

Smart Agri-Food Systems: Collaborating for a Resilient Future

IEEE CAFÉ' 2026, Cagliari, Italy

Workshop Agenda

Friday, September 25		
2:30 PM	Danilo Demarchi	Welcome and Logistics
2:45 PM	John Verboncoeur	SmartAg Vision and Workshop Goals
3:00 PM	Panel 1	Key Technologies
4:00 PM	Coffee Break	Networking
4:30 PM	Panel 2	Novel Food Industry Applications
5:30 PM	Round Tables	Prioritizing Challenges
6:30 PM	Adjourn	

Details

Panel 1: Key Technologies

Moderator:	Danilo Demarchi	Politecnico di Torino, Italy
Panelists:	Ravinder Dahiya	Northeastern University, USA
	Wei-Jen Lee	University of Texas at Arlington, USA
	Temitope Odedeyi	University College London, UK
	Matias Miguez	Catholic University of Uruguay, Uruguay

Panel 2: Novel Food Industry Applications

Moderator:	Wei-Jen Lee	University of Texas at Arlington, USA
Panelists:	Marios Sophocleous	Terrateq Innovation, Rep. of Cyprus
	Danilo Demarchi	Politecnico di Torino & PlantZCare Srl, Italy
	Roberto La Rosa	STMicroelectronics, Italy
	Alfredo Arnaud	BQN, Chipamate and ABM Engineering, Uruguay

Round Tables: Prioritizing Challenges

Moderators:	Samsuzana Abd Aziz	Universiti Putra Malaysia, Malaysia
	Carole Graas	IEEE Future Directions, USA

Saturday, September 26		
9 :00 AM	John Verboncoeur	Day 1 Outcome Summary
	Danilo Demarchi	
9 :30 AM	Lwanga Herbert	Local Groups Engagement
10 :00 AM	John Verboncoeur	Open discussion on SmartAg Assets across IEEE
10 :30 AM	Coffee Break	Networking
11 :00 AM	Carole Graas	Volunteer Roles
11 :30 AM	John Verboncoeur	Partnership Opportunities
12 :00 PM	Danilo Demarchi	Summary and Actions
	John Verboncoeur	
12 :30 PM	Adjourn	

Page break

Workshop Contributors

SmartAg expertise and projects



Danilo Demarchi, Professor, Politecnico di Torino, Italy

- IoT for Climate-Smart Agriculture
- Wearable Plant Sensors
- Smart Systems
- Edge AI



John Verboncoeur, Professor, Michigan State University, USA

- Capstone project to develop the first orbital farm, “Aeroponics for Space Station,” NASA report (1986)
- Research on accelerator-based gamma sources for food sterilization
- Cold plasmas for delicate food surface sterilization
- Developed *Global Digital Food Passport* concept



Wei-Jen Lee, Professor, University of Texas at Arlington, USA

- AI-powered “smart trap” of New World screwworms
- Integrated AI-Driven Systems for Invasive Pest Monitoring and Management in Subtropical Agriculture
- AI-Driven Smart Monitoring/Management in Subtropical Agriculture
- AI-Driven Smart System for Insecticide-Free Fire Ant Control
- Wireless Monitoring System for Online Insect Tracking Analysis
- Non-Invasive Queen Bee Activities Tracking System



Temitope Odedeyi, Royal Academy of Engineering Research Fellow, University College London, UK

- RF/microwave sensing for agrifood and food-quality applications
- IoT sensor networks and embedded electronics
- UAV and satellite observation for crop monitoring
- Machine learning for crop yield prediction and crop quality assessment
- Field deployment of sensing systems in sub-Saharan Africa



Roberto La Rosa, Senior Principal IC Architect, STMicroelectronics, Italy

- Energy-autonomous and maintenance-free sensing for remote monitoring
- Precision irrigation and plant monitoring applications
- Solutions for battery-free, low-power agrifood systems



Matias Miguez, Professor, Universidad Catolica del Uruguay

- IoT applications in agroindustry
- Powering smart irrigation from small batteries
- LoRa – Sigfox – NBloT comparison of power consumption
- Active tags for cows and farm animals BT for longer range
- Modeling dense LoRaWAN networks
- Real time tree detection for phytosanitary products reduction