

# Supporting Inquiry and Problem Based Learning with Online Labs and STEM Apps

Impact of learning analytics, inquiry learning, MOOCs and e-books on online labs & STEM apps

The 12th International Conference on Web-based Learning (ICWL 2013)

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Websites:

<http://icwl2013.tajen.edu.tw/RoundTable.html>

<http://go-lab-project.eu/workshop/icwl-2013-round-table>

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## Objectives of the Round Table

Inquiry learning is a new and debated topic in schools in East Asia, where students study based on standardized textbooks oriented by examinations. To increase the number of students who continue their studies in STEM fields, inquiry-based learning methods using online experiments and labs are raising more and more attention. We propose this round table to introduce the Go-Lab project ([www.go-lab-project.eu](http://www.go-lab-project.eu)), to discuss related research questions with experts, to share knowledge, and to reach out to the large TEL community beyond Europe. This round table will bring experts and TEL audience from academia and industries together to discuss the future of STEM learning, learning analytics, federation of online labs, representation of big ideas of science, inquiry learning at schools, e-books, and MOOCs.

This round table will offer a good platform to obtain a better picture on the online labs and STEM apps in Europe and Asia. We aim to introduce the Go-Lab project at schools outside Europe and to find collaborators of external labs and of STEM apps. This round table will also explore the potential connections and solutions of online labs in e-books and MOOCs, in order to promote inquiry learning methods and to disseminate inquiry learning spaces with online labs and STEM apps at a large scale in Asia-Pacific areas.

The round table will be given by invited experts who are conducting advanced TEL research in online labs, learning analytics, mobile learning, multimedia technologies, as well as e-books. The ICWL participants will be expected to attend this round table with their active discussions with the experts.

## Experts of the Round Table



**Sachio Hirokawa**

Kyushu University  
Japan



**Qing Li**

City University of Hong Kong  
Hong Kong, China



**Denis Gillet**

École Polytechnique Fédérale de Lausanne  
Switzerland



**Ching-Kun Hsu**

National Taiwan Normal University  
Taiwan



**Nick Rushby**

British Journal of Educational Technology (BJET)  
United Kingdom

## Program of the Round Table

1. A short presentation of the Go-Lab project, its philosophy, and a demo will be given to give the audience a context of the round table.
2. A list of predefined questions will be discussed by the experts to share knowledge on research of online labs, learning analytics, etc. The audience may participate in the round table actively by asking questions directly or via Speak-up (a smartphone app, <http://doplab.unil.ch/speakup>, to ask questions anonymously)
3. The round table experts will further answer on-site questions and conduct discussions on the topic of online labs, learning analytics, inquiry learning, MOOCs, and e-books.

## Interesting topics include but are not limited to:

- Discussion on how to apply learning analytics in online labs
- Discussion on how to apply online labs in MOOCs
- Integration and federation of other lab repositories and other apps
- How are online labs used in learning activities?
- How to represent big ideas from online lab metadata?
- Implementation challenges of smart devices in labs