

# EDUCON2021 Special Session

## Special Session “OLaC ‘21”: Online Laboratories in Times of Corona – New Developments and Experiences

### OLaC ‘21

#### Overview

*As the COVID-19 crisis has forced universities to suspend most face-to-face instructional activities, faculty across the globe have faced the extraordinary challenge of switching at least partly to online instruction. In many cases, this transition in instructional modality, which would normally be carried out over a period of months/years, has instead been implemented over a timeframe of days to weeks. While this wholesale transition to online instruction already is difficult for many institutions, it is a unique challenge for faculty in STEM education who are also required to deliver alternative laboratory experiences. As hands-on educational models could not be applied under the COVID-19 circumstances, the challenge has been to bring laboratory experiences online without losing the educational impact of the experiential learning activities.*

*This special session (OLaC ‘21) within the EDUCON 2021 Conference, April 2021, Vienna, Austria, aims to report experiences and educational research results with a special focus on online laboratory education under the current circumstances. As many educators had to bring online experiences online somehow, it is obvious that many new approaches and great developments in the field of online labs have been made over the last months. Those approaches, developments connected experiences, and research results are of focal interest for this Special Session. We invite authors to submit practice-oriented papers describing their online laboratories and educational research (or at least pilot-study evaluation). The special session is organized by the International Association for Online Engineering (IAOE) and invites authors from all connected scientific fields to submit their research work. Our main goal is to bring together stakeholders for exchanging ideas, experiences, and research results and encouraging networking for future efforts.*

#### Topics

*Authors are invited to submit complete papers for the OLaC ‘21 special session (no abstracts needed). The topics cover all aspects of online laboratories applied to STEM education, including but not limited to the following:*

- *Applications & Experiences*
- *Augmented & Mixed Reality*
- *Cyber Physical Systems*
- *Cyber Security*
- *Collaborative Work in Virtual Environments*
- *Bridging the gap between face-2-face and online experimentation*

- *Evaluation of Online Labs*
- *Human Machine Interaction & Usability*
- *Impact of COVID on STEM Education*
- *New Approaches for Online Experimentation*
- *Online Engineering*
- *Online Labs in the era of COVID*
- *Process Visualization & Virtual Instrumentation*
- *Remote Control & Measurements*
- *Remote & Crowd Sensing*
- *Standards & Standardization Proposals*
- *Virtual & Remote Laboratories*

## Program Committee

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