TECHNICAL PROGRAMME

INTERNATIONAL CONCLAVE ON

FUTURISTIC FARMING

NAHEP

December 20-21, 2023

Venue: Four Points by Sheraton Hotel, Pune (MH)

ICAAT | ISDAg | ISHAg | IoTAg | INFarm2023 | ISRAg

International Conclave on Futuristic Farming 2023
December 20-21, 2023

ICAAT

Technical Programme

International Conference
Advanced Agricultural Technologies

Venue: Grand Maratha - I, Four Points by Sheraton Hotel, Pune (MH)

NAHEP

MAHATMA PHULE KRISHI VIDYAPEETH

Date: 20 December, 2023

Time	Programme
0830 to 0945	Breakfast and Networking
1000 to 1100	Inauguration of the International Conclave
1100 to 1130	Hi-tea, Networking break
1130 to 1300	**Key Note Session-I (Digital Technologies for Agriculture)** • **Farm of the future: Use of AI in farming - *Dr. Ajit Jaokar,*** *Department of Continuing Education, University of Oxford, United Kingdom* • **Smart farm concepts to reality of technology transition in Washington State Agriculture - *Dr. Lav R. Khot,*** *Associate Professor & Director, AgWeatherNet, Dept. of Bio. Systems Engg., WSU, USA* • **Advanced technologies to ensure sustainable farmers income - *Er. Vilas Shinde,*** *Chairman and Managing Director, Sahyadri Farms Post Harvest Care Ltd., Nashik*
1300 to 1400	Lunch break
1400 to 1530	**Technical Session-I (Advanced Technologies in Agriculture)** • **Climate Resilient Technologies for Agriculture- *Dr. Alok Sikka,*** *IWMI Representative- India & Principal Researcher, IWMI, Pusa, New Delhi* • **Application of Bio-Technologies in Agriculture - *Professor (Dr.) Siddhivinayak Barve,*** *Director Kelkar Education Trust's Scientific Research Centre, Mulund, Mumbai* • **Green Hydrogen Energy Technologies - *Shri. Anand Raidurg,*** *Project and General Manager (Green Hydrogen), MEDA, Pune* • **Central Pivot Irrigation System - *Mr. R.B. Sunder Rao,*** *Director, Irrigation Mi Digitek Agriculture Solution Pvt. Ltd., Pune*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Technical Session-II (Innovative Technologies Developed under NAHEP)** • **Development of hybrid model using satellite data and machine learning technique for price forecasting - *Dr. R.S. Pundir,*** *PI, CAAST, AAU, Anand* • **Edible films and coatings: An emerging trends for preservation of livestock products - *Dr. R.J. Zende,*** *PI, CAAST, MAFSU, Nagpur* • **Protected soil less cultivation of vegetable crop in North-West himalaya - *Prof. Parveen Sharma,*** *CAAST, Palampur* • **New varieties & hybrid intervention in vegetable crops for protected cultivation - *Prof. Akhilesh Sharma,*** *CAAST, Palampur* • **Technology driven education and industry partnerships - *Dr. P.S. Bodake,*** *PI, IDP, Dr. BSKVV, Dapoli* • **Development of e-learning/ICT tools for effective education dissemination of scientific knowledge for improving animal health and production - *Dr. Amit Kumar,*** *PI, CAAST, IVRI, Izatnagar*
1730 to 1900	**Poster presentation session**
1930 to 2100	Dinner

Date: 21 December, 2023

Time	Programme
0900 to 0930	Breakfast and Networking
0930 to 1100	**Technical Session-III Parallel (Innovative Technologies Developed under NAHEP)** • **Relation: agriculture, rivers and environment - *Prof. Vinod Tare,*** *Professor and Founding Head, cGanga, Environmental Engineering, IIT, Kanpur* • **Establishment of secondary agriculture unit for skill development in students and farmers at NAU, Navsari- *Dr. T.R. Ahlawat,*** *PI, CAAST, NAU, Navsari* • **Skill development to use spatial data for Natural Resources Management in Agriculture - *Dr. R.K. Nema,*** *PI, CAAST, JNKVV, Jabalpur* • **IoT enabled Smart Weather Stations for Climate Smart Agriculture - *Dr. M.G. Shinde,*** *Co-PI, CAAST, MPKV, Rahuri* • **Standardization of Integrated farming system models for the state of Jharkhand - *Dr. M.S. Malik,*** *PI, CAAST, BAU, Ranchi*
0930 to 1100	**Special Session (Parallel)** **Reflection of NAHEP Authorities, Vice Chancellors and NAHEP PI Unit and The Way Forward**
1100 to 1130	Hi-tea, Networking

Date: 21 December, 2023 (Contd.)

Time	Programme
1130 to 1300	**Technical Session-IV Parallel (Digital Marketing)** • Mission Market Mirchi, helping rural India to get free online market linkages for all agro rural products - ***Pragati Gokhale,*** *Advisor, Government of Maharashtra* • Digital marketing in 2024 and AI driven market - ***Mr. Ashish Dashrathi,*** *Sr. Manager, Web Marketing, Markets and Market Research Pvt. Ltd.* • Farmer Producer Organization - ***Er. Rajesh Urkude,*** *Head, mKRISHI Planning & Operations, TCS, Mumbai* • Digitalization in Agriculture and Skill requirements for changing technology landscape in Agriculture - ***Er. Nitin Agrawal,*** *Former Sr. Vice President, Int.Tractor Limited and Vice Chairman, SAEWIG, Pune* • Climate Smart Digital Agricultural: a community-based approach to sustainable agricultural development - ***Dr. Shubhangi Ghadge,*** *RA, CAAST, MPKV, Rahuri* • Impact of Climate Smart Agriculture Technology on the Rice-Wheat System of the Indo-Gangetic Plains of India- ***Dr. Sanjay Sapkal,*** *JRA, Department of Agricultural Economics, MPKV, Rahuri*
1130 to 1300	**Technical Session-IV (Parallel)** • Solar powered simple to tow single tower center pivot irrigation - ***Dr. Padmakar Kelkar,*** *CEO, Bright Stars Electronics, Pune* • Geospatial assessment of suitable sites for artificial groundwater recharge in Narmada river basin, Madhya pradesh - ***Mr. Deepak Patle,*** *Research Associate, JNKVV, Jabalpur* • Development of mobile and web-based applications for village level contingency crop plan - ***Dr. Ravi Andhale,*** *Associate Professor, Agronomy, Director of Instruction, MPKV, Rahuri* • Sustainable precision agriculture based on agrivoltaics - ***Dr. Vinod Atkari,*** *Assistant Profesor, CoA, Goa* • Bitter Gourd Tea: Standardization and formulation for preparation of bitter gourd tea - ***Dr. Snehal Bhise,*** *Assistant Professor, College of Food Technology, Acholi, Mahad* • Apical Rooted Cutting (ARC) "A disruptive technology for rapid seed potato production - ***Dr. R. Reddy,*** *Project Manager, Central Potato Research Institute, Bengaluru* • Grape Master: Solution for grapes growers - ***Mr. Sunil Shinde,*** *Managing Director, Grape Master* • Climate resilient resource conservation technologies for sustainable production of sugarcane - ***Dr. Ulhas Surve,*** *Professor, Dept. Agronomy, & CAAST, Member, MPKV, Rahuri*
1300 to 1400	Lunch break
1400 to 1530	**Key Note Session-II (Digital Technologies for Agriculture)** • Crop modeling and monitoring using advanced technologies - ***Dr. Manzul Hazarika,*** *Director, Asian Institute of Technology, Thailand, Bangkok* • Machine learning application for NRM - ***Dr. Ha Nam Thang,*** *Faculty (Aquaculture), Hue University, Thua Thien Hue, Vietnam* • Harvesting innovations: Robotics in Agri. Unveiling Japan's Agri-Tech Excellence - ***Dr. Asaithambi Manickam,*** *CEO, MIYABI Constancy, Service Tokyo, Japan* • Futuristic farming: Way forward - ***Dr. S. D. Gorantiwar,*** *Director of Research and Principal Investigator CAAST-CSAWM, Head, Deptt. of Agril. Engg., MPKV, Rahuri*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Concluding Session**

International Conclave on **Futuristic Farming 2023**

ICFF 2023

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Centre for Advanced Agricultural Science and Technology for Climate Smart Agriculture and Water Management (CAAST-CSAWM)

Mahatma Phule Krishi Vidyapeeth, Rahuri

413 722 Maharashtra, India

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International Conclave on Futuristic Farming 2023
December 20-21, 2023

ISDAg

Technical Programme

International Symposium

Drones for Agriculture

Venue: Grand Peshwa - I, Four Points by Sheraton Hotel, Pune (MH)

NAHEP

MAHATMA PHULE KRISHI VIDYAPEETH

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0830 to 0945	Breakfast and Networking
1000 to 1100	Inauguration of the International Conclave
1100 to 1130	Hi-tea, Networking break
1130 to 1300	**Key Note Session-I (Digital Technologies for Agriculture)** • **Farm of the future: Use of AI in farming - *Dr. Ajit Jaokar,*** *Department of Continuing Education, University of Oxford, United Kingdom* • **Smart farm concepts to reality of technology transition in Washington State Agriculture - *Dr. Lav R. Khot,*** *Associate Professor & Director, AgWeatherNet, Dept. of Bio. Systems Engg., WSU, USA* • **Advanced technologies to ensure sustainable farmers income - *Er. Vilas Shinde,*** *Chairman and Managing Director, Sahyadri Farms Post Harvest Care Ltd., Nashik*
1300 to 1400	Lunch break
1400 to 1530	**Technical Session-I (Drone based data collection systems including sensors and camera)** • **Drone technology for agriculture: potential and challenges - *Dr. Indra Mani,*** *Hon. Vice-Chancellor Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani* • **Drone computing - *Dr. S.N. Omkar,*** *Chief Research Scientist, Control & Guidance, Department of Aerospace Engineering, Indian Institute of Sciences (IISc), Bengaluru* • **Drone in agriculture: CIAE's efforts in research and extension - *Dr. Ramesh Kumar Sahni,*** *Scientist, ICAR-Central Institute of Agricultural Engineering, Bhopal* • **Drones in agriculture: opportunities and limitations - *Mr. Sumit Darphale,*** *Precision Farming Automotive and Farm Equipment, Mahindra and Mahindra Ltd., Mumbai, Maharashtra* • **Drone technology potential in agriculture - *Er. Yogesh Jadhav,*** *Founder, Amity Engg. & Surveyors, Pune*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Technical Session-II (Drone based input delivery system: chemical, nutrients and seeds)** • **Application of drones for spraying & monitoring of the crops - *Dr. Manjeet Singh,*** *Dean, College of Agricultural Engineering & Technology, PAU, Ludhiana, Punjab* • **Planning smart drone mission for effective spraying - *Mr. Vishal Dharankar,*** *Chief Technical Officer, Passenger Drone Research Private Limited, Nashik* • **Use of drone technology for breeding and seed production - *Mr. Swanand Gudhate,*** *General Manager- Agri Solutions, Asteria Aerospace Limited, Thane, Maharashtra, India* • **Drone technology in agricultural spraying: benefits and limitations - *Dr Sachin V Wandkar,*** *Assistant Professor, SKN College of Agriculture, SKNAU, Jobner, Rajasthan* • **Effect of flight height and flying speed on droplet deposition by spraying with unmanned aerial vehicle - *Dr. G.B. Bhanage,*** *Research Associate (FMPE), CAAST-CSAWM, MPKV Rahuri*
1730 to 1900	**Poster presentation session**
1930 to 2100	Dinner

Date: 21 December, 2023

Time	Programme
0900 to 0930	Breakfast and Networking
0930 to 1100	**Technical Session-III (Advancement in drone technologies and their futuristic)** • **AI application in drone industry - *Zain Saeed,* Co-founder, Enord, Delhi** • **Future prospects of drone technology in agriculture - *Jatin Patel,* Co-founder, Enercomp Solutions Pvt. Ltd. Pune, Maharashtra** • **Cargo drones for agriculture - *Capt. Aman,* Director, Aman Aviation and Aerospace Solution Pvt. Ltd., Mumbai** • **Drones – new enterprising opportunity in agriculture - *Mr. Vikram Borade,* Head-Credit Initiatives and Research, Syngenta Foundation India** • **Performance of pre and post herbicide application for weed management in soyabean by using drone - *Dr. B.V. Asewar,* Head, Agronomy & Associate Dean, VNMKV, Parbhani**
1100 to 1130	Hi-tea, Networking
1130 to 1300	**Technical Session-IV (Challenges & opportunities: policy measures for use of drones in agriculture)** • **Drone policies in India - *K Thulsiraman,* Director (Drone), Ministry of Civil Aviation, GoI, New Delhi** • **Drones: will they achieve outcomes for small-hold farmers from climate-vulnerable communities? - *Dr Ruchi Saxena,* Director, Caerobotics Consultancy, India** • **Governance of civilian Unmanned Aerial Vehicle (UAV) technology in Indian agriculture: a responsible innovation perspective - *Dr. Anjan Chamuah,* Project Officer, United Nations Development Programme, Kokrajhar, Assam** • **Type certification scheme in India - *Raghavendra B.S.,* Director - RPAS Operations, Agni Aero Sports Adventure Academy - RPTO, Bengaluru** • **Design and development of agricopter: revolutionizing seed-sowing and fertilizer spraying- *Mr. Alistair Johnny,* Student, Dept. of Automation and Robotics, DYPIT, Pimpri, Pune**
1300 to 1400	Lunch break
1400 to 1530	**Key Note Session-II (Digital Technologies for Agriculture)** • **Crop modeling and monitoring using advanced technologies - *Dr. Manzul Hazarika,* Director, Asian Institute of Technology, Thailand, Bangkok** • **Machine learning application for NRM - *Dr. Ha Nam Thang,* Faculty (Aquaculture), Hue University, Thua Thien Hue, Vietnam** • **Harvesting innovations: Robotics in Agri. Unveiling Japan's Agri-Tech Excellence - *Dr. Asaithambi Manickam,* CEO, MIYABI Constancy, Service Tokyo, Japan** • **Futuristic farming: Way forward - *Dr. S. D. Gorantiwar,* Director of Research and Principal Investigator CAAST-CSAWM, Head, Deptt. of Agril. Engg., MPKV, Rahuri**
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Concluding Session**

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International Conclave on Futuristic Farming 2023
December 20-21, 2023

Technical Programme

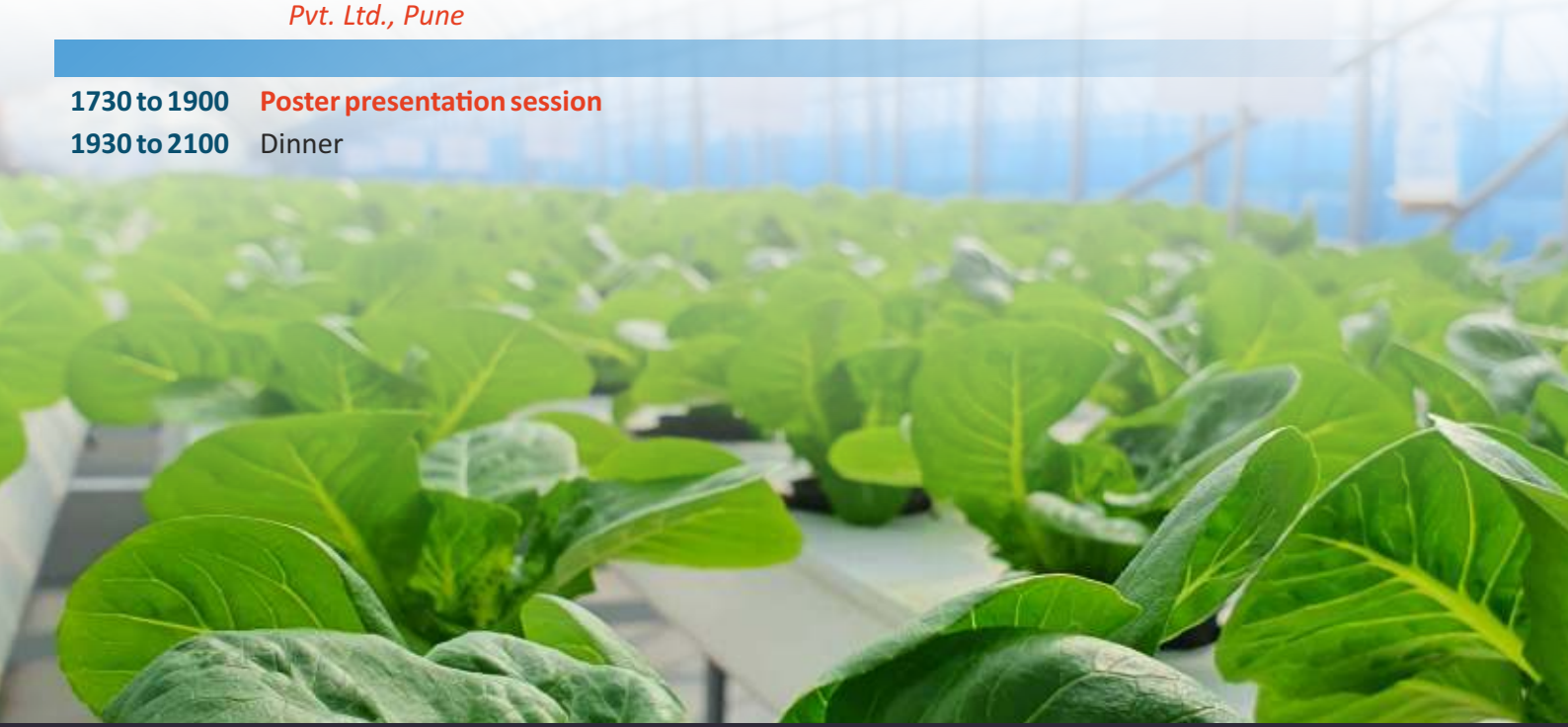
International Symposium

Indoor Farming

Venue: Grand Maratha - III, Four Points by Sheraton Hotel, Pune (MH)

Date: 20 December, 2023

Time	Programme
0830 to 0945	Breakfast and Networking
1000 to 1100	Inauguration of the International Conclave
1100 to 1130	Hi-tea, Networking break
1130 to 1300	**Key Note Session-I (Digital Technologies for Agriculture)** • **Farm of the future: Use of AI in farming -** ***Dr. Ajit Jaokar,*** *Department of Continuing Education, University of Oxford, United Kingdom* • **Smart farm concepts to reality of technology transition in Washington State Agriculture -** ***Dr. Lav R. Khot,*** *Associate Professor & Director, AgWeatherNet, Dept. of Bio. Systems Engg., WSU, USA* • **Advanced technologies to ensure sustainable farmers income -** ***Er. Vilas Shinde,*** *Chairman and Managing Director, Sahyadri Farms Post Harvest Care Ltd., Nashik*
1300 to 1400	Lunch break
1400 to 1530	**Technical Session-I (Soilless/ Protected Cultivation Technologies)** • **Choices in Substrate Growing -** ***Mr. Rajeeb Roy,*** *Founder and Managing Director, Agriplast Tech India Pvt. Ltd. Bengaluru, Karnataka* • **Retractable Protected Cultivation Structures-** ***Mr. Richard Vollebragt,*** *President & CEO, CRAVO Equipments Ltd., Ontario, Canada (Through Video Presentation)* • **Climate Resilient protected cultivation technologies for Indian Agriculture -** ***Mr. Bharat Bhojane,*** *Vice President, Asia Pacific, Region, Ekland Marketing Co., Pune*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Technical Session-II (Vertical Farming)** • **Revolutionizing indoor farming: Enhancing sustainability and energy efficiency through revoponics and vertical farming systems -** ***Mr. Pravein Sharma,*** *Founder, Flora Consultant, Pune* • **Harvesting the future: Exploring the heights of indoor vertical farming -** ***Mr. Muraleemanohar M.,*** *Managing Director Farm Tech Consultancy & Owner, Tech Farming International, Oman* • **Indoor movable vertical farming of saffron and leafy vegetables -** ***Mr. Shailesh Modak,*** *Founder & CEO, 365D Farms, Warje, Pune* • **Artificial lighting in vertical farming technology -** ***Mr. Vishal Bhosale,*** *Founder & CEO, NEXSEL Tech Pvt. Ltd., Pune*
1730 to 1900	**Poster presentation session**
1930 to 2100	Dinner



Date: 21 December, 2023

Time	Programme
0900 to 0930	Breakfast and Networking
0930 to 1100	**Technical Session-III (Hydroponics)**
	• **Hydroponics: A Technical Journey - *Dr. Suresh Dhumal,*** *Professional Hydroponicist, Nourishing Farms, Pune*
	• **Hydroponics: my life, my experiences, my journey - *Mr. Sanket Mehta,*** *Co-Founder and CEO, Nutrifresh Farm Tech India Pvt. Ltd, Pune*
	• **Exploring the scope of indoor farming- innovative approaches for year round crop production- *Dr. Yashwant Jagdale,*** *Subject Matter Specialist (Horticulture), KVK, Baramati*
	• **Solar powered hydroponic system: The future of agriculture - *Ms. Parul Mehra,*** *Ph.D. Scholar (Vegetable Science), Department of Horticulture, PGI, MPKV, Rahuri*
1100 to 1130	Hi-tea, Networking
1130 to 1300	**Technical Session-IV (Aeroponics & Soilless Media)**
	• **Futuristic media- *Mr. Sanmit Ahuja,*** *An Expert Member, cGanga, IIT Kanpur*
	• **Soilless media - *Mr. Ganesh Kulkarni,*** *Managing Director, Hindustan Agri Business Pvt. Ltd., Pune*
	• **Aeroponics: An objective overview - *Mr. Prabhu Sankar,*** *Director, Neoponics Projects India. Pvt. Ltd, Coimbatore, Tamil Nadu*
	• **Vertical Aquaponics Systems - *Mr. Rajsingh Nimbalkar,*** *Director, Hexgro Sustainable Solutions Pvt. Ltd., Pune*
1300 to 1400	Lunch break
1400 to 1530	**Key Note Session-II (Digital Technologies for Agriculture)**
	• **Crop modeling and monitoring using advanced technologies - *Dr. Manzul Hazarika,*** *Director, Asian Institute of Technology, Thailand, Bangkok*
	• **Machine learning application for NRM - *Dr. Ha Nam Thang,*** *Faculty (Aquaculture), Hue University, Thua Thien Hue, Vietnam*
	• **Harvesting innovations: Robotics in Agri. Unveiling Japan's Agri-Tech Excellence - *Dr. Asaithambi Manickam,*** *CEO, MIYABI Constancy, Service Tokyo, Japan*
	• **Futuristic farming: Way forward - *Dr. S. D. Gorantiwar,*** *Director of Research and Principal Investigator CAAST-CSAWM, Head, Deptt. of Agril. Engg., MPKV, Rahuri*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Concluding Session**

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Technical Programme

International Symposium
IoTs for Agriculture

Venue: Grand Maratha - II, Four Points by Sheraton Hotel, Pune (MH)

Date: 20 December, 2023

Time	Programme
0830 to 0945	Breakfast and Networking
1000 to 1100	Inauguration of the International Conclave
1100 to 1130	Hi-tea, Networking break
1130 to 1300	**Key Note Session-I (Digital Technologies for Agriculture)**

- **Farm of the future: Use of AI in farming - *Dr. Ajit Jaokar,*** *Department of Continuing Education, University of Oxford, United Kingdom*
- **Smart farm concepts to reality of technology transition in Washington State Agriculture - *Dr. Lav R. Khot,*** *Associate Professor & Director, AgWeatherNet, Dept. of Bio. Systems Engg., WSU, USA*
- **Advanced technologies to ensure sustainable farmers income - *Er. Vilas Shinde,*** *Chairman and Managing Director, Sahyadri Farms Post Harvest Care Ltd., Nashik*

1300 to 1400	Lunch break
1400 to 1530	**Technical Session-I (Sensors for IoT Enabled Systems)**

- **IoT overview: Application Development, Use Cases and Research Area- *Dr. Parikshit N. Mahalle,*** *Dean- Research and Development, VIIT, Pune*
- **Navigating Precision Agriculture: Unveiling Prospects and Hurdels in Sky-Earth Convergence- *Dr. Suryakant Sawant,*** *Scientist, Digital Food Initiatives, TCS, Pune.*
- **Sensors for IoT Enabled Systems - *Dr. Bharat Sambhu Chaudhari,*** *Dean, MIT-WPU, Pune*
- **Sensors for IoT Enabled Systems in Agriculture - *Er. Parag Achaliya,*** *Assistant Professor, SNJB College of Engineering, Nashik*
- **Role of sensors in IoT system - *Dr. D.V. Jadhav,*** *Jt. Director, Directorate of Technical Education, Pune*
- **IoT based smart agriculture control and feedback for improving crop yield - *Mr. Avinash Pawar,*** *BATU, Lonare*

1530 to 1600	Hi-tea, Networking
1600 to 1730	**Technical Session-II (IoT-Irrigation Water Management Systems)**

- **IoT Irrigation Management system - *Mrs. Sangita Ladha,*** *Business Director, Rivulis India, Pune*
- **IoT Based Decision Support Systems in Water Management - *Dr. Dhananjay Pandit,*** *Director, WRM, Research Tringle Institute (RTI) International India, Pune*
- **IoT Water Management System - *Mr. Tushar Karande,*** *Global Go to Market and Knowledge Transfer Lead, Digital Farming Netafim, Ltd., Pune*
- **IoT Smart Irrigation Management System - *Dr. Ajitkumar Shitole,*** *Head Department of Computer Science, International Institute of Information Technology, Pune*
- **IoT in Agricultural Structures - *Dr. Harishchandra T. Jadhav,*** *Associate Professor (CAS), PI (AICRP-PEASEM), BSKVV, Dapoli*

1730 to 1900	**Poster presentation session**
1930 to 2100	Dinner

Date: 21 December, 2023

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0900 to 0930	Breakfast and Networking
0930 to 1100	**Technical Session-III (IoT- Other Applications in Agriculture)** • **IoT and Automation for Sustainable Agriculture in India- *Dr. Sayed Ismail,* Director, SIFA, Mumbai** • **Digital Transformation in Agriculture - *Dr. Mohini Sadumbrekar,* Founder, FutureSkill Consultants, Pune** • **IoT and Supply Chain Management in Agricultural Sector - *Mrs. Trupti Aggarwal,* Engagement Client Manager, T systems, Pune** • **AI in Pest and Disease Management System - *Er. Yogesh Murumkar,* Chief Executive Officer and Corporate Trainer, Bharatsoft Solutions Pvt. Ltd., Pune** • **Application of sensors in IoT enabled system- *Mr. Ajay Mittal,* Domain Consultants, TCS, Pune**
1100 to 1130	Hi-tea, Networking
1130 to 1300	**Technical Session-IV (IoT- Livestock and Other Management Systems)** • **Use of IoT and ITES in animal husbandry to maximize productivity - *Dr. Abhaysingh K. Jagtap,* Director, Shaurya Technosoft Pvt. Ltd., Pune.** • **IoT enabled THI (temperature Humidity Index) based livestock advisory system - *Dr. Somnath Mane,* Chief Scientist, ICRTC, COA, Pune** • **Use of AI/ML technology in managing cattle health and productivity - *Dr. V.S. Shridhar,* Co-founder and Director, AREETE Business Solutions, Pune** • **Overview on IoT technologies developed under CAAST-CSAWM - *Dr. Vaibhav Malunjkar,* Research Associate, CAAST-CSAWM, MPKV, Rahuri**
1300 to 1400	Lunch break
1400 to 1530	**Key Note Session-II (Digital Technologies for Agriculture)** • **Crop modeling and monitoring using advanced technologies - *Dr. Manzul Hazarika,* Director, Asian Institute of Technology, Thailand, Bangkok** • **Machine learning application for NRM - *Dr. Ha Nam Thang,* Faculty (Aquaculture), Hue University, Thua Thien Hue, Vietnam** • **Harvesting innovations: Robotics in Agri. Unveiling Japan's Agri-Tech Excellence - *Dr. Asaithambi Manickam,* CEO, MIYABI Constancy, Service Tokyo, Japan** • **Futuristic farming: Way forward - *Dr. S. D. Gorantiwar,* Director of Research and Principal Investigator CAAST-CSAWM, Head, Deptt. of Agril. Engg., MPKV, Rahuri**
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Robotics for Agriculture

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1300 to 1400	Lunch break
1400 to 1530	**Technical Session-I (AI, machine learning and computer vision for agricultural robotics)** • **Plant feature detection and processing using deep learning network using mobile, drone and robotic vision cameras -** ***Dr. Yogesh H. Dandawate,*** *Professor, VIIT, Pune* • **Machine learning for Agriculture Robotics -** ***Dr. Rahee Walambe,*** *Associate Professor, Symbiosis Centre for Applied Artificial Intelligence, Pune* • **Smart Farming: The future of agriculture -** ***Dr. Mukul Kulkarni,*** *Assistant Professor, Department of MCA, IMCC, Pune* • **AI and ML for agriculture robot for smart farming -** ***Dr. Prashant Kharat,*** *Assistant Professor (Sr. Scale), Walchand College of Engineering, Sangli* • **AI/ML and Service Robotics Scope in the Agriculture -** ***Dr. Mukesh Bangar,*** *Founder, Muks Robotics, Pune*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Technical Session-II (Robotics applications for farming operations (pre-harvesting)** • **Design and Technologies, Automation of robotics in agriculture -** ***Dr. Girish S. Mundada,*** *Professor (E&TC) PICT, Pune* • **Application of Robotics and Automation Technologies in smart farming -** ***Dr. B.K. Patle,*** *Associate Professor, Dept. of Mechanical Engineering, MIT Art, Design and Technology University, Pune* • **Scenario of Robotics application in pre harvesting -** ***Prof. Gajanan R. Trikutkar,*** *Professor of Practice, SGGS Institute of Engineering & Technology, Nanded* • **Robots for pre-harvesting applications in agriculture -** ***Dr. Vikas Singh Panwar,*** *Assistant Professor, Department of Automation and Robotics, Dr. D. Y. Patil Institute of Technology, Pimpri, Pune* • **Development of an autonomous weeder for inter-row and intra-row Interculture operation -** ***Ms. Mugdha Sudhir Jog ,*** *Ph.D Scholar, COEP Technological University, Pune*
1730 to 1900	**Poster presentation session**
1930 to 2100	Dinner

Date: 21 December, 2023

Time	Programme
0900 to 0930	Breakfast and Networking
0930 to 1100	**Technical Session-III (Challenges & opportunities; and policy measures for the deployment of robots)** • **Challenges and opportunities in application of robots in farming operations- *Dr. Bijay Kumar Rout,*** *Professor (Mech.Engg.), Coordinator, CRIS, BITS Pilani, Rajasthan* • **Challenges policy and Ethics for Agriculture Robots - *Dr. Sachin Wandkar,*** *Assistant Professor (FPM), Department of Agricultural Engineering, SKNAU, Jobne, Rajasthan* • **Robots: Indian Scenario - *Er. Deepak Ugale,*** *Robotics Division, Mahindra and Mahindra, Nashik* • **Challenges and future scope in the development of Agriculture Robots - *Er. Deepak Reddy,*** *Co-Founder, Rowbotix, Pune*
1100 to 1130	Hi-tea, Networking
1130 to 1300	**Technical Session-IV (Robotics applications for farming operations harvesting and post harvesting)** • **Farm of the future: small robots for small farms- *Prof. Girish V. Chowdhary,*** *Professor, University of Urbana, Cofounder of Earthsense Inc. Champaign, Illinois, USA and* **Mr. Amol Gijare,** *Director EarthSense Technology, India Pvt. Ltd, Pune* • **TerraSentia: High throughput phenotyping platform- *Mrs. Preeti G. Chowdhary,*** *Head of operations EarthSense Inc. Champaign, Illinois, USA* • **Overview on Agricultural Robotics Research in MPKV Rahuri - *Dr. S.M. Nalawade,*** *Head, Dept. FMPE, Dr. ASCAET and Member (CAAST-CSAWM), MPKV, Rahuri* • **Robot for post-harvest management - *Dr. Digvijay Bhosale,*** *Associate Professor, Department of Automation & Robotics, Dr. D. Y. Patil Institute of Technology, Pimpri, Pune* • **Robotics applications for farming operations - *Er. Deepak Kumawat,*** *Product Development Manager, Precision Farming Division, Mahindra Rise, Mumbai* • **Harvesting Robot - *Dr. Hugh Zhou,*** *Monash University (Online)* • **Robotic sprayer for precise application of pesticides in agriculture - *Mr. Pranav Pawase,*** *Ph.D. Scholar, Mahatma Phule Krishi Vidyapeeth, Rahuri*
1300 to 1400	Lunch break
1400 to 1530	**Key Note Session-II (Digital Technologies for Agriculture)** • **Crop modeling and monitoring using advanced technologies - *Dr. Manzul Hazarika,*** *Director, Asian Institute of Technology, Thailand, Bangkok* • **Machine learning application for NRM - *Dr. Ha Nam Thang,*** *Faculty (Aquaculture), Hue University, Thua Thien Hue, Vietnam* • **Harvesting innovations: Robotics in Agri. Unveiling Japan's Agri-Tech Excellence - *Dr. Asaithambi Manickam,*** *CEO, MIYABI Constancy, Service Tokyo, Japan* • **Futuristic farming: Way forward - *Dr. S. D. Gorantiwar,*** *Director of Research and Principal Investigator CAAST-CSAWM, Head, Deptt. of Agril. Engg., MPKV, Rahuri*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Concluding Session**

International Conclave on **Futuristic Farming 2023**

ICFF 2023

World Bank Aided ICAR-NAHEP Project

Centre for Advanced Agricultural Science and Technology for Climate Smart Agriculture and Water Management (CAAST-CSAWM)

Mahatma Phule Krishi Vidyapeeth, Rahuri

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International Conclave on Futuristic Farming 2023
December 20-21, 2023

ISHAg

Technical Programme

International Symposium

AI & Hyperspectral Imaging

Venue: Grand Peshwa - III, Four Points by Sheraton Hotel, Pune (MH)

NAHEP

MAHATMA PHULE KRISHI VIDYAPEETH

Date: 20 December, 2023

Time	Programme
0830 to 0945	Breakfast and Networking
1000 to 1100	Inauguration of the International Conclave
1100 to 1130	Hi-tea, Networking break
1130 to 1300	**Key Note Session-I (Digital Technologies for Agriculture)** • **Farm of the future: Use of AI in farming - *Dr. Ajit Jaokar,*** *Department of Continuing Education, University of Oxford, United Kingdom* • **Smart farm concepts to reality of technology transition in Washington State Agriculture - *Dr. Lav R. Khot,*** *Associate Professor & Director, AgWeatherNet, Dept. of Bio. Systems Engg., WSU, USA* • **Advanced technologies to ensure sustainable farmers income - *Er. Vilas Shinde,*** *Chairman and Managing Director, Sahyadri Farms Post Harvest Care Ltd., Nashik*
1300 to 1400	Lunch break
1400 to 1530	**Technical Session-I (Hyperspectral imaging applications for abiotic and biotic stress management)** • **Hyperspectral image analysis and selected applications in agriculture - *Prof. B.K. Mohan,*** *Professor, CSRE, IITB, Mumbai* • **A rapid method for Hyperspectral model calibration and prediction of instantaneous relative water content in plant leaves - *Dr. Bhaskar B. Gaikwad,*** *Senior Scientist, ICAR-NIASM, Baramati* • **Hyperspectral remote sensing of abiotic stress in crops - *Dr. R. Jagadeeswaran, Professor,*** *Department of Remote Sensing and GIS, TNAU, Coimbatore* • **Quantitative monitoring of abiotic stresses in agriculture using Hyperspectral remote sensing - *Dr. Bappa Das,*** *Scientist, ICAR – CCARI, Goa*
1530 to 1600	Hi-tea, Networking
1600 to 1730	**Technical Session-II (Spectral imaging technologies and applications)** • **Measurement of field tripod stage resonon operation, measurement of data using HR1024i and data analysis - *Dr. Ramesh and Er. Wilson,*** *Application Support, Sinsil International Pvt. Ltd., Thane* • **Remote video presentations - *Tom Corl,*** *SVC, USA and* **Rand Swanson,** *Resonon, USA* • **Crop yield prediction using Hyperspectral images - *Ms. Kanchan Borade,*** *Head, Product Engineering & AI Strategies, PDRL, Nasik* • **Next-generation smart irrigation practices with high-resolution spatial inputs - *Dr. Manivasagam V.S.,*** *Assistant Professor, School of Agri. Sci., Amrita Vishwa Vidyapeetham, Coimbatore (TN)* • **Beyond the visible: Agriculture applications of Hyperspectral Remote Sensing - *Dr. Vikas Dugesar,*** *Geospatial Lab, IRRI South Asia Regional Centre, Varanasi* • **Weed detection using advanced deep learning techniques - *Ms. Sayali Shinde,*** *Ph.D. Scholar, COEP, Pune* • **Assessment of temperature stress tolerance during the seedling stage through Hyperspectral index spectral reflectance analysis in wheat - *Ms. A.Y. Pundkar,*** *Ph. D. Scholar, MPKV, Rahuri*
1730 to 1900	**Poster presentation session**
1930 to 2100	Dinner

Date: 21 December, 2023

Time	Programme
0900 to 0930	Breakfast and Networking
0930 to 1130	**Technical Session-III (AI applications in agriculture)**

- **Hyperspectral Imaging: Microdetection of satellite images for crop classification - *Dr. K.V. Kale,*** *Hon. Vice Chancellor, BATU, Raigad*
- **Humanistic Intelligence and its applications in Climate Smart Agriculture - *Mr. Sarang Nerkar,*** *Founder and CEO, Innosapien Agro Technologies Pvt. Ltd., Thane, Maharashtra*
- **User-inspired digital agriculture through multimodal data and artificial intelligence - *Dr. Abhilash Kumar Chandel,*** *Assistant Professor, CAIA, Virginia Tech Tide Water, USA*
- **From Pixels to Predictions: Revolutionizing Soil mapping with machine learning and Hyperspectral data - *Dr. S. Dharumarajan,*** *Senior Scientist, Regoinal Centre NBSS & LPU, Banglore*
- **An open-source toolkit for fusing Geospatial and Spatiotemporal data for Agriculture - *Mr. Riyaz Pishori,*** *FarmVibes.Ai, Microsoft Research, USA*

1130 to 1200	Hi-tea, Networking
1200 to 1300	**Technical Session-IV (Computer vision and instrumentations for the AI and spectral imaging)**

- **Hyperspectral applications for crop and soil using imaging spectroscopy - *Dr.Bimal Bhattacharya,*** *Group Director & Sci./Eng.-G, AFESA, Space Application Centre, ISRO, Ahmedabad*
- **Information extraction from Hyperspectral images for agriculture Applications - *Dr. Anand S Sahadevan,*** *Scientist, ATDD, Space Application Centre (SAC), Jodhpur Tekra, Ahmedabad*
- **Hyperspectral reflectance and machine learning tools for rapid assessment of soil properties - *Dr. Priyabrata Santra,*** *Principal Scientist & Head, Div.of Natural Resources, ICAR-CAZRI, Jodhpur*
- **Development of remote sensing-based index for estimation of suspended sediment concentration - *Ms. Prasanna Khaire,*** *Ph.D. Scholar, Dr. ASCAET, MPKV, Rahuri*
- **Cotton plant disease detection using deep learning networks: Comparative approach - *Ms. Amruta Suryawanshi,*** *Ph.D. Scholar, SPPU, Pune*

1300 to 1400	Lunch break
1400 to 1530	**Key Note Session-II (Digital Technologies for Agriculture)**

- **Crop modeling and monitoring using advanced technologies - *Dr. Manzul Hazarika,*** *Director, Asian Institute of Technology, Thailand, Bangkok*
- **Machine learning application for NRM - *Dr. Ha Nam Thang,*** *Faculty (Aquaculture), Hue University, Thua Thien Hue, Vietnam*
- **Harvesting innovations: Robotics in Agri. Unveiling Japan's Agri-Tech Excellence - *Dr. Asaithambi Manickam,*** *CEO, MIYABI Constancy, Service Tokyo, Japan*
- **Futuristic farming: Way forward - *Dr. S. D. Gorantiwar,*** *Director of Research and Principal Investigator CAAST-CSAWM, Head, Deptt. of Agril. Engg., MPKV, Rahuri*

1530 to 1600	Hi-tea, Networking
1600 to 1730	**Concluding Session**

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