KESInternational

SPECIAL SESSION ON
AI-based Networking and Control for Unmanned Aerial Systems

KES International 2022: 7 - 9 September 2022 Verona, Italy

26th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems

Session Chairs:

Dr. Abolfazl Razi, Clemson University, SC, USA
Dr. Francesco Malandrino, National Research Council of Italy

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Notification of Acceptance: April 30, 2022

INTRODUCTION:

Unmanned Aerial Vehicles (UAV) is an emerging technology representing key roles in developing smart connected communities, with wide-ranging applications including transportation, navigation control, emergency detection and relief, agriculture, and many more. Despite the exponential growth of this technology in terms of market revenue and enabling new features, there still is a critical need for fast, agile, adaptive and self-tuning control algorithms and communication platforms for extremely dynamic and vivid UAV networks. This special session invites submissions that propose novel ideas and algorithms to solve the UAV network communication problems by leveraging artificial intelligence, online learning, and distributed algorithm design.

This special issue invites submissions that propose novel ideas algorithms and approaches to UAV network communication, including --but not limited to -- solutions leveraging machine learning, artificial intelligence, and distributed control.

RECOMMENDED TOPICS:

Topics to be discussed include (but are not limited to) the following:

- UAV technology, future trends and applications
- UAV swarm technology: opportunities and challenges
- AI for Aerial Systems
- Image Processing for Aerial Systems
- Deep Learning for Aerial Systems
- IoT platforms for un-manned autonomous vehicles
- UAV networks: implementation, performance analysis, planning and optimization
- Ad-hoc networking, routing, handover and meshing
- Cognitive radio networks for flying objects
- UAV path planning, localization and flight control
- Applications of big data and machine learning in UAV networks
- Distributed data compression
- Sparse signal discovery:
- Wireless access technology
- Security and Privacy of UAV networks
- Remote sensing with UAV networks
- MIMO systems for UAV networks
- Channel modeling: indoor and outdoor
- Source and channel coding for UAV networks
- Network connectivity and communication reliability

Conference link: http://kes2022.kesinternational.org/index.php
Feel free to email arazi@clemson.edu for your inquiries.