for engineering and technical personnel in countries along the Belt and Road. Meanwhile, the experts also suggested that Big Data knowledge mining tools should be fully leveraged and developed and active exploratory efforts should be made to build up a knowledge service platform of international influence.

International Training Course on Karst landscape, Geopark, Natural Heritage, Environmental Geology Mapping and Data Mining held in Nanning

The International Training Course on Karst landscape, Geopark, Natural Heritage, Environmental Geology Mapping and Data Mining was held in Nanning from September 21st to October 3rd ,2015. The training course is jointly sponsored by the Institute of Karst Geology (IKG) of the Chinese Academy of Geological Sciences (CAGS) and the International Research Centre on Karst (IRCK) under the Auspices of UNESCO, and co-organized by the International Knowledge Centre for Engineering Sciences and Technology (IKCEST) under the Auspices of UNESCO, among other institutions and organization.

The training course has enrolled 38 students from 20 countries, among which 25 foreign students are from 19 countries, including Thailand, South Africa, Slovenia, and Australia.

The 15-day training focused on five topics, namely, functions and research methods of karst dynamics in the protection of karst landscapes; basic characteristics and protection of karst geoparks and natural heritages; typical cases and regulations of karst geoparks and natural heritages; methods and applications of karst environmental geology mapping; and constructions of data platform and data mining.

Four experts from the IKCEST acted as lecturers of the training course. Mr. Cao Xuejun, head of the IKCEST platform development centre, delivered a report about the application of search engine technology in knowledge service. Prof. Chen Ling, an expert on the IKCEST research team, made a presentation on big data management and data mining. Prof. Zhang Jinchuan of the

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geological sub-system, talked about several key issues regarding shale gas development. Prof. Wang Zhangjun of the geological sub-system gave a lecture titled "Visible Dissemination of Geological Natural Heritages - Flying Dinosaurs". The lecturers made in-depth academic exchanges with the trainees and were warmly received.

Cao Jianhua, Executive Deputy Director of the IRCK, presided over the opening ceremony of the training course. A number of guests delivered opening speeches, including Jayakumar, Programme specialist from UNESCO Bangkok Office, Ma Yongzheng, Director of Science, Technology and International Cooperation at the Ministry of Land and Resources, Tian Fengming, Deputy Director General of the Department of Land and Resources of Guangxi Zhuang Autonomous Region, Zhu Lixin, Executive Vice President of the Chinese Academy of Geological Sciences, Yi Jian, Deputy Director-elect of IKCEST, Yuan Daoxian, Director of Academic Committee at the International Research Centre on Karst and a member of the Chinese Academy of Sciences (CAS), together with Liu Tongliang, Director of the Institute of Karst

Geology, CAGS and Director of the IRCK.

The training course came to a successful conclusion as it explored big data technologies and knowledge services in the field of geological science and broadened the trainees' knowledge structure. The training course has strengthened the alliance between China-based category 2 centres under the auspices of UNESCO, expanded IKCEST's communication with the outside world and laid a solid foundation for its future exchange and cooperation with domestic and overseas institutions.

Preparatory meeting for IKCEST-DRR UNESCO cooperation held in Beijing

Preparatory meeting for cooperation between IKCEST and Disaster Risk Reduction Department of UNESCO was held in Beijing on October 20,2015.

The meeting was presided over by Yi Jian, Deputy Director-elect of IKCEST and attended by CAE Member Sun Jiulin, CAE Member Wang Hao, Wang Juanle, Director of the Resources and Environmental Data Centre of the Institute of Geographical Sciences and Natural Resources Research of the Chinese Academy of Sciences, Deng Li, Senior Engineer of the National Meteorological Centre, Xie Wenjun, Senior Engineer of the Information Centre of the Ministry of Water Resources, together with Liu Chang, Fu Zhijie and other staff members from the IKCEST Secretariat.

Deputy Director-elect Yi Jian briefed all attending CAE Members and experts on the background of the meeting. In September this year, an IKCEST delegation visited UNESCO Headquarters to report on its work progress over the past year and won high recognition from the UNESCO side. UNESCO then put forward specific requirements for future work at IKCEST, including positively responding to UNESCO's global initiatives of major concern and providing knowledge services on disease forecasting, disaster early warnings and identification of animals and plants. On October 17, the Disaster Risk Reduction Department of the Natural Sciences Sector of UNESCO called IKCEST and put forward specific ideas for future cooperation with IKCEST and proposed to hold an international video conference at 15:30 on October 21 to discuss relevant issues.

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Based on the ideas of cooperation put forward by the UNESCO side, all attending CAE Members and experts held full and detailed exchanges and discussions, explored potential fields of cooperation between the two sides, discussed the status of relevant data resources construction in China, and examined and considered the focal points of concern and the positioning of needs of the two sides, as well as possible difficulties in the cooperation. As for the core issues and key resources in the database building, the attending CAE Members and experts reached the following consensus: user positioning and user needs must be specified first; as standards must go first for data gathering, it is necessary to discuss the issue of standards formulation. In addition, data quality and data sharing authorizations are also issues to which attention must be paid. It is suggested that CAE Members should play a leading role in disaster database building,

cooperation should be forged with the concerned Chinese ministries and commissions and existing resources must be fully utilized. As cooperation in disaster prevention science popularization, education and training is highly feasible, relevant work should be implemented as soon as possible. It is suggested that IKCEST should work with the Ministry of Finance, Asian Infrastructure Investment Bank, international public welfare foundations and other organizations to get financial support. It is proposed that a special committee should be set up to coordinate future efforts. All the attending CAE Members and experts unanimously agreed that the establishment of a global disaster risk reduction database would be of great significance for China and the world and would provide data support for China's Going Global strategy of economic development and genuinely serve China's national strategy.

IKCEST and UNESCO Disaster Risk Reduction Department held video conference

International Knowledge Centre for Engineering Sciences and Technology ("IKCEST") and the Earth Science and Geological Disaster Risk Reduction Department of the Natural Sciences Sector of UNESCO held an international video conference to preliminarily discuss future cooperation between the two sides on October 21, 2015.

Participants from the Chinese side in the video conference included Yi Jian, Deputy Director-elect of IKCEST, Du Yang, officer from UNESCO Beijing Office, Wang Juanle, Director of the Resources and Environmental Data Centre of the Institute of Geographical Sciences and Natural Resources Research of the Chinese Academy of Sciences, Deng Li, Senior Engineer of the National Meteorological Centre, Xie Wenjun, Senior Engineer of the Information Centre of the Ministry of Water Resources, Cao Xuejun, Platform Team Leader of IKCEST, Liu Chang, Fu Zhijie and other staff members from the IKCEST Secretariat. Participants from the UNESCO side included programme specialists Alexandros K. Makarigakis, Soichiro Yasukawa, Jair Torres, Irina Pavlova, Florian Dierickx, Margherita Fanchiott and Xiaoning Wu of the Earth Sciences and Geol-hazards Disaster Risk Reduction Department of the Natural Sciences sector of UNESCO.

On behalf of IKCEST, Dr. Cao Xuejun made a presentation on the current status of system platform construction at IKCEST, with emphasis on the specialized geological, hydrological and metrological databases which were closely related to disaster risk reduction. Subsequently, programme specialists Alexandros K. Makarigakis from the Natural Sciences Sector of UNESCO also introduced to the Chinese side UNESCO's work on disaster risk reduction worldwide.

The two sides conducted in-depth discussions on issues of mutual concern and reached a couple of agreements. Both sides agreed that after the meeting they would further digest and understand the basic information introduced by the other side so as to enhance mutual understanding, which was the main purpose of the first conference. IKCEST agreed to provide UNESCO with its existing data resources and links as soon as possible after the conference so that UNESCO could gain a preliminary understanding of the existing databases at IKCEST. In addition, the Chinese experts generally believed that the way of taking geological disasters in a region in China for case study would be suitable for UNESCO's research paradigm and needs and that relevant trial projects or geological disaster real time early warning system building may be launched as an entry point.

Both sides agreed that future cooperation between these two organizations would have broad prospects and wider space for development and that they would work out detailed plan for cooperation after the conference based on their understanding and generalization of existing information and more expert discussions. The two sides promised to hold further video conferences to continue relevant discussions.

IKCEST International Symposium 2015 on "Digital Knowledge for Science and Engineering" held in Beijing

The IKCEST International Symposium 2015 on Digital Knowledge for Science and Engineering was held in Beijing Conference Center on November 17, 2015. More than 400 representatives attended the symposium, including about twenty internationally renowned foreign and domestic academicians and experts. The symposium lasted one day and was hosted by the Chinese Academy of Engineering and organized by the International Knowledge Centre for Engineering Sciences and Technology under the auspices of UNESCO (shortened as "IKCEST").

CAE Member Pan Yunhe and CAE Foreign Member Raj Reddy, also Turing Award Winner served as co-chairs of the program committee of the symposium. Zhou Ji, President of CAE, Hans Dencker Thulstrup, Programme Specialist for Natural Sciences of the UNESCO Beijing Office, and Chen Zuoning, Vice President of CAE, addressed the symposium. President Zhou said, the Chinese Academy of Engineering was very willing to carry out active and in-depth cooperation with UNESCO and international engineering science and technology institutions in information sharing, big data technology research and knowledge services, thus jointly promoting the prosperity and development of the world's engineering science and technology sector.

The symposium was divided into two sessions. The morning session centered on "Digital Knowledge for Science" and was moderated by CAE Member Wu Cheng, with four speakers from all over the world giving keynote speeches respectively. Based on in-depth analysis, CAE Member Pan Yunhe pinned down the root cause behind Big Data's attracting attention from various countries to the fact that the world was now entering into a new ternary space from a binary one of the past. With great insight, the report suggested that the Big Data era would give way to an age of Big Knowledge in the future. Prof. Raj Reddy talked about surviving in an information intensive world of the 21st century and presented two families of intelligent agents, that is, "cognition amplifiers" and "guardian angels" to help with problem of scarcity of attention. Wu Zhiqiang, Vice President of Tongji University, elaborated on the interactive relationship between big data and intelligent urban planning

and construction. The supportive function of big data in the process of urban planning was further analyzed from perspectives of flows of people, flows of natural elements, and flows of functions. Prof. Otthein Herzog, Fellow of German National Academy of Science and Engineering, said that the role of semantics for the analysis of non-scientific texts together with images and videos had to be reshaped from a cultural neutral analysis to an analysis based on cultural cues, and Knowledge Discovery methods for texts would be looked at allowing us to extract knowledge buried deeply in mountains of data.

CAE Member Li Guojie moderated the afternoon session centered on "Digital Knowledge for Engineering", and five speakers from all over the world gave keynote speeches. CAE Member Xie Kechang proposed that a Professional Knowledge Service System for Energy (PKSSE) was needed to collect and organize comprehensive data about energy for finding a reasonable solution for energy development. Hsiao-Wuen Hon, Chairman of the Microsoft Asia-Pacific R&D Group, provided an overview of the progress of Artificial Intelligence, highlighted some recent milestone results in image recognition, natural language understanding, and predicted the progress of AI in research and application over the next 5-10 years. Eduardo M. Krieger, Full Member of Brazilian Academy of Sciences, said in his presentation that the explosion of the data both in the biomedical research and in the healthcare systems demanded urgent solutions, and efficient analysis and interpretation of big data would open new avenues to explore molecular biology. CAE Member Gao Wen pointed out that, there were at least three parts in intelligent cities: the sensing network, the multimedia data center, and the decision procedure. He also interpreted the technologies related to the first two parts. N. Balakrishnan, Fellow of Indian Institute of Science, claimed the quality of S&T output and the growth

indicators of most nations were correlated with their leadership specifically in High Performance Computing and Big Data Science. And he explored futuristic and mutually beneficial collaboration between India and other nations.

An atmosphere of warm friendship prevailed at the two panel discussion sessions, with speakers answering questions raised by the audience, and

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in-depth interactive communication carried out.

The symposium provided a platform for top scientists and engineers, scholars and experts all over the world to share research progress and insights, making significant contribution to facilitate the world's engineering science and technology community to carry out active and close cooperation in information sharing, big data technology research, and knowledge services, etc. in the future.
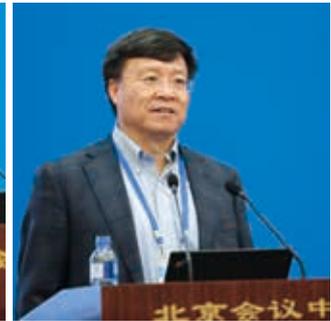
First session of First Governing Board of IKCEST under the Auspices of UNESCO held in Beijing

The first session of the First Governing Board of IKCEST under the Auspices of UNESCO was held in Beijing on the morning of 18 November 2015.

The International Knowledge Centre for Engineering Sciences and Technology (shortened as "IKCEST") is a category 2 centre under the auspices of UNESCO. IKCEST was established in June, 2014. It's committed to mobilizing the engineering science and technology research institutions, enterprises and universities globally, assembling data resources, discovering knowledge from big data and promoting its application.

The meeting was attended by the First Governing Board members, including Chen Zuoning, Vice President of CAE, Pan Yunhe, former Vice President of CAE, Zhong Zhihua, Secretary-General of CAE, Du Yue, Secretary-General of the Chinese National Commission for UNESCO, Hans Dencker Thulstrup, Programme Specialist for Natural Sciences of the UNESCO Beijing Office, CAE Member Li Guojie, Gao Wen (represented by Huang Tiejun), Zheng Nanning (represented by Zheng Zhuanghua), Raj Reddy, CAE Foreign Member and Turing Award Winner, Otthein Herzog, Fellow of German National Academy of Science and Engineering, and Eduardo M. Krieger, Full Member of the Brazilian Academy of Sciences, etc., as well as staff members of the IKCEST Secretariat. Rovani Sigamoney, Assistant Programme Specialist of UNESCO Headquarters, representatives of the International Cooperation Department of CAE and system platform experts attended the meeting as invited guests.

The first session of the First Governing Board was chaired by Chen Zuoning and it's composed of 11 foreign and domestic experts. Zhong Zhihua was appointed as the Director of IKCEST and Yi Jian was appointed as Executive Deputy Director of IKCEST. At the meeting, CAE Member Zhong Zhihua issued the certificate for official appointment on behalf of CAE President Zhou Ji to CAE Member Chen Zuoning as chairperson of the Governing Board of IKCEST. Subsequently, the meeting was presided over by Chen Zuoning, who then issued the official appointment certificates to all other Governing Board members.

The meeting reviewed the IKCEST 2015 work report, as well as discussed and adopted the proposed Charter, Rules of Procedure of the Governing Board of IKCEST, Mid-Term Strategic Plan 2015-2020, and Biennial Work Plan 2015-2016. It also approved the members of the First Advisory Committee of IKCEST.

First session of First Advisory Committee of IKCEST underthe Auspices of UNESCO held in Beijing

The first session of the First Advisory Committee of IKCEST under the Auspices of UNESCO was held in Beijing on the afternoon of 18 November 2015.

The International Knowledge Centre for Engineering Sciences and Technology (shortened as "IKCEST") is a category 2 centre under the auspices of UNESCO. IKCEST was established in June, 2014. It's committed to mobilizing the engineering science and technology research institutions, enterprises and universities globally, assembling data resources, discovering knowledge from big data and promoting its application.

The meeting was attended by the First Advisory Committee members, as well as Hans Dencker Thulstrup, Programme Specialist for Natural Sciences of the UNESCO Beijing Office, Rovani Sigamoney, Assistant Programme Specialist of UNESCO Headquarters, system platform experts of IKCEST, and staff members of IKCEST Secretariat.

The First Advisory Committee was co-chaired by CAE Member Pan Yunhe, former Vice President of CAE and Prof. Raj Reddy, CAE Foreign Member and Turing Award Winner, and composed of 11 foreign and domestic experts. CAE Member Pan Yunhe and Prof. Raj Reddy took the chair of this meeting and issued the official appointment certificates to all Advisory Committee members.

The meeting held discussions on the annual IKCEST International Symposium and discussed the theme, time and venue of IKCEST International Symposium 2016. Members reached agreement on that the IKCEST international Symposium should not only focus on the organizational responsibility of the IKCEST, but also pay attention to knowledge service applied into different fields, so that knowledge would integrate with service, producing knowledge service in the real sense.

Participants also held in-depth discussion regarding IKCEST platform development framework, suggesting that in order to build up a knowledge service platform that is with its distinctive features and focuses based on actual situation, a sustainable service mechanism needs to be set up. They also recommended that IKCEST should further identify its target users and realize the comprehensive interdisciplinary development in the future. In the meantime, it was suggested that more attention should be paid to the intellectual property, striving to construct IKCEST's classification standards and metadata bases.

UNESCO natural science official inspected IKCEST Technology Centre

Ms. Rovani Sigamoney, Assistant Programme Specialist of the Natural Science Sector of UNESCO Headquarter, inspected the Technology Centre of the International Knowledge Centre of Engineering Sciences and Technology under the Auspices of UNESCO (IKCEST) on November 21, 2015. The Technology Centre was set in the College of Computer Science of Zhejiang University, Hangzhou, Zhejiang Province.

Mr. Zhuang Yueting, Dean of the College of Computer Science of Zhejiang University, presided over the meeting. He also briefed on the general information of the Technology Centre. A team of experts on the research team then made presentations on the Engineering Science and Education Library Knowledge Service System, the Chinese Herbal Medicine Knowledge System, the CADAL Calligraphy respectively, followed by discussion between Rovani and the attending experts. Rovani spoke highly of the work progress of the Technology Centre, urging it to make continued efforts to provide powerful support for the development of the IKCEST. Zhuang also took Rovani on a brief technical tour of the Centre.

Those who were also present at the meeting were Mr. Wu Guokai, Deputy Secretary-General of the Chinese Academy of Engineering (CAE), Ms. Liu Wei, Deputy Director of the Education Comittee Office of CAE, Ms. Liu Chang, Director of the Division of International Cooperation of IKCEST, as well as Prof. Wei Baogang and Li Xi, Associate Prof. Zhang Yin (female), Wu Jiangqin, Zhang Yin and Wang Donghui from the College of Computer Science of Zhejiang University, and Associate Research Librarian Lu Guoqiang of Zhejiang University Library.
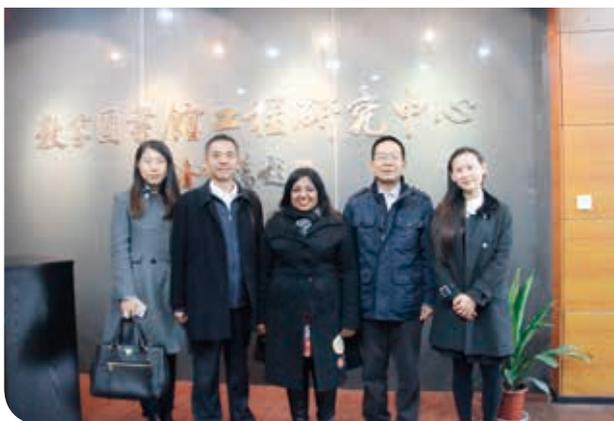
IKCEST International Training Workshop 2015 held in Hangzhou

The IKCEST International Training Workshop 2015, hosted by the International Knowledge Centre for Engineering Sciences and Technology under the Auspices of UNESCO (shortened as "IKCEST") and organized by the College of Computer Science of Zhejiang University, was held in Hangzhou from December 3 to 9,2015.

The training workshop, themed on "Big Data Technology Application and Knowledge Service", aims to provide technicians and management personnel of the category 2 centres under the auspices of UNESCO with training courses on data processing and analysis to help them build capabilities in the field of engineering science and technology.

Some 40 students from 15 category 2 centres took part in the training workshop, including 10 foreign students from Malaysia, Iran, Kenya and Nigeria, etc.

The training courses were jointly given by experts from the IKCEST platform development team, the IKCEST research team from the College of Computer Science of Zhejiang University, as well as its sub-centres , with contents including introduction of IKCEST, basic knowledge of big data and its application in various specialized fields, cloud storage, as well as specific knowledge service systems of the IKCEST. The training courses were followed by technical discussions and visits to help the students have intuitive and profound understanding of the IKCEST and big data. In one word, the training courses were well received.

The opening ceremony was chaired by Liu Chang, Director of Division of International Cooperation of IKCEST. Hans Dencker Thulstrup, Programme Specialist for Natural Sciences of the UNESCO Beijing Office, and Yi Jian, Executive Deputy Director of IKCEST, addressed the ceremony. Zhuang Yueting, President of the College of Computer Science of Zhejiang University, attended the ceremony and introduced the technical centre of IKCEST.

The training workshop was the first of its kind hosted by the IKCEST since its establishment. By providing targeted training to staff members at the Category 2 centres, IKCEST helped the trainees enhance their skills in data analysis, mining and processing, discussed the IKCEST's user needs and development objecives and approaches and explored the possibility of data resource cooperation between IKCEST and other Category 2 centres. During the technical discussions, participants from several Category 2 centres expressed strong intent of cooperating with the IKCEST in such areas as resource-sharing alliance, knowledge service

and training program development. The training workshop was a great success, as it strengthened the connections between various Category 2 centres, expanded the influence of the IKCEST and laid a solid foundation for the centres to share resources and carry out cooperation in the future.

IKCEST popularized science knowledge among young people

In order to accommodate the Campaign on "Teenagers Go into the Chinese Academy of Engineering (CAE)" launched by the CAE, the International Knowledge Centre for Engineering Sciences and Technology (IKCEST) was open to youngsters on October 9, 16 and 23, November 6 and 13 respectively, in order to introduce the concepts of building the centre and popularize related science knowledge.

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≫ CKCEST News

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

CKCEST held Second Work Meeting in Hangzhou

CKCEST held the 2015 2nd Work Meeting on October 15 in Hangzhou City, Zhejiang Province. Prof. Pan Yunhe, former Executive Vice President of CAE, and Prof. Chen Zuoning, Vice President of CAE, attended the meeting and listened to reports on work progress of the various sub-systems as well as the overall platform, and preparatory work for launching its Official Version 1.0 online scheduled in October. Both professors gave explicit instructions about construction of the centre in the next stage.

CKCEST held data sharing seminar

CKCEST held a data sharing seminar at Conference Room 220 of CAE on September 17,2015. Yi Jian, director of the centre's Project Management Office, chaired the seminar, and Prof. Chen Zuoning, Vice President of CAE, as well as experts from sub-centres of metal materials, agriculture, chemical engineering, manufacturing, pharmaceuticals, meteorology, information, geographic information and metallurgy attended the seminar. At the seminar, experts discussed issues related to the centre's data and resource sharing and raised a list of problems the centres needs to address soon. Citing China's national strategy of expediting big data development, Prof. Chen Zuoning said the centre should focus on user needs and make tangible breakthroughs in key technology development as well as data and resource sharing.

CKCEST held training workshop on use of knowledge organization system tools

CKCEST held a training workshop on how to use knowledge organization system tools on September 24,2015 at the Institute of Scientific and Technical Information of China (ISTIC). Technicians from 22 sub-centres of CKCEST participated in the workshop. ISTIC was a joint developer of the knowledge organization system tools in 2015, and it provided training about the building process of knowledge organization system and how to use tools to build the system. In 2016 CKCEST plans to build and apply the knowledge organization system to some fields on a trial basis.

CKCEST Official Version 1.0 began user test before launch

In late September of 2015, the Institute of Scientific and Technical Information of China (ISTIC) invited experts and about 40 students to test the CKCEST Official Version 1.0 before its launch. The testing aimed to make sure users including CAS and CAE Members can have satisfactory experience when using the system. The testing was carried out from such aspects as resource, navigation, service, searchability and human-computer interaction. CKCEST sub-centres offered some suggestions to optimize the system. The testing outcome has important reference value for enhancing system stability and optimizing human-computer interaction.

CKCEST Official Version 1.0 launched

The CKCEST Official Version 1.0 was launched on October 26,2015 on the sideline of the second meeting to elect new CAS and CAE Members. In addition to seven existing professional knowledge service systems, CKCEST Official Version 1.0 added five new professional knowledge systems in Chinese herbal medicine, strategic emerging industries, academic activities, academic journals and energy. In order to improve user experience for CAS and CAE Members and attract them to use the system, CKCEST launched push service for some members based on their research areas and interested topics. The members can receive emails every week containing information like authoritative data, academic papers, scientific research progress and up-to-date industry developments. The service has been favored and hailed by the Members.

CKCEST held discussions about Project Acceptance Rules (Trial) in Beijing

CKCEST's Project Management Office and some sub-centres held a meeting at Conference Room 220 of CAE on the afternoon of October 29,2015 to discuss the CKCEST Project Acceptance Rules (Trial). The rules are formulated on the basis of the CKCEST Construction & Management Rules (Trial), CKCEST Special Fund Management Rules (Interim), as well as relevant laws and regulations, and are designed to govern project evaluation before the next stage of construction begins.

CKCEST conducted survey to gauge demand for project management system

Since the CKCEST launched the initiative to build a project management system in late August of 2015, the Project Management Office has rescheduled the project management procedures and communicated with the software developer to clarify the practical application demand for the system. On the morning of October 29, the Project Management Office and some sub-centres held a meeting at Conference Room 220 of CAE to hear a report about design proposal of the system architecture, discuss practical needs for the system and finalize the system's management procedures and architecture. The discussions laid a foundation for the development of the project management system.

Top News for Big Data Era

Seminar on "13th five-year development plan" for big data industry held in Beijing

A panel tasked with compiling the 13th five-year development plan for the big data industry held a seminar at China Academy of Telecommunication Research (CATR) on November 25. Participants discussed a wide range of issues concerning big data technologies, big data safety, regulatory policies, legislation, as well as data sharing, trading and exchange. Experts from Alibaba, Datatang, Transwarp and CATR made separate reports on specific topics. The panel also sought professional opinions about the "13th Five-year Development Plan" for Big Data Industry (Draft version), and discussed relevant issues and revised the plan.

Excerpted from People's Posts and Telecommunications News

IDC expects big data spending to reach US$48.6bn in 2019

Market research institute IDC predicted the big data technology and service market will expand at a compound annual growth rate (CAGR) of 23.1% in the following years to hit US$48.6 billion in 2019. IDC said discrete manufacturing is the biggest spender in big data (US$2.1bn in 2014), followed by banking (US$1.8bn in 2014) and process manufacturing (US$1.5bn in 2014). Sectors that are expected to see the fastest growth in big data spending are securities & investment (CAGR at 26%), banking (CAGR at 26%) and media (CAGR at 25%).

Excerpted from China Internet Network Information Centre

UK government plans to modernize data infrastructure to improve data use efficiency

The UK's Computer Weekly magazine said in a report published on its website on November 5, 2015 that the government plans to upgrade its data infrastructure as part of "data revolution" for the public sector, according to Cabinet Office minister Matt Hancock. Hancock added that the "Government as a Platform" (GaaP) Programme led by the Government Digital Service (GDS) and the plans with a shifted focus from transactions to platform construction will both depend on strong data foundations so as to avoid duplicating work among departments. A new GDS strategy is due to be published before December 25.

Excerpted from www.cnii.com.cn

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Five countermeasures against big data challenges in China

As social and economic development advances, big data engine has become a core driving force for organization innovation, industry upgrade and national governance modernization. Based on the experience of the U.S. and European nations adopting big data strategy, China should take five countermeasures to implement its big data strategy. First, improve intellectual property protection system and information resource market and draft relevant laws. Second, establish the big data administration, set up an open platform to share government information & resources. Third, make technological breakthroughs and identify key fields to be provided with stronger R&D support. Fourth, cultivate professional talents, especially those with expertise in data mining and machine learning. Fifth, set up big data R&D fund and build a mechanism of rewards and penalties and a budget system.

Excerpted from Guangming Daily

Gartner: 75% companies will invest in big data in next two years

Investment in big data continues to increase in 2015, but not as rapidly as in previous years. More than three-quarters of companies are investing or planning to invest in big data in the next two years, a three percent increase over 2014, according to a survey of 437 IT and business leaders by Gartner. Nick Heudecker, research director at Gartner, said this year begins the shift of big data away from a topic unto itself, and toward standard practices, and big data solutions become mainstream.

Excerpted from People's Posts and Telecommunications News

China's big data market will reach RMB 11.59bn in 2015

China's big data market is estimated to expand 38% year on year to RMB 11.59 billion in 2015, according to the 2015 China Big Data Development Report released by China Academy of Telecommunication Research. The report predicted the market will continue to grow at about 40% a year between 2016 and 2018, as some successful applications will exert demonstrating impact and help the market grow further.

Excerpted from People's Posts and Telecommunications News

Aliyun releases China's first artificial intelligence platform DTPAI

Aliyun announced the launch of China's first artificial intelligence platform DTPAI on August 18. With the service developers can use simple means to analyze and mine mass data and predict user behaviors and industry trends. The platform will integrate with Alibaba's algorithm database, including feature engineering, massive machine learning and deep learning.

Excerpted from www.chinabyte.com

Terms on Big Data

Category navigation

Category navigation is a form of service that adopts a classification system to organize resources like documents, research data and media, navigate the resources through a tree-shaped directory and help users pinpoint the resources they need. Category navigation is an important means of knowledge service and is complementary to search service. Supporting category navigation is a basic requirement for the establishment of CKCEST's sub-centres.