

International Commission of Agricultural and Biosystems Engineering

June 2023

Newsletter 133

"...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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Contents

| Address by the IAABE President Peter Schulze Lammers | 2 |
|---|----|
| Japanese government announces a series of key agricultural policies | 3 |
| University of Agriculture in Krakow/Poland Celebrates its 70th Anniversary | 4 |
| AI/DS Workgroup Organizes the International Workshop on Machine Learning for Cyber-Agricultural Systems | 6 |
| In memoriam: Bill Stout | 7 |
| ASABE Revises AG CAB Standard | 8 |
| Second Call: Proposals for 2028 CIGR International Meeting Venue | 9 |
| Guidelines for Submitting a Bid to Host a CIGR World Congress or International Meeting | 9 |
| Upcoming Conferences | 15 |
| 5 th International Workshop on Machine Learning for Cyber-Agricultural Systems (MLCAS2023) | 15 |
| 14 th European Conference on Precision Agriculture, 3-6 July 2023, Bologna, Italy | 15 |
| ASABE Annual International Meeting, 9-12 July 2023. Omaha, USA | 16 |
| International Agriculture Innovation Conference, 1-2 August, 2023, Virtual | 17 |
| VII International Conference RAGUSA SHWA, 6-9 September 2023, Ragusa (Sicily), Italy | 18 |
| CIOSTA 2023, 10-13 September, Evora, Portugal | 19 |
| 2nd Global Evapotranspiration Symposium, 23-26 Oct., Pennsylvania, USA, | 19 |
| Int. Congress on Ag. Mechanization and Energy in Agriculture, 29 Oct-1 Nov, Antalya, Türkiye | 20 |
| The 2 nd Global Evapotranspiration Symposium | 20 |
| 25th ICID Congress, 1-8 of November, Vizag, India | 21 |
| 17 th International Conference of the Hellenic Association of Agricultural Economics, 2-3 Nov, Thessaloniki, Greece. | 22 |
| AgEng2024 International Conference of EurAgEng, 1-3 July, 2024, Athens, Greece | 22 |

Web: <u>www.CIGR.org</u> Journal: <u>www.CIGRjournal.org</u> Contact us: <u>secretarygeneral@CIGR.org</u>

Address by the IAABE President Peter Schulze Lammers



Peter Schulze Lammers President iAABE Universitat Bonn, Germany

The International Academy of Agricultural and Biosystems Engineering (IAABE) was founded under the umbrella of CIGR during the 18th CIGR World congress 2014 held in Beijing. In addition to CIGR's organizational boards and the CIGR technical sections dedicated to scientific and professional business the academy aims at "identify and recognize individuals distinguished by their scientific and professional contributions to agricultural and biosystems engineering". Other purposes of the academy include fostering international cooperation and exchange of information, promoting agricultural and biosystems engineering and other sciences and technology of importance for this area, and stimulating international education and training in agricultural and biosystems engineering.

The Agricultural and Biosystems Engineering discipline contributed significantly to improving agriculture and the sustainable use of natural resources globally. One

of many important contributions was mechanization, which abolished drudgery and later improved efficiency of field and farm operations, as well as water and fertilizer use. Since the last 3 decades electronics, sensors as well as smart technologies made its way into the agricultural sector by support of agricultural and biosystems engineers. Technology has evolved into Agriculture 4.0 and currently transformation is occurring in all areas of agriculture. Knowledge that was once fragmented into the experience of the many stakeholders involved in agriculture and natural resources is in the process of being integrated while new technologies and tools are emerging to improve quality outcomes.

The academy honors individuals who have made an important contribution to these developments in recent years by inducting them as fellows, supports the activities of CIGR's technical sections and workgroups, and provides advice and expertise to other organizations that focus on the same issues.



Japanese government announces a series of key agricultural policies



Seishi Ninomiya CIGR Incoming President University of Tokyo, Japan

Japanese agriculture faces several challenges, including a shrinking agricultural workforce, aging farmers, extremely low self-sufficiency rates, heavy use of chemicals, and limited land. To drastically address these problems, major agricultural policies have been announced in recent years.

The first is the strategy for sustainable food systems, MIDORI

(https://www.maff.go.jp/e/policies/env/env_policych/ meadri.html), which aims to achieve a food system that is sustainable environmentally, economically, and socially by 2050. Given the current situation, it is extremely challenging: zero carbon dioxide emissions from agriculture, forestry, and fisheries; a 50% reduction in pesticide risk; a 30% reduction in the use of chemical fertilizers; the expansion of organic farming to 25% of total farmland; high-throughput breeding of super cultivars; and the 100% of artificial seedling rates in aquaculture of Japanese eel, Pacific bluefin tuna, etc. It is a policy for the entire food system, including not only agricultural production but also procurement, processing, distribution, and consumption, and has many aspects in common with the EU's Farm to Fork (https://food.ec.europa.eu/horizontalstrategy topics/farm-fork-strategy en). These are difficult to achieve with the technology available today, and significant technological innovation is essential. In fact, the government has launched an intensive research investment to achieve this goal.

The second is the strong promotion of smart framing (digital farming, e-Farming, or data-driven farming). Automatic tractor navigation using RTK-GPS with retrofitted automatic steering systems is becoming widespread in large-scale agricultural areas in Japan. In addition, commercial robotic tractors, robotic

harvesters, automatic irrigation systems for rice fields, drone-based growth monitoring services, drone-based pesticide application services, various IoT weather sensor systems, etc., are gradually becoming available for smart farming. Smart farming is expected to help improve production efficiency under declining and aging farmers, as well as reduce environmental impact through pinpoint pest control, variable fertilizer application, optimization of water use, etc. However, hardware and services for smart farming are still relatively expensive and beyond the reach of most farmers. Therefore, the Japanese government has initiated policies to support their adoption financially and to promote services such as rental services of smart farming machinery and dispatch services of operators. The first policy implemented was a project to verify the improvement of farm management through the introduction of smart farming technologies. The project targeted about 200 farm households and enterprises and was characterized by the fact that it covered a wide variety of farming types, including rice paddy, field crops, open field vegetables, greenhouse vegetables, flowers, fruit orchards, tea, livestock, and dairy farming, and the scale of farm operations ranged from small to several hundred hectares. For example, in the case of a large-scale rice paddy farmer, a complete set of a farm management support system, a robotic tractor, a robotic rice transplanter, automatic water management systems, a drone field management system, a robotic combine harvester with yield monitoring function, etc., are provided to the farmer to verify how labor time and production cost can be improved. Through the verification project, we are optimizing smart farming systems and promoting their widespread use.

The third is to review food security policies. Japan's food self-sufficiency rate in terms of calories is 37%, which is remarkably low among developed countries. Various efforts have been made to improve the self-sufficiency rate, but they have not been successful. However, Japan's relative decline in economic status and concerns about food security due to pandemics, wars, etc., have increased dramatically, and although no clear policy has yet been proposed, the situation is being actively discussed.

University of Agriculture in Krakow/Poland Celebrates its 70th Anniversary



Peter Schulze Lammers President iAABE Universitat Bonn, Germany



Tadeusz Juliuzewski CIGR Honorary President Cracow University, Poland

On July 6th and 7th, the University of Agriculture in Krakow (UAK) celebrated its 70th anniversary, and the celebration ceremony took place at the UAK Congress Center in Krakow. After welcoming the guests and opening the conference by the Rector of the UAK Prof. Dr. Sylwester Tabor, the plenary lecture entitled: "Agriculture 4.0 - From Mechanization to Digitalization" was given by Prof. Dr. Peter Schulze Lammers, the Honorary President of the International Commission of Agricultural Engineering (CIGR). Following the lecture, Prof. Lammers took the opportunity to convey congratulations from Prof. Dr. Seishi Ninomiya, the CIGR president, and Prof. Dr. Fedro Zazueta, the CIGR Secretary General, to the academia of the University of Agriculture in Krakow on its 70th anniversary. The second invited speaker was Prof. Tadeusz Uhl from the AGH University of Krakow who gave a lecture entitled "You can see more from space - Space technologies for nature and agriculture". The celebration was attended by 24 invited guests from cooperating Universities and Research Institutes in Europe and other continents, and over 150 representatives of Polish Universities, research institutions and industry.

Prof. Dr. Tadeusz Juliszewski, Chairman of the Organizing Committee of the Anniversary is a past President of CIGR.

UAK is a public university providing tertiary education, conducting specialist research and educational activity in the fields of agriculture, in all their functional aspects, i.e., natural, technical, social, and economic. The University expands and popularizes knowledge, creates innovation aimed to promote food safety and climate neutrality, and improves the competitive advantage of an economic sector based on biological materials and processes, in response to emerging challenges to society and civilization. UAK operates on a European scale, continually improving its processes, and is positioned to influence especially the region of Central Europe. The University's potential is used in research and implementation projects, in educational activity, based on cooperation with businesses, social organizations, state administration, local government units, and in continually developed international cooperation with leading academic centers in the European Union and worldwide. Agricultural by name, the University educates human resources not only for the agricultural and forestry sectors but also for the entire food economy and agribusiness, paying special attention to acquiring knowledge based on current scientific achievements, learning skills from the latest technical solutions and technologies including in the educational process to developing social competences with consideration of the dynamics, variability and variety of transformations affecting our civilization. Currently, UAK educates c.a. 7 100 students at 7 faculties: Faculty of Agriculture and Economics, Faculty of Forestry, Faculty of Animal Sciences, Faculty of Biotechnology Horticulture, Faculty of Food Technology, Faculty of Environmental Engineering and Surveying, Faculty of Production and Power Engineering, and University Centre of Veterinary

Medicine JU-UA. The University employs 1476 people including 758 academic staff who carry out research in 12 scientific disciplines: Agriculture & Horticulture; Animal Science and Fisheries; Biological Sciences; Forestry; Nutrition and Food Technology; Veterinary Science; Civil Engineering, Geodesy and Transport; Mechanical Engineering; Environmental Engineering, Mining and Energy; Economics and Finance; Mathematics; Management and Quality Studies. The UAK educational offer includes full-time, extramural and doctoral programs, i.e., 1st (BSc. or Eng.), 2nd (MSc.), and 3rd cycle (PhD), as well as postgraduate studies (supplementary for Master Diploma holders). The teaching process, carried out within 31 main fields of study in Polish and 11 programs taught in English, is based on constantly updated curricula and conducted using modern teaching methods. Graduates of the 2nd cycle have the opportunity to continue their education at the Doctoral School and obtain PhD degrees in 12 scientific disciplines. UAK cooperates with 65 universities from 27 countries on the basis of bilateral agreements on research and academic exchange and

conducts student and teacher exchange within ERASMUS+ and CEEPUS framework with universities from 24 countries. Since the eighties, UAK has been deeply involved in the implementation of educational projects within the EU Educational Programs, including PHARE TEMPUS, Leonardo da Vinci, Jean Monnet, Socrates-Erasmus, LLP-Erasmus, ERASMUS+, CEEPUS. UAK is a member of several international academic networks, such as the European University Association (EUA), EUA-Council for Doctoral Education (EUA-CDE), the Visegrad University Association (VUA), the ICA Association for Life Sciences University, International Relations Officers' Network of the Association of European Life Science Universities (IROICA), International Relations Offices Forum (IROS Forum), BLOOM - bioeconomy network, EPENOE Networks of International Polysaccharide Community, European Forest Institute (EFI), International Union of Forest Research Organizations (IUFRO), International Centre of Research and Information on the Public, Social and Cooperative Economy (CIRIEC).



AI/DS Workgroup Organizes the International Workshop on Machine Learning for Cyber-Agricultural Systems

Core members of CIGR WG12 - Artificial Intelligence and Data Science members are organizing the International Workshop on Machine Learning for Cyber-Agricultural Systems (MLCAS)

MLCAS is an international workshop started in 2018, by the University of Tokyo and Iowa State University team, with the support of CIGR. As a JST-CREST sponsored and USDA-NIFA, US NSF CPS program supported event, MLCAS is hoping to bring together a large group of academic and industrial researchers and practitioners at the intersection of machine learning, cyber-physical systems, plant sciences and agriculture for stimulating conversation and cross-pollination of ideas. Apart from plenary talks, contributed research papers and posters, MLCAS also runs academic and industry panels, machine learning-based agriculture data competition and an agricultural data annotation hackathon for students.

Apart from the event, the selected paper of MLCAS got the opportunity to be published in two special issues in Plant Phenomics:

- 1. Object Detection and Image Segmentation for Plant Phenotyping
- 2. Technologies in the Metaverse for Ultra-precision Agriculture

The first MLCAS2018 was held in Bombay, India, in 2018 under AFITA/WCCA2018.

The second MLCAS2019 was held in Ames, U.S.A, in 2019.

Because of the COVID-19 pandemic, the planned MLCAS202 in Tokyo has been postponed.

The third MLCAS2021 has been held online, with the consideration of multiple time zones.

The fourth MLCAS2022 was held in Ames, U.S.A, in 2019.

This year, the fifth MLCAS2023 will be held in SARABETSU VILLAGE, HOKKAIDO, JAPAN from 3 July 2023 ~ 5 July 2023. This year the theme of the workshop will be Automation and Digital Twins for Ultra-precision Agriculture, which will explore the recent advances in Agri machinery automation, building

virtual representations of plants, plots to fields using advances sensing, computational approaches, machine learning, scientific principles, and domain knowledge. We will have 5 keynote speakers, 4 invited talks from the U.S.A, Australia, France, Japan, and 30 academic presentations.

- Dr. Asheesh K Singh from Iowa State University, give his talk titled "Cyber-Agricultural Systems in Crop Breeding and Production".
- Dr.Takashi Okayasu from Kyushu University, give his talk titled "Plant Phenotyping Technology Leading to Data-driven Agriculture".
- Dr. Ruth Wagner from Bayer, give his talk titled "Al for Agriculture R&D; Insights from Bayer Crop Science".
- Dr.Satoshi lida from Kubota Corporation, give his talk titled "Kubota's Smart Agriculture and Future Directions".
- Dr. Tadatoshi Satow from Obihiro University of Agriculture and Veterinary Medicine, give his talk titled "Introduction of robotic tractors expected for upland farming in Hokkaido".

MLCAS2023 Organizing Committee:

Wei Guo, Graduate School of Agriculture and Life Sciences, University of Tokyo, Japan

Soumik Sarkar, Mechanical Engineering, Iowa State University

Baskar Ganapathysubramanian, Mechanical

Engineering, Iowa State University

Asheesh K. Singh, Department of Agronomy, Iowa State University

Arti Singh, Department of Agronomy, Iowa State University

Masayuki Hirafuji, Graduate School of Agriculture and Life Sciences, The University of Tokyo

Seishi Ninomiya, Graduate School of Agriculture and Life Sciences, The University of Tokyo

In memoriam: Bill Stout



Prof. Bill Stout (1932-2023)

CIGR Honorary President iAABE Fellow

Dr. Stout was born on a wheat and cattle farm in Nebraska, USA in 1932. He has over 50 years of experience in agricultural engineering and has been deeply involved in international applications. He has served as a Farm Power and Machinery Specialist for FAO in Rome, Director of a 3-yr USAID study of agricultural mechanization in Equatorial Africa, Campus Director of USAID Agricultural Research Project in Mali, and Key Consultant to the UNDP/ICAR sponsored energy center at the Punjab Agricultural University in Ludhiana, India. He has also had short term assignments in China, Thailand, Indonesia, Saudi Arabia and Latin America. He has authored or edited eight books on mechanization and energy management in agriculture and has also published over 140 papers in technical and popular journals. He was a faculty member at Michigan State University from 1955-1981 and served as Chair of the Agricultural Engineering Department for five years where he directed a broad program of engineering applications in agriculture-- mechanization, structures, irrigation, and food processing.

Dr. Stout joined the Biological and Agricultural Engineering Department at Texas A&M University in 1981. His program expanded beyond the technical aspects of engineering to focus on management and a number of social and ethical issues. He was co-principal investigator of a NSF project entitled, "Beyond the Large Farm: Ethics and Agricultural Research" and also a project entitled, "Risk Assessment: Implications for Agricultural Research". He served as coordinator for a

B.S. program in "Agricultural Systems Management" from 1987-90. He was Speaker of the Faculty Senate at Texas A&M University in 1990-91 and advised the President of TAMU on all matters of concern to the 2500 faculty members. He was Director of the branch campus of Texas A&M University in Koriyama, Japan for 2? years. He retired from TAMU in 1998.

In 1999/2000, Dr. Stout served as President of CIGR, the International Commission of Agricultural Biosystems Engineering, a global network serving agricultural engineers in about 100 countries. He has visited a total of 70 countries in his long career. Since 2003, he has spent 2-4 months each year as a Visiting Professor at the China Agricultural University (CAU) in Beijing. At CAU he works with students and faculty interested in renewable energy and mechanization. Since 2009, he has also served as Visiting Professor at the Chinese Academy of Agricultural Mechanization Sciences (CAAMS) and in 2012 he was designated as Visiting Professor at the Shenyang Agricultural University.

EDUCATION

- B.S. Agricultural Engineering University of Nebraska, 1954
- M.S. Agricultural Engineering Michigan State University, 1955
- Ph.D. Agricultural Engineering Michigan State University, 1959

HONORS AND AWARDS

He is a Fellow in the American Society of Agricultural and Biological Engineers (ASABE), the American Association for the Advancement of Science (AAAS), and the International Commission of Agricultural Engineering (CIGR). In 1986, he received the ASAE Kishida award for "outstanding contributions toward food and fiber production, improved living, and education of people outside the USA". In 1988, he was elected as a member of Academia dei Georgofili, an Italian Honorary Society. In 2001, he was inducted into the Hall of Fame of the University of Nebraska,

Department of Biological Systems Engineering. In 2002, he received the Max Eyth Medal from the German Society of Agricultural Engineering "in appreciation for his great contribution to the technical development of harvest machines and in the field of renewable energy helping to improve the world food supply and to protect the environment", in 2003 he received the McCormick-

Case Gold Medal from ASAE for his "exceptional and meritorious engineering achievements in agriculture", and in 2004 he was named a "Distinguished Alumnus" by the Department of Biological Systems Engineering, Michigan State University. In 2011, his work in developing the once-over mechanical cucumber harvester was designated an ASABE historic site at MSU.

ASABF Revises AG CAB Standard

ST JOSEPH, MICHIGAN— The American Society of Agricultural and Biological Engineers (ASABE) has revised the terminology and overview document in its series of standards for agricultural cab air quality.

ANSI/ASABE S613-1.1 JUN2023, Tractors and Self-Propelled Machinery for Agriculture — Air Quality Systems for Cabs — Part 1: Terminology and Overview, upgrades the standard agricultural cab series to meet current practices and references. Editorial changes were also made to clarify and improve existing language and terminology.

ASABE members with standards access and those with site-license privileges can access the full-text via electronic download on the ASABE online Technical Library at elibrary.asabe.org/. Others can obtain a download for a fee directly from the library or by contacting ASABE headquarters at OrderStandard@asabe.org.

ASABE is recognized worldwide as a standard developing organization for food, agricultural, and biological systems, with more than 280 standards

currently in publication. Conformance to ASABE standards is voluntary, except where required by state, provincial, or other governmental requirements, and the documents are developed by consensus in accordance with procedures approved by the American National Standards Institute. For information on this or any other ASABE standard, contact Scott Cedarquist at 269-932-7031, cedarq@asabe.org. A current listing of all ASABE standards projects can be found on the ASABE web site at www.asabe.org/projects.

ASABE is an international scientific and educational organization dedicated to the advancement of engineering applicable to agricultural, food, and biological systems. Further information on the Society can be obtained by contacting ASABE at (269) 429-0300, emailing hq@asabe.org or visiting www.asabe.org/.

Dolores Landeck ASABE

Second 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 CICR W.

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.

Guidelines for Submitting a Bid to Host a CIGR World Congress or International Meeting

The International Commission of Agricultural and Biosystems Engineering (CIGR) requires that you use the following guidelines for preparing a bid to host a CIGR Congress or International Meeting (Herein referred to as CIGR Meeting). CIGR meetings are organized by national or regional member societies only. As such, all aspects of a CIGR Meeting will be under the auspices of the organizing society and their designees. The CIGR Presidium will work with the organizing society to ensure the quality of the event and timeliness of actions leading to it.

These guidelines outline the minimal components that are recommended in an appropriate bid to host a Meeting; the inclusion of additional information that will allow the CIGR Presidium to make a more informed recommendation to the CIGR Governance Board is strongly encouraged.

The intent of this document is to facilitate the preparation of complete and successful bids. It is advantageous to all CIGR members for all bid proposals to make use of our previous experience and to address as many important issues as early in the Meeting-development process as is possible.

A call for bids will be announced in the CIGR Newsletter asking for a statement of interest. Complete bids must be submitted to the CIGR Secretary General at least one

month prior to the CIGR Board meeting that occurs at the Meeting four years prior to the bid year (e.g., 2010 for a 2014 Meeting). Submitted bids will be reviewed by the CIGR Presidium and a recommendation will be made to the CIGR Governance Board. If no consensus occurs, a simple majority vote will be taken.

Representatives of the group that prepared the bid are expected to make a short presentation in support of their bid at the Board meeting. The presentation package should include both audiovisual materials and handouts containing any information that was not included in the official bid document. representative of the group that submitted the successful bid will be expected to make a brief presentation describing plans for the Meeting to the CIGR membership in the General Assembly on the last day of the Meeting at which the bid was accepted and that immediately precedes the Meeting to be hosted.

Questions concerning the bid process and any information contained in this document should be directed to the CIGR General Secretary (secretarygeneral@cigr.org).

I. Provide general information concerning the location and attractions of the Meeting City and/or Country.

- A. Provide information about the general site of the meeting (e.g., capital city; regional city; self-contained conference facility, local history, etc.).
- B. Provide detailed information about access to the location of the Meeting, including:
 - Name of the most convenient international airport
 - Names of airlines that serve that airport.
 - Distance, travel times, and available modes of transportation from the airport to the Meeting venue
 - Alternative airports, train stations, bus stations, etc. that can be used to get to the Meeting venue.
 - Necessities and procedures for obtaining visas.
 - Current health and/or safety risks associated with the host city/country.
- C. Provide basic information concerning tourism opportunities for conference attendees and/or their guests and family.

II. Identify the Local Organizing Committee Chairperson

- A. The Local Organizing Committee Chairperson is typically a long-time member in good standing of CIGR who has previously attended multiple CIGR Meetings and has knowledge about the workings of the CIGR organization. The organization of a Meeting that is likely to attract between 800 and 1600 participants is a time-consuming process that begins more than four years prior to the Meeting and does not end until at least six months after the Meeting. The Local Organizing Committee Chairperson must have the time available to commit to this demanding process.
- B. The Local Organizing Committee Chairperson will interact directly with the CIGR Presidium during all phases of Meeting planning and implementation; the Treasurer and Secretary General, including financial matters. Other members of the CIGR Board may also be involved in the planning and implementation of specific aspects of the Meeting, including the Pre-Meeting Training Program, the Scientific Program, and the Student Competition. Additional details concerning interactions with

- members of the CIGR Presidium will be presented later in this document.
- C. The naming of two Co-Chairpersons is acceptable and may be preferable.
- D. If a Professional Conference Organizer (PCO) is engaged, all relevant details concerning contracts with, payments to, and services provided by the PCO must be specified. The Local Organizing Committee Chairperson and at least one member of the CIGR Board will represent CIGR in dealings with the PCO. The names and contact information for at least two representatives of the PCO must be provided. It is important to note that any financial obligations are acquired by the organizing society.

III. Provide information concerning the Local Organizing Committee

- A. In addition to identifying the Local Organizing Committee Chairperson, the bid must identify other members of the Local Organizing Committee, discuss the division of responsibilities within the Local Organizing Committee, and identify the chairpersons of any subcommittees.
- B. It is highly recommended that CIGR members be integrated into all components of the Local Organizing Committee to take advantage of their expertise and to ensure that the Meeting adheres to the goals and missions of CIGR. At a minimum, the following CIGR officers would be involved with the following functions:
- The CIGR Secretary General and treasurer should be involved in the overall organization and finances of the Meeting in an advisory capacity.
- CIGR member societies must be broadly represented in the organization of the scientific program, including the selection of plenary speakers.

IV. Identify the proposed dates for the Meeting.

- A. Times coincide with the longest break in the academic teaching calendar in most countries are preferred.
- B. The dates for the Meeting should facilitate easy and inexpensive travel to the Meeting venue (as well as can be predicted four years in advance). Scheduling Meetings in temporal proximity to major national or

- international events (World Cup, Olympics, elections, etc.) should be avoided.
- C. The typical CIGR Meeting lasts six to seven days including: Registration, committee meetings, Opening Reception Scientific Sessions, Exhibits, General Assembly, Closing Banquet, and technical tours.

V. Provide a description of the venue and the physical facilities.

- A. Provide the following:
- 1. Name, address, and website of the venue(s) and detailed information concerning the facilities available for:
- Scientific sessions (CIGR typically requires space for 6-7 concurrent sessions) and Plenaries (the room used for plenary addresses and the General Assembly should be large enough to accommodate ALL Meeting registrants, 800-1500)
 - Symposia
 - Smaller sessions
 - Workshops
 - Poster sessions
 - Exhibits
 - Receptions
 - Meeting rooms for committees, the CIGR Board, and other groups
 - Space and equipment to check presentations.
 - Audio Visual and technical support
- 2. Services available at the Meeting venue(s):
 - Registration and Setup, including on-site registration.
 - Internet access
 - Business center
 - Security
 - Transportation
 - Guides/Docents/Ushers
 - Drinking water
 - Storage of materials
 - Tourist activities
 - Accommodation booking
- 3. Catering Services
 - Opening reception
 - Morning breaks
 - Lunches (optional or included)
 - Afternoon breaks

- Evening receptions
- Closing banquet

VI. Provide basic information concerning the scientific program, and the abstract submission and review process.

- A. The Local Organizing Committee Chairperson must present a concise statement/phrase/theme that will serve as the scientific focus of the Meeting. This statement or theme should emphasize the strengths of the host country/region.
- B. The Scientific Committee should be of appropriate size, experience, and diversity to provide all attendees with a scientific program that is intellectually stimulating and enriching. While it is not necessary to name the members of this committee four years in advance, it will be valuable to be able to provide the name of the Chairperson of the Scientific Committee and to briefly describe the selection criteria that will be used to ensure diversity in the geographic and academic representation of committee members. To present the most up-to-date findings at a Meeting or International Meeting, the abstract submission deadline must be no sooner than 9 months prior to the Meeting. It is important to note that many abstracts are likely to be submitted and the Scientific Committee must be large enough to thoroughly review these abstracts in a very timely fashion (less than 3 months will be available to review abstracts and construct the scientific program).
- C. The Local Organizing Committee Chairperson must present a basic description of the system(s) that will be employed to facilitate abstract submission and participant registration. At recent Congresses or International Meetings, these functions have been internet-based and linked together. Descriptive information and/or customer reviews must be provided if a commercial 'system' (through the Professional Conference Organizer or another entity) is utilized.

VII. Present ideas for the official Pre-Meeting Training/Workshop Program, with a captive care, conservation, research, and/or education theme

A. The Society is committed to conducting a Pre-Meeting Training and/or workshops at each Meeting. The Local Organizing Committee's role in this effort can range from complete organization to aiding with limited aspects of the organization and logistics of the Program as proposed by any CIGR member. The bidding group is responsible for organizing the Pre-Meeting programs but is not responsible for funding or guaranteeing the expenses associated with conducting the Pre-Meeting Programs other than space and internet access. Additional expenses may require a fee for cost recovery. Ideas from the bidding group concerning the special opportunities that exist for a small group of exceptional and highly CIGR members in the country of the Meeting are encouraged. Participants are chosen from the pool of applicants and financial risk, and logistical arrangements must be made well in advance.

VIII. Provide comprehensive budget information.

- A. Construct a budget for the Meeting, based on a specified total number of attendees (paying and non-paying) that includes estimates of all revenues and all expenses for the Meeting. This specified number of attendees should represent both 1) a realistic estimate of the number of attendees and 2) the approximate number of attendees that will generate a balanced budget. Bids that include budgets in which total expenses exceed total revenues will not be considered.
- B. Estimated revenues should include:
- Registration fees for paying participants and guests.
 - Exhibitor fees
 - Donations
 - Sponsorships
 - Credit card payment supplements
 - Optional item sales
 - Banquet tickets
 - T-shirts o CDs o Extra tote bags
 - Shuttle service o Tours
 - Other food and beverage (lunches (if optional), dinner at the zoo, etc.)
- C. Estimated expenses should include:
 - Venue rental fees
 - Facilities (rooms, exhibit halls, etc.)

- Audio Visual equipment and services
- Administrative support
- Support services (security, ushers, etc.)
- Meeting catering costs
 - Drinking water o Opening reception o Morning breaks
 - Lunches (optional or included) o Afternoon breaks
 - Evening receptions o Banquet o Other social functions
- Meeting organizer costs (Professional Meeting Organizer or Volunteer Organizer)
 - Office staff o Office supplies (Nametags, CDs, etc.)
 - Communication (equipment and services)
 - Website establishment and maintenance (including registration and abstract submission) o Advertisement
 - Support for Local Organizers during the Meeting (travel, accommodations, meals)
 - Tote bags and other commemorative items
 - T-shirts
- Administrative fees o Banking fees
 - Credit card fees
- Transportation costs
 - Airport shuttles o Hotel to Meeting shuttles
- Subsidies for volunteers
- Plenary speakers' travel and honoraria
- Abstract publishing
- CIGR Levies. A levy agreement must be signed a t the time of the submission of the proposal.
- Contingencies
 - 10% of estimated expenses
- D. Registration fees for participants and guests should be calculated considering the following:

Type and number of participants:

- CIGR Member full registration (Developed economy)
- CIGR member early registration (Developed economy)
- CIGR Member full registration (Developing economy)
- CIGR member early registration (Developing economy)
- CIGR Member (on-site registration)

- Student registration
- CIGR Non-Member registration
- Courtesy registration (CIGR {Presidium, Conference organizers, etc.)

IX. Provide a timeline for when income and expenses are going to occur.

- A. The Local Organizing Committee Chairperson must prepare a timeline that shows when income is going to be generated and when expenses will have to be paid. For example, if the Early Bird registration deadline is 12 months prior to the Meeting, an estimate of income at that time point must be provided. Additionally, if venue and catering deposits are due at the time of contract signing and/or nine months prior to the event, then the due dates for these payments must also be specified.
- B. The Early Bird registration deadline can precede the abstract submission deadline. These two events may coincide with one another, but they are not required to do so. Timeline should include the deadline for presenting the full program for dissemination among the registered attendees.
- C. Deadline for reservation of rooms with number of persons for CIGR board meetings, technical sections and working groups. A schedule for technical sections and working group meetings should be prepared.

X. Provide evidence of financial and legal sponsorship.

A. Financial and legal sponsorship or backing from a legal entity (e.g., municipal government, university, agency of national government, legally registered organization) with adequate financial assets to act as a financial guarantor for the Local Organizing Committee's activities is required. A signed, original letter on official letterhead from these entities, indicating their sponsorship, must be provided.

XI. Provide a plan that includes innovative techniques to encourage participation by CIGR members with limited financial means.

A. The Local Organizing Committee Chairperson must present several innovative ideas that are focused on increasing participation at the Meeting by CIGR members that have limited financial resources. This may include applying for grants, identifying individual supporters, or other creative ways to fund such participants.

XII Provide information concerning options for accommodations.

- A. The Local Organizing Committee Chairperson must provide information concerning the range of accommodations available for Meeting participants and the mechanisms that will be used to facilitate Meeting attendees finding and renting appropriate accommodations. Where possible, special 'Meeting rates' should be negotiated, especially if a 'Meeting Headquarters Hotel' is to be utilized. These rates should be valid for the period from at least two days prior to the Meeting until two days after the Meeting.
- B. Accommodation options should include a full range of inexpensive, moderately priced, and expensive choices (from camping sites to youth hostels to guest houses to five-star hotels). Since approximately 40% of Meeting attendees are students and range country members, at least 40% of the available housing should fall into the inexpensive price category.
- C. There are several mechanisms that can be used to match Meeting attendees with their desired accommodations. Professional Conference Organizers typically include arrangements for accommodations in their portfolio of services. Housing services or tourism services currently operating in the Meeting city are often convenient, efficient, and relatively inexpensive ways for the Local Organizing Committee Chairperson to handle accommodations. In special circumstances, the Local Organizing Committee can attempt to handle the booking of accommodations but note that this is typically an extremely time-consuming process requires considerable patience and outstanding problem-solving skills.
- D. Describe transportation systems that will be available to get Meeting attendees between their accommodations and the Meeting venue.

XIII Provide information concerning the cost of food.

A general estimate of the cost of budget dining for the length of the Meeting must be included. If continental breakfasts and/or lunches are included in the registration fee, then this should be noted.

XIV Additional information that may be useful as you in developing a bid.

- A. A pre-printed "evaluation and comments" form must be included with the conference registration materials so that participants can comment on the organization of the Meeting. CIGR will supply the template for this form. Receptacles for collection of these forms must be available for the duration of the Meeting at the Meeting venue.
- B. It is important to state explicitly that the CIGR Board considers each bid in detail. Two of the most important criteria used to evaluate bids are the COSTS to the attendees to participate in the Meeting and the probability that an efficient, comfortable, safe, and professional meeting can be organized. These two criteria will sometimes conflict with one another. It is impossible to say

which of these two criteria is the most important. A Meeting that is inexpensive for attendees, but also fraught with organizational difficulties, is unlikely to be a good for participants. Meetings that involve the services of a Professional Conference Organizer are typically more expensive than Congresses that do not involve the services of such a group, but they also may be better organized. Slightly higher registration fees that translate into significantly better services may be good value for Congress participants. Carefully evaluate the relative costs and benefits of paying for such services.

Questions concerning the bid process and any information contained in this document should be directed to the CIGR General Secretary (generalsecretary@cigr.org).

Adapted from <u>IPS Congress Guidelines</u> (internationalprimatologicalsociety.org)

Upcoming Conferences

5th International Workshop on Machine Learning for Cyber-Agricultural Systems (MLCAS2023)

MLCAS2023 Workshop



Today, efficient, and cost-effective sensors as well as high performance computing technologies are looking to transform traditional plant-based agriculture into an efficient cyber-physical system. The easy availability of cheap, deployable, connected sensor technology has created an enormous opportunity to collect vast amounts of data at varying spatial and temporal scales at both experimental and production agriculture levels. Therefore, both offline and real-time agricultural analytics that assimilate such heterogeneous data and provide automated, actionable information is a critical needed for sustainable and profitable agriculture.

Data analytics and decision-making for Agriculture has been a long-standing application area. The application of advanced machine learning methods to this critical societal need can be viewed as a transformative extension for the agriculture community. In this workshop, we intend to bring together academic and industrial researchers and practitioners in the fields of machine learning, data science and engineering, plant sciences and agriculture, in the collaborative effort of identifying and discussing major technical challenges and recent results related to machine learning-based approaches. It will feature invited talks, oral/poster presentation of accepted papers, and a panel discussion.

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 "Agroindustrialization 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





15 th INTERNATIONAL CONGRESS ON AGRICULTURAL MECHANIZATION AND ENERGY IN AGRICULTURE October 29-November 1, 2023 - 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.

The 2nd Global Evapotranspiration Symposium



The 2nd 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.

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).