# IFT-POSTEN NYTT FRA INSTITUTT FOR FYSIKK OG TEKNOLOGI UNIVERSITETET I BERGEN

THE HEAD OF DEPARTMENT

WEEK 37, 2014

We have received a proposal for changing the name of our faculty. The proposed name is: Faculty of Mathematics, Science and Technology. The goal of changing the name is to make visible the great number of technology-oriented activities at our faculty. This topic will be addressed at the next council meeting, which takes place on September 29th, and those of you who have views on this topic are thus encouraged to discuss those views with the members of the Council ahead of the actual council meeting.

Furthermore, we would like to congratulate Jan Petter Hansen and Jan R. Lien on their new book which we would like to recommend to all of you. Read the review on page 3.

For all the fresh students: Don't forget the Semester Start Party, which is a welcoming party for all new Bachelor students of physics, petroleum and process technology. Information on this can be found on page 6.

Otherwise, we remind you to send in suggestions for the Photo of the Week. According to the rumours, Anders' inbox has not been overstuffed over-eager contributors.

#### Have a nice week,

Øyvind

### CONSULTATIONS - PROPOSAL ON NAME CHANGING FOR THE FAC-ULTY OF MATHEMATICS AND NATURAL SCIENCES

The Faculty board wishes to make visible the technology part in the formal name of the Faculty, in addition to mathematics and natural sciences. An example of a possible name would be (in Norwegian) *Fakultet for matematikk, naturvitenskap og teknologi* («MNT-fakultetet»). A possible English version of the name could then be the *Faculty of mathematics, science and technology.* The Faculty board's view is that the proposal on name change should be discussed widely, so that all the arguments – both pro and contra– be clarified before the faculty board passes its decision on what name should the faculty bear.

Consultation deadline is on Wednesday, October 22nd 2014. <u>For more information, read the consultation an-</u><u>nouncement.</u>

# Følg oss på Facebook

#### **PHD - DISPUTATION**



**Bergit Brattekås** will hold a PhD disputation by the following title: *Conformance Control for Enhanced Oil Recovery in Fractured Reservoirs* Friday, September 19th, at 13.15 in Auditorium 2, Realfagsbygget.

Arne Graue, IFT, Randall S. Seright - New Mexico Institute of Mining and Technology and Martin Fernø, IFT, have been her supervisors.



#### **DISPUTATION BEFORE CHRISTMAS?**

We would like to remind you of the last deadline for submitting your PhD thesis to the department, if you intend to have your disputation during this semester, is Monday, October 13th. Your supervisor should have a list of suggested opponents at the moment of submitting the thesis. The last possible disputation date before Christmas holidays is Thursday, December 18th.

#### **CHRISTMAS PARTY 2014**

This year's Christmas Party at IFT will take place on Friday, November 21st. Book this day already today! Registration details will be provided later.

# · Clady

#### UOB'S LANGUAGE POLITICS COMMITMENT: AIR OUT OF THE BALOON - OR FRESH WIND IN THE SAILS?

The University Board adopted in 2007 a language politics strategy based on committee settings "Both worlds". UoB thus bonded with a number of Norwegian universities and colleges which passed similar strategic documents in the period between 2006 and 2010. This tendency was characterized as promising, but critical voices now claim that the support had stagnated in the entire sector.

Language services at UoB, Staff and Organization department, would now like to invite you to a seminar the aim of which is to define the status of UoB's language politics support and discuss how to give it some fresh wind in the sails. It is natural to view this in correlation with UoB's strategic processes 2016 - 2022. The important questions are among others:

- In which ways can parallel language skills be combined with increased internationalization?
- How can UoB improve the language skills of its employees and students in other languages than English?
- What should be UoB's superior goal for the use of English or other foreign languages in teaching and research?
- Which demands should be placed ahead of the organization and its individual employees, and how do we ensure proficiency in Norwegian as course language?

Date: Monday, September 29th, 2014

Place: Faculty of Law, auditorium 4

The seminar starts with a lunch at 11.15 and ends at 15.30.

Does this sound interesting to you? You can read more Here about the programme and registration.

**BOOK LAUNCH:** With a global population growth approaching 10 billion people, sufficient energy for all is probably the greatest challenge facing our civilization today. In fact, it is more pressing than other global issues since energy supply, particularly from sustainable resources, is a precondition for solving all other bigger issues. Think, for example, of the problems of ensuring that everyone has enough food and water: both food and drinking water would be produced in sufficient amounts if there is enough energy available for the production.

The problem with sustainable global energy supply is rather urgent, for at least three reasons: 1) Population growth and the improvement of living standard in developing countries alone calls for increased energy supply.

2) Extraction of fossil resources (and potentially a crisis when the global demand for oil no longer can be covered by the oil producing countries) will undoubtedly happen in foreseeable future.

3) Increased global warming is an imminent issue, and will again probably reduce our planet's capacity to provide for the increasing number of population.

<u>Energy, Technologies and Economics</u> is the first and only book of its kind, and forms a foundation for a popular subject for many Master students in energy studies and economics. <u>Jan Petter Hansen</u>, Professor of physics at IFT, has together with PhD <u>Patrick Narbel</u> of <u>Sund Energy</u> and Professor Emeritus <u>Jan R. Lien</u> written this book which covers the physics principles behind the majority of the common energy resources on our planet, in combination with estimates on how large the useful resources are. These aspects are combined with an economic analysis of how

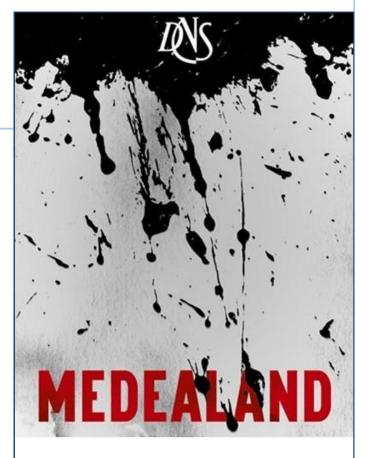
much resource exploitation actually costs us today, and how much it could cost us in the future. The book is written at an accessible mathematical level, which makes it readable also for readers without a background in economics, physics or engineering can read it. You can read a summery here.

#### WELFARE OFFERS FROM UOB

#### Biff gives away free tickets to UoB's employees

Get the BIFF viewing of the movie «Ivory Tower». This is a closed projection for UoB employees in KP1 on September 23rd, at 17.00. The movie "Ivory Tower" is an interesting and recent movie which among other things deals with university politics, MOOCs (Massive Open Online Courses) and the value of education. The tickets will be available as september 12th. Upon showing your UoB employee card at the ticket office at Konsertpaleet, you can get 2 free tickets.





Date: Monday, September 22, at 19.30 Tuesday, September 23, at 19.30 Place: Den Nationale Scene

UoB price: 120 kr

Tickets can be ordered via DNS ticket office or by phone: 55 60 70 80



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#### THE POSTDOC:

Name: Naureen Akhtar

Supervisor: Bodil Holst, Research group for nanophysics and technology

Naureen came to Bergen in January this year, and has a goal of learning to speak Norwegian in the course of 2015. You can be the one helping her with that.

Naureen was born and raised in Rawalpindi in mid 1980s. Rawalpindi is a ig city right outside Islamabad, the capital of Pakistan. Rawalpindi and Islamabad are known as twin cities, and the contrast with Bergen is enormous; the metropolitan area consists of over 4,5 million inhabitants, not much lass than the entire population of Norway. The twin cities are situated in the province of Punjab, with over 100 million inhabitants. Rawalpindi has been inhabited for several thousand years, but only after Islamabad became the capital in 1960 the area achieved its cosmopolitan, urbanized, economic and population growth.

Naureen grew up in a relatively atypical Pakistani family and region, with a great deal of personal and individual freedom, both for men and women. In the Punjab region, there is generally a higher level of education, and a liberal way of thinking. Naureen has got two brothers, one of them four years younger, and the other four years older. One of them works in Islamabad, and the other works in Multan, in the southern part of Punjab. Her parents still live in Rawalpindi.

Upon completing high school, she took a Bachelor degree in physics, chemistry and mathematics at Federal Government College for Women in Rawalpindi, where she graduated as the best in her generation. Physics and chemistry quickly became her favourite subjects, particularly since the two subject areas to a certain degree complement each other, and since natural sciences generally have a rational basis.



Naureen is portrayed in the Kallar Kahar-valley, a tourist attraction some 135 kilometers away from Rawalpindi. Kallar Kahar is known for its natural gardens, a beautiful fresh water lake, a great number of peacocks, as well as Tahkt-e-Babri, Mughal Emperor Babur's throne in stone. It's a myth which says that those who try to steal one of these peacocks will go blind, so the best is not to do anything of the kind just to be on the safe side (click to enlarge the photo).



Naureen in <u>Giethoorn</u>, also known as "Venice of the Netherlands". (click to enlarge the photo)

After Bachelor degree Naureen enrolled at the Quaid-

i-Azam University Islamabad (Qau) for higher education. Qau is a public university and one of the most popular in Pakistan, offering education within the field of mathematics and natural sciences, as well as social sciences. During her Master studies, she lectured part time in physics at the engineering school in Rawalpindi, before completing her degree in 2009 from Quaid-i-Azam, as one of the three best students at the department of physics. While doing her Master studies, she participated at <u>Nathiagali Summer College</u>, where she met Professor Petra Rudolf from <u>Zernike Institute for Advanced Materials</u> of the University of Groningen.

This lead to Naureen moving to the Netherlands in 2009 in order to do her PhD. At the Zernik Institute she researched the multifunctional, layered, ultra-thin films, and specialized in surface physics within material technology. She worked with several techniques within the diffraction, magnetic and electric transport properties, and various spectro-

scopic and microscopic techniques. Her research was conducted in cooperation with several well-known international research groups, and she gathered a lot of experience in presenting her research at international conferences. She learned to speak Dutch, ice skate and yoga, and she made several friends with whom she still keeps in touch. (cont.)

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#### (cont.)

While Naureen lived in Holland, she met Professor Bodil Holst, who offered her to work on an industrial project as part of an academic research at IFT. After Naureen completed her PhD in 2013, she moved to Bergen and accepted a two-year PostDoc position. Her current research project is about oil resistant optical windows for underwater monitoring systems.

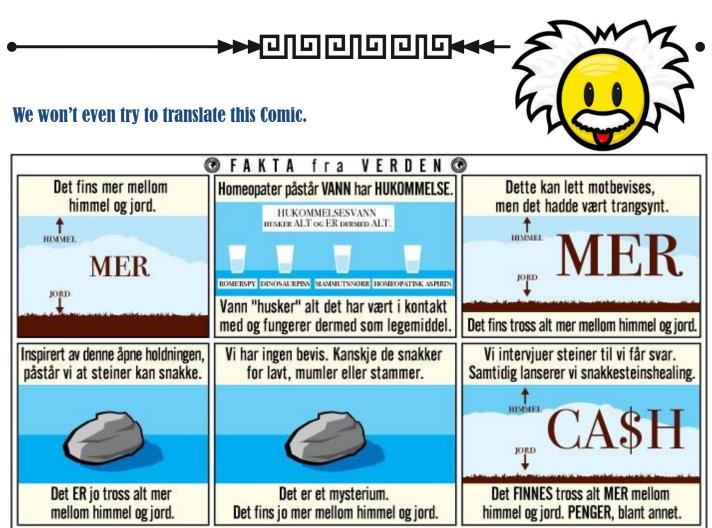


Naureen says she had never heard of Bergen until she got the opportunity to participate in this research project, and she thought it was a bit strange to move here. Nonetheless, it was a nice change from flat Holland to a landscape which reminded her more of what she was used to from home. She has settled nicely here, and lives in a collective at Danmarksplass with three Norwegian girls who study at the university or college. She can well picture herself staying there for a couple of years, but would have nothing against moving to another country either, regardless of whether that be in Europe, America or, for instance, Japan.

Apart from research and studies, Naureen likes to cycle, go for walks, practice yoga and play squash. Although she is from Pakistan, she is not particularly fond

of cricket, but is more of a land hockey and football fan. Her favourite hobby is reading books, primarily in Urdu, mostly biographies of famous philosophers, history books or travelogues.

Naureen's ambitions for the next year are to learn Norwegian, go skiing, and perhaps rowing and rafting. Next time you see her in one of the corridors, you can ask her slowly in Norwegian how these projects are coming along.



#### WELCOME PARTY FOR BACHELOR STUDENTS AT IFT!

You are welcome to a great evening in order to get to know both the new and older students at the Department of Physics and Technology! You will also have the opportunity to get acquainted with the department and a number of future opportunities. This is the fourth welcome party in a row and can now be considered to be a tradition at IFT.

# Where: Bachelorrommet and the canteen in the 3rd floor at the department.

When: Friday September 26th at 17.00.

More information and registration form can be found on the scientific committee's webpages.





We would like to remind you about the upcoming application

Follow <u>this</u> link for more information on the application process and/or to read previous stipend holders reports here.



#### IFT IN THE MEDIA

On Friday, September 12th, it was possible to experience the northern lights in Bergen, as reported by our PhD-candidate, <u>Beate Humberset</u> in <u>BT</u>.



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

On Tuesdays, every even-

numbered week, there are organized publectures at H-bar.

More info at H-bar's facebook page.

H-bar is run by IFT's Fagutvalget, and is primarily aimed at department's students – but employees are also welcome!



deadline on October 1.

#### TRIAL LECTURE:



<u>Dr. Heidi Sandaker</u> will be holding the following trial lectures: Tuesday September 16th, between 11.15 am and 12.00 am, in room 359 (Bachelorrommet):

Self-chosen topic: European Spallation Source

Wednesday, September 17th, between 09.15 am and 10.00 am, in room 359 (Bachelorrommet):

Given topic:

Light from early galaxies: What is the potential of the next generation of telescopes?

#### **PUBLICATIONS:**

- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Lipniacka, A.; Latour, B. Martin dit; Rosendahl, P. L.; Sandaker, H.; Sjursen, T. B.; Stugu, B.; Ugland, M.; et al.: *Measurement of the underlying event in jet events from 7 proton-proton collisions with the ATLAS detector* ATLAS Collaboration EUROPEAN PHYSICAL JOUR-NAL C Volume: 74 Issue: 8
- Sandanger, M.; Soraas, F.; et al.: Solar filament impact on 21 January 2005: Geospace consequences JOURNAL OF GEOPHYSICAL RESEARCH-SPACE PHYSICS Volume: 119 Issue: 7 Pages: 5401-5448
- Gligorova, A.; Pacifico, N.; Sandaker, H.; et al.: *A moire deflectometer for antimatter* NATURE COMMUNICATIONS Volume: 5 Article Number: 4538
- Roehrich, D.; et al.: NA61/SHINE facility at the CERN SPS: beams and detector system JOURNAL OF INSTRUMENTATION Volume: 9
- Gligorova, A.; Pacifico, N.; Sandaker, H.; et al.: *Detection of low energy antipro*ton annihilations in a segmented silicon detector JOURNAL OF INSTRUMENTA-TION Volume: 9



#### **ΡΗΟΤΟ ΟΓ ΤΗΕ WEEK**



#### Aurora over Longyearbyen

"The picture shows aurora over Longyearbyen, Svalbard in January 2013, and was taken on an evening off during an international campaign at the EISCAT radar in Longyearbyen. The radar is used to study the ionosphere (plasma density, electron and ion temperature, etc.) in relation to aurora and other interesting ionospheric phenomena. Svalbard is one of many locations where we in the Birkeland Centre for Space Science can perform measurements to try to answer some of our overarching science goals: How do we get beyond the large-scale static picture of the ionosphere? What are the effects of particle precipitation on the atmospheric system? When and why is the aurora in the two hemispheres asymmetric?

The Picture is taken by <u>Christer van der Meeren</u>, PhD at the BSCC.

Click to enlarge the photo.



<b>USEFUL LINKS</b>		
The IFT Webpages	PagaWeb (Your current job)	The Campus Bus
Employees at the administration	<u>BRITA</u> (IT-support)	<u>Cristin</u>
Webpages of the Faculty	LYDIA (transport)	UoB internal phonebook
	<u>SEBRA</u> (user account)	
Employee Pages at the UoB	Recent PhDs at the UoB	Employee pages FAQ A - W
	(only in Norwegian)	
The Board of Faculty		
The Faculty- Strategy and Vision	The HSE Gateway	Vacant positions at UoB
<u>Pubmed</u>	My Space	The UiB Magazine
The internet News Bulletin <u>På Høyden</u> (internalnews for UoB)	The Student Counsil at IFT: <u>http://fft.uib.no/</u> <u>Facebook</u>	Contact the editor of IFT-posten: anders.kulseng@ift.uib.no
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