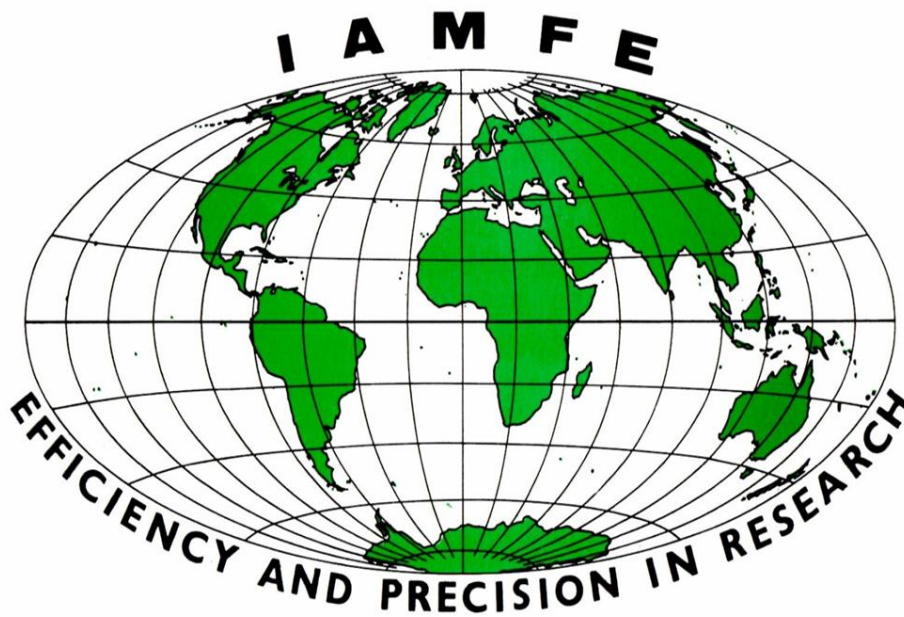


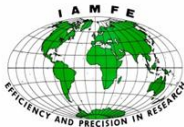
Newsletter of IAMFE

IAMFE News 2022



Edited by the IAMFE Secretariate

www.iamfe.org



IAMFE 2022

2022 International Conference on Mechanization of Field Experiments & Smart Agriculture: Early Experience and Prospects

November 08-09, 2022

<http://www.iamfe2022.net>

ANNOUNCEMENT

I Sponsor

International Association on Mechanization of Field Experiments (IAMFE).

II Co-organizers

Qingdao Agricultural University(QAU), China

Chungnam National University(CNU), Republic of Korea

Federal Scientific Agroengineering Center VIM, Russia

III Support Organizers

Chinese Society of Agricultural Engineering, China

Korean Society of Precision Agriculture, Republic of Korea

Graduate School of Smart Agriculture, CNU, Republic of Korea

Qingdao Plantech Mechanical Technology Co.,Ltd, China

IV Programme

The scientific programme includes plenary session, oral presentations and poster session. The conference language is **English**, and the conference will be held online by using communication software. Small sub-venues will be set up in China, Korea and Russia, respectively.

V Topics

- General and methodological issues of field experiment management
- Technical support of crops breeding and seed production
- Machinery equipment of plot seeding and plot harvesting
- Information technologies applied in field experiments
- Seed processing technology and instruments
- Technologies and technical tools for breeding and seed production of cereals, perennial grasses, potato, peanuts, fruits and berriesSmart experimental field
- Typical cases of smart agriculture
- Early experience of smart agriculture
- Prospects of smart agriculture
- Technologies and equipment for smart agriculture
- Intelligence and informatization on agricultural equipment
- Information and technological support for the development of organic crop production

- Forecast of the development of agricultural supply associated with climate change
- Facility agriculture
- Other related topics

VI Call for Papers

Abstracts and full papers are accepted in English and shall be published in Conference Proceedings (Free of charge) or International Academic Journals. Authors willing to publish their papers in International Academic Journals need to pay a fee of 300 Euros. Deadline of paper submission is October 29, 2022.

VII Committee

Co-Chairs:

Shang Shuqi

Vladislav Minin

Sun-Ok Chung

Academic Members:

Shang Shuqi
Vladimir Popov
Sun-Ok Chung
John Hampton
Taewook Kim
John Stevens
Chanseok Ryu

Luo Xiwen
Zhao Chunjiang
Zhu Ming
Yakov Lobachevsky
Yushin Ha
Anders Heen

Chen Xuegeng
Vladislav Minin
Wang Jiasheng
Chen Shaojiang
Hak-Jin Kim
Torbjorn Leuchovius

Organizing Members:

Liu Xinmin
Tian Yike
Xu Ying
Wang Jiasheng
Yang Ranbing

Sun-Ok Chung
Wang Yingkuan
Jiao Lei
Du Kun
Yang Hao

Vladislav Minin
Hani Mehana
Wang Dongwei
Wang Haiyan
Li Guoying

Welcome!

Dear Madam/Sir,

On behalf of the IAMFE and the Co-organizers, it is my great honor to invite you to attend 2022 International Conference on Mechanization of Field Experiments & Smart Agriculture: Early Experience and Prospects on November 8-9, 2022.

The themes of the conference are Smart Field Experiments and Smart Agriculture. The conference aims to provide a platform for the exchange of scientific ideas, public consideration of ways of methodological and instrumental support of agro-biological field studies and smart agriculture, cooperation in the field methods of experimentation and technology. The meetings of scientists, scholars, engineers, plant breeders in agriculture and agricultural engineering, and joint discussion provide the synthesis of new ideas, the emergence of technical solutions, which meet the needs of users. All this will contribute to the

progress in the production of agricultural and horticultural products and food security on a global scale.

We are looking forward to meeting you at the conference online in this coming November. Welcome to attend the conference!

Sincerely,

Professor Shang Shuqi, President of the IAMFE

**The programme of the
2022 International Conference on Mechanization of Field Experiments & Smart
Agriculture: Early Experience and Prospects**

Date:	November 08-09, 2022
November 08, 2022 14:00-18:00 (Beijing Time)	IAMFE Executive Committee Meeting
	Opening Ceremony of the Conference
	Plenary Session
	Oral Presentations
November 09, 2022 14:00-18:00 (Beijing Time)	Oral Presentations
	Closing Ceremony of the Conference
	IAMFE General Assembly

Tel: +86.15854209587

Email: jiasheng0813@163.com

Code: 266109

Address: No.700,Changcheng Road, Chengyang, Qingdao, China

Report for the 16th International Conference and Exhibition on Mechanization of Field Experiments

The 16th International Conference and Exhibition on Mechanization of Field Experiments (IAMFE/China'2022) was held successfully at Qingdao Agricultural University, China during November 8th-9th, 2022. IAMFE/China'2022 was co-sponsored by the International Association on Mechanization of Field Experiments (IAMFE), Qingdao Agricultural University(QAU, China), Chungnam National University(CNU, Republic of Korea) and Russia Federal Scientific Agroengineering Center (VIM, Russia). The conference was also supported by Chinese Society of Agricultural Engineering, Korean Society of Precision Agriculture, Graduate School of Smart Agriculture of CNU, and Qingdao Plantech Mechanical Technology Co.,Ltd. The conference programme includes plenary session, oral presentations and poster session. The conference language is English, and the conference was held online by webinar software. Small sub-venues was set up in China and Russia respectively. The theme of IAMFE 2022 is *Mechanization of Field Experiments & Smart Agriculture: Early Experience and Prospects*.

At the opening ceremony, **Prof. Shang Shuqi** (the President of IAMFE), **Prof. Vladislav Minin** (the vice President of IAMFE), **Prof. Sun-Ok Chung** (Head of Department of Biosystems Machinery Engineering, College of Agriculture and Life Sciences, Chungnam National University), **Prof. Liu Xinmin** (President of Qingdao Agricultural University), and **Prof. Zhu Ming** (Vice President of Chinese Society of Agricultural Engineering) gave their welcome speech and greetings to all the participants, and expressed their best wishes for a successful 16th International IAMFE Conference and Exhibition, and hopefully increase the cooperation and communication of scientists, scholars, engineers, plant breeders in agriculture and agricultural engineering.



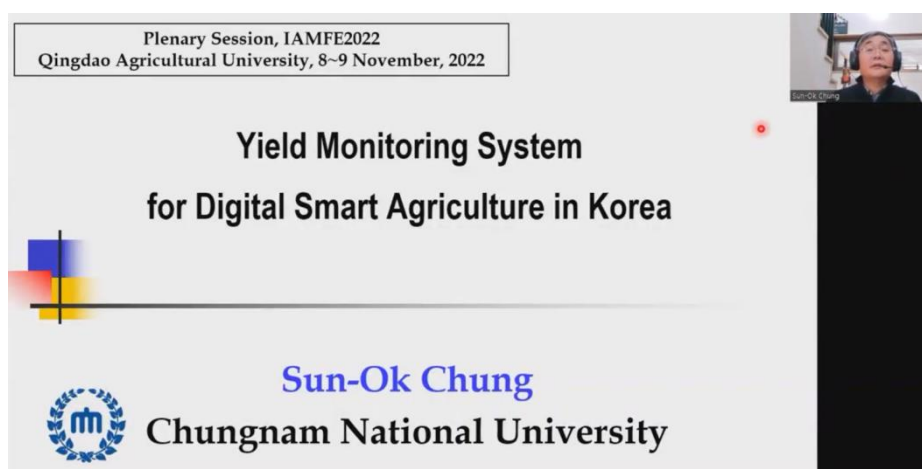
The Opening Ceremony Speech of IAMFE 2022

After the Opening Ceremony, Academician of Chinese Academy of Engineering, **Prof. Luo Xiwen** gave a keynote presentation of “Explore and Ractice of Unmanned Farm” firstly, in his report, Prof. Luo Xiwen Shared knowledge about smart agriculture and unattended farms, introduced the key technology of large-scale intelligent variable sprayers, multi-channel associated spray volume feedback control technology, and automatic weed identification technology based on computer science. Finally, the unattended paddy field rotary farming machinery, seeder, pesticide spraying, fertilization, harvesting, loading and unloading and other mechanical equipment developed by South China Agricultural University were displayed.



Academician Luo Xiwen Was Giving His Keynote Speech

Then, Head of Department of Biosystems Machinery Engineering, College of Agriculture and Life Sciences, Chungnam National University, **Prof. Sun-Ok Chung** gave a keynote presentation of “Yield Monitoring System for Digital Smart Agriculture in Korea”, Prof. Sun-Ok Chung pointed out that with the rapid development of electronic technology, communication technology, and information technology, field experiments should also develop in the direction of intelligence. He believes that this conference provides valuable communication opportunities for scholars and experts participating in the conference, which will help the promotion of advanced technologies,



Prof. Sun-Ok Chung Was Giving His Keynote Speech

Corresponding Member of the Russian Academy of Sciences Director of the Institute for Engineering and Environmental Problems in Agricultural Production-Branch of Federal Scientific AgroEngineering Centre VIM, **Prof. Alexander Bryukhanov** gave a keynote presentation of “Agroengineering and Digital Technologies for the Development of Environmentally Safe Agriculture in Russia” with **Ph.D. Eduard Vasiliev**, Prof. Alexander Bryukhanov appealed that the world's food security problem is getting worse, and it is urgent to strengthen relevant research and strengthen cooperation among countries in this field. Relevant experimental results in the fields of agricultural mechanization, agricultural informatization, and agricultural automation can bring good news to thousands of agricultural users. Researchers in plant breeding, crop planting and related fields have adopted more active collaborative research, and the scientific research output has achieved remarkable results. And he proposed that Russia should continue to strengthen in-depth exchanges and discussions with the International Association of Field Test Mechanization and achieve important results in cooperative scientific research projects.



Prof. Alexander Bryukhanov Was Giving His Keynote Speech

Academician of Chinese Academy of Engineering, **Prof. Zhao Chunjiang** gave a keynote presentation of “Field Test Machine IoT&Crop Phenotyping System”, in his report, Prof. Zhao Chunjiang discussed the field testing machine and crop phenotyping system based on the Internet of Things in detail, and shared the latest research directions and progress of field testing machine operation information collection, agricultural machinery remote information processing system, plant phenotype measurement platform, and plant phenotype factory.






IAMFE 2022
2022 International Conference on Mechanization of Field Experiments
& Smart Agriculture: Early Experience and Prospects
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Field Test Machine IoT & Crop Phenotyping System

Dr. Chunjiang ZHAO
zhaocj@nercita.org.cn

National Engineering Research Center for Information Technology in Agriculture(NERCITA), Beijing, P.R.China

2022-11-08

ZHAO Chunjiang

Professor of NERCITA
Academician of CAE

Academician Zhao Chunjiang Was Giving His Keynote Speech

President of IAMFE, **Prof. Shang Shuqi** gave a keynote presentation of “Challenges and Opportunities for Seed Machinery and Equipment (Instruments)”, Prof. Shang Shuqi pointed out that the food security strategy puts forward higher requirements for breeding mechanized equipment, and the difference in planting and sowing methods puts forward higher requirements for the adaptability of seed machinery and equipment. Professor Shang Shuqi finally called for the development of intelligence, informatization, and standardized technologies, and the establishment of mechanized breeding demonstration area based on crop ecosystems to realize the prospect of agricultural machinery and agronomy integration.



青岛农业大学
QINGDAO AGRICULTURAL UNIVERSITY

农机装备创新团队

Professor Shang Shuqi's Team

Challenges and opportunities for seed machinery and equipment (instruments)

Professor **Shang Shuqi** Doctoral Supervisor
President of the International Association on Mechanization of Field Experiments (IAMFE)
Director of Mechanization Professional Committee of China Seed Association
Director of Academic Committee of Qingdao Agricultural University



November 8, 2022



SHANG Shuqi

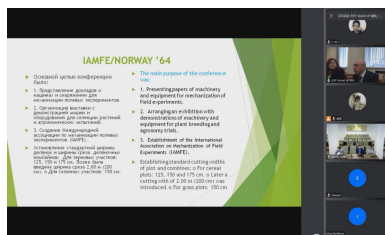
President of IAMFE
Director of Academic Committee of QAU

Prof. Shang Shuqi Was Giving His Keynote Speech

In addition, the backbone members of IAMFE also gave their presentations to introduce and discuss their latest progress and thought, including **Dr. John Stevens**(General Manager of Flexiseeder company, New Zealand), **Prof. Torbjorn Leuchovius** (Swedish University of Agricultural Sciences , Secretary General of Swedish Branch of IAMFE), **Prof. Vladislav Minin**, **Prof. John Hampton**(Seed Research Center of Lincoln University, New Zealand).

In general, the oral presentations gave by reporters from over 9 different countries were carried out in the main session in China and sub session in Russia, scholars introduced their

research progress, the participants gave warmly discussions and comments on every presentation.



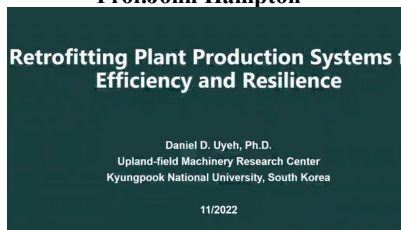
Russian Sub-session 1



Dr. John Stevens



Prof. John Hampton



Prof. Daniel Dooyum Uyeh



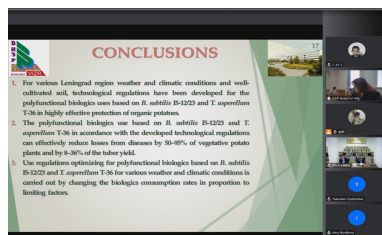
Prof. Mohamed M. IBRAHIM



Prof. Yang Ranbing



Prof. Wang Baochao



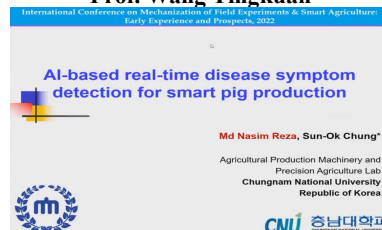
Russian Sub-session 2



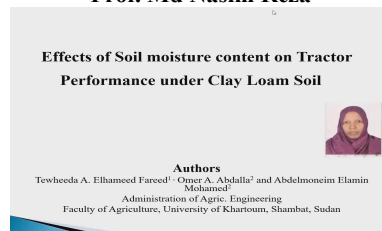
Prof. Torbjorn Leuchovius



Prof. Wang Yingkuan



Prof. Md Nasim Reza



Dr. Tewheeda A. Elhameed Fareed



Prof. Wang Jiasheng



Dr. Alexander Aksenov



Russian Sub-session 3



Prof. Vladislav Minin



Prof. Hani Mahanna



Prof. Myongkyoon Yang



Mr. Li Guoying



Mr. Jia Jun



Dr. Yang Hao



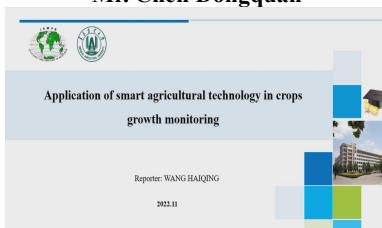
Mr. Chen Dongquan



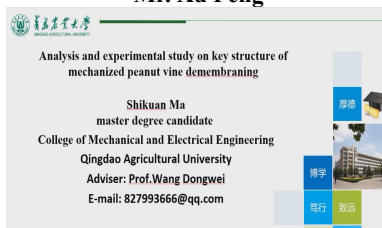
Mr. Xu Peng



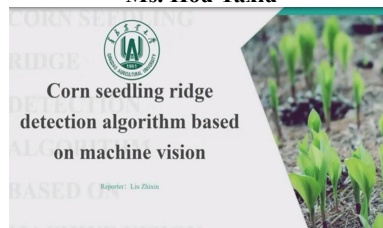
Ms. Hou Yaxiu



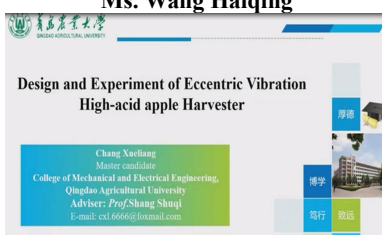
Ms. Wang Haiqing



Mr. Ma Shikuan

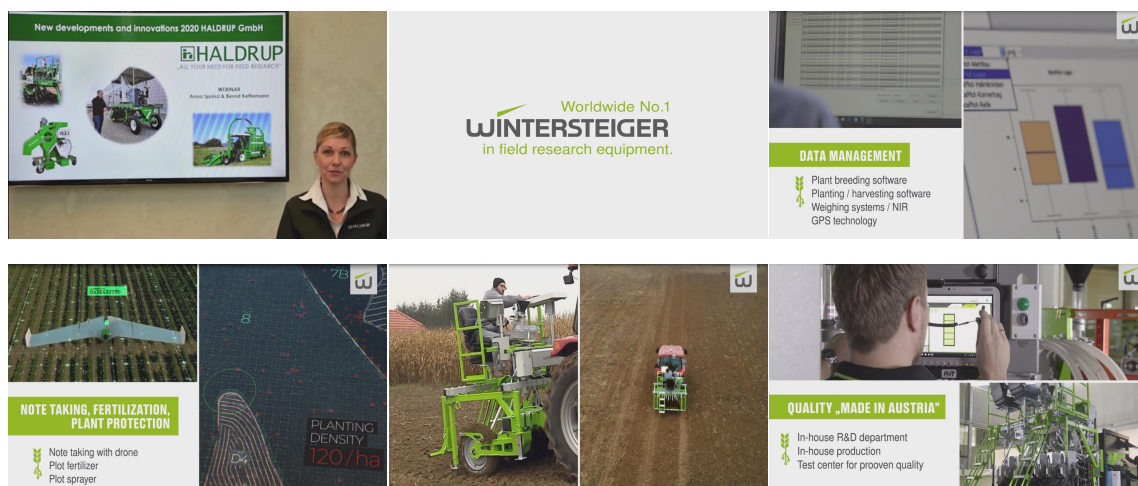


Mr. Liu Zhixin



Mr. Chang Xueliang

In addition, famous enterprises sent representatives to attend the conference and exhibited their new technology and equipment, including five famous breeding machinery enterprises, New Zealand Flexiseeder, Germany Hardrup, Jiuquan OK Seed Machinery Co.LTD, Qingdao Plantech Mechanical Technology Co., Ltd., and Austrian Wintersteiger.



The On-line Exhibition



The Student Audience in Qingdao Agricultural University

The executive committee meeting of IAMFE was held synchronously. Professor Wang Jiasheng, the executive secretary of IAMFE, made a summary report for the previous work

and progress of IAMFE. The general election was held, and Memorandum of Understanding IAMFE 2022 was formed. The new executive committee is composed of 13 members from 7 countries including China, Russia, and New Zealand. Prof. Shang Shuqi was re-elected as the president of IAMFE, and Prof. Minin was re-elected as the vice president. Professor Wang Dongwei and Prof. Alexander Bryukhanov were elected as vice president, Prof. Wang Jiasheng was re-elected as executive secretary, and Dr. Du Kun was elected as vice executive secretary. The International IAMFE Centre will still continue to be set in Qingdao Agricultural University, China. The meeting also discussed and determined that the next IAMFE International Conference will be held in Cairo, Egypt in 2026. In terms of international cooperation, the conference proposed and adopted the resolutions on admitting Sudan as a member of the association and establishing branches in Egypt and Sudan, which is a milestone in improving the international influence of the association and strengthening international academic exchanges and cooperation.

Memorandum of Understanding IAMFE 2022

9 November, 2022

The General Assembly of IAMFE 2022 has on the above date decided the following:

- As President of IAMFE, Prof. Shang Shuqi, was re-elected.
- As Vice President of IAMFE, Dr. Vladislav Minin from Russia was re-elected, and Prof. Wang Dongwei from China was elected, and Prof. Alexander Bryukhanov from Russia was elected.
- As Executive Secretary of IAMFE, Prof. Wang Jiasheng from China was re-elected.
- As Vice Executive Secretary of IAMFE, Dr. Du Kun from China was elected.
- Establishing two new National Branches: Egypt and Sudan National Branch of IAMFE.
- As Members in the IAMFE Executive Committee (EC) were elected Prof. John Hampton from New Zealand, Prof. Sun-OK Chung from South Korea, Dr. John Stevens from New Zealand, Dr. Alexander Aksenov from Russia, Dr. Hani Mehana from Egypt, Dr. Yu Qiang from Germany, Dr. Tewheeda A. F. Mohammed from Sudan.
- The International IAMFE Centre will still continue to be set in Qingdao Agricultural University, China
- The 17th International Conference and Exhibition on Mechanization of Field Experiments will be arranged 2026 in Egypt.

The General Assembly of IAMFE 2022 expresses its gratitude to Qingdao Agricultural University (QAU) and to the Chungnam National University (CNU) and Federal Scientific Agroengineering Center (VIM) for co-organizing IAMFE 2022.

Prof. Shang Shuqi
President of IAMFE

Shang Shuqi

Dr. Vladislav Minin
Vice President of IAMFE

V. Minin

Dr. Wang Jiasheng
Executive Secretary of IAMFE

Wang Jiasheng



IAMFE/2022
November 8-9, 2022



**Memorandum of Understanding IAMFE 2022 which is decided by
the Executive Committee Meeting of IAMFE**