

EDUCON2020 Special Session

Remote and Pocket Labs (RPL2020)

<http://www.educon-conference.org/>

Overview

Pocket Labs (or Lab in a bag/pocket, Lab at home, etc.) are a very promising opportunity especially for part-time students for managing their study efforts and time. In this context, Pocket Labs are meant to be hardware units (e.g. Digilent's Analog Discovery 1 and 2, National Instruments' myDAQ or myRIO, but also open microcontroller platforms such as Arduino or Raspberry Pi), in combination with software management and programming tools. They enable students to do a reasonable part of their time-consuming work at home and – even more important – at a self-defined time.

Remote Labs have been developed by several universities and offer flexibility in terms of place, time and learning pace. Additionally, they allow students to have access to more complex real experimental setups and offer the possibility for a more efficient sharing of resources across institutions. A well-known example for a Remote Lab is the already widespread VISIR platform, developed by Blekinge Tekniska Högskola (BTH) and used by various Universities in Portugal, Spain, Brazil, Sweden, and Austria

Remote and Pocket Labs are predestinated to be a promising platform for enforcing technology- enhanced as well as mobile learning; especially at Universities of Applied Sciences, where practical work is a big issue. They contribute in keeping the entire study program more practice-oriented and potentially increasing student's motivation and satisfaction.

Topics

In this special session, we expect to receive proposals of best-practice examples and experiences concerning the use of Pocket and Remote Labs covering a broad variety of hardware and software solutions. Papers (5 to 10) should cover the topics:

- **Hardware:** Which platform is used (and why), what are the (yearly) financial efforts for providing it? Is there one single platform used or more?
- **Ownership:** Will the Pocket Lab belong to the students after finishing their projects or courses or will they have to return it to the University?
- **Lectures:** Teaching methods, new approaches, covered topics and courses using Remote and/or Pocket Labs as well as possible combinations of both.
- **Software:** Which tools (programming languages, measurement apps) are used in combination with Remote and/or Pocket Labs? Are they open source or commercial?
- **Feedback:** What were the student's opinions? Was it possible for them to define at least a part of their workload themselves?

Technical Program Committee

Chair(s)

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Deadlines

Dec. 15, 2019

Submission of complete papers

Jan. 21, 2020

Notification of Acceptance

Feb. 17, 2020

Author registration and Payment and Final/Camera-ready Due

Apr. 27, 2020

Pre-Conference Workshops

Apr. 28-30, 2020

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