

IFT-POSTEN

NYTT FRA INSTITUTT FOR FYSIKK
OG TEKNOLOGI
UNIVERSITETET I BERGEN



Department Head's Intro

We have let behind us a couple of days where we got the chance to get acquainted with the elements. I have to report that my facade got a bit modified on the balcony after Nina's visit, as well as having had the privilege with many others of feeling the joy once the electricity is reconnected after both the weekend and several weekdays. Some say it was really difficult being without heating, while others were more focused on the most valuable side of having electricity, namely the loss of the wireless Internet. In my electrified everyday life, I would like to send some warm and grateful thoughts ca. 200 years back in time to Michael Faraday and his work in basic physics which gave us a sensible method for generating electrical current.

Back to the present time, it is nice to establish the fact that ten years after UNESCO Year of Physics, we are again back on the track with marking the international year for light, and light-based technologies. If anyone would like to contribute to IFT-posten with articles on light as informative curios throughout the year, it would be well appreciated. As an example, I am publishing here a photo of my façade-modified balcony where one is on the way toward the blue hour. The light-related question is therefore why is this hour blue?

You can send your answer to IFT-posten.

Have a nice and lightning-free weekend,

Øyvind

<http://www.light2015.org/Home.html>



Photo: UiB

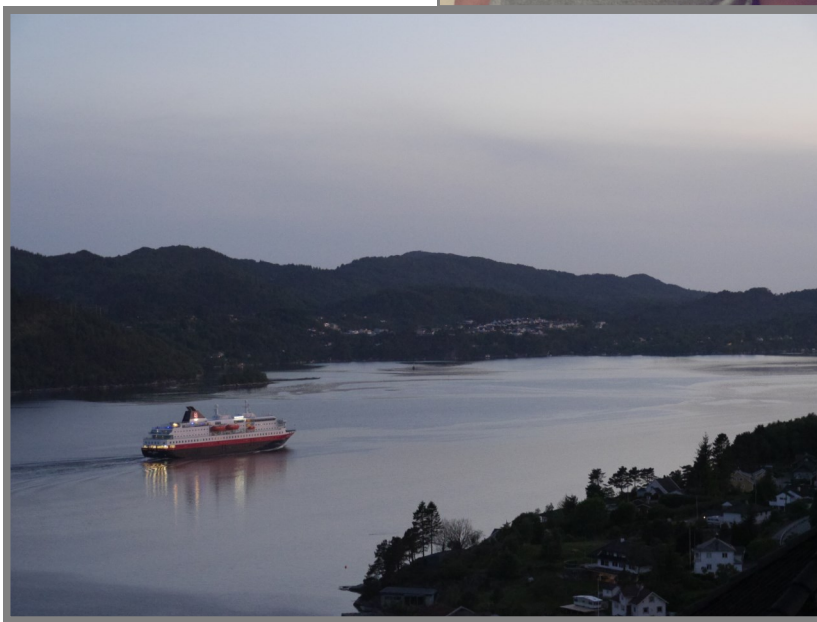


Photo: Øyvind Frette

Important information from the Financial Services at UiB

We would like to remind all of you with a time-defined work contracts (mostly students) that the lists with the number of worked hours should be delivered continuously – latest by the 15th of each month. [Here's a new form](#) for work paid by the hour. **Students who are getting paid by the hour should also remember that they need to have a valid contract upon starting the work.** Please contact Elin Pedersen from the Administration if you have any questions related to this.

Important: Travel expenses must also be delivered right upon the completion of your travel. Travel expenses should be delivered latest one month upon your return. Always remember to sign your travel expense reimbursement form - it must also be signed and authorized by your supervisor.

The reason for these changes is that the government has introduced stricter rules, starting as of January 1st, 2015.

If you are using the flexi form, [the new form for 2015 can be found here](#).



PhD – Trial Lecture

Msc Jef Snoeys will hold the following PhD trial lecture:

Given topic:

CO2-blowouts and handling in the petroleum industry

Time: Tuesday, January 20th, at 10:15

Place: Room 546, Bjørn Trumpys house, Allégaten 55



PhD – Trial Lecture

Msc Angela Gligorova will hold the following PhD trial lecture:

Given topic:

Two photons into one - Nonlinear Interaction between Single Photons

Time: Tuesday, January 20th, at 14:15

Place: Room 366, Bjørn Trumpys House, Allégaten 55



Master Thesis Presentation

Øystein Grøndahl will hold a Master thesis presentation in Space Physics, by the following title:

High voltage electrical discharges in the laboratory

Time: Tuesday, January 20th, at 12:15

Place: Room 366, Bjørn Trumpys House, Allégaten 55

His supervisor was Nikolai Østgaard from IFT.



PhD-funds for researcher education

Candidates attending the PhD program at the Department of Physics and Technology can apply for funds aimed at activities supporting researcher education. Applicants must be registered as PhD-students in the current semester in order to apply. Applicants without the external financial support (Quota, University-funded research assistants, self-financed PhD students) will be prioritized. You may apply for funds for the following activities:

- A) Research stay at one of the universities or research institutions outside Norway
- B) Participation in advanced courses, workshops, symposium, conferences, etc. (NB! Does not include the conference fee itself)
- C) Purchase of tutorials/ lectures at PhD level
- D) Participation in courses/subjects/field courses which result in study points and which are a part of the studies
- E) Research courses in natural sciences

The activity must be completed by August 15th, 2015.

[Download application form](#) and submit it or send it to Anders B. Kulseng (room 354) within the assigned deadline, **February 15th, 2015.**



Informative meeting on Organization Development Project at UiB

The aim of the Organization Development project at UiB is to develop the central administrative services in such a way that they provide the best possible support to the university's tasks of research, education and outreach.

All employees are hereby invited to the informative meeting about the first reports from the Working Groups of the Organization Development Project. The meeting will take place in the Student Centre's Egget, on Monday, January 26th, from 13:00 – 16:00.

At the meeting, the leaders of the six first part-projects present the Working Groups recommendations, and there will also be a plenty of opportunity to come up with your questions. A more detailed program will be available from the Project's web pages prior to the meeting.

We will also serve a simple lunch at the entrance to the Auditorium. For practical reasons, we would like to remind all employees planning to attend this meeting to register for it latest by January 22nd.

[You can register at this link.](#) We would like to remind you that the information about the project and on Working Groups' reports can be obtained from Project's web pages: www.uib.no/ouprosjekt

Welcome!

Best regards

Kari Fugleseth, Head of the Project



Reports from the Part-Projects

[Orientation about the reports](#)

[Ou-4 This is how we recruit the best talents](#)

[Ou-5 Digital Services- Simplify, renew, improve](#)

[Ou-6 Service and quality in the Central services](#)

[Read more here](#)

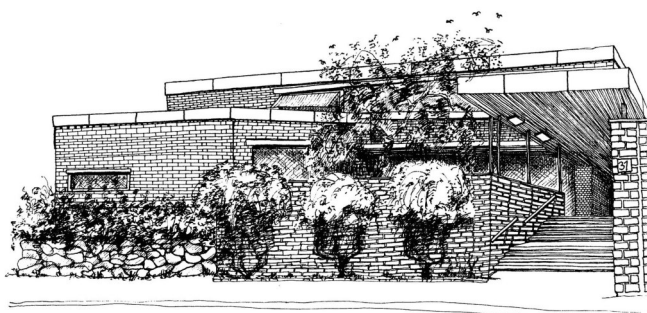
UiB-Office space available in Oslo

As of January 8th this year, the UiB employees can use the UiB's own meeting room and office spaces in Oslo.

UiB is renting seven offices and two meeting rooms, which are at the disposition of all UiB employees who have the have the need to use them. The offices are located by the Vigelandsparken, in the same building as the Institute for Social Studies.

If you would like to book an office or a meeting room, you can book it [here](#) or read more on where and how, or you can book it via [Andre Almås Christiansen](#) at UiB's Oslo office.

[You can read more at this link](#) about the Oslo offices at UiB's web pages. [Read also the article](#) in *På Høyden*, and in *Bergensavisen*.



UiB's Oslo offices are located in the building of the Institute for Social Studies in Munthes gate 31.

Illustration: ISF, UiO

No longer at IFT? Would you like to continue receiving IFT-posten?

If you would like to continue receiving IFT-posten after completing your studies or work contract at IFT, or you know someone who would like to be on our mailing list, feel free to send an e-mail to ift-posten@ift.uib.no.



You or somebody you work with can now become a mentor

Scientific fields at the Department of Physics and Technology are invited to propose mentors for a mentor project organized under [Balanse Bergen](#), a collaboration project between UiB, Høgskolen i Bergen and Institute for Ocean Studies.

The project is run by the University Of Bergen, and Vice Rector Anne Lise Fimreite is the head of the Management Board. «Gender Balance in Top Professional Positions and Research Leadership (BALANSE)» has been established as a unique program within the Norwegian Research Council since 2013. The main aim is to improve the gender balance at senior level in Norwegian research via new knowledge, learning and innovative measures. The vision is to become the best in Europe when it comes to gender balance in top scientific positions and research leadership.

The mentor project is planned to take place over a period of one year, and does not require much time on behalf of the participants.

Deadline: January 26th (extended from December 20th). [Read more at this link](#).



Prorector Anne Lise Fimreite
Photo: UiB

Announcement of research funds - Peder Sather Grant Program

The aim of the [Peder Sather Center](#) for Advanced Study is to strengthen the research cooperation between UC Berkeley and the eight Norwegian universities participating in the Centre, University of Bergen among others.

Funds are announced via the Peder Sather Grant Program, aimed at research cooperation within all academic fields. The program grants between 10 000 - 25 000 USD per project.

Application deadline is March 2nd, 2015. [Announcement of Peder Sather Grant Program](#)



A lot of Norwegian scientists want to collaborate with Berkeley. [Read more in this article](#) in the Internet News Bulletin *På Høyden* (Norwegian only).

Information: Fire Safety Course for all employees

All UiB employees should have attended the Fire Safety Course, in both theory and practice. This is stipulated by the Fire Safety Law and the paragraph on Health Environment and Safety (HES). Fire Safety Course lasts for two hours, with one hour dedicated to theory and one to fire extinguishing in practice.

UiB has hired Teknisk industrivern AS to lead this course. Cost per participant is 260 NOK, which will be covered by the employees' respective departments. NB! Billing will be done in accordance with the numbered of registered participants, regardless of whether they show up or not.

Registration for IFT employees should be done via Head of Administration [Grete Kvamme Erslund](#), who then forwards the generated list to Teknisk industrivern. The course will take place in Seminar Room B, Student Centre, Parkveien 1. The practical fire extinguishing will take place in the open area behind the Student Centre. In case there are many participants from the same department, Teknisk industrivern can also come to your work place. The course will take place with 20 - 25 participants in each group.

NB! These courses tend to book pretty fast, so don't wait too long with your registration.

Dates:

Thursday, March 5th, from 09:00 – 11:00.

Thursday, March 26th, from 09:00 – 11:00. **NB! In English.**

Thursday, April 16th, from 09:00 – 11:00.

Thursday, May 21st, from 09:00 – 11:00.



Foto: UiB

COMSOL Multiphysics simulations in research and teaching

Thursday, January 22nd, we are arranging a seminar at UiB with focus on simulations in research and teaching. Our aim is to show several examples from research and teaching as well as to give an insight into what makes COMSOL Multiphysics special in such cases. On our team we have Nils-Otto Kitterød from NMBU who is going to present some of the work he had done in COMSOL Multiphysics with groundwater around Bryggen in Bergen.

Programme, UiB - IFT, Allégaten 55, room 456:

09:15 – 10:00: Introduction to COMSOL Multiphysics with examples from education sector

10:00 – 10:10: Break

10:10 – 10:30: Nils-Otto Kitterød: Groundwater in urban areas, modeling of Bryggen in Bergen

10:30 – 11:00: Introduction to COMSOL Application Builder, create simple applications to be used in teaching

11:00 – 13:00: Session where you can try out COMSOL and COMSOL Application Builder (bring your own laptop)

You can find a bit more information at the registration web page:

<http://comsol.no/c/1if7>

Hope you can find time to participate.

Best regards.

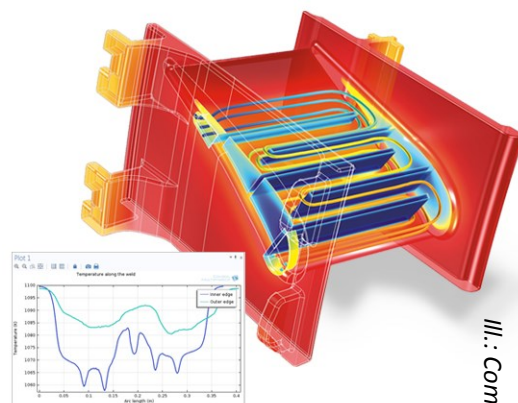
Bertil Nistad, PhD

Sales Manager

COMSOL AS

Tel: 7384 2400

www.comsol.no



Ill.: Comsol



PhD Research Assistant Mathias Sæther Acoustics Supervised by Per Lunde and Geir Erslund

When somebody asks me who I am, the most precise answer would be Mathias, male. We all take up many different roles in various situations. I am a rather energetic guy and believe that it is a bit of a paradox since I became a physicist, since sitting in one place is by all means not my strongest side. After (or before) work, I try to have it as active as possible. Once upon a time, football meant everything. I was not the best with the ball, but I was the one who ran the most. Most boys understand at some point why football is not everything. Nonetheless, it is still well imbedded in me to give my best when it comes to sports. This is not necessarily always an equally good quality.

Although I never liked to sit for too long, I have always been very curious when it comes to the nature that surrounds us and to ask the question “what” until it gets to the point that people have no answer. This resulted in me engaging in physics, which is also one of the things I never regretted. I feel I have made the right choice at least when it comes to that. I play guitar in my free time, and when it was the time to choose a Master, acoustics seemed the right way to go.

If I was to put it in a few words what I’m working on, it would have to be with the formula $\text{distance} = \text{speed} * \text{time}$. The speed means the speed at which the sound travels, and distance tells us how far it travels in time. This may sound very simple, but the possible challenges arise. Much of the time goes to setting up and conducting lab experiments, and in getting the computer to respond to various measuring instruments. The data collected in the experiments must then be processed and analyzed, often via the horrible Fourier transformation. Then comes the time to write the computer program which can do an efficient job, which is often a rather frustrating process. I usually say that the work of a physicist is rather absurd. You use a lot of time on things you don’t understand. At the very moment when you have understood something, it is about time to find something new that you do not understand.



”To make sure the students will succeed”

By Harald Åge Sæthre

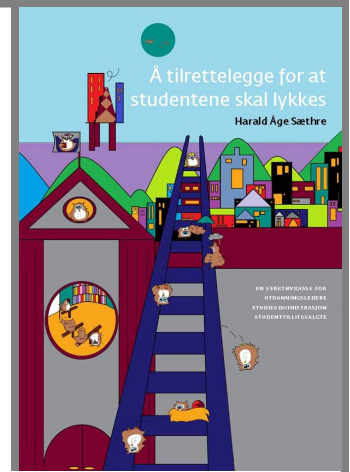
42 percent of all students never complete higher education, show SSB statistics. For those this refers to, this means a lot of wasted time, wasted money and often involves a feeling of personal failure. For the society and the educational facilities, this leads to certain costs. Ten years have passed since the Quality Reform had been introduced, but the number of dropouts is equally high as back in time, and has in fact been stable since Reform’s introduction. The number of dropouts can be reduced, but it requires a new approach to the issue.

Last week saw the publication of the book entitled “Å tilrettelegge for at studentene skal lykkes” (To make sure the students will succeed). The book deals with the subject of which possibilities one has at one’s disposal in order to reduce the number of dropouts from higher education, and it also discusses a number of myths linked to this issue. The book’s starting point is based on American research, with examples from Norway and Bergen.

The book is written by Harald Åge Sæthre, who works as councilor and project leader in Student Administration of the Faculty of Mathematics and Natural Sciences.

Web newspaper *På Høyden* published last week an article on [book launch](#), and [here is an article](#) on the subject of dropouts.

[You can read the book review here](#), as well as download the summary.



Physics student Sandra takes customer services in her part-time job one step further...

Philips Home Living Vat

 **Rickard Bergman**
 "Philips rakapparat rör sig i 8 dimensioner för perfekt resultat."
 Behövs verkligen det när man bara har ett tredimensionellt ansikte? Tror mig aldrig ha varit orakad i fjärde till åttonde dimensionerna, men vad vet jag om kvantmekanisk skäggväxt?

Upplever hur som helst mitt skägg som påfallande rumsligt - vilka övriga dimensioner avses i er marknadsföring?

Igår klockan 16:07

 **Philips Home Living**
 Hej Rickard, Tack för att du kontaktat oss 😊
 Det är en intressant observation du gör, och visst kan man fundera kring hur vi använder begreppet "dimension". Vi på Philips strävar efter att ligga i framkant och vi är inte främmande för att inkorporera lite strängteori i vår produktutveckling. Som du kanske vet så finns det grund att tro att det finns hela 10 dimensioner. Det är svårt att veta om du någonsin varit orakad i just åttonde dimensionen eftersom det är ett koncept som bygger på annorlunda ursprungsscenario än Big Bang, och man kan ifrågasätta huruvida det ens finns skägg i den åttonde dimensionen. Men om så är fallet så kommer vi finnas där, för att raka dig. För vidare info: <http://bit.ly/1DPtGT0> Mvh Sandra

H-bar

H-bar is open every Friday from 19.00 - 01.00.

On Tuesdays, every even-numbered week, there are organized pub-lectures at H-bar.

More info at H-bar's [facebook page](#).



Publications

- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Rosendahl, P. L.; Sandaker, H.; Sjurset, T. B.; Stugu, B.; Umland, M.; et al.: Comprehensive measurements of t-channel single top-quark production cross sections at $\sqrt{s}=7$ TeV with the ATLAS detector PHYSICAL REVIEW D Volume: 90 Issue: 11
- Altinpinar, S.; Djuvsland, O.; Fehlker, D.; Haaland, O.; Huang, M.; Loenne, P. I.; Nystrand, J.; Rehman, A.; Rohrich, D.; Skjerdal, K.; Ullaland, K.; Velure, A.; Wagner, B.; Yang, S.; Zhou, Z.; et al.: Measurement of Prompt D-Meson Production in p-Pb Collisions at $\sqrt{s(NN)}=5.02$ TeV PHYSICAL REVIEW LETTERS Volume: 113 Issue: 23
- Saethre, Bjorn Steen; Hoffmann, Alex C.; et al.: Order Parameters and Algorithmic Approaches for Detection and Demarcation of Interfaces in Hydrate-Fluid and Ice-Fluid Systems JOURNAL OF CHEMICAL THEORY AND COMPUTATION Volume: 10 Issue: 12 Pages: 5606-5615
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Rosendahl, P. L.; Sandaker, H.; Sjurset, T. B.; Stugu, B.; Umland, M.; et al.: Measurement of the $t\bar{t}$ production cross-section using e mu events with b-tagged jets in pp collisions at $\sqrt{s}=7$ and 8 TeV with the ATLAS detector EUROPEAN PHYSICAL JOURNAL C Volume: 74 Issue: 10
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Rosendahl, P. L.; Sandaker, H.; Sjurset, T. B.; Stugu, B.; Umland, M.; et al.: Electron and photon energy calibration with the ATLAS detector using LHC Run 1 data EUROPEAN PHYSICAL JOURNAL C Volume: 74 Issue: 10
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Rosendahl, P. L.; Sandaker, H.; Sjurset, T. B.; Stugu, B.; Umland, M.; et al.: Search for new phenomena in final states with large jet multiplicities and missing transverse momentum at $\sqrt{s} = 8$ TeV proton-proton collisions using the ATLAS experiment (vol 10, pg 130, 2013) JOURNAL OF HIGH ENERGY PHYSICS Issue: 1



Useful links

[The IFT Webpages](#)

[Employees at the administration](#)

[Webpages of the Faculty](#)

[The Board of Faculty](#)

[The Faculty- Strategy and Vision](#)

[The HSE Gateway](#)

[Archive of IFT-posten](#)

[The UiB Magazine](#)

The internet News Bulletin [På Høyden](#)

[FAQ A - W](#)

Fagutvalget at IFT: <http://fft.uib.no/> / [Facebook](#)

[UiB internal phonebook](#)

[Employee pages](#)

[PagaWeb](#) (Your current job)

[BRITA](#) (IT-support)

[LYDIA](#) (transport)

[SEBRA](#) (user account)

[The Campus Bus](#)

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[Vacant positions at UiB](#)

Contact the editor / editorial of IFT-posten: anders.kulseng@ift.uib.no / ift-posten@ift.uib.no



[Bjørn Trumpy, 1900 - 1974](#)



[Bjørn Trumpys hus](#)



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