



# International Commission of Agricultural and Biosystems Engineering

September 2023

## Newsletter 134

*"...to serve - on a world-wide basis and through its members - the needs of humanity by fostering mutual understanding, improvement and rationalisation of sustainable biological production systems while protecting nature and environment and managing landscape through the advancement of engineering and allied sciences..."*

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Web: [www.CIGR.org](http://www.CIGR.org)

Journal: [www.CIGRjournal.org](http://www.CIGRjournal.org)

Contact us: [secretarygeneral@CIGR.org](mailto:secretarygeneral@CIGR.org)

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## Announcement and Invitation to Attend the 6<sup>th</sup> CIGR International Conference



Kangjin Lee, Ph.D.  
President, Korean Society for  
Agricultural Machinery  
Chair, CIGR2024  
Korea

On behalf of KSAM, KSAE, and KSBEC, it is a great honor to cordially invite you to attend “The 6th CIGR International Conference 2024”, to be held May 19th–22th, 2024 at ICC Jeju, Jeju Island, Republic of Korea.

In the 21st century, the era of 4th industrial revolution, the CIGR has promoted exchanges of agricultural information, seminars on the development and utilization of technologies, discussions about mutual interests, and research on measures for future advancement. Climate change is of global significance as it adversely impacts on the market economy of every country through unpredictable natural disasters, the resulting political crisis and social instability. In the face of such a general crisis, the agriculture industry takes particular importance in providing life-saving food for people. It is essential to create sustainable values of survival and advances for the future livelihood of the people everywhere.

The theme of this CIGR World Congress is “Digital Agriculture (Feed the Future)”. Dynamic thought leaders, scientists, and researchers will share and exchange information about state-of-the-art technology related to agricultural engineering in this conference. In addition, this conference will provide a great opportunity for communication with all the participants

from around the world, who are global experts in agricultural and biological engineering and related fields. The program will consist of 8 potential technical sessions, i.e., novel technology and innovation in agricultural machines, robotics and sensing technology structures and agricultural environments, sustainable plant production, artificial intelligence and data science, machine vision system for agricultural processing, food safety, processing and engineering, and smart livestock farming. These sessions will be valuable forums for the exchange of recent research findings in various academic fields.

Jeju is the island of symbol of peace on the Korean Peninsula and a treasure island of the world, with a unique mixture of culture and nature that is blessed by heaven. Jeju would serve as an excellent platform for exchange of such valuable information and personnel related to agricultural engineering research and industry.

All the people of the organization societies are expecting the day when this top networking opportunity will be held in Jeju, where we will share the value and meaning of agriculture. As well as we hope all participants will enjoy the contents of the conference.

Sincerely yours,

*KANGJIN LEE*

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**The 6<sup>th</sup> CIGR International Conference: *Digital Agriculture to Feed the Future***

<http://CIGR2024.org>

May 19<sup>th</sup> – 22<sup>nd</sup>, 2024

ICC Jeju, Republic of Korea

Organized by: Korean Society for Agricultural Machinery (KSAM)

The Korean Society for Agricultural Engineers (KSAE)

The Korean Society for Bio-Environment Control (KSBEC)

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## New CIGR Circular Bioeconomy Workgroup (CBE WG): Invitation to participate.



John Reid  
CBE WG Chair  
University of Illinois  
USA

A new CIGR Workgroup on Circular Bioeconomy (CBE) was approved by the CIGR Executive Board.

CBE is an economic model that emphasizes the use of renewable natural capital and focuses on minimizing waste, reusing materials and energy, while replacing non-renewable resources.

The CBE working group (WG) was created to address contemporary and potential future issues/problems in which agricultural and biosystems engineering may contribute to, promote good practice, and improve the understanding and/or advance solutions.

The CBE WG will be composed of recognized experts in a related subject matter. CIGR seeks to recruit world class contributors with a record of high-level performance in their discipline.

The members of the CBE WG will participate in setting the goals, objectives, strategy, and actions of the WG. In addition, they will contribute to activities and products that lead to the desired outcomes established by the WG.

Expected WG outcomes in the related subject matter are expected along four areas (but not limited to):

- 1) Increasing awareness of all stakeholders (white paper, CIGR newsletter contributions, etc.).
- 2) Advancing science and engineering (jointly funded research, project design, collaboration with other disciplines, etc.).
- 3) Knowledge integration into formal education (curriculum, educational materials, etc.).
- 4) Delivering practical recommendations to stakeholders and policy/decision-makers (outreach to industry, government, farmers, engineers, etc.).

Participants in CIGR Member Societies are invited to nominate an expert in the subject. Self-nominations are welcome and encouraged.

To participate in this effort kindly send a short statement of interest to [secretarygeneral@cigr.org](mailto:secretarygeneral@cigr.org).

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## Third Call: Proposals for 2028 CIGR International Meeting Venue

The CIGR Presidium is requesting from CIGR member societies proposals to host the 2028 CIGR International Meeting.

A statement of interest is due January 15, 2024.

Complete proposals are due April 19th, 2024.

A final decision will be made during the XXI CIGR World Congress 2024 that will be held May 19th-22nd in Jeju Island, Republic of Korea, and is hosted by KSAM, KSAE, and KSBEC.

Any society interested in hosting the 2028 CIGR International Meeting please contact the Secretary General at [secretarygeneral@cigr.org](mailto:secretarygeneral@cigr.org) for further information.

For submission Guidelines see CIGR Newsletter 133 at <https://cigr.org/view-newsletters>

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## [AMAA Conference 2023: Imagining African Agri-Food Systems Looking Forward](#)



Margaret Gitau  
Purdue University  
USA



Ajit Srivastava  
Michigan State University  
USA

The many challenges facing African agriculture have led to high food product imports which are expected to reach \$110 Billion by 2025. On a positive note, it is estimated that investments in agriculture can create markets worth \$80 Billion/year over 10 years according to a report from the African Development Bank. Given that the agricultural sector is the primary source of employment for most African countries and that 60% of the world's uncultivated arable land is in Africa, African agriculture has the potential to be an engine for economic growth and development. Due to the urgency caused by challenges such as population growth, rapid urbanization, growth in the middle class and related diet transformation, and climate change, we must take a bold, innovative approach to transform the African agrifood system by developing and deploying appropriate, modern technologies to increase productivity and profitability of these systems.

Come join us at the [Alliance for Modernizing African Agrifood Systems \(AMAA\) Conference and Technology Showcase](#), on November 14-17, 2023 in Saly, Senegal, with the theme: *Imagining African Agri-Food Systems Looking Forward*. The goal of the conference is to create a platform that fosters collaboration among diverse stakeholders, local actors, and visionaries to design innovative and transformative initiatives for modernizing African agrifood systems. Details are provided in the [Conference Brochure](#). The conference culminates in a Summit on November 17, a working event in which we lay down concrete steps for transformative projects and programs in Africa. [Register today!](#) (virtual participation available) and be part of this growing initiative to transform African agrifood systems through engineering technologies and innovations.

### **About the AMAA**

The [Alliance for Modernizing African Agrifood Systems \(AMAA\)](#) is a part of the Global Initiative of the American Society of Agricultural and Biological Engineers (<https://www.asabe.org/>). The vision of the AMAA is a modern, productive, and profitable agrifood system in sub-Saharan Africa that ensures food security, promotes economic growth, and improves quality of life in a sustainable, equitable, and responsible manner. The mission of the initiative is to promote modernization of African agrifood value chains from production to consumption through development and deployment of modern technologies and methodologies.



Conference Website: <https://asabe.org/Event-Detail/imagining-african-agrifood-systems>  
Registration: <https://www.asabe.org/Events/Calendar/AMAA-Conference-Registration-Rates>  
Conference Brochure: <https://heyzine.com/flip-book/a2f65e4183.html#page/1>  
AMAA: <https://asabe.org/amaa>

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## Report on Ragusa SHWA, the International Conference devoted to the Safety, Health and Welfare in Agriculture and Agri-food Systems



Giampaolo Schillaci  
University of Catania  
Italy

The VII Edition of Ragusa SHWA, the International Conference devoted to Safety, Health and Welfare in Agriculture and Agri-food systems, has concluded.

The Conference has been promoted by the Mechanics and Mechanization Section of the Di3A Department of the University of Catania, under the auspices of the International Committee on Rural Engineering - CIGR - and the Italian Agricultural Engineering Association – AIIA.

The Ragusa SHWA 2023 International Conference followed the track of the previous editions held in Ragusa in the years 2008, 2010, 2012 and, in 2015, in Lodi in partnership with Rural Health, under the High Patronage of the Presidency of the Italian Republic

In the years 2020 and 2021, due to the Covid pandemics, the conference was held remotely. For the in-person editions, from 2008 to 2015.

Two hundred and forty authors contributed to the 88 papers presented as oral presentations under the parallel sessions, symposia and posters of the VII Edition of Ragusa SHWA. Ninety-five specialists in disciplines dealing with the topics covered by the conference attended the event: many of them

from abroad (Denmark, Sweden, Greece, Germany, USA, Australia). The accepted abstracts and posters presented during the conference can be accessed from the [conference website](#).

The full papers of the contributions to the conference will be published, after review, in a dedicated volume of Lecture Notes in Civil Engineering book series edited by SPRINGER and indexed by SCOPUS. Authors who wish to have their work published on this volume are warmly invited to send their final version of the full paper by 16th, October 2023.

As in previous editions, the morning of the first day of the conference was devoted to an Italian-language meeting. It was the workshop "Safety and Health in the Transformed Belt" organized by the Department of Experimental Clinic Medicine of the University of Catania.

The *Lectio Magistralis*, the Main Communication, the oral and poster participants' contributions confirm that Ragusa SHWA Conference has once again achieved its three main objectives: updating, crossing and encouragement to the formation of new interdisciplinary research groups on safety, health and well-being.

The Ragusa SHWA Conference has two distinctive characteristics. First, it has always been celebrated in cities of art; then, it shows a high return rate of the participants. Those who participate in one edition tend to return to the following ones. This means that the opportunities offered by the location are attractive and regarded as unique and authentic strengths. Sicily and its Southeastern

part are a real laboratory for actions related to agriculture, agri-food, and well-living, in urban, coastal and rural spaces. All factors that promote socialization, well-being and, ultimately, successful and enduring partnerships among researchers.

Finally, on behalf of the Organizing Committee, I give a warm thanks to the authors and the presenters for their contributions and to the audience. Prof. Sabina Failla deserves a special thanks for her outstanding work as the Scientific and Organizing Secretariat.

The International Conference Ragusa SHWA Organizing Committee wait you for the next 2025 on line and 2027 in presence editions of the Conference. Save the date and keep in touch by the web!

A handwritten signature in black ink, reading "Giampaolo Chelero". The signature is written in a cursive, flowing style.

*Convener Int. Conf. Ragusa SHWA 2023*

## Upcoming Conferences

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Int. Congress on Ag. Mechanization and Energy in Agriculture, 29 Oct.-1 Nov., Antalya, Türkiye



**15<sup>th</sup>** INTERNATIONAL CONGRESS ON  
AGRICULTURAL MECHANIZATION  
AND ENERGY IN AGRICULTURE  
October 29-November 1, 2023 - Antalya, Türkiye



<https://www.ankageng2023.org/>

ANKAEng'2023 will offer an amazing international platform for academicians, researchers, engineers, industry participants, and students from all over the world to share their research results in the field of agricultural technologies engineering. Main subjects of the Congress are Machinery and Energy Systems, Agriculture Information Technologies, Digital-Smart Agriculture, Ergonomics, Health & Safety, System Engineering, Postharvest Technologies & Process Engineering, Sustainable Agriculture, Natural Resources & Environmental Systems, Plant, Animal & Facility Systems, Agricultural Engineering Education and Biosystems Engineering. The congress will include keynote speakers, oral and poster presentations, special sessions, and real time discussions. All sessions will be available via live streaming for those who cannot attend the congress.

Contributions accepted by reviewers will be published in a SPRINGER Scopus Indexed book; "15th International Congress on Agricultural Mechanization and Energy in Agriculture – ANKAEng'2023" Conference proceedings of Springer Publishing as book chapters.

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The 2<sup>nd</sup> Global Evapotranspiration Symposium, October 23-27, 2023, Pennsylvania, USA



### The 2<sup>nd</sup> Global Evapotranspiration Symposium

Advances, Challenges, and Future Needs  
in Measurements, Modeling, and Applications

October 23–27, 2023  
State College, Pennsylvania

Join us for this specialty symposium on evapotranspiration, to be held at the Penn Stater Hotel and Conference Center in State College, Pennsylvania, October 23-27, 2023. Early Bird registration is open now through October 10.

Visit the [symposium website](#) for all of the up-to-date program details.

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World Agrifood Innovation Conference & World Agrifood Science and Tech Expo, Nov 2-4, 2023, Pinggu, China

<https://wafiforum.com>

# 2023 | 世界农业科技创新大会 世界农业科技博览会

2023 WORLD AGRIFOOD INNOVATION CONFERENCE & WORLD AGRIFOOD SCIENCE AND TECH EXPO

2023.11.2-4 | November  
2-4, 2023

中国·平谷 | Pinggu,  
China



## 2023 WORLD AGRIFOOD SCIENCE AND TECH EXPO

创新农业 共享未来  
Innovating Agrifood Sharing Future



### Overview

**2023 World Agrifood Science and Tech Expo** will invite the world's major agricultural countries, universities and scientific research institutes, leading enterprises in agrifood science and technology to participate in the exhibition, showcasing the achievements of the global agrifood science and technology development, as well as the cutting-edge technology and products that will influence the future development of global Agrifood.



### Dates

November 2-4, 2023



### Venue

Beijing Pinggu Jinhai Lake International  
Convention & Exhibition Center



### Scale

Exhibition area: 10,000 square meters for 200+ exhibitors.







### **Tackling Water Scarcity in Agriculture**

The International Commission on Irrigation and Drainage (ICID) was established on 24 June 1950 at New Delhi, India. ICID is a leading scientific, technical, and professional international not-for-profit network of experts from the fields of irrigation, drainage, and flood management working together with the mission of 'Sustainable Agriculture Water Management'.

ICID is a knowledge-sharing platform dedicated to issues related to the entire spectrum of agricultural water management practices ranging from rain-fed agriculture to supplemental irrigation, land drainage, deficit irrigation to full irrigation, etc. In addition, the drainage of agricultural lands forms the core theme of our activities. Floods and drought; the two extremes of increasingly variable climate as a result of potential climate change, also form the focus of activities. [ *For more details log on to <https://icid-ciid.org>*]

ICID has been organizing its flagship triennial event International Congress on Irrigation and Drainage since 1951. The 1st ICID Congress was held in 1951 at Delhi and so far, ICID has held 24 Triennial Congresses. The **25th International Congress on Irrigation and Drainage and the 74th International Executive Council meeting** are being organized by the Indian National Committee of ICID (INCID) on the theme '**Tackling Water Scarcity in Agriculture** from **01-08 November 2023 in Vishakhapatnam (Vizag), Andhra Pradesh, India**. ICID triennial Congresses focus on the upcoming issues that need to be addressed in irrigation, drainage, and flood management. The Congresses also provide a platform for reviewing several contentious issues concerning the future of irrigation water vis-à-vis increased demands for competitive uses. The aim of the Congress is to provide a platform for irrigation and drainage professionals and the broad range of other stakeholders to share their knowledge and experience in sustainable agriculture water management focusing on irrigation management and its related/integrated aspects.

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17<sup>th</sup> International Conference of the Hellenic Association of Agricultural Economics, 2-3 Nov., 2023, Thessaloniki, Greece

**17th International Conference  
of the Hellenic Association of Agricultural Economists**

**November 2-3, 2023 | Thessaloniki, Greece**

[ETAGRO 2023 – 17th International Conference of the Hellenic Association of Agricultural Economists](https://etagro.gr/2023/)

(<https://etagro.gr/2023/>)

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6<sup>th</sup> CIGR International Conference, May 19-23, 2024, Jeju Island, Korea.



<http://CIGR2024.org>

The theme of this CIGR International Conference is “Digital Agriculture (Feed the Future)”. Dynamic thought leaders, scientists, and researchers will share and exchange information about state-of-the-art technology related to agricultural engineering in this conference. In addition, this conference will provide a great opportunity for communication with all of the participants from around the world, who are global experts in the area of agricultural and biological engineering. The program will consist of 8 potential technical sessions, i.e., novel technology and innovation in agricultural machines, robotics and sensing technology structures and agricultural environments, sustainable plant production, artificial intelligence and data science, machine vision system for agricultural processing, food safety, processing and engineering, and smart livestock farming. These sessions will be valuable forums for the exchange of recent research findings in the various academic fields.

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AgEng2024 International Conference of EurAgEng, 1-3 July, 2024, Athens, Greece



AgEng2024 is being hosted by the Hellenic Society of Agricultural Engineers. Delegates will have the stage to exchange knowledge and ideas, present innovations, and discuss the perspectives for agricultural engineering for the sustainable future of agriculture. For more information see AgEng 2024 - EurAgEng (<https://eurageng.eu/events/ageng-2024>).

*AgEng2024 aims to foster strong collaboration between academia, agricultural organizations, research institutions, and industry, with the shared goal of advancing research and driving innovation in this field. To achieve this target, AgEng2024 will include a scientific program comprising plenary talks from distinguished speakers, special sessions, tutorials as well as oral and poster presentations; special sessions include Publishing with Biosystems Engineering, while a technical tour will provide to the participants hands-on experience in interesting applications.*

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