

International Commission of Agricultural and Biosystems Engineering

March 2023

Newsletter 132

"...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..."

Join CIGR on Twitter at https://twitter.com/CIGR1930

Contents

President's Message	2
First Call: Proposals for 2028 CIGR International Meeting Venue	3
100 th Year Anniversary of the University of Florida's Agricultural and Biological Engineering Department	3
Working Group 12: Artificial Intelligence & Data Science	
Digital transformation of the agri-food system	6
International Association for Agricultural Sustainability (IAAS) Is Admitted as a new CIGR Corporate Member	7
Invitation to the VII International Conference on Safety, Health, and Welfare in Agriculture and Agri - food Systems -	
RAGUSA SHWA 2023	8
Invitation to the 15th International Congress on Agricultural Mechanization and Energy in Agriculture	9
Upcoming Conferences	10
14 th European Conference on Precision Agriculture, 3-6 July 2023, Bologna, Italy	10
ASABE Annual International Meeting, 9-12 July 2023. Omaha, USA	10
International Agriculture Innovation Conference, 1-2 August, 2023, Virtual	11
VII International Conference RAGUSA SHWA, 6-9 September 2023, Ragusa (Sicily), Italy	12
CIOSTA 2023, 10-13 September, Evora, Portugal	13
2nd Global Evapotranspiration Symposium, 23-26 Oct., Pennsylvania, USA,	13
Int. Congress on Ag. Mechanization and Energy in Agriculture, 29 Oct1 Nov., Antalya, Türkiye	14
25th ICID Congress, 1-8 of November, Vizag, India	15
17 th International Conference of the Hellenic Association of Agricultural Economics, 2-3 Nov., Thessaloniki, Greece	16
AgEng2024 International Conference of EurAgEng, 1-3 July, 2024, Athens, Greece	16

Web: www.CIGR.org Journal: www.CIGRjournal.org Contact us: secretarygeneral@CIGR.org

President's Message.



Seishi Ninomiya CIGR President University of Tokyo Japan

In the 20th century, the invention of chemical fertilizers by Haber-Bosch and the development of varieties that did not lodge under heavy use of fertilizers allowed humanity to greatly increase food production. The success of this massive increase in production saved many people from starvation. Research and development in areas related to CIGR contributed significantly to this success, as did the development of several technologies, such as agricultural machinery and irrigation systems.

However, by the end of the 20th century, the environmental impacts of agriculture became more apparent, including water pollution, impacts on biodiversity, increased emissions of agricultural greenhouse gases such as methane and nitrous oxide, excessive water use, deforestation, and heavy dependence on fossil fuels. In addition, the frequency of extreme weather events due to climate change increases the threat to stable agricultural production. In addition to population growth, the rapid increase in grain demand due to increased reliance on animal products in growing economies requires increasingly efficient food production to increase supply. At the same time, however, sustainability must be achieved - a complicated problem to solve. Namely, a paradigm shift from simple maximization to optimization is necessary.

Such a shift is impossible with our current technology alone and requires dramatic scientific

technological innovations. CIGR shall significantly contribute to this goal through agricultural and biosystem engineering. Of course, each agricultural and biosystem engineering field must conduct research and development in their respective fields. However, sharing and collaborating among the many disciplines involved is most important in solving such complex problems. Of course, it is also important to encourage collaboration outside CIGR's area of expertise. The fastest way to solve problems is for the various disciplines to pool their knowledge and skills and work together. Fortunately, CIGR has been promoting collaboration between different fields through the organization of international conferences and the activities of its technical sections and working groups. In the future, we must further strengthen such activities to promote the creation of new scientific and technological values.

Another point I emphasize is the need to strengthen support for young researchers and students. The problems I mentioned at the beginning of this article are even more severe for young people. It is the role of CIGR to prepare a system that will allow them to take the lead in solving these problems. CIGR must also work to create a framework for this. It is also essential to promote cooperation between developing and developed countries. Science and technology must equitably benefit all humanity. CIGR must support research and development in regions lagging in research and development and promote cooperation with regions with technology.

The challenges we face are serious. CIGR hopes to use its position as a group of experts in agricultural and biosystems engineering, and sometimes beyond, to promote activities to solve these problems.

First 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.

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 for further information.

100th Year Anniversary of the University of Florida's Agricultural and Biological Engineering Department

The University of Florida's Agricultural and Biological Engineering Department is the host of the CIGR Secretariat beginning in January 2018. This year, 2023, UFABE reached an important benchmark in reaching its 100th year since it was established in 1923.

UFABE is a department in the Herbert Wertheim College of Engineering and the Institute of Food and Agricultural Sciences (IFAS) that is charged with carrying out the land-grant university mission of teaching, research, and extension for the State of Florida. Since its beginnings UFABE has made important contributions to agriculture locally and globally and is ranked amongst the top programs in the USA.

The first courses in Agricultural Engineering were taught in 1909 by Prof. Frazier Rogers, which is the person after whom the current building that hosts UFABE is named after.

Courses were taught in the Department of Agronomy until the creation of the Department of Agricultural Engineering in 1923. The teaching of



Kati Migliaccio Chair, Agricultural and Biological Engineering University of Florida Gainesville, FL, USA

I would like to extend to CIGR members an invitation to celebrate with us the University of Florida Agricultural and Biological Engineering (ABE) Department's centennial! We are very fortunate to be part of this noteworthy year and excited to highlight our past, current, and future accomplishments. For 100 years, ABE's programs have made a great impact throughout Florida and around the world. Together we reflect on our past with appreciation and look forward with anticipation of the many ways we can continue to make lasting change for the better.

Our 100 Year Celebration Website provides a portal to stay connected to all things related to the ABE centennial for 2023. Visit us at abe.ufl.edu/100-years. There you will find a calendar of events including virtual events that are recorded or you can attend live.

Thank you for being part of this important celebration.

agricultural engineering started with the courses Farm Machinery, Farm Motors, Drainage and

Irrigation, Farm Buildings, Farm Concrete and Woodwork and Forgework. By the early 1970's the number of course offerings had expanded to 62, not including electives.

A second important benchmark was the change of the departments' name to Agricultural and Biological Engineering in 1994. This recognized and formally incorporated in the teaching, research and extension programs developments in biology and their role of engineering science and practice.

Working Group 12: Artificial Intelligence & Data Science



Luis Miranda
Al Working Group, Chair
Eberswalde University for
Sustainable Development
Berlin, Germany



Wei Guo Al Working Group, Vice Chair University of Tokyo Tokyo, Japan

Working Group 12 was very active during the last CIGR World Congress, which was held in December in Kyoto, Japan. WG12 was created this year 2022 with a high resonance from CIGR members from around the world, considering that we are using these methods and techniques across many study areas in agricultural and biosystems engineering.

During the World Congress, WG12 was responsible for two organized sessions. OS-6 Machine Learning Innovations in Biosystems Engineering was led by Prof. Luis Miranda from the Eberswalde University for Sustainable Development (Germany) and had 6 oral presentations about the use of machine learning in a range of fields from greenhouse management to detection of pest and diseases, automatic insect tracking, outdoor robotics for fruit

orchards and digital twins in forestry. Many thanks to the presenters Thomas Bartzanas, Inés Hernández, Young-Woo Choi, Shinji Fukuda, Uddhay Battarai and Hernán Salamanca.

OS-7 Proximal Sensing and Artificial Intelligence in High Throughput Plant Phenotyping was led by Prof. Wei Guo from The University of Tokyo (Japan) and had seven presentations with focus on phenotyping both indoors and outdoors, but also related topics such as software management, robotics and tracking of bees. We thank the presenters Stephen Njehia Njane, Ting Jiang, Takashi Okayasu, Yuki Yamagishi, Haozhou Wang, Tang Li and Sylvain Grison for their input.

Furthermore, we held a joint networking event to facilitate exchange by all interested people attending the congress. The event was very successful and led to many deep conversations and new contacts among participants. This led to further exchange during the rest of the event, with positive feedback and a few people interested in joining WG12.

We wish all members a great and happy year 2023, in which we will continue with the activities within the working group. Please reach out to Luis Miranda or Wei Guo if you are interested in joining or if you have suggestions and ideas.









Lively discussions during and after the joint networking event by WG12.



Selwin Hageraats, discussing with Chan-Seok Ryu

Digital transformation of the agri-food system



Claus Grøn Sørensen Incoming CIGR President Aarhus University, Denmark

Digitalization is the necessary precondition and enabler for scalable and sustainable agri-food systems. Sustainable agri-food systems involve the large-scale coordination of farming operations, resource use, food chains, and value flows, and they will rely on extensive digital device and infrastructure technologies and on their resulting data and information chains. Digitalization holds the promise of enabling increased production efficiency, overall sustainability, climate mitigation, Transition, biodiversity, monitoring. In that way, digitalization follows two main pathways: 1) as an incremental enabler of production efficiency and sustainability metrics, policy monitoring, etc., and 2) as an enabler of radical innovation and systemic changes, new redesigned processes, new business models, and as a genuine game-changer (changing farmer identity, farm work, farmer skills, ownership, privacy and ethics, and digital knowledge. It requires that we go from using digitalization solely for operational performance efficiency to hyper-automation involving dynamic and intelligent design/re-design of technical processes and business processes.

Currently, copious amounts of data are collected in the agri-food domain with all kinds of sensors (substitutions for manual observations) but still need the digitalization of processes, where information is interconnected, shared, and processed into information for decision making. The overall goal is to improve the efficiency of the agri-food system, while at the same time improving overall sustainability and facilitating the Green

Transition. The main challenge for the agri-food businesses in a strongly digitalized environment is how to design robust and economically viable farm/food business models, which also produce environmental and social benefits.

The challenges include improving data processing/data sharing as the basis for improved decision making, converge technologies, digitalization awareness to create about sustainable food production by quantifying sustainability, indicators for improve interoperability, standards, semantics, and user adoption. This calls for a more interdisciplinary approach that addresses how, for example, humans interact with technology. Change of minds on how digitalization works with production system must be considered, and digitalized systems must be implemented with a clear focus on a total system perspective.

Digitalization is often confronted with "problem of implementation ", requiring the understanding that digital/data technologies are not just replacing old technologies and practices "one-to-one". These new data technologies are different from fundamental traditional technologies and must be seen as part of a sociotechnical transition, where it often changes the very practice, it is a part of, while at the same time complying with several constraints. The problem of implementation is therefore also tightly connected with relevance and value creation from digitalization and data value chains.

general, digitalization calls for a more interdisciplinary approach that involves competences like data science, computer science, data analytics, system engineering (Artificial Machine Intelligence, Learning, Big Data), communication technologies, social science/economics/business/organization,

production and operations management, biological science and extensive domain knowledge, governance and management, and social sciences. Digitalization must be analyzed and evaluated at system-level and not only at device-level.

Two distinct pathways may be considered:

- (interoperability, aligned data semantics, efficient data transformation, data quality, etc.) to facilitate the capture and usage of usability of remote data, environmental and other farm/supply chain in dedicated data-based solutions for a sustainable agri-food system as well as for policy monitoring. This includes an analytic part determining what type of data is needed and in what form (raw data, aggregated data, etc.) to avoid redundant data, followed by a design of the digital infrastructure customized to specific domain for a specific purpose.
- Boosting of the uptake of data technologies through dedicated analyses of the nontechnical parameters (human-technology interface, user decision making regarding

adoption of new technologies, training, competences, data trust, cost-benefit, new business models, etc.). This includes the key issue of co-designed development of databased solutions.

To advance the above mentioned integrative and interdisciplinary approach, The Center for Sustainable Agrifood Systems - START — was established as a unique platform for collaboration between Danish universities and international outreach for strategic research related to the green transition of agrifood systems. START accelerates the green transition of the Agrifood System through research-driven activities by employing a true system approach (integrative, inclusive, and interdisciplinary).

The center is involving different research hubs, where digitalization and infrastructure is one – see:

https://start.uni.dk/research-hubs/digitalizationand-infrastructure-digitazation

International Association for Agricultural Sustainability (IAAS) Is Admitted as a new CIGR Corporate Member.



Michael Fu Secretary General, International Association for Agriculture Sustainability Singapore

Established in 2017, International Association for Agricultural Sustainability (IAAS) was founded as an internationally renowned non-profit organization by prominent members from Academicians and industry players in Singapore. Over the years, IAAS

has built global partnerships across research institutes, established and start-up private enterprises to drive agri-food and agri-tech innovation. As the founder and main organizer of International Agriculture Innovation Conference (IAIC), IAAS is committed to its goals in helping establish a healthy food system for global food and nutrition security; preserving our natural resources and environment for sustainable agricultural practice; improving the quality of life through advancement of innovation and successful agricultural businesses; and empowering the next generation of leaders through sharing of agricultural knowledge, methodology

development, and community engagement. Furthermore, we are an international platform for knowledge and techniques transformation to focus on agriculture for Innovation, Sustainability, Technology, and Investment to bring together the dynamic exchange of ideas about agriculture field in the world. Currently, IAAS has a growing membership network comprising of 25 corporate members and 56 individual members, as well as more than 5000 subscribers on our e-Newsletter and social media platforms. 2

IAAS MISSION STATEMENT

To serve as an international platform for academicians, researchers, industry players and policy makers in the fields of agri-technology, sustainability, food technology, innovation, management, and economics to communicate and interact for the advancement of research, instruction, trade promotion and policy development.

IAAS ACTIVITIES in 2022

25th March 2022 – Webinar on "Sustainable Water Management in Agriculture" 24th June 2022 – Webinar on "Functional Food: Food as Medicine" 2nd to 3rd September 2022 – Hybrid Event: the 7th International Agricultural Innovation Conference (IAIC 2022) 2nd December 2022 – Annual Meeting cum Webinar

UPCOMING ACTIVITIES in 2023

8th May 2023 – Webinar on "Carbon Sink" 19th May 2023 – Hybrid Forum on Industry-Education Integration Development in Agriculture and Aquaculture 1st to 2nd August 2023 – The 8th International Agriculture Innovation Conference (IAIC).

For more information see: www.iaas.org.sg

Invitation to the VII International Conference on Safety, Health, and Welfare in Agriculture and Agri - food Systems - RAGUSA SHWA 2023



Giampaolo Schillaci RAGUSA/SHWA Convener Universita degli Studi di Catania Sicily, Italy

We are pleased to announce that the 7th Ragusa SHWA International Conference will take place in Ragusa Italy, from Wednesday, September 6 to Saturday, September 9, 2023. Ragusa SHWA is a periodic conference entirely devolved to the topics of Safety, Health and Welfare in Agrosystems in the Central European and Mediterranean area. Due to

the incomparable beauty of the Hyblaean and the quality of the reception and facilities, after the first edition celebrated in Ragusa Ibla in 2008, it was repeated again in Ragusa in 2010 and 2012. In 2015 it was held in Lodi (MI), in conjunction with the Expo and in collaboration with RURAL HEALTH. In 2020 and 2021 Ragusa SHWA was held online due to the COVID 19 pandemic. As per the Conference website, the in-person editions (2008, 2010, 2012, 2015) have so far enjoyed the privilege of the high patronage of the Republic of Italy. C.I.G.R. supported past editions of the Conference, too. Now we kindly ask that Ragusa SHWA 2023 receive the patronage of the C.I.G.R. and the logo. We trust

in your kind interest so that this ours may receive a positive reception and sending the most cordial greetings we remain at your disposal for any clarification. For more information visit the conference website at RAGUSA SHWA 2023.

Invitation to the 15th International Congress on Agricultural Mechanization and Energy in Agriculture



Ahmet Çolak Congress Chair University of Ankara Ankara Turkiye

It is a great pleasure and honor to extend to you a warm invitation to attend "15th International Congress on Agricultural Mechanization and Energy in Agriculture-ANKAgEng'2023", to be held October 29 - November 1, 2023, in Antalya, Türkiye organized by Ankara University Faculty of Agriculture Department of Agricultural Machinery and Technologies Engineering. We are also honored to hold the 15th of our congress, the first of which was organized by Ankara University in 1980. Since the first International Congress on Agricultural Mechanization and Energy in Agriculture in 1980, we have continued our congress on a regular basis every three years. At the International Congress on Agricultural Mechanization and Energy in Agriculture held in the past, scientists, experts, and students from our nation and other countries working on agricultural technologies came together to present their research, analyze current developments, and create new collaborations. To carry on this tradition, we are organizing the 15th International Congress on Agricultural Mechanization and Energy in Agriculture—ANKAgEng'2023" at Ankara University.

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

We hope you will enjoy the content of the Congress, renew old friendships, meet new people, get new ideas, and, most importantly, have a wonderful time in a city known as the paradise on earth and the pearl of the Mediterranean.

Date: Sunday, 29 October 2023 to Wednesday, 01

November 2023

Contact: https://www.ankageng2023.org/contact/

Upcoming Conferences

14th European Conference on Precision Agriculture, 3-6 July 2023, Bologna, Italy



14th European Conference on Precision Agriculture | Bologna (ecpa2023.it)

The 14th European Conference on Precision Agriculture will showcase the results of ongoing research and applications in precision agriculture. Organized under the auspices of the International Society of Precision Agriculture (ISPA), by the Department of Agricultural and Food Sciences of the University of Bologna, the ECPA sessions will present Precision Agriculture from the viewpoint of scientists, crop consultants, advisors, extension personnel, agronomists, producers, and other practitioners.

ASABE Annual International Meeting, 9-12 July 2023. Omaha, USA



ASABE - American Society of Agricultural and Biological Engineers > Event Detail

The Call for Sessions is closed. Submitting authors should monitor their email in late March for a message from the session organizer regarding the status of your submission. Contact your Technical Community Program Chair to get involved. Visit www.asabemeetings.org for links to registration, the abstract portal, tour options, and more.

<u>2023 Technical Community Program Chairs</u> Key deadlines for ASABE23

International Agriculture Innovation Conference, 1-2 August, 2023, Virtual



HOME | International Agriculture Innovation Conference (IAIC) (iaas.org.sg)

International Agriculture Innovation Conference (IAIC) is an annual conference that has been running since 2016 organized by International Association for Agricultural Sustainability (IAAS). The IAIC conferences are devoted to presenting and examining various issues that are related to current problems seen in agriculture. Furthermore, we are an international platform for knowledge and techniques transformation to focus on agriculture for Innovation, Sustainability, Technology and Investment to bring together the dynamic exchange of ideas about agriculture field in the world.

The 8th IAIC 2023 will take place on 1-2 August, 2023. The conference will be held under the theme of "Agro-industrialization and Sustainability" and specially address the key themes on "Vertical Farming", "Forest-Industrialization" and "Regenerative Agriculture". We look forward to exchange of ideas and facilitation of partnerships in IAIC 2023.

VII International Conference RAGUSA SHWA, 6-9 September 2023, Ragusa (Sicily), Italy



UNLEASHING THE POTENTIAL OF PRECISION AGRICULTURE

The 14th European Conference on Precision Agriculture will showcase the results of ongoing research and applications in precision agriculture. Organized under the auspices of the International Society of Precision Agriculture (ISPA), by the Department of Agricultural and Food Sciences of the University of Bologna, the ECPA sessions will present Precision Agriculture from the viewpoint of scientists, crop consultants, advisors, extension personnel, agronomists, producers, and other practitioners.

VII International Conference RAGUSA SHWA

6 - 9 September 2023

The VII International Conference on Safety, Health, and Welfare in Agriculture and Agri - food Systems - RAGUSA SHWA 2023 will be held on 6-9 September 2023 in Ragusa (Sicily, Italy), in the gorgeous UNESCO district of Ragusa Ibla.

On the Conference website the attractive program, *Lectio Magistralis*, Main Communications, Parallel Sessions and exciting side events, according to the usual RAGUSA SHWA format.

The communications to the Conference will be published by Springer and indexed in Scopus. Abstracts on Book and E book (ISBN – ISSN – CAB ABI).

Keep in touch by visiting periodically!

Conference website, Facebook, Twitter, ResearchGate, LinkedIn

Save the date and spread the news to your colleagues!

CIOSTA 2023, 10-13 September, Evora, Portugal



https://ciosta2023.pt/

Subordinated to the theme "Sustainable Socio-Technical Transition of Farming Systems", the Conference will be the ideal forum for sharing knowledge, discussion and generation of new ideas on the themes in which Agriculture, an essential activity for Humanity, is most directly involved in the nowadays. It will also offer the opportunity for colleagues who have not seen each other for some time, as well as to meet new colleagues, namely those at the beginning of their academic and research careers. Additionally, the Conference emphasizes a holistic and sustainable approach to design and improve systems and promotes cooperation among scientists, technicians, consultants and producers around the world.

2nd Global Evapotranspiration Symposium, 23-26 Oct., Pennsylvania, USA,



The 2nd ASABE Global Evapotranspiration Symposium

The 2023 symposium will bring together a diverse range of stakeholders in the same platform to exchange ideas, establish/foster collaborations, and work together to address grand challenges related to energy, water resources, food production, ecosystem management, climate change, and environmental services. We will continue a tradition providing symposium participants a lively platform to share the advancements of ET sciences and applications and enhance global communication and collaboration.

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









https://www.ankageng2023.org/

ANKAgEng'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 – ANKAgEng'2023" Conference proceedings of Springer Publishing as book chapters.

25th ICID Congress, 1-8 of November, Vizag, India







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.

17th International Conference of the Hellenic Association of Agricultural Economics, 2-3 Nov., 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/)

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 <u>AgEng 2024 - EurAgEng</u> (https://eurageng.eu/events/ageng-2024).