



Partners



ASIAN ASSOCIATION FOR AGRICULTURAL ENGINEERING
Organises

International Symposium on

Automation in Agriculture in Asia

at

Mahatma Gandhi Mission, Dyotan Hall, 4 th floor,
MGM Medical College and Hospital,
N - 6 Cidco Aurangabad, India

October 2nd and 3rd 2023



|| ABOUT ASIAN ASSOCIATION FOR AGRICULTURAL ENGINEERING ||

Asian Association for Agricultural Engineering (AAAE) was founded on December 5, 1990 at Bangkok, Thailand, during an International Agricultural Engineering Conference at the Asian Institute of Technology (AIT). The Offices of AAAE was moved to Chinese Academy of Agricultural Mechanization Sciences (CAAMS) Beijing, China in the year 2009. International Agricultural Engineering Journal ISSN:0858-2114 (print) is being published from the Beijing office of AAAE. The Association AAAE is also a member of the International Commission of Agricultural and Biosystems Engineering (CIGR).

In December 2022, AAAE was moved to India and registered at Thane-Maharashtra, India.
URL: <https://aaaesociety.org> Email: <mailto:office@aaaesociety.org>

|| AAAE HAS FOLLOWING MAIN OBJECTIVES ||

- To strengthen the profession of Agricultural Engineering by promoting information exchange, improving communications, minimizing duplication of activities, and optimizing use of resources.
- To formulate, establish, and promote voluntary academic, professional, and technical standards of relevance to the profession of Agricultural Engineering in Asia.
- To support, at the international level, the activities of National Agricultural Engineering societies or related associations and to maintain liaison among them.
- To coordinate and assist in organizing timely international meetings in cooperation with national societies/associations within Asian region. It acts as a Consortium of the national associations both Professional and Manufacturing.

|| ABOUT VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH (VNMKV), PARBHANI ||

– Host of the event

VNMKV is one of four Agricultural Universities in the State of Maharashtra. Prior to the original Maharashtra Agricultural University, it was established on May 18, 1972, to fulfil the regional aspirations of agrarian growth. It is entrusted with the responsibility to provide education in agriculture and allied fields, undertake research and facilitate technology transfer in Marathwada region of Maharashtra. It has got several colleges and research institutions affiliated to it in Parbhani, Latur, Badnapur, Osmanabad, Golegaon and Chakur.

|| ABOUT MAHATMA GANDHI MISSION AND MGM UNIVERSITY, CHH. SAMBHAJINAGAR ||

– Event Facilitator

“In a gentle way, you can shake the world.” With this philosophy and ideology of Mahatma Gandhi, MGM established an educational trust in 1982 under the guidance of former Education Minister Shri Kamalkishore Kadam and a group of founder members who are hard-core academicians and visionaries. For more than four decades, Mahatma Gandhi Mission has blazed a trail of academic excellence and state-of-the-art health care services. A strong dynamic institution that keeps pace with the demands of the modern world, prominent locations and excellent education facilities makes MGM worthwhile and an exciting choice for education. This institution is devoted to extensively impart education and enable the students to stand on their own, strongly believing that “Literary education is of no value if it is not able to build up a sound character.”

|| PREAMBLE ||

Asian Agriculture is experiencing Technology transformation in this decade. In agricultural machinery, India and China dominate with share of >40% with a CAGR of 4-8%. More emphasis is given to technologies in reducing water, chemicals, and environmental impact. To improve farm productivity and distribution several initiatives are on in Drones, Artificial Intelligence, Bigdata, Block Chain and allied areas. Asia attracts significant investments in startups engaged in Control Environment Agriculture, Alternative Proteins, Climate-Soil- Crop and Nutrition Management. Asia is already a market leader in sustainable environmental sensors manufacturing and embedded technologies besides having the strongest workforce in the software industry. For many agricultural scientists and farmers, the technology is new. Technologists are also in the learning curve of agricultural systems. Asian Association for Agricultural Engineering shall organize a Symposium of the stake holders from Academia, Industry, NGOs, and Farmers of the region for exchanging their experiences and views to form a sustainable growth pattern. This symposium shall provide a platform to correct our course wherever required with collective wisdom.

|| AREAS FOR DISCUSSION ||

- A) Agricultural Tools and Machinery for marginal & small-scale farmers
- B) Irrigation and Fertigation Systems
- C) Control Environment Agriculture
- D) ICT Technologies in Forecasting, Supply Chain Management.
- E) Drones for the Farm
- F) Artificial Intelligence, Bigdata and other Technology Applications
- G) Storage Systems and Logistics
- H) Animal & Fisheries and other Integrated Farming
- I) Renewable Energy Systems

|| PRESENTATION BY INDUSTRY, STARTUPS, ACADEMIA, AND FARMERS ||

Industry shall be presenting their new technologies as well as discussion points on core issues in adopting emerging technologies.

- The Academia shall be presenting papers, themes, and possible avenues in 'Automation in Agriculture in Asia'.
- Discussion on possible initiatives for better Industry/ Academia collaboration and Industry funding of Research in emerging technologies in Asian Agriculture.
- Proceedings of the symposium will be published with selected presentations.
- Selected Industry participants shall be provided with a hall for presenting their products.
- Progressive farmers who have adopted technologies shall share their experiences.
- Possible suggestions in Agricultural technology policy to governments in the region.

|| EVENT DETAILS ||

Date : 2nd and 3rd October 2023

Time : 09:00 - 19:00

Location : Mahatma Gandhi Mission, Dyotan Hall, 4 th floor,
MGM Medical College and Hospital, N - 6 Cidco Aurangabad, India

|| REGISTRATION ||

Non- Members : Rs.2000
 Members : Rs.1000
 Registration Link : <https://aaaesociety.org/symposium-2023/>

|| PAPERS AND PRESENTATIONS (ACADEMIA AND INDUSTRY) ||

Please send the short description of the topic to office@aaaesociety.org
 We shall provide you a link to upload your paper/ presentations. Selected papers will be published in the proceedings and will be available both in printed and on-line form.

|| INDUSTRY PRODUCTS DISPLAY/DEMONSTRATION ||

Kindly send us the space and facilities required to office@aaaesociety.org

|| WHY SHOULD YOU PARTNER WITH AAAE ||

AAAE is an organization of professionals working in Technology and Engineering in Agriculture in the Asian region. The partners will have exposure of all Asian countries, their activities, market, and products. The symposium envisages discussing the experiences of adoption of new technology and would greatly help in optimizing solutions of the emerging technology in the region. By the virtue of its location, this symposium gives excellent opportunity to expose your new products and solutions to the farmers of Maharashtra and Indian partners an opportunity to be proud contributors of such an event of meet of Academia, Industry, and progressive farmers. The startups get an opportunity to expose their ideas and initiatives for exploring adaptation in the region. The researchers will be sharing the new development in technology that will greatly help the partners to initiate new or changes in their development programs.

Platinum Sponsors : Rs. 5,00,000	Corporate Member (Life) : Rs. 45,000
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ASIAN ASSOCIATION FOR AGRICULTURAL ENGINEERING (AAAE)

C/O Aspee Agricultural Research Foundation,
 Village, Bhiwali, Taluka Bhiwandi, Vijraeshwari Road, Opp. Shri, Gadge Maharaj Ashram School, Dist. Thane 401 206, Maharashtra Registration No. MH/1258/2022 Dated 29.12.2022
 URL: aaaesociety.org Email: office@aaaesociety.org

|| BANK DETAILS ||

Name of the Bank: Indian Overseas Bank, Malad (W) Branch, Mumbai 400064, India
 A/c: Asian Association for Agricultural Engineering
 Savings Account No: 097301000024439
 Branch Code: 0973 Malad (West), Mumbai, Maharashtra
 IFSC Code: IOBA0000973
 Swift Code: I O B A I N B B 2 0 9

**Asian Association for
Agricultural Engineering**

**Symposium
2023,
Aurangabad**

Automation in Agriculture in Asia

October 2, 2023

October 3, 2023

08:30	Registration				
09:30	Inaugural Session Welcome Address	Dr. Indra Mani	09:00	Session IV Application of Geo informatic for irrigation planning and water resources management	Dr. Vishal Ingle
09:45	About AAAE and the Symposium 2023	Dr. Gajendra Singh	09:20		
			09:40	Strategies for attaining large scale mechanization of small farms	Mr. Bimal Kumar
10:40	<i>IOT enabled technologies for the real time precision irrigation management</i>	Dr. Gorantiwar	10:00	Science directed policies for sustainable Agriculture	Dr. Indra Mani
11:00	<i>Smart mechanization of Asian farms</i>	Mr. TR Kesavan	10:20	Plant factory based automated smart urban farming for sustainable food production	Dr. Murtaza Hasan
			10:40	Development of control environment for Cultivation of Coriander in Vertical Tower hydroponic structure	Dr. Suchita Gupta
11:20	Tea Break		11:00	Tea Break	
	Session I			Session V	
11:45	Small farm mechanization- A field experience	Mr. Neeraj Kumar Srivastava	11:30	Irrigation automation and mitigating climate change	Dr. MV Rengasamy
12:10	Use of remote sensing in irrigation forecasting	Mr. Kaushal Jaiswal	11:50	Drone Applications in Agriculture	Dr. Gopal Shinde
12:30	Harnessing the traditional knowledge in Agriculture for a resource constrained world	Dr. Ganti Murthy	12:10	Agro met Advisory and its impact in Agriculture	Dr. Kailash Dakhore
12:50	Agricultural Interventions for small and marginal farmers	Dr. Mathala Juliet	12:30	Smallholders' Grain Drying Solutions for Sustainable Impact on Food Security	Dr. Manzur Alam
13:00	Role of NCPAH/PFDCs in popularizing Precision Agriculture Technologies in India	Dr. Anand Zambre	12:50	Effect of heat stress reducing techniques on buffalo to enhance their comfort in "barn"	Dr. S.K. Jain
13:20	A sustainable approach in design and development of a tractor mounted ULV sprayer	Dr. Narendra Kumar	13:10	Automation in Renewable Energy Generation and Management	Dr. Atul Mohod
13:40	Technological advancements in Agricultural Mechanization	Dr. Peeyush Soni	13:30	Filtered biogas digestating: Developments and effects for future automation	Dr. Susama Sudhishri
14:00	Lunch Break		13:50	Lunch Break	
	Session II			Session VI	
15:00	Present Status, Prospects and Constraints of Drone Technology in Agriculture	Dr. Sachin Nalawade	15:00	Towards Mechanization of Cotton Picking	Mr. Manohar Sambandam
15:20	The synergy of Photovoltaics and Agriculture	Dr. Khodke	15:20	Utilization of Solar Energy for Integrated Pest Management in Agriculture	Dr. Surendra Kalbande
15:40	Auto Navigation Systems, the smarter way for precision farming	Mr. Manoj K Sharma	15:40	Pesticide penetration through standard cotton fabric for protective clothing	Dr. Arun Waghmode
16:00	Robots for Small Farms	Prof. Girish Chowdhary	16:00		
16:20	Precision Crop Management: A Journey from Single Disease Identification to Multimodal Sensing	Dr. Dharmendra Saraswat	16:20	Appropriate technology in Agriculture	Dr. Solanki
16:40	Ground water Matters- The role of Citizen Science in achieving India's water security	Dr. Basant Maheshwari	16:40	Design of bund cutter for paddy cultivation	Dr. Mrudulata Deshmukh
17:00	Tea Break		17:00	Tea Break	
	Session III			Session VII	
17:20	Relevance of AAAE symposium and SDG & food security of Asia	Prof. Vijay P. Singh	17:20	Development of detection device for Ethelene gas during storage of fruits and vegetables	Dr. Bhagyashree Patil
17:40	<i>Electric Tractors for small farms</i>	Dr. Ajit Srivastava, Michigan	17:40	Determination of crop coefficient using lysimeter.	Dr. Harishchandra Awari
18:00	<i>Industry-Academia Partnership in Developing Agri-Biotech Industry</i>	Dr. Vijay Singh, Illinois	18:00	Experimentation on Essential Oil Extraction using Solar Distillation System from Medicinal Plants	Dr. Surendra Kalbande
18:20	Cyber Physical Systems in Agriculture	Dr. Asheesh Singh	18:20	Estimation of soil characteristics for saline tract of Purna valley	Mrs. Dr. Mital S Supe
18:40	Automation and Big-Data to Optimize Resources for Sustainable Crop Production	Dr. Gansh Bora	18:40	Design and performance evaluation of Tomato seed extraction machine	Dr. P. H. Bakane
19:00	Battery powered equipment in Agriculture	Dr. Jatin Bali	19:00	Vote of Thanks	Dr. Syed Ismail



**Asian Association for Agricultural
Engineering, Aurangabad**

Chairman: Mr. Yoshisuke Kishida, Tokyo,
Japan.

Immediate Past President: Dr. Vilas M Salokhe,
Kolhapur, India.

President Emeritus: Prof. Gajendra Singh,
Carlsbad, USA.

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India

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**Vice President of Section VII: Information
Communication Technology in Agriculture**

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Director of International Affairs

Dr. Peeyush Soni, Kharagpur, India

Symposium Organizing Committee

Chairman: Dr. Indra Mani, Vice Chancellor,
NVMKV, Parbhani

Vice-Chairman: Dr. Uday Khodke, Dean,
VNМКV, Parbhani

Technical Committee:

Prof. Gajendra Singh,

Dr. Syed Ismail,

Dr. Indra Mani

Dr. Uday Khodke

Dr. Sunil Gorantiwar

Dr. Atul Mohod

Event Management:

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