Opportunities and Challenges for the Future of Engineering Education

At Aalborg University

Friday 4th of April at Nybrogade 6, ground floor, room 1.133

PROCEED seminar

Program of Research on Opportunities and Challenges in Engineering Education in Denmark (PROCEED)

Funded by the Danish Strategic Research Council, 2010-2013

This seminar is one of the final seminars presenting results from the project. We have the great pleasure that one of our research advisors Professor Cindy Atman will present her research on engineering design.

PROCEED researchers will present partly the conceptual framework for understanding and developing engineering education and partly empirical results from a survey sent out to all engineering student in 2010. There will be special emphasize on what the research results indicate as future directions of engineering education.

The overall objective of PROCEED has been to investigate how engineers and engineering educators are responding to the environmental, socio-economic and scientific-technological challenges facing their profession. It has been a strategic alliance among four universities in Denmark (Aalborg, Århus, Roskilde, and the Danish Technical University) and with international collaborators in the United States, the Netherlands, and Australia.

09.30: Welcome
09.45: Making Sense of Engineering Design. Cindy Atman
10.45: Engineering Practice – Is that more than design? Lars Bo Henriksen
11.30: Does Sustainability Become Part of the Professional Identity of Danish Engineering Students? Sanne Haase
12.15: Lunch
13.15: Gender and motivational factors. Anette Kolmos
13.45: Discussion on the advice for development of engineering education
15.00: end of day

Please register here: http://www.ucpbl.net/Activities/Proceed/

Cindy Atman

Cindy Atman is the founding director of the Centre for Engineering Learning & Teaching (CELT), a professor in Human Centred Design & Engineering, and the inaugural holder of the Mitchell T. & Lella Blanche Bowie Endowed Chair at the University of Washington. She was director of the NSF-funded Centre for the Advancement of Engineering Education (CAEE), a national research centre that was funded from 2003-2010. Dr. Atman joined the UW in 1998 after seven years on the faculty at the University of Pittsburgh. Her research focuses on engineering education pedagogy, engineering design learning, assessing the consideration of context in engineering design, and understanding undergraduate engineering student pathways. She is a fellow of the American Association for the Advancement of Science (AAAS) and the American Society of Engineering Education (ASEE). She was the recipient of the 2002 ASEE Chester F. Carlson Award for Innovation in Engineering Education and the 2009 UW David B. Thorud Leadership Award. Dr. Atman holds a Ph.D. in Engineering and Public Policy from Carnegie Mellon University.

Anette Kolmos

Anette Kolmos is Professor in Engineering Education and PBL and Chair holder for UNESCO Chair in Problem Based Learning in Engineering Education, Aalborg University, Denmark. Guest professor at KTH Royal Institute of Technology and Guest Professor at UTM University Technology Malaysia 2011-2013. President of SEFI 2009–2011 (European Society for Engineering Education). Founding Chair of the SEFI-working group on Engineering Education Research. During the last 20 years, Dr. Kolmos has researched the following areas, primarily within Engineering Education: development and evaluation of project based and problem based curriculum, change from traditional to project organized and problem based curriculum, development of transferable skills in PBL and project work, and methods for staff development. She is Associate Editor for the *European Journal of Engineering Education* and was Associated Editor for *Journal of Engineering Education* (ASEE). Involved in supervision of 13 PhD projects and published around 200 publications. Member of several organizations and committees within EER, national government bodies, and committees in the EU.

Lars Bo Henriksen
"Lars Bo Henriksen works as a professor in engineering practice and engineering education at the Department of Planning, Aalborg University, Denmark. His work is mainly concerned engineers' everyday life and the education of engineers in a PBL context (Problem Based Learning). Lars Bo's research is mainly based on hermeneutic philosophies, ethnographic and practice oriented research methods – always conducted in close contact with practitioners in the field, be it engineers in industry or educators at engineering schools.
His current work involves studies in engineering practice and engineers' role as managers and facilitators of change projects."

Sanne Haase
Sanne Haase from the Danish Centre for Studies in Research and Research Policy, Aarhus University, has been affiliated to the research alliance PROCEED, Program for Research in Opportunities and Challenges in Engineering Education in Denmark throughout her time as a PhD Fellow.

Her dissertation is about the conception of societal challenges/sustainability of engineering students and about the role of such challenges in their nascent professional engineering identity. Sanne takes pride in her mixed-methods toolbox and covers a cross-disciplinary field.

She currently works with a science-based evaluation of education policy reforms in the Swedish higher education system.

In 2011 she was awarded a visiting scholarship at Stanford University, H-STARS (Human Sciences and Technologies Advanced Research Institute, California) by the Danish Agency for Science, Technology and Innovation and a travel grant from Aarhus University Research Foundation.

Previously, she worked as a consultant in the Danish public sector's innovation support system.