IEEE EDUCON - Engineering Education 2013 https://www.conftool.com/educon2013/
EDUCON 2013
http://www.educon-conference.org/educon2013/index.htm
Berlin, Germany, March 13-17, 2013

Preconference Workshop OnLine Engineering, March 12, 2013, 09:00am (all day)

Workshop Co-Chairs

Andrzej Rucinski, Michael Auer

Workshop Description

The model solution of OnLine Engineering is presented motivated by: (1) the search for Cost Effective and "Democratic" OnLine Engineering; (2) the definition of Global Engineering Solution. The approach is based on Disruptive Education, defined by Christensen [1], the author of disruptive innovation and disruptive technologies concepts. The technology under study is derived from the Internet of Things (IOT) defined as a Web of Objects (Rao, [2]). The Web of Objects (WOO) is a superset of the Internet of Things which enables worldwide interaction among objects without human intervention as well as the Internet, a classic medium facilitating communication among people. The presented OnLine Engineering platform, called WOO3©, is a triple WOO based model and ecosystem (WOO3©) which includes: (1) IOT based eLearning; (2) IOT based subject matters; and (3) IOT based online engineering. The platform includes a Orthogonal Model Curriculum, one of many possible, which emphasizes: (1) the education roadmap "From the State of the Mind to the State of the World"; (2) the accreditation roadmap "From Introduction Through Certification Towards Accreditation." The WOO3 compatible development platform, called GNAT-X©, is also presented along with several Course Descriptions. Special attention is paid to the concept of the Home Laboratory/Development Kit based on disruptive technology of Programmable System On a Chip (PSOC) from Cypress Semiconductor.

Short CV of Andrzej Rucinski

Prof. Andrzej Rucinski - represents a growing category of "transatlantic professors" defining the role of academia in the global engineering era and developing global innovation, technology, and education solutions. He was educated both in Poland and the former Soviet Union and has conducted his academic career in both the United States (University of New Hampshire, USA), Europe (France, Germany, Hungary, Italy, Poland, Russia, and Ukraine), and Asia (India, Central Asia). His service has been with high tech industry, NGOs, ranging from state (National Infrastructure Institute) to a global level (NATO, United Nations Organization). He is a member of the Executive Committee (Innovation Chair) of the IEEE Computer Society's Design Automation Technical Committee. At the University of New Hampshire, he is the founding Director of the Critical Infrastructure Dependability Laboratory, the Professor in the Department of

Electrical and Computer Engineering and the Space Science Center. He was the Member of the US State Department/Fulbright National Screening Committee, a Visiting Professor at the Gdansk University of Technology, a Professor of the Indo-US Coalition of Engineering Education (IUCEE), and he has been the Fulbright Senior Specialist.

Outline of the Workshop and Preliminary Schedule

March 12, 2013

Real Classroom Part (4 hours)

9:00 am Keynote: "Disruptive Education: WOO3 © Model, Infrastructure, and Global Engineering" (Andrzej Rucinski)
10:00 am Break
10:30 am WOO(X): How to use Collaborate? (Cilley)
11:00 am WOO(Y): What is PSoC? (Kane)
11:45 am Break
12:00 am WOO(Z): How to use GNAT-X? (Kimsey)
1:00 pm Lunch

Virtual Classroom Part (4 hours)

14:00 pm WOO(X) x WOO(Y): PSoC in real and virtual classroom (Kane)
15:00 pm Break
15:30 pm WOO(X) x WOO(Z): CLOUD in real and virtual classroom (Jeffords)
16:15 pm Break
17:00 pm WOO(Y) x WOO(Z): IOT in real and virtual classroom (Kimsey)
WOO(X) x WOO(Y) x WOO(Z): demo#4 in PSoC (Virtual Lecture 4) (Jeffords, Kane, Kimsey)

Prerequisites on the audience or equipment

Notebooks are required