Conference Agenda

Overview and details of the sessions of this conference. Please select a date or room to show only sessions at that day or location. Please select a single session for detailed view (with abstracts and downloads if available).

Session Overview

**Date: Wednesday, 25/Feb/2015**

- **9:00am** Workshop 1  
  Location: Ruam Rudee Ballroom  
  **RALFie - Peer-to-Peer Remote Access Laboratories**  
  Kist, Alexander A.; Maiti, Ananda

- **12:00pm** Workshop 2  
  Location: Ruam Rudee 1  
  **Considerations for designing at-presence and remote laboratories for students with disabilities**  
  Grout, Ian

- **12:00pm** Lunch Break  
  Location: Restaurant (8th Floor)

- **1:00pm** Tutorial 1: Lab sessions in VISIR laboratories  
  Location: Ruam Rudee Ballroom

**Date: Thursday, 26/Feb/2015**

- **9:00am** Opening and Keynote Session I  
  Location: Ruam Rudee Ballroom  
  Chair: Michael E. Auer, Carinthia University of Applied Sciences

  The Speaker: Ton de Jong is professor of Instructional Technology at the University of Twente. He specializes in inquiry learning (mainly in science domains) supported by technology (online labs, games, modelling environments). He was coordinator of several EU projects (e.g., SimQuest, Co-Lab, KITS, SCY) and several national projects including the ZAP project in which interactive simulations for psychology were developed. ZAPs are sold worldwide. For ZAP and SimQuest he has won a number of international prizes. For one of the SCY applications the Inquiry Based Instruction prize issued by Science was won in 2013. Currently he is coordinator of the 7th framework EU Go-Lab project. He published close to 200 journal articles and book chapters, is associate for the Journal of Engineering Education, and is on the editorial board of eight other journals. He has published papers in Science on inquiry learning with computer simulations (2006) and online laboratories (2013). He is AERA fellow...

  **Online Labs in the Science Classroom – How Cognitive Scaffolds Support Students to Engage in Effective Learning Experiences**  
  De Jong, Ton

- **10:00am** Coffee/Tee Break  
  Location: Foyer

- **10:30am** 1A: Full Papers  
  Location: Ruam Rudee Ballroom  
  Chair: Mario A. Bochicchio, University of Salento

  **wCloud: automatic generation of WebLab-Deusto deployments in the Cloud**  
  Orduña, Pablo; Gomez-Goiri, Aitor; Rodríguez-Gil, Luis; Diego, Javier; Lopez-de-Ipina, Diego; Garcia-Zubia, Javier

  **A Collaborative Multi-Videoconferencing Platform for Online Optical Microscopy**  
  Bochicchio, Mario Alessandro; Longo, Antonella; Zappatore, Marco

  **Teaching and learning globally connected - Using live online classes for preparing international engineering students for transnational collaboration and for studying in Germany**

- **11:00am** 1B: Full Papers  
  Location: Ruam Rudee 1  
  Chair: Karsten Henke, Ilmenau University of Technology

  **Modelling combined with remote experiments**  
  Kuriščák, Pavel

  **Safety in Interactive Hybrid Online Labs**  
  Henke, Karsten; Vietze, Tobias; Wutke, Heinz-Dietrich; Gätendorf, Steffen

  **Surfing Virtual Environment in the Galápagos Islands**  
  Vaca Cárdenas, Leticia; Bertacchini, Francesca; Gabriele, Lorella; Tavernise, Assunta; Olmedo, Diana Elizabeth; Pantano, Pietro; Bilotta, Eleonora

  **A Distinctive Approach to Enhance the Utility of Laboratories in Indian Academia**
May, Dominik; Sadiki, Abdelhakim; Pleul, Christian; Tekkaya, A. Emran

Design and Operational Reliability for a Peer-to-Peer Distributed Remote Access Laboratory
Matti, Ananda; Maxwell, Andrew D; Kist, Alexander A

12:00pm Lunch Break
Location: Restaurant (8th Floor)

1:30pm 2A: Full Papers
Location: Ruam Rudee Ballroom
Chair: Danilo Zutin, CUAS

An HTML Client for the Blackbody Radiation Lab
Kreiter, Christian; Garbi Zutin, Danilo; Auer, Michael

Converting a remote laboratory back end from Remote Panels in LabVIEW to HTML5
Samuelsen, Dag A. H.; Bjerk, Joakim; Graven, Olaf H.

A Remote Solar Photovoltaic Laboratory based on the iLabs Shared Architecture (ISA)
Bomugisha, Denis; Kyomugisha, Rebeccaah; Mwikirize, Cosmas

A New Implementation of the iLab Service Broker
Colbran, Sam; Schulz, Mark

1:30pm 2B: short Papers
Location: Ruam Rudee 1
Chair: Dieter Wuttke, TU Ilmenau

Development and Application of Remote Laboratory for Embedded Systems Design
Parkhomenko, Anzhelika; Gladkova, Olga; Kurson, Sergey; Sokolyanskii, Aleksandrii; Ivanov, Eugene

From RGB led laboratory to servomotor control with websockets and IoT as educational tool
Carro Fernandez, German; Castro Gil, Manuel; Mur Perez, Francisco; Sancristobal Ruiz, Elio

Real-time and turn-based biology online experimentation
Hossain, Zahid; Chung, Alice; Riedel-Kruse, Ingmar

The use of telecommunication technologies in education network
Sakhapov, Rustem Lukmanovich; Absalyamova, Svetlana Germanovna

Opportunities and Challenges in Virtual Reality for Remote and Virtual Laboratories
Callaghan, Michael James; Gómez Eguíluz, Augusto; McLaughlin, Gavin; McShane, Niall

3:00pm 3A: Full Papers
Location: Ruam Rudee Ballroom
Chair: Vinod Kumar, IIT Roorkee

Google Cloud and Analysis of Realtime Process Data
Langmann, Reinhard

Real-Time ECG Acquisition Under Incorrect Electrode Positions
Kumar, Vinod; Kashyap, Vikas

Weblab of a Control Experiment in a Newborn Baby Incubator
Bauer, Karine; Mendes, Luciano Antonio

A Low-cost Remote Laboratory of Field Programmable Gate Arrays
Quang, Huy Nguyen; Hoang, Thang Manh

4:30pm GOLC Annual General Meeting
Location: Ruam Rudee 1

5:30pm 7:00pm Conference Dinner
Location: Ruam Rudee Ballroom

9:00pm Announcement of the GOLC Online Laboratory Award Winner and IJOE Best Paper Award

Date: Friday, 27/Feb/2015

9:00am Keynote Session II
Location: Ruam Rudee Ballroom
Chair: Doru Ursutiu, "University "Transilvania" of Brasov, Romania"
The Speaker: Dr. Vinod Kumar is Dean of Faculty Affairs and Professor of Electrical Engineering Department of IIT Roorkee, INDIA. He received his Engineering degree from Punjab Engineering College, Chandigarh, M.Tech. & Ph.D. from IIT Roorkee, India (erstwhile University of Roorkee). He has many academic awards, distinctions and scholarships...

Biomedical Virtual Workbench
Kumar, Vinod

10:00am Coffee/Tea Break
Location: Foyer

10:30am
**10:30am - 12:00pm**

**4A: Full Papers**

**Location:** Ruam Rudee Ballroom

**Chair:** Kemi Jona, Northwestern University

**Designing Remote Labs for Broad Adoption**  
Jona, Kemi; Walter, Ashley D.; Pradhan, Sachin N.

**Smart Device Specifications for remote labs**  
Saltzmann, Christophe; Govartes, Stephan; Halimi, Wissam; Gillet, Denis

**Develop a Scheduler and Federated Authentication for Remote Laboratory Access**  
Wang, Ning; Chen, Xuemin; Song, Gangbing; Parsaei, Hamid

**Co-Designing Online Experimentation for Teaching STEM**  
Bochicchio, Mario A.; Longo, Antonella; Zappatore, Marco

**Lunch Break**  
**Location:** Restaurant (8th Floor)

**1:00pm - 2:00pm**

**Invited Speaker Session**  
**Location:** Ruam Rudee Ballroom

**Chair:** Abul Azad, Northern Illinois University

This presentation will show how new global activities and technology are impacting Engineering Education. New ways of teaching, such as MOOCs and blended learning, as well as different kinds of learning analytics, assessment and engagement will be analyzed and connected. The evolution of teaching through face-to-face, distance learning and new... [8]

**Impact of Technology and Globality in Engineering Education**  
**Castro, Manuel**

**2:00pm - 3:30pm**

**5A: Full Papers**  
**Location:** Ruam Rudee Ballroom

**Chair:** Antonella Longo, University of Salento - Department of Innovation for engineering

**Low-cost Multi-Channel Analog Sampler and Signal Generator for Remote Laboratories**  
Samueelsen, Dag A. H.; Graven, Olaf H.

**Introductory Laboratories in Semiconductor Devices using the Digilent Analog Discovery**  
Grout, Ian; Bin A'ain, Abu Khari

**Towards Massive Open Online Laboratories: an Experience about Electromagnetic Crowdsensing**  
Longo, Antonella; Zappatore, Marco; Bochicchio, Mario Alessandro

**The Challenge of Specimen Handling in Remote Laboratories (for engineering education)**  
Sadiki, Abdelhakim; Ortelt, Tobias R.; Pleul, Christian; Becker, Christoph; Chatti, Sami; Tekkaya, A. Emran

**3:30pm - 5:00pm**

**6A: Full Papers**  
**Location:** Ruam Rudee Ballroom

**Chair:** Doru Ursutiu, "University "Transilvania" of Brasov, Romania"

**Supporting Access to STEM Subjects in Higher Education for Students with Disabilities using Remote Laboratories**  
Grout, Ian

**Iterative Pattern for Remote Laboratories Embedding in Educational Process**  
Tabunshchyk, Galyna; Arras, Peter; Henke, Karsten; Van Merode, Dirk; Parkhomenko, Anzhelika

**Powerful Technologies Together for Engineering Education (PTT for EE)**  
Ursutiu, Doru; Samoila, Corneliu; Kane, Patrick; Altoe, Filippe

**The Bibliographic Reference Collection GRC2014 for the Online Laboratory Research Community**  
Zappatore, Marco; Longo, Antonella; Bochicchio, Mario Alessandro

**VISIR - Microcontroller Extensions (MCE)**  
Fischer, Thomas; Scheidinger, Julia

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**12:00pm - 2:00pm**

**4B: Full Papers**  
**Location:** Ruam Rudee 1

**Chair:** Zorica Nedic, University of South Australia

**Virtual and Remote triggered Industrial Automation Labs: Collaboration case study**  
Diwakar, Anita S.; Noronha, Santosh; Agashe, Sudhir

**DC Motor Control in a 3D Real-Time Virtual Laboratory Environment**  
Li, Zhongchong; Hu, Wenshan; Zhou, Hong; Zhong, Liang

**Development of an Online Renewable Energy Laboratory**  
Nedic, Zorica; nafalski, Andrew

**An Innovative Educational Concept of Teleworking in the High Precision Metrology Laboratory to Develop a Model of Implementation in the Advanced Manufacturing Industry**  
Durakbasa, Numan M.; Bauer, Jorge M.; Bas, Gokcen; Riepl, David
5:00pm - Farewell Coffee/Tee
  Location: Foyer

5:30pm