



(15th- 17th June 2023)

ICEPE 2023 Special Session

on

IoT based Drone for Crop Disease Detection and Pesticide Recommendation for better Yield Production using Machine Learning and Deep Learning Schemes

Drones are defined as Unmanned Aerial Vehicles (UAVs). In other words, drones are flying devices that are autonomously programmed or remotely controlled, either by a remote control or a ground station, and are categorized as networked robotic technologies. Unfortunately, drones haven't had a significant impact on agricultural practices, at least until recently. A lot is happening lately on the subject of drone applications in agriculture and precision farming. There are significant technologies have been developed to automate agriculture in order to decrease the production cost and to increase profits of the farmers. The Internet of Things (IoTs) in agriculture can support the production process and can scale from small to big farmers. In agricultural modernization, IoT and UAV can monitor the incidence of crop diseases and pests from the ground micro and air macro perspectives, respectively. IoT technology can collect real-time weather parameters of the crop growth by means of numerous inexpensive sensor nodes. While depending on spectral camera technology, UAVs can capture the images of farmland, and these images can be utilize for analyzing the occurrence of pests and diseases of crops. In this work, we attempt to design an agriculture framework for providing profound insights into the specific relationship between the occurrence of pests/diseases and weather parameters.

Topics of interest for this Special Session includes, but are not limited to:

- Design and controlling of Drones
- IoT Applications in Healthcare, Agriculture, Energy
- Machine Learning for Autonomous vehicles, Home Automation, Battery Management and Speed control of Motor
- Deep Learning for Image and Video Processing and Speech Processing
- Information Security
- Classical cryptography
- Quantum computing
- Quantum key distribution

Special Session Organizers (Names, Designation, Affiliation and Contact emails)

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Special Session Organizer (Short Bio with Photo)



Dr. C. N. Sujatha, accomplished B.Tech (Electronics & Communication Engineering, 2001), M.Tech (Electronic Instrumentation and Communication Systems, 2005) and Ph.D. (Image Processing, 2018) from S.V. University, Tirupati, A.P, India. She started her career in 2001 as a lecturer in Annamacharya Institute of Science and Technology at kadapa. Presently associated with Sreenidhi Institute of Science and Technology, Hyderabad, Telangana as a Professor, Dept. of ECE. She has presented 19 papers in International and National conferences and published 37 papers in international journals. Her current research interests include Image & Video Processing, Speech & Signal Processing, Machine learning, Deep Learning, Quantum Computing and Antenna Design. She has written 4 books and published 5 patents. She has received best woman academican of the year award by iiva 2021 and also received Best Faculty Award from Knowledge Research Academy in 2022. She Reviewed a book titled “Cryptographic and Information Security Approaches for Images and Videos” that was published by CRC Press, Taylor and Francis Group. She is an Editorial Board member, reviewer for several International Journals and Conferences.



Dr. V. Padmavathi holds a Bachelor of Engineering degree in Computer Science and Engineering (CSE) discipline. She completed her M. Tech. and Ph. D in CSE discipline. She works as an Associate Professor in Chaitanya Bharathi Institute of Technology, Hyderabad. Her research areas include Quantum Computing and Cryptography, Classical Cryptography and Information Security, Algorithms, Software Engineering, Data Mining, Machine Learning, Quantum Machine Learning. Dr. Padmavathi has three patents and several International publications to her credit. She has conducted various FDPs, workshops, bridge courses. She is a Program Committee member and reviewer for several International Conferences