

国家农业信息化工程技术研究中心

国家农业智能装备工程技术研究中心

International Top-level Forum on Engineering Science and Technology Strategy---Agricultural Sensors & International Conference on Intelligent Agriculture (ICIA2021)

NOTICE

May 20 - 22, 2021, Tianjin

The integration of a new generation of information technology and agricultural methods has introduced a new era of digitization and intelligence to agriculture. Smart agriculture is a modern agricultural production method that integrates information, knowledge, and intelligent equipment as its core scientific and technological elements. It is at the cutting edge of modern agricultural technology and provides a new structure for future agricultural development. As the main source of information, sensors play a key role in the development of smart agriculture.

To promote the development of agricultural sensor technology and smart agriculture, the "International Top-level Forum on Engineering Science and Technology Strategy Agricultural Sensors & International Conference on Intelligent Agriculture (ICIA2021)" is planned to be held in Tianjin from 20 to 22 May 2021. The conference will be hosted by the Chinese Academy of Engineering and World Intelligence Congress Committee. Sponsored by Tianjin Municipal Commission of Agriculture and Rural Affairs, China National Engineering Research Center for Information Technology in Agriculture (NERCITA), China National Engineering Research Center of Intelligent Equipment for Agriculture (NERCIEA), South China Agricultural University (SCAU), China Agricultural University (CAU), Chinese Association for Artificial Intelligence (CAAI), Chinese Society for Agricultural Machinery (CSAM), Chinese Society of Agricultural Engineering (CSAE), China Agricultural Mechanization Association (CAMA), China Association for the Promotion of International Agricultural Cooperation (CAPIAC), and Jiangsu University (JSU). The Conference will concurrently host associated academic activities such as the "The First China Agricultural Robot Innovation Competition," and the "Intelligent Agriculture and Intelligent Equipment Achievement Technology Exchange Conference". These are one part of the sub-forum of smart agriculture of The 5th World Intelligence Congress.

Focusing on the topics of agricultural sensors, agricultural artificial intelligence, agricultural robots, precision agriculture, and smart farms, the Conference invites Chinese and international experts to exchange the latest technology research progress and application experience, and strengthen the in-depth cooperation and discussions among academia, industry, departments of government, and users in the field of smart agriculture. The Conference will promote the rapid development of China's smart agriculture.

On behalf of the organizing committee, we cordially invite you to attend this conference.

China National Engineering Research Center for Information Technology in Agriculture
China National Engineering Research Center of Intelligent Equipment for Agriculture



February , 2021



International Top-level Forum on Engineering Science and Technology Strategy---Agricultural Sensors & International Conference on Intelligent Agriculture (ICIA2021)

Invitation Letter

Distinguished experts,

China is at the historical juncture of approaching its second centennial goal—to build a modern socialist country that is prosperous, strong, democratic, culturally advanced and harmonious. As part of this goal, it is of great significance to "comprehensively promote rural revitalization and accelerate the modernization of agriculture and rural areas" to build self-reliance and self-improvement in agricultural science and technology and to accelerate the development of core agricultural technologies. As agriculture enters the digital age, smart agriculture has become an important aspect of modern agriculture. The development of smart agriculture will play an important role in transforming traditional production methods, improving agricultural resource use and production efficiency, and achieving high-quality agricultural development.

Smart agriculture is the product of multiple disciplines, involving information awareness, intelligent control, precision operations, network management and personalized services. Sensors are the core technology of smart agriculture, and the key to acquiring information and providing intelligent control. At present, most of China's high-end agricultural sensors are imported. However, research shows that agricultural sensors have become a bottleneck for the future development of smart agriculture in China. In particular, the stability and reliability of agricultural sensors in complex environments need to be improved.

To promote the development of agricultural sensor technology and smart agriculture; learn from the technological advances and experiences of international agricultural sensor use; and explore new principles, new materials, and new technologies for agricultural sensors, the Chinese Academy of Engineering plans to hold the "International Top-level Forum on Engineering Science and Technology Strategy---Agricultural Sensors & International Conference on Intelligent Agriculture (ICIA2021)" on May 20 - 22, 2021 in Tianjin, China. We are inviting distinguished Chinese and international experts to discuss topics around agricultural sensors, agricultural artificial intelligence, agricultural robots, precision agriculture and smart farms. We intend the conference to be held both online and offline. As the Co-Chairs of the conference, we cordially invite you to attend this meeting.

This conference accepts online registration, please log on to the conference website

<http://icia.nercita.org.cn> to register.

Co-Chairs: Academician of Chinese Academy of Engineering

Zhao Chunjiang

Luo Xiwen

Organizing committee: Hongru Wang Email: wanghr@nercita.org.cn;
Muguo Zhang Email: zhangmg@nercita.org.cn;
Xinyi Wang Email: wangxy@nercita.org.cn.
Conference Email: icia2021@126.com

International Top-level Forum on Engineering Science and Technology Strategy---Agricultural Sensors & International Conference on Intelligent Agriculture (ICIA2021)

May 20 - 22, 2021, Tianjin

1、Background

The integration of a new generation of information technology and agricultural methods has introduced a new era of networking, digitization, and intelligence to agriculture, leading to changes in production methods and the development of an agricultural digital economy. Smart agriculture is a modern agricultural production method that integrates information, knowledge, and intelligent equipment as its core scientific and technological elements. It is at the cutting edge of modern agricultural technology and provides a new structure for future agricultural development. As the main source of information, sensors play a key role in the development of smart agriculture. The support of sensors is essential for cultivating new agricultural varieties, producing livestock and crops, and processing agricultural products and cold chain logistics. It is expected that the extensive development and application of agricultural sensors will further enhance our understanding and control of agricultural systems, promote intelligent agricultural production and management, greatly improve agricultural production efficiency and resource use, and enable agriculture to progress towards high-quality development.

In recent years, new principles, technologies, materials, and processes in agricultural sensors have led to continuous advancements. Agricultural sensors have moved from simple sensing of physical measurements to rapid sensing of complex chemical and biological information. Basic research into agricultural sensor technology in China started late, leading to a gap in the status of knowledge and sensor technology between China and developed countries. This has caused problems such as poor stability in existing sensors and a lack of high-end agricultural sensors.

The International Top-level Forum on Engineering Science and Technology Strategy is a high-end academic exchange platform established by the Chinese Academy of Engineering, focusing on academic discussions around international cutting-edge and strategic engineering technologies in different fields. The International Conference on Intelligent Agriculture (ICIA) is an international academic exchange platform established by the National Engineering Research Center for Information Technology in Agriculture (NERCITA). It has been held every 2 years since 2000.

To promote the development of agricultural sensor technology and smart agriculture, the "International Top-level Forum on Engineering Science and Technology Strategy Agricultural Sensors & International Conference on Intelligent Agriculture (ICIA2021)" is planned to be held in Tianjin from 20 to 22 May 2021. The conference will be hosted by the Chinese Academy of Engineering and World Intelligence Congress Committee. Sponsored by Tianjin Municipal Commission of Agriculture and Rural Affairs, China National Engineering Research Center for Information Technology in Agriculture (NERCITA), China National Engineering Research Center of Intelligent Equipment for Agriculture (NERCIEA), South China Agricultural University (SCAU), China Agricultural University (CAU), Chinese

Association for Artificial Intelligence (CAAI), Chinese Society for Agricultural Machinery (CSAM), Chinese Society of Agricultural Engineering (CSAE), China Agricultural Mechanization Association (CAMA), China Association for the Promotion of International Agricultural Cooperation(CAPIAC), and Jiangsu University (JSU). The Conference will concurrently host associated academic activities such as the "The First China Agricultural Robot Innovation Competition," and the "Intelligent Agriculture and Intelligent Equipment Achievement Technology Exchange Conference".

Focusing on the topics of agricultural sensors, agricultural artificial intelligence, agricultural robots, precision agriculture, and smart farms, the Conference invites Chinese and international experts to exchange the latest technology research progress and application experience, and strengthen the in-depth cooperation and discussions among academia, industry, departments of government, and users in the field of smart agriculture. The Conference will promote the rapid development of China's smart agriculture.

2、 Topics

Agricultural sensors: mainly includes agricultural environmental sensor, life information sensor of animals and plants, high-throughput acquisition technology of animals and plants phenotypes, rapid detection technology of agricultural product quality, new material and technique for sensors, agricultural wireless sensor network, theory and method of agricultural remote sensing, etc.

Agricultural artificial intelligence: mainly includes algorithm and analysis tools of agricultural artificial intelligence, intelligent image recognition, complex scene perception and feature recognition of animals and plants, knowledge mapping, big data intelligent decision-making, open synergy decision-making, agricultural intelligent information service, intelligent voice interaction, agricultural block chain, control and traceability on quality and safety of agricultural products, etc.

Agricultural robots: mainly includes system design of agricultural robot, navigation and path planning of agricultural robot, environment perception and recognition of agricultural robot, operation control and actuator of agricultural robot, agricultural robot brain, typical agricultural robot and autonomous unmanned operation system, etc.

Precision agriculture and smart farms: mainly includes farmland information acquisition technology, precision agriculture decision-making and prescription, automatic driving and operation of agricultural machinery, precision operation technology and equipment, agricultural aviation technology and application, intelligent detection classification and packaging technology of agricultural products, integration solutions and typical application cases of smart farm technology.

3、 Sponsors

Chinese Academy of Engineering

World Intelligence Congress Committee

4、Organizers

Agriculture Division, Chinese Academy of Engineering (CAE)

China National Engineering Research Center for Information Technology in Agriculture (NERCITA)

Tianjin Municipal Commission of Agriculture and Rural Affairs

China National Engineering Research Center of Intelligent Equipment for Agriculture (NERCIEA)

South China Agricultural University (SCAU)

China Agricultural University (CAU)

Chinese Association for Artificial Intelligence (CAAI)

Chinese Society for Agricultural Machinery (CSAM)

Chinese Society of Agricultural Engineering (CSAE)

China Agricultural Mechanization Association (CAMA)

China Association for the Promotion of International Agricultural Cooperation (CAPIAC)

China Animal Agriculture Information Association (CAAIA)

Jiangsu University (JSU)

Nongxin Science & Technology (Beijing) Co., Ltd. China

5、Supporters

Pinduoduo Inc.

6、Co-Sponsors

Tianjin Institute of Intelligent Agriculture

Key Laboratory of Information Technology in Agriculture, Ministry of Agriculture

Key Laboratory of Quantitative Remote Sensing in Agriculture, Ministry of Agriculture and Rural Affairs, PRC

Branch of Agricultural Information Processing, International Federation for Information Processing (IFIP TC5.14)

Technology Innovation Strategic Alliance for Agricultural Internet of Things Industry (TISA-AITI), Beijing, China

Technology innovation strategic alliance for agricultural aviation

National Center for International Research on Agricultural Aerial Application

National Innovation Center of Digital Technology in Animal Husbandry

China Collaborative Innovation Platform for Digital Fishery (CCIPDF)

National Innovation Center for Digital Fishery

National Engineering Laboratory of Agricultural Product Quality and Safety Traceability Technology and Application

National-Local engineering Laboratory for Beidou navigation, Intelligent Control and Telematics of Agricultural Machinery

Beijing Key Laboratory of Digital Plant

Collaborative Innovation Center of Crop Phenomics in Beijing Academy of Agricultural and Forestry Sciences

Sciences Research and Development Base of Beijing Science and Technology conditional Platform in Beijing Academy of Agriculture and Forestry

Beijing Engineering and Technology Research Center for Internet of Things in Agriculture

Beijing Society for Information Technology in Agriculture (BSITA)

Nongxin Science & Technology (Nanjing) Co., Ltd. China

Nongxin Science & Technology (Tianjin) Co., Ltd. China

7、Date& Location

May 20-22, 2021, Tianjin Society Hill International Conference Center Hotel, Tianjin, China.

PS: If you live overseas and unable to attend on-site, we kindly invite you to follow the registration process on <http://icia.nercita.org.cn> and attend online meeting. If you have any questions, please contact our organization committee.

8、Agenda

Date	Agenda	Time (UTC+8)
May 20 (Thursday)	Register	08:00-20:00
May 21 (Friday)	Opening Ceremony	08:30-09:00
	Symposium	09:00-17:30
May 22 (Saturday)	Seminar	08:30-17:30

9、Key dates

Deadline for online registration: April 30, 2021

Deadline for registration and payment: April 30, 2021

Conference registration date: May 20, 2021

Conference date: May 20 - 22, 2021

10、 Conference Fee

The online registration fee is ¥1,000 yuan / person

Registration fee transfer information:

Name: Nongxin Technology (Beijing) Co., Ltd.

Account: 11053201040005746

Bank: Beijing Shuguang Branch of Agricultural Bank of China

Please indicate the ICIA registration fee and the name of the participant while making the transaction or contact us for further detail.

11、 Conference website

Website: <http://icia.nercita.org.cn>

Mailbox: icia2021@126.com

12、 Organizing committee

Secretary-General :

Du Xiaohong , National Agricultural Information Engineering Research Center;

Contact :

Wang Xinyi: +86010-51503417, wangxy@nercita.org.cn

PS: if you have Wechat account, please scan the QR code for personal assistance.

