

IEEE COINS 2021

IEEE International Conference on Omni-layer Intelligent Systems

IEEE | IEEE RAS | IEEE CEDA | IEEE COMPUTER SOCIETY | VSA-TC IEEE CAS | E-HEALTH-TC IEEE COMSOC | TC-ICPS IEEE IES | IEEE IOT

Hybrid Event:
(On-site In-person Presentation & Virtual Presentation)

Barcelona, Spain
August 23-25, 2021



**Call for
Papers**

Track Name: IoT-driven Smart Agriculture

COINS is the premier conference devoted to omnilayer techniques for smart IoT systems, by identifying new perspectives and highlighting impending research issues and challenges. The aim of this track is to exchange and discuss innovative proposals on agriculture, livestock farming, aquaculture and forestry based on Internet of Things and other related technologies, techniques and architectures. Topics of interest include, but are not limited to, the following:

A) Technologies, techniques and architectures

- Long-Range and Low-Power Wide Area Networks
- Energy harvesting smart sensors
- Innovative sensing technologies in agriculture, livestock and aquaculture (pesticides, nutrients, biometric, pollutants, etc.).
- Cloud computing, Fog Computing and Edge Computing
- Big Data, Smart Data, and Big and Open Linked Data
- Blockchain and Distributed Ledger Technologies
- Data Mining, Artificial Intelligence and Deep Learning
- Computer Vision, Multispectral imaging and Pattern Recognition
- Autonomous Unmanned Aerial and Terrestrial Vehicles and Swarms, Robots and Cobots
- Positioning, navigation and dynamic route planning

B) Solutions applied to specific problems

- Optimization of the use of water, energy and pesticides
- Early detection and prediction of fungi and insect pests
- Expert assessment of damages caused by pests or droughts
- Automated and assisted harvesting and application of treatments
- Health monitoring and prevention of diseases and stress in livestock
- Optimization of yield in dairy, meat or aquaculture industries
- Sustainability in mixed farming environments
- Recommender systems for fertilization in hydroponics

Javier Prieto, University of Salamanca, Spain
Munir Shah, AgResearch, New Zealand
Ali Moghimi, UC Davis, USA
Roberto C. Casado-Vara, University of Salamanca, Spain
Saman Abdanan, Khuzestan University, Iran
Ricardo S. Alonso, University of Salamanca, Spain
Konstantinos Loizu, Embio Diagnostics, Cyprus