28th IEEE International Conference on Industrial Technology (ICIT 2027)

Special Session on

Smart and Sustainable Agri-Food Systems

Organized by

Prof. Carlos Eduardo Pereira, Dr.-Ing. (cpereira@ufrgs.br)
Federal University of Rio Grande do Sul, Brazil

Prof. Danilo Demarchi, PhD (danilo.demarchi@polito.it)
Politecnico di Torino, Italy

Prof. John P. Verboncoeur, PhD. (johnv@msu.edu)
Michigan State University – USA

Prof. Charles Steinmetz, Dr.-Ing. (charles.steinmetz@de.abb.com)
ABB Research Center – Germany

Call for Papers

Smart Agri-Food Technology is revolutionizing the way we produce, manage, and distribute food, making it more sustainable, efficient, and resilient for the future. As the global population continues to grow and the demand for food increases, innovative solutions are critical to ensuring food security, reducing environmental impact, and optimizing resource use.

By integrating advanced technologies such as Internet of Things (IoT) sensors, data analytics, artificial intelligence (AI), and robotics, Smart Agri-Food enables real-time monitoring, precision farming, and data-driven decision-making. This leads to higher crop yields, reduced waste, and improved quality of agricultural products. This also includes food processing technologies, packaging shelf life monitoring and support technologies, nutrition and human wearable technologies, management of waste circularity including food adjacent materials like disposable place ware, and so on.

IEEE recognizes the importance of Smart Agri-Food Technology in shaping the future of food production. The IEEE 2050 and Beyond subcommittee, along with IEEE volunteers, has identified this field as a key driver for reliable and efficient food systems that can benefit current and future generations. This special sessions aims to continue a series of SmartAG workshops that have successfully carried on within the scope of IEEE events, aiming to discuss the challenges and opportunities in this relevant are of smart and digital Agri-Food Systems.

Topics of interest include, but are not limited to:

- IoT sensors networks and embedded electronics applied to Smart Agri-Food Systems
- Climate Smart Agriculture
- UAV and Satellite Observation for Crop Monitoring
- Nano-/Pico-Satellite Applications in Agriculture
- Advanced Sensing in Agriculture
- Collaborative Digital Agriculture: Integration of Drones, Satellites, Sensors, Autonomous Machines
- Robotics and Agricultural Machines
- Precision irrigation and plant monitoring applications
- Wearable Plant Sensors
- Nutrition and Human wearable technologies
- Innovations in Shelf Life Monitoring
- Communication protocols in Digital Agriculture
- Traceability in the Agri-Food Supply-Chain
- Image-Processing Applications in Agriculture
- AI-Applications for Smart Agri-Food Systems
- Digital Twins and Ontologies for Smart Agri-Food Systems
- Agricultural Dataspaces
- Energy Generation, Management, and Storage for Sustainable Agri-Food Applications
- Presentation of results from Competence Centers, Research Networks and Major Initiatives in Digital Agriculture

Submission Procedure:

All the instructions for paper submission are included in the conference website**:**
https://icit2027.ieee-ies.org/

Deadlines:

- **Special Session Paper Submission Deadline:** December 1st , 2026
- **Special Session Acceptance Notification:** December 20th, 2026
- **Conference Dates:** March 17–19, 2027