Wi-DroIT 2021

Wireless Sensors & Drones in IoT

Wireless Sensors & Drones in IoT (Wi-DroIT 2021)

3rd International Workshop on

Wireless Sensors and Drones in Internet of Things (Wi-DroIT) 2021

Virtual Event

July 14–16, 2021

co-located with DCOSS 2021

Scope

Due to the evolution of the health pandemic, the event will be held fully on-line. This will not impact the publication of the DCOSS 2021 proceedings and accepted papers will be included in the IEEE Xplore Proceedings. The virtual program will include live sessions of invited speakers and author presentations, possibly supplemented by online material such as the papers, presentation slides and videos.

Recently, the rapid development of Unmanned Autonomous Vehicles (UAVs), also known as drones, has highlighted a plethora of emergent applications such as infrastructure inspection and surveillance, smart agriculture, seek and rescue, parcel delivery, communications, and post-disaster recovery. In all these applications, UAVs may coexist with ground Internet of Things (IoT) devices. For example, UAVs autonomously perform remote sensing relaying the collected data by the sensors. Moreover, single or multiple UAVs can cooperatively collaborate providing services that require efficient protocols where multiple objectives and constraints should be accounted for.

For this workshop, we seek papers that combine the design of algorithms and testbed implementations to develop the theoretical foundations for UAVs as well as the synergies with IoT devices. The numerous emergent applications raised by IoT may require an interdisciplinary approach, involving techniques from algorithm foundations and different areas, such as computer networks, artificial intelligence, concurrent, parallel and distributed computing, security, digital signal, image and sound processing.

Topics of Interest

- Autonomous sensing via UAVs
- Topology monitoring with UAVs
- Remote sensing networks via UAVs
- Communication protocols of UAVs over IoT
- Modeling and analysis of UAVs over IoT
- Precision agriculture and UAVs
- Crops monitoring in agriculture
- Bugs monitoring in agriculture
- UAVs for environmental monitoring
- Autopilot and UAS autonomy
- UAVs path planning and scheduling
- Parcel delivery using UAVs
- Cellular networks and UAVs
- Constrained and multi-objectives problems
- Sensors localization with UAVs
- UAVs tracking techniques
- Cooperative control of multiple UAVs
- Cyber-security communications and UAVs
- Optimal UAV deployment strategies
- Test-beds and experimental results for UAVs
- Single UAV applications
- Multi-UAV applications
- Energy-efficient UAV communications
- Machine learning for UAV communications

Important dates

- **Abstract Submission**: May 14, 2021
- **Paper Submission**: May 21, 2021
- **Acceptance Notification**: June 11, 2021
- **Camera Ready**: June 18, 2021
- **Early Registration**: July 5, 2021

Author information

Authors are invited to submit original unpublished manuscripts that demonstrate current research on distributed sensor systems related to WiDroIt topics of interest. Please use the US letter size (8.5 x 11 in) standard IEEE conference LaTeX format or Microsoft Word template

available on the link below: http://www.ieee.org/conferences_events/conferences/publishing/templates.html

All submissions should be written in English and submitted as a full paper. Full papers should have a maximum of eight (8) printed pages including figures and references. Full papers are expected to describe fully developed ideas with a thorough evaluation. Note that Wi-DroIT does not follow the double-blind review policy. The names and affiliations of all the authors must be present in the submitted manuscript.

Committees

Workshop Chairs

- **Francesco Betti Sorbelli**: Missouri University of Science and Technology, USA
- **Dimitrios Zorbas**: Nazarbayev University, Computer Science Department, Kazakhstan

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- **Enrico Natalizio**: University of Loraine, France
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Past editions

- Wi-DroIT 2020
- Wi-DroIT 2019

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