

REV 2021 – Call for papers

Special Session on

Non-traditional labs and lab networks in the IoT and Industry4.0 domain

The relevance of laboratories and experimentation in STEM education cannot be denied. This is particularly true for technology-intensive topics, such as IoT (Internet-of-Things), IIoT (Industrial Internet-of-Things) and Industry4.0. It is undeniable that IoT and Industry4.0 are connected and interrelated, and that those two topics can greatly profit from the opportunities that lab-based learning can provide.

However, scientific literature is not rich of studies on suitable lab-based learning deployments and on ICT-aided learning paradigms in the above-mentioned subjects. Still, the interest of the scientific community in lab-based learning has been steadily increasing in the last decades, with a special focus on non-traditional labs and lab networks.

Aim of this special session is to bring together academics and professionals, to share knowledge, experiences, and research on the broad topic of non-traditional labs and lab networks in the IoT and Industry4.0 domain. With the term non-traditional labs, we mean all kind of labs that differ from the traditional hands-on laboratory, such as online, simulative, virtual, remote and hybrid labs. The concept of lab network, instead, defines a set of two or more labs that cooperates for a certain amount of time for a common purpose or benefit, especially by sharing resources, or by using a common organization, architecture, or approach (e.g. pedagogical).

Original contributions are sought in the following topics, all related to non-traditional labs and lab networks in the IoT, IIoT and Industry4.0 domain:

- *Applications & Experiences of non-traditional labs and lab networks in IoT and I4.0*
- *Augmented & Mixed Reality in the IoT and I4.0 domain*
- *Business models and architectures on lab networks*
- *Cyber security of IoT lab networks*
- *Data Science in labs and lab networks*
- *Didactical and pedagogical aspects of non-traditional labs and lab networks in IoT and I4.0*
- *Evaluation of non-traditional labs and lab networks in IoT and I4.0*
- *Labs and lab networks on Cyber Physical Systems*
- *Process Visualization & Virtual Instrumentation*
- *Standards and standardization for lab networks*

Initial Program Committee

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