



SCHOOL OF ENGINEERING SCIENCES IN CHEMISTRY, BIOTECHNOLOGY AND HEALTH

CBH News

No 19, December 2018

2018-12-04

At the end of last week, a conference on development was held at CBH with the contact network for the foundation year programmes in Sweden. The conference had 63 participants from 17 different universities. The purpose of the conference was to give examples of how teaching and examining in the foundation year programmes takes place in different universities, and broaden the contact areas between the universities that are in giving foundation year studies. Conference participants also had the opportunity to expand their network in the foundation year teaching and gain inspiration.

Foundation year programmes was introduced nationally in 1992 and had targeted funds until 1997. Since then, foundation year programmes are competing for educational grants with the «standard» educational programs in the university. Studies which KTH and Blekinge Institute of Technology presented during the conference show that the students from the founding year programmes who enter our degree programmes performs better than the students who enter with grades from high school or college entrance examinations. The students from the founding year programmes studies an average of 7.5 credits more per semester and they have fewer study breaks. We can also see that we are broadening our recruitment from other high school programs and from families with non-academic background.

The student completion rate is higher among foundation year students in our MSc programs. Not only have they learned more math, physics and chemistry during the foundation year, they have also received a smooth transition to university studies through the foundation year. That is something we could learn when we are considering actions in our MSc programs to improve student completion. Many thanks to our lecturer Ingemar Jerling and all CBH teachers who made a great effort to make the conference very successful.



Mikael Lindström
Head of School

Do you have news tips?

Send it to CBH News!

All news tips for CBH News should be sent to

cbh-nytt@cbh.kth.se

All contributions must be in by 12.00 on Monday the same week as CBH News is published in order to be admitted. See the current deadline at the last page.



Christina Divne - CBH's new director of third-cycle education (FA)

Tell us a little about what you work with at CBH

– My work includes research, supervising doctoral students, teaching, administration and various commissions. During CBH's first year I have also acted as the deputy director of third-cycle education, vice FA, for two of our doctoral programs. My research group consists of four people, two of whom are PhD students, and another PhD student will join us in January next year. Briefly, my research concerns understanding how proteins work based on information about their three-dimensional atomic structure. This type of information is for instance needed for rational protein design and engineering. The atomic structures are determined by the experimental method macromolecular X-ray crystallography.

How do you feel about being appointed the CBH director of third-cycle education, and what made you want to take the role?

– I feel honored, and very humble about the duty and responsibility that comes with the role. The decision to accept the offer felt quite natural since I have always been interested in issues related to education. During the past year with the new school organization, I realized that there is a lot to do in the third-cycle education at CBH. In the role as FA, it becomes easier to survey the organization and influence decision-making. I think that the benefit of having worked with research, supervision and teaching at three different Swedish universities can make it easier to see new opportunities and solutions.

What does it mean to be FA? What do you do?

– FA has an overarching responsibility for the third-cycle education. We have nearly four hundred doctoral students at CBH so it is a major responsibility. As FA, one should work with KTH's management, program directors (PA), and the education administration (UA). The list of tasks is extensive, but in short it entails to take a number of decisions related to the third-cycle education, to ensure quality of the education, to disseminate information, and to deal with conflicts between doctoral students and supervisors that sometimes arise.

You have now been vice FA for almost a year, what conclusions can you draw after this time?

– It has been an enlightening year. The current FA has put a lot of effort and dedication into trying to land the third-cycle education as smoothly as possible in the new school organization, and not least our administrators have worked very hard and made an outstanding effort. It is my hope that we are now in a position where we can focus more on forward-looking and visionary activities over the coming term, rather than just keeping operations afloat.

Full interview at [intra.kth/cbh](https://intra.kth.se/cbh)

Read the full interview at <https://intra.kth.se/en/cbh/nyheter-och-handelser/nyheter/intervju-med-christina-divne-forskarutbildningsansvarig-1.862637>

Congratulations Armin and Peter, who have received the award “Teacher of the Year” from the THS union’s chapters.

This year is nearly over, and the THS union’s chapters want to pay attention to teachers who they think have done a great work. Two of the CBH teachers who have received the award “The Teacher of the Year” are Armin Halilovic and Peter Dinér.

The chapter for Medical Engineering recently awarded Armin Halilovic, for his great commitment to both his own courses and all students in the program.

The Chemistry chapter has the pleasure to announce that Peter Dinér will receive their award as the teacher of the year. This is based on his good teaching ability and structure of the courses KD1230 and KD1270. The motivations concern, among other things: Engagement in the course for the students to fully learn the content, as well as the inclusion and application of digital resources in the teaching.



Armin Halilovic received his award at the MiT- chapter’s dinner for teachers earlier this fall.



Hello Peter Dinér,

What does it mean for you to get this price?

– It’s great fun to get the chemistry chapter’s award as the teacher of the year. In recent years, I have been strongly involved in all teaching in organic chemistry and it means very much that the students appreciate the effort that has been made. The best part about the price is that it comes from the students themselves who are directly “exposed” to my teaching. Naturally, I would also like to thank the other teachers involved in the courses and make it possible to give such good courses as possible.

Is there any part in the motivation that pleases you extra?

– In recent years, we have worked quite a bit to develop pedagogy mainly on the basic courses in organic chemistry, for example by introducing green chemistry into the laboratory courses and using digital resources in teaching. Since I started at KTH, I have stopped using the “board” but instead project the drawing from an Ipad. This makes it possible to record parts of lectures and to easily return to what was written earlier in the lectures. This is something

that the students appreciate alongside the moments in our courses (lectures, exercises, and laboratory work) are well-connected.

What do you think makes a good teacher?

– The most important thing as a teacher is to show commitment to the subject and the students, and that there is a clarity in the course structure. If there is a positive attitude among the students for the course, this greatly facilitates their learning. Our students are very talented and if you get them interested, your education will be more fun. A good example of this from my study time at the University of Gothenburg was Åke Nilsson, an incredibly engaged teacher in organic chemistry. He showed a great commitment to the students and was a very good teacher, which created a very good learning environment for his courses.

Internationalisation



CBH students visited KU Leuven

In November, a delegation of three CBH students was invited for four days to KU Leuven in Belgium in order to discover the city, the university and inspire CBH students to come for an exchange to Leuven (and the other way around). KU Leuven offered to the students: accommodation, a bike and meals during their stay in Leuven. The flights tickets were covered with Erasmus grant by our school CBH.

This invitation was the results of our new agreement with KU Leuven. Last spring, KTH received a delegation from KU Leuven. At this occasion we decided of a new Erasmus agreement in the field of Chemistry, Biotechnology and Health. Professor Christophe Courtin, Vice Dean of the Faculty of Bioscience Engineering, visited CBH and met several of you in Polymer Technology, Energy processes, Glycoscience and Neuronic Engineering. We had a presentation of our respective study programmes, research, a visit of the Greenhouse Labs and the campus in Valhallavägen and Alba Nova.

The programme of the delegation included a guided tour of Leuven and Brussels, diner with faculty officials, participation at the Go Global fair of KU Leuven, visit of a research Lab of their interest, workshop with student organizations and experience of the student life in Leuven with games and party. Our students chose to visit the Centre for Surface Chemistry and Catalysis, the Medical Imaging Research Center and the Centre of Microbial and Plant Genetics.



Places for students and staff

Our agreement with KU Leuven offers places for **students and staff** at the faculty of Engineering Science and the Faculty of Bioscience Engineering.

We are pleased of this strengthen collaboration with Leuven that give our students reliable programmes matching with the one of our school with possibilities for broader specialization and we hope for a fruitful development in research too.

For further information contact your international coordinators:

David Grenot, grenot@kth.se

Zofia Laine, zofial@kth.se

News from the group for Gender Equality, Diversity and Equal Treatment

At the latest meeting of the group, the following priority issues were discussed:

- » Broadening the base for future recruitment: Information required to qualify for applying for faculty services, as well as encouragement and tips on how to gain merit.
- » Diversity of invited speakers: To take into consideration the entire area when inviting seminars, courses, industry representatives, panels, etc.
- » An including student reception - how do we work with these questions?
- » Respect for diverse functions - everyone contributes to KTH's development
- » Attention to holidays and festivities in a multicultural perspective
- » On CBH's website, we should list where we have toilets, any quiet rooms, etc.

CBH:s Impact managers

The education and research carried out within CBH has left a great mark on the surrounding community, which can be termed impact. KTH has been running a project since 2012, which systematically works to show KTH's impact in both research and education. Work at the schools is run by Impact managers and since the merger, CBH has received two new Impact managers: My Hedhammar and Bertil Guve.

KTH systematically works with impact in order to measure and, in the long run, strengthen our contribution to society. The project is led by a project leader who, along with appointed Impact managers at each school, drives the work forward.

- To show impact is becoming increasingly important, both for KTH as a university and individually for researchers. As a researcher, for example, you can see it in applications, which are

increasingly expected to describe expected impact, says My Hedhammar.

In order to strengthen and provide researchers with the right tools to boost impact work, CBH, together with the Research Office, will have a workshop series starting after New Year.

- Strengthening Impact work is also done by finding new forms of cooperation that open up new opportunities. We will work to try to show opportunities within CBH, says Bertil Guve.

If you want to know more about Impact work at CBH, there is a page on the intranet <https://intra.kth.se/cbh/arbetsplatsen/impact> where you can also find contact information for My and Bertil. There will also be forthcoming activities published. You will also get information via CBH news.

In addition to My and Bertil, Josefin Illergård also works as a communicator in the project.

What is impact?

The word impact is defined as an effect, change or benefit to the economy, society, culture, policy or services, health, environment or quality of life beyond the academy. For example, it may be discoveries in the research that form the basis of a current patent

Workshop series with Research office

On 22 January and 5 February, a workshop series about Personal Impact Plan will be held, which is a tool that will help you as a researcher to strengthen and clarify your personal impact. The workshops are held 12.00-13.45 on campus Valhallavägen and lunch will be offered to registered participants. More information and registration link will be available.

Happenings at the School

Noden goes on Christmas leave

Noden will be closed 21/12 2018 - 4/1 2019.

If you need help with catering, travel bookings or purchase of office supplies, this needs to have reached us on December 14 at the latest for delivery before Christmas or immediately after the Christmas holidays.

Best regards,
Nils Lenart, Johanna Nyholm och Sandhya Hagelin



Welcome Lina Torenstam!

How does it feel like having started at the CBH school?

- It feels fun and exciting!

What are you going to work with?

- I will help in Noden at Teknikringen and AlbaNova, and in the student expedition in Flemingsberg. I will help with orders, organisation, student expedition and generally work as an extra hand where needed.

Where do you come from?

- I graduated from the Södra Latin high school this spring. In addition to that, I have been working at Burger King for two years.

What are you hoping can achieve in your new role?

- Help as much as I can where it is needed to make it easier for my colleagues.

The economy department informs

Datum	Aktivitet
5 dec	Deadline for submission of billing for 2018. Send email to faktura@cbh.kth.se
14 dec	Last day to economically attest transfers
27 dec	Last day to economically attest internal invoices
4 jan	Last day to economically attest external invoices

Note! You can no longer attest invoices on mobile phones and reading devices. Only computer works.

Do not forget to enable replacements in EFH if you can not attest invoices yourself during your vacation. If you need help, please contact faktura@cbh.kth.se

The economy department wishes a Merry Christmas and a happy New Year!

An Experimental Study to Understand the Localized Corrosion and Environment-Assisted Cracking Behavior of AISI 420-Martensitic Stainless Steel

Krishnan Hariramabadrán Anantha,
Yt- och korrosionsvetenskap

Disputerar

Fredag 14 december, kl. 10.00.
F3, Lindstedtvägen 26.

What is your dissertation about?

– It is about an experimental study to understand the localized corrosion and environment-assisted cracking behavior of martensitic stainless steel.

Does it have any connection to KTH's sustainability work and the global sustainable development goals?

– Studies related to corrosion are intrinsically related to the sustainability of the material/structures. I have written about sustainability in my PhD thesis in the introduction section. But I am not sure whether it is related to the KTH's sustainability work or the global sustainable development goals

How can your results be used in the future?

– My results can be used to optimize existing alloys for better corrosion resistance. Also it can be used to recommend heat treatment cycles for heat treaters.



Upcoming defences of dissertations

7 December, 10:00, Sal F3, Lindstedtvägen 26, KTH
Polymer extraction and utilization of brown algal biomass
Fibre and Polymer Science
Doctoral Student: Martin Sterner, FPT

7 December, 13:00, Sal T1, Hälsovägen 11, Flemingsberg
Change agents and use of visual management tools in care process redesign – implications on working conditions for operative managers and healthcare professionals
Technology and Health
Doctoral Student: Anna Williamsson, MTH

Dissertations

7 December, 14:00, Kollegiesalen, Brinellvägen 8, KTH

Recovery of Rare Earth Elements from an Apatite Concentrate

Chemical Engineering

Doctoral Student: Mahmood Alemrajabi, KET

7 December, 14:00, Sal F3, Lindstedtsvägen 26, KTH

Antimicrobial materials from cellulose using environmentally friendly techniques

Fibre and Polymer Science

Doctoral Student: Anna Ottenhall, FPT

10 December, 10:00, Sal T2, Hälsovägen 11, Flemingsberg

Wearable Solutions for P-Health at Work: Precise, Pervasive and Preventive

Applied Medical Technology

Doctoral Student: Ke Lu, MTH

11 December, 10:00, Sal T2, Hälsovägen 11, Flemingsberg

Novel Analysis Toolkit for Capillaroscopic Images; Development and Clinical Evaluation

Applied Medical Technology

Doctoral Student: Abdolamir Karbalaie, MTH

14 December, 10:00, Sal F3, Lindstedtsvägen 26, KTH

An Experimental Study to Understand the Localized Corrosion and Environment-Assisted Cracking Behavior of AISI 420-Martensitic Stainless Steel

Chemistry

Doctoral Student: Krishnan Hariramabadran Anantha, CHE

14 December, 13:00, Sal T1, Hälsovägen 11, Flemingsberg

Activity-based Flexible Office work environments - design and implementation processes and outcomes

Technology and Health

Doctoral Student: Linda Rolfö, MTH

14 December, 14:00, Sal F3, Lindstedtsvägen 26, KTH

Valorization of Kraft Lignin by Fractionation and Chemical Modifications for Different Applications

Fibre and Polymer Science

Doctoral Student: Selda Aminzadeh, FPT

The next issue of CBH News will come out in week 51. The deadline for making contributions is on December 17 at 12.00.

Editor: Sabina Fabrizi, sabina@kth.se