



The Bergen Energy Lab wishes you all a great summer vacation!

This edition of the Bergen Energy Lab newsletter marks the end of an eventful spring semester. Since January we have learned about renewable energies through 24 very interesting lunch meetings as well as 3 half-day seminars. The Programme Committee deserves a lot of praise for putting together a highly varied and exciting programme. I hope it will be just as good next semester.

In this short newsletter you can read summaries from the lunch-meetings recently arranged in the Bergen Energy Lab. We have been visited by [Gudmund Olsen](#) from Statoil, [Esmeralda Colombo](#) from the Faculty of Law, [Claes Eskilsson](#) from Chalmers University, [Stian Backe](#) from the Department of Informatics, [Kirsti Midttømme](#) from CMR and [Kristin Guldbrandsen Frøysa](#) from NORCOWE/UIB.

Enjoy reading and have a nice summer!

Hans-Kristian Ringkjøb

Contact us

Website:

www.uib.no/energy

E-mail:

energylab@uib.no

Facebook:

www.facebook.com/uibenergylab/

Summary of the semester from the Programme Committee

Many interesting topics have been presented at the Bergen Energy Lab during the spring semester. In particular, I would like to highlight the half-day seminars, where we have had both technical presentations and presentations addressing legal and social science issues. I think this has been very valuable, and I'm glad that the presentations are available on our webpage. There are good opportunities for interdisciplinary project proposals, and I look forward to continue the work at Bergen Energy Lab in the autumn.

We have already started planning the events for the autumn. If you want to hold a presentation on an energy-related topic, or you want to suggest a speaker, please fill out [this](#) form on our website.

Kristin Guldbrandsen Frøysa

Leader of the Energy Lab Programme Committee



Recent Lunch Meetings

Gudmund Olsen (Statoil): Hywind



Gudmund Olsen (Photo: Stian Backe)

Gudmund Olsen visited Bergen Energy Lab on the 2nd of May 2017. Gudmund works as a project leader for R&T Floating Offshore Wind at Statoil. He gave a talk about Hywind: Statoil's successfully developed floating offshore wind turbine technology.

The Hywind demo has been tested in Norwegian waters since 2009. Based on the demo, 5 larger

turbines are currently being assembled at Stord in Norway to be towed to Scotland, where they will constitute the world's first floating wind farm.

(After Gudmund's presentation, a guided tour at the wave tank at the Western Norway University of Applied Sciences was arranged).

See Gudmund's presentation [here](#).

Esmeralda Colombo (Faculty of Law - UiB): Legal Control and Enforcement over National Energy Plans

Esmeralda Colombo held a presentation for Bergen Energy Lab on the 9th of May 2017. She currently pursues a PhD at the Faculty of Law at the University of Bergen about climate change related law.

Esmeralda presented several lawsuits raised in different nations about climate injustice, mostly due to lack of action on a state level. She explained the background and impacts of these lawsuits, and ended her talk with a discussion on whether natural gas is a reasonable bridge fuel on our way to a sustainable energy system.

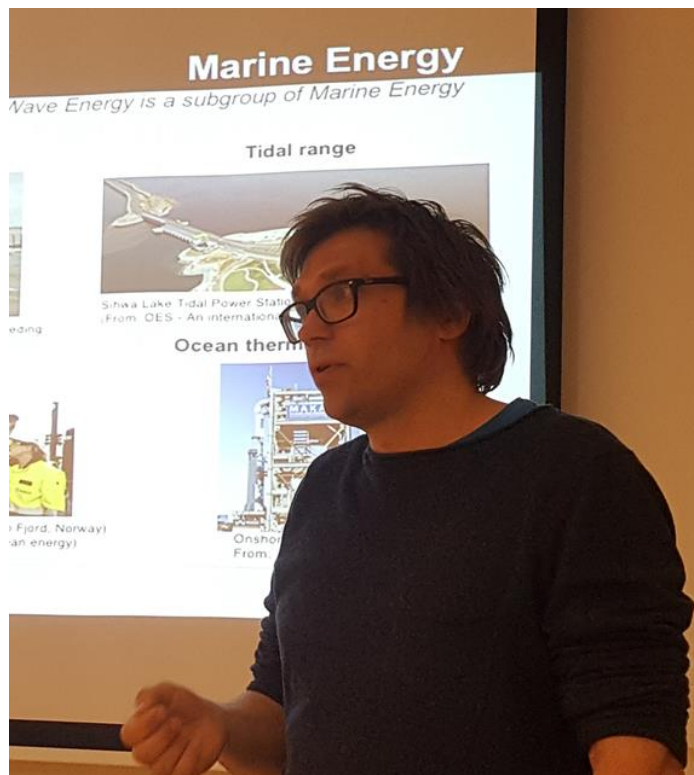
See her presentation [here](#).



Esmeralda Colombo (Photo: Stian Backe)



Claes Eskilsson (Chalmers) - Towards Increased Fidelity in Simulation of Moored Wave Energy Converters



Claes Eskilsson (Photo: Stian Backe)

On the 16th of May 2017, Bergen Energy Lab was visited by Claes Eskilsson from Chalmers University of Technology. He is an associate professor with a research interest in hydrodynamic modelling of moored wave energy converters (WECs).

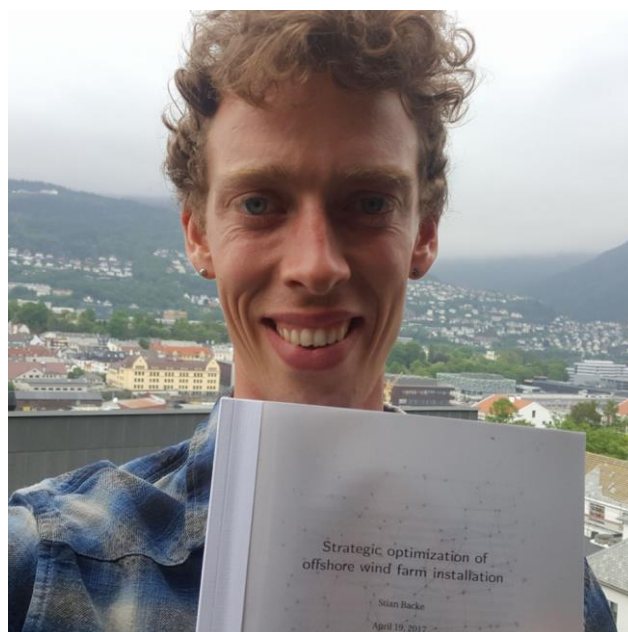
His talk gave an overview of the challenges faced within the wave energy sector. Claes highlighted how non-linear simulations are necessary, yet provide great computational challenges, when modelling a wave energy system that must deal with a dynamic sea state.

Stian Backe (Department of Informatics): Planning installation of offshore wind farms

Stian Backe held a presentation for Bergen Energy Lab on the 23rd of May 2017. He is about to graduate from the Energy Master at the University of Bergen specializing in energy analysis and optimization.

Stian gave an overview of his Master's Thesis project about planning vessel logistics to support decisions on how to install offshore wind farms. By applying theory of mixed integer linear programming, Stian presented two models that he has developed, tested and analysed to minimize installation costs.

His presentation can be seen [here](#).



Stian Backe (Photo: Stian Backe)



Kirsti Midttømme: Geothermal Energy in Norway and in Hordaland



Kirsti Midttømme from Christian Michelsen Research (CMR) visited the Bergen Energy Lab on the 30th of May. She is a senior scientist and the manager of the Norwegian Centre for Geothermal Energy Research.

Kirsti gave an overview of larger geothermal projects in Norway, with a specific focus on

Bergen. She also gave a thorough explanation of the innovative heating/cooling system installed at the Western University of Applied Sciences. In addition, Kirsti also set Geothermal Energy in Norway into an International context.

See Kirsti's presentation [here](#).

Kristin Guldbrandsen Frøysa (CMR/UiB) - European Energy Research - Seen from EUA



Kristin Guldbrandsen Frøysa (Photo: Marit Hommedal/NORCOWE)

On the 6th of June, Kristin Guldbrandsen Frøysa, director of NORCOWE and associate professor II at UiB, gave a summary of the recent European University Association (EUA) conference in Leuven, Belgium.

The conference addressed the contribution of higher education in developing better energy systems based on renewable energy sources, and how we can transition towards a carbon-neutral society. Recent hot topics include smart grids, smart cities, electrical vehicles, living labs and demonstrations, the energy union and so on. Kristin also pointed out some challenges being faced, such as the difficulty of achieving true cooperation between natural and social sciences.

See Kristin's presentation [here](#).

