



## Faculty of Science & Technology invites you to

# Teaching & Education Day, August 25 2017

**Teaching & Education Day** vänder sig till alla anställda vid fakulteten som är intresserade av att vara med och utveckla undervisningen på våra kurser och program. Seminarier och andra presentationer kommer att hållas på engelska – programmet nedan presenteras därför enbart på engelska.

### Welcome to the 3rd Teaching & Education Day!

Seminars and introductory presentations will be held in English. The conference is free of charge and open to everyone at the faculty interested in continued development of our courses and programs. The program will start at 08.30 and ends at 16.00. Coffee and lunch will be served.

**Registration** will be open from **May 15**.

**When?** Friday August 25, 08.30–16.00

**Where?** Sliperiet, Umeå Arts Campus

**Topic of the day:** How can our knowledge at Teknat best prepare our students for working with the challenges and transitions that face our society?

The programme includes invited speakers, teacher-activating workshops and a discussion in smaller groups.

## Programme

**08.30 – 10.00 INTRODUCTION  
THE CHALLENGES  
HOW KTH MEETS THE CHALLENGES**

Organizing committee  
Eva Friman, Uppsala University  
Hélène Hermansson-Järvenpää, KTH

**10.00 – 10.30 FIKA**

**10.30 – 12.00 TEACHER ACTIVATING WORKSHOPS (CHOOSE 1 OF 4)**

Teaching and learning in an interdisciplinary context  
Jon Moen, EMG

What does society and employers expect from our students?  
Anna Joelsson, Sweco

Teaching and learning critical thinking skills  
Martin Rosvall, Icelab, Physics

External collaboration  
Demian Horst, Linda Bogren, Umeå Institute of Design

**12.00 – 13.00 LUNCH**

**13.00 – 13.30 CHALLENGED-BASED LABORATORIES  
SITUATED PROBLEM BASED LEARNING  
13.30 – 15.00 DEVELOPING CHALLENGED-BASED  
EDUCATION AT TEKNAT**

Fredrik Georgsson, Teknat  
Amalia Katapodis, Tobias Westerlund, UMA  
Group-discussion and fika

**15.00 – 16.00 SUMMARY AND CONCLUDING REMARKS**

Fredrik Georgsson and Jon Moen



# The workshops - brief descriptions

## 1. Teaching and learning in an interdisciplinary context – Jon Moen

All challenges facing society are complex and involve many different perspectives and knowledge areas. Courses that address these challenges will thus have to include knowledge from many different disciplines. Given that each of us is only an expert in some area, how do we address this knowledge complexity as teachers? What are the skills that we need to give the students so that they will function efficiently in interdisciplinary teams at their future work places? Based on a short introduction these issues will be discussed at the workshop.

## 2. What does society and employers expect from our students? – Anna Joelsson

Based on some introductory remarks on qualifications, mindsets and knowledge students need to have to be attractive for the employers in the future we will explore where we end up when we leave the safe-box of our disciplines, skills and knowledge. We will do an exercise where each one of us can reflect on how our specific knowledge can meet the United Nations development goals.

## 3. Teaching and learning critical thinking skills – Martin Rosvall

Can you tell whether a news article is trustworthy and explain why or why not? How can we better teach how to think critically about the methods that provide evidence in the sciences? The workshop will be a mixture of Martins reflections and experiences and discussions in smaller or larger groups.

## 4. External Collaboration – Demian Horst and Linda Bogren

From successful to not so successful stories, an open-minded discussion about how to get the best out of our future opportunities to collaborate with external partners. The workshop will be a mixture of experiences at UID and discussions/presentations of own experiences in smaller or larger groups.

## The speakers:

**Eva Friman** is the Director of the Swedish International Center of Education for Sustainable Development, SWEDESD, and a Research Fellow at CSD Uppsala. <http://katalog.uu.se/empInfo/?id=N5-338>. She will give a plenary seminar about the challenges that society and our student will meet in the near and more distant future – and discuss why this needs to be considered at Universities.

**Hélène Hermansson-Järvenpää** works together with the deputy vice Chancellor Göran Finnveden at KTH Sustainability – see more information about KTH policies and efforts here <https://www.kth.se/en/om/miljo-hallbar-utveckling/miljo-och-hallbar-utveckling-1.448091>. She will give a plenary seminar about how KTH integrates sustainable development in their education, and how and why technical universities can be/needs to be a part of “the solution”.

**Jon Moen** is a professor at Ecology and Environmental Science (EMG) and has a long experience of interdisciplinary research. Read more about Jon here <http://www.emg.umu.se/english/about-the-department/staff/?uid=jomo0002&guiseld=77836&orgId=1901f068f18a6b029e06aa53be2985d2a042a032&name=Jon%20Moen>. He will lead one of the workshops.

**Anna Joelsson** is a former student (Alumn) at our faculty “cvilingenjör i teknisk fysik” working with sustainable city development at SWECO in Umeå. Read more about Anna as Alumn here <http://www.alumn.umu.se/intervjuer/anna-joelsson/> and about the consulting company SWECO here <http://www.sweco.se/om-oss/>. She will lead one of the workshops.

**Martin Rosvall** is a lecturer Physics and one of the founders of IceLab and has thought a lot about critical thinking. Read more about Martin here <http://www.physics.umu.se/om-institutionen/personal/?languageld=-3&uid=maro0001&guiseld=255357&orgId=c5b62378a9ad595a4a41ac5dfd7de0cb50307a5b>. He will lead one of the workshops.

**Demian Horst & Linda Bogren** work at Umeå Institute of Design (UID) where external collaboration is integrated in almost all courses and one of reasons for the Schools success and good reputation. Read more about Demian and Linda here: <http://www.uid.umu.se/demianhorst> and <http://www.uid.umu.se/lindabogren>. They will together lead one of the workshops.

**Fredrik Georgsson** is Utbildningsledare at our faculty but also involved as a board member and other networks comprising engineering education representatives in both Sweden and Europe. He will present snapshots from Challenge-based laboratories at other Universities.

**Amalia Katapodis & Tobias Westerlund** work at Umeå School of Architecture (UMA) <http://www.arch.umu.se/sv/>. They will present how the architecture students learn how to find, formulate and solve problems.