

1ST WORKSHOP ON 6G AMBIENT IOT FOR A SUSTAINABLE ENVIRONMENT

October 12-27 2023
Aveiro Congress Center, Portugal

In conjunction with IEEE WF-IoT 2023



Organizing Chairs:

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Important dates:

Paper submission: Jul 30, 2023

Notification of acceptance: Aug 21, 2023

Camera-ready submission: Sep 29, 2023

Presentation submission: Oct 2, 2023

Description:

The ubiquitous sensor-rich mobile devices have been playing a vital role in the evolution of the Internet of Things (IoT), which bridges the gap between digital and physical spaces. However, high energy cost and short lifespan of these devices pose significant barriers to the spread of IoT applications. These concerns have drawn substantial attention from both academic and industrial sectors, emphasizing the need for sustainable IoT solutions. Recently, the concept of Ambient IoT has been proposed as a promising solution. It relies upon energy harvesting as one of the key strategies for powering and transmitting data using backscattering communications. Ambient IoT leverages energy harvesting and backscatter communication, allowing IoT devices to operate without batteries, and sustainably manage perception and communication within diverse 6G scenarios. The objective of this workshop is to discuss the networking and communication solutions for ambient IoT, as well as to demonstrate a cutting-edge hardware module and prototype for potential ambient IoT applications, and identifying an evolution path of Ambient IoT for the development of a perceptible, controllable and sustainable future world.

Topics of Interest:

- State-of-the-art survey of standards, challenges and solutions for ambient 6G IoT
- Energy harvesting and transfer in ambient 6G IoT
- Signal processing and waveform design for ambient 6G IoT
- High-order modulation technique for ambient 6G IoT
- Massive multiple access technique for ambient 6G IoT
- MAC protocols design for ambient 6G IoT
- Resource management and scheduling for ambient 6G IoT
- Network architecture for ambient 6G IoT
- Hardware design and prototype of ambient 6G IoT
- Ambient 6G IoT applications in space, aerial, ground, and maritime
- Relay-based ambient 6G IoT system
- Sensing and computing in ambient 6G IoT
- Long-range energy harvest and data transmission in ambient 6G IoT
- Security and privacy in ambient 6G IoT
- Cost-effective computation and AI for ambient 6G IoT
- Simultaneous wireless information and power transfer (SWIPT) in ambient 6G IoT

Paper Submission:

All papers must be submitted through eWorks. You must choose the workshop track (Work-13) when submitting your paper in order to be considered for this workshop. The paper should be up to six (6) pages in length. The conference allows up to two additional pages for a maximum length of eight (8) pages upon payment of extra page fees once the paper has been accepted.

More information on the workshop:

<https://wfiot2023.iot.ieee.org/1st-workshop-6g-ambient-iot-sustainable-environment>

