

CALL FOR PAPERS

SPECIAL SESSION ON Networking and Artificial Intelligence for Aerial Monitoring Systems: Design, Operation, Performance Analysis, and Future Directions

KES International 2020: 16 - 18 September 2020 Verona, Italy

24th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems

Session Chairs:

Dr. Abolfazl Razi, Northern Arizona University
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Submission Deadline: TBD

INTRODUCTION:

Unmanned Aerial Vehicles (UAV) is an emerging technology representing a key building block of the smart city concept, with wide-ranging applications including transportation, navigation control, emergency detection and relief, agriculture, and many more.

The investment in this technology has witnessed an exponential growth in recent years and is expected to reach \$2 billion by 2022. An important challenge to harness UAV technology is the 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

