

International Symposium



# IOTs (Internet of Things) for Agriculture

December 20-21, 2023



Grand Maratha, Four Points By Sheraton Hotel and Serviced Apartments, Viman Nagar, Pune, Maharashtra 411014, India.



<http://mpkv-cff2023.in/>  
<https://www.mpkv-caast.ac.in/>



## Importance

The Internet of Things (IoT) refers to a network of interconnected things (devices or objects that are embedded with sensors, electronic components, and actuators), computer programs (software, simulation, and decision support systems), computer servers/clouds and internet connectivity capabilities; allowing them together to collect and exchange data over the internet, analyze, take decisions, trigger the decisions. IoT systems are currently being used in various sectors including industry automation, manufacturing systems, healthcare, smart homes, smart cities, security and surveillance, transport and logistics, energy management, supply chain and logistics. IoT technologies offer wide range of benefits including their capabilities to perform various tasks in real time with precision, improved productivity and efficiency, automation, performing hazardous tasks, monitoring the processes in real time. Hence IoT technologies are proving to be formidable for various applications in agriculture sector. In context of increased weather variability, more prominently experienced impact of climate changes, variability in soil and farm management systems; adoption of precision agriculture practices is becoming apparent for sustainable and environmentally secure agriculture; and IoT technologies offer all the capability required for the precision agriculture. IoT technologies have several applications in agriculture including monitoring of soil, crop and weather; irrigation management, livestock management, pest and diseases management, supply chain management, automation of farm machinery and equipments. IoT technologies have been developed for many of these applications. In order to explore IoT technologies further for real-time and precision agriculture; and to make the students, researchers, practitioners, farmers and industries aware about the advances in IoT technologies; and bring them on one platform to deliberate on several aspects of IoT technologies, the **“International Symposium on IoTs for Agriculture”** is organized with following specific objectives.

## Objectives

1. To explore IoT enabled technologies for performing various operations and management systems in real time and with precision.
2. To educate farmers, researchers, industries and students about the latest developments and advancements in IoT enabled systems for agriculture and their potential benefits.
3. To provide a platform to meet, share ideas, and explore possible national and global partnerships and collaborations for potential applications of IoT technologies in Indian context.
4. To demonstrate IoT enabled technologies through exhibits, and presentations.
5. To deliberate on the measures for wider adoption of IoT enabled tools for real time and precision operation and management of the agricultural systems.

## Themes

- Sensors for IoT enabled systems
- IoT- irrigation water management systems
- IoT- Pest and diseases management systems



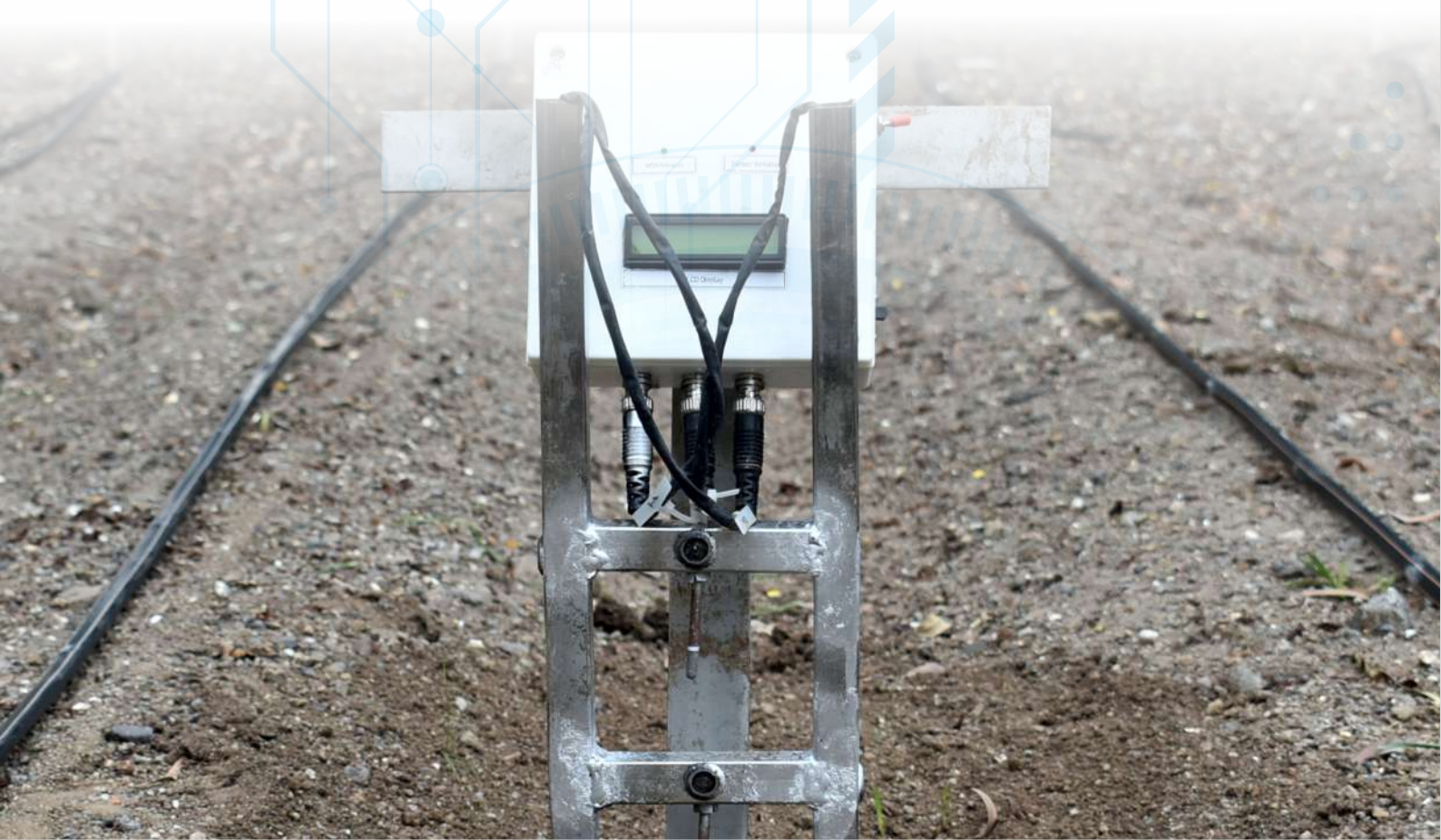
## Programme and Technical Sessions

Date: 20 December, 2023

0830 to 0945 h	Breakfast and Networking
1000 to 1100 h	Inauguration
1100 to 1130 h	Hi-tea, Networking break
1130 to 1300 h	<b>Key Note Session-I</b> (Digital Technologies for Agriculture)
1300 to 1400 h	Lunch break
1400 to 1530 h	<b>Technical Session-I</b> (Sensors for IoT enabled systems) <b>Theme Presentations</b> (by invited experts) <b>Presentations of accepted research and practioners papers</b>
1530 to 1600 h	Poster presentation, Networking and hi-tea
1600 to 1730 h	<b>Technical Session-II</b> (IoT-irrigation water management systems) <b>Theme Presentations</b> (by invited experts) <b>Presentations of accepted research and practioners papers</b>

Date: 21 December, 2023

0930 to 1100 h	<b>Technical Session-III</b> (IoT- Pest and diseases management systems) <b>Theme Presentations</b> (by invited experts) <b>Presentations of accepted research and practioners papers</b>
1100 to 1130 h	Poster presentation, Networking and hi-tea
1130 to 1300 h	<b>Technical Session-IV</b> (IoT-livestock and other management systems) <b>Theme Presentations</b> (by invited experts) <b>Presentations of accepted research and practioners papers</b>
1300 to 1400 h	Lunch
1400 to 1530 h	<b>Key Note Session-II</b> (Digital Technologies for Agriculture)
1530 to 1600 h	Hi-tea, Networking
1600 to 1730 h	Concluding Session



## Call for Papers

### Category of papers

The papers are invited on one or more themes of the Symposium in following categories from:

- **Academician, Scientists and Researchers:** The research papers based on the development of components (things); and tools and technologies IoT enabled systems.
- **Entrepreneurs, Start-ups, Practitioners and Industries:** The practitioners/ description papers based on the developed and under-development IoT components and tools.
- **Students:** The papers on the development of the concepts, framework and systems.
- **Others:** The papers on challenges, issues and policies; and measures for wider adoption of IoT enabled technologies.

### Acceptance of the Papers and Form of the Presentations

The papers submitted for the Symposium will be entered through the peer review process and depending on the comments from the reviewers, the accepted papers will be considered for the “Oral” or “Poster” presentations.

### The Submission of the Papers

- **The format:** The formats of the papers to be submitted in various categories are available at <https://mpkv-cff2023.in/Home/iotag/5>
- The papers in the prescribed format need to be uploaded at <https://mpkv-cff2023.in/Home/iotag/5> and/or emailed to [info@mpkv-cff2023.in](mailto:info@mpkv-cff2023.in)



### Publication of the Papers

All the papers accepted in various categories and presentation forms will be published in the Symposium Proceedings after due modifications by the authors/presenters as per the comments received during the presentations. The selected papers from all the categories accepted for oral presentations will also be published in the “**Journal of Agricultural Research and Technology**” jointly published by all the four agricultural universities in the State of Maharashtra after processing thorough the review process of the journal.

### Awards

The poster presentations of the scientists/faculties and practitioners; and the oral and poster presentations of the students will be evaluated by the International and National Experts and the selected oral and poster papers will be awarded in various categories.

### Key Dates

- **Registration**
  - With normal registration fees: **8 December, 2023**
  - With late registration fees: **15 December, 2023**
- **No on-spot registration**
  - The registration will be closed once the prescribed numbers of delegates have registered.
- **Paper submissions**
  - Last date of submission of papers: **8 December, 2023**
  - Communication regarding the final acceptance: **12 December, 2023**
- **The dates of the Symposium**
  - 20-21 December, 2023**



## Registration

### Registration Fees

#### For participation only

- **Registration fee for the participants other than students: Rs. 10000/-** and late registration fee (i.e. registration after 15 December, 2023): **Rs. 15000/-**
- **Registration fee for the students: Rs. 4000/-** and late registration fee (i.e. registration after 15 December, 2023): **Rs. 6000/-**

#### For participation with paper presentation

- Registration fee for the presenting author of the paper accepted for the **oral presentation** (however registration is mandatory): **Rs. 3000/-**
- Registration fee for the presenting author of the paper accepted for the **poster presentation** (however registration is mandatory): **Rs. 5000/-**
- Registration fee for presenting author (**if student**) of the paper accepted for the **oral and/or poster presentation** (however registration is mandatory): **Rs. 500/-**
- Registration fee for the authors whose submitted papers have not been accepted for oral or poster presentation and desire to participate: **Rs. 10000/-** and if student: **Rs. 4000/-**

### Mode of Payment

Online and links will be available during the Registration Process.

### Registration includes

- Access to the Inaugural and Closing Programs, Key Note Sessions and Technical Sessions
- Access to other parallel Symposia (depending on availability of seats)
- Opportunity for networking with National and International Experts, Industries, Start-ups, Entrepreneurs, Students and Farmers
- Registration kit with the specified literature
- Snacks/Lunch during the Symposium

Click here to

**Register**

### Click here for Registration

### Accommodation

Limited accommodations are available in the guest houses of NCL (CSIR), IITM, IMD, IE(I), NIV, ICAR-NRCs, University of Pune and Govt. guest houses on first-come first-serve and payment basis. The participants can contact them directly or indicate the requirement during the registration process (while submitting the application form). Accommodation will not be available at MPKV Guest houses in Pune. There are plenty of hotels in Pune and especially near the venue of the Symposium. The participants are advised to book these hotels, if required, in advance. The list of the hotels along-with the contacts and the tariffs is available at the Symposium Website.



## Organizers

### About CAAST-CSAWM

The project entitled "**Center for Advanced Agricultural Science and Technology (CAAST) on Climate Smart Agriculture and Water Management (CSAWM)**" is being implemented in Mahatma Phule Krishi Vidyapeeth (An Agricultural University), Rahuri, Maharashtra under World Bank Sponsored National Agricultural Higher Education Project (NAHEP) of Indian Council of Agricultural Research (ICAR), New Delhi, Government of India, Since 2018. The major objectives of CAAST-CSAWM project are;

- To develop the capacity amongst the faculties and scientists for the development and adoption of Precision Farming, Climate Smart Agriculture and Water Management Technologies
- To start a one-year Post-Graduate Diploma in "Climate Smart Agriculture and Water Management" for developing human resources to create entrepreneurship and enhance employability in the public sectors and private industries, strengthen the current M.Sc., M. Tech. and Ph.D. programme (for their research projects, and make provision for the prospective beginner/middle-level faculties/researchers for Post Doctorate studies in precision water management, precision climate-smart agriculture and Geoinformatic
- To develop an integrated system including RS/GIS and GPS tools, modelling and SDSS tools using unmanned aerial system (UAS aka. drone) and sensor-based technologies, mobile applications and their applications climate-smart and precision agriculture and water management
- To conduct end-to-end capacity building through on-the-job training and case study-based learning; enhance the employment and placement rate; and business and entrepreneurship opportunities
- To develop the capacity amongst the faculties and students of MPKV Rahuri and other Agricultural Universities and related organizations for the development and adoption of the precise Climate Smart Agriculture and Water Management technologies as well as to conduct on-the-job training and case study based learning to enhance the employment and placement rate; and business and entrepreneurship opportunities.

With this background, CAAST-CSAWM, MPKV, Rahuri is organising International Symposium on "**IoT's for Agriculture**" during **20-21 December, 2023 at Pune.**

[Click here to know more about CAAST-CSAWM](#)

### Organizing Committee

- **Patrons**  
**Dr. Prashantkumar Patil**, Hon'ble Vice Chancellor, Mahatma Phule Krishi Vidyapeeth, Rahuri  
**Dr. R.C. Agrawal**, Deputy Director General (Edu.) and National Director, ICAR-NAHEP, New Delhi
- **Convenors**  
**Dr. Sunil Gorantiwar**, Director of Research; Head (Ag. Engg.) & Principal Investigator (CAAST-CSAWM), MPKV Rahuri  
**Dr. Anuradha Agrawal**, National Coordinator (CAAST), ICAR-NAHEP, New Delhi
- **Co-Convenor**  
**Dr. Mukund Shinde**, Professor (SWCE) and Co-Principal Investigator (CAAST-CSAWM), MPKV Rahuri
- **Organizing Secretary**  
**Dr. Mahanand Mane**, Head (IFD-IWM), PGI, MPKV Rahuri (+91-9423295619)
- **Joint Organizing Secretary**  
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- **Co-Ordinators**  
**Er. Tejashree Nawale**, Sr. Research Fellow (Smart Irrigation) (+91-9404810341), **Ms. Kavita Rajput**, Research Associate (CAAST) and **Er. Nikhil Dugad**, Sr. Research Fellow (RKVY-CPS), MPKV Rahuri

For updates, visit: <http://mpkv-cff2023.in/>

World Bank Aided  
ICAR- National Agricultural Higher Education Project (NAHEP)  
Centre for Advanced Agricultural Science and Technology  
for Climate Smart Agriculture and Water Management  
(CAAST-CSAWM)

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