



Welcome to
the University of
Stavanger!



The University of Stavanger (UiS) is situated in the most attractive region in the country, with some 300 000 inhabitants.

In constant collaboration and dialogue with the surroundings, regionally, nationally and internationally, we enjoy an open and creative climate for education, research, innovation, dissemination and museum activities.

UiS will have an innovative and international profile, and will be a driving force in knowledge development and in the process of societal change.

Stavanger is the oil and energy capital in Norway with a dynamic job market and exciting culture and leisure activities. The interplay between the university and society and business is rich and diverse.

The Faculty of Science and Technology has over 2880 students and 200 employees. The faculty's curriculum focuses especially on engineering disciplines, while research activities are characterised by innovation and collaboration with industry and government.

Some of the research conducted at the Faculty of Science and Technology is at the very forefront of scientific achievement in its respective areas.

Situated in the "oil capital" of Norway, one of the world's largest oil exporters, the University of Stavanger is world-class when it comes to petroleum science. It also has strong research groups in the offshore technology field.

The petroleum industry is Norway's biggest source of income and plays an important role in the world economy. We are proud to have Norway's largest research group studying the petroleum economy.

NextMGT Workshop

Modelling Power Systems

8th to 10th November 2021

Stavanger, Norway



Day 1 Activities

Time CET	2021-11-08
9:00 - 9:10 UiS, KE-A-259, Dataverkstedet	Welcoming Speech from the Host University - Prof. Assadi (UiS; Norway)
9:00 - 10:10 UiS, KE-A-259, Dataverkstedet	Keynote: Energy transition and the Role of Modeling Tools and Methods Juha Kiviluoma (VTT; Finland)
10:10 - 10:30 UiS, KE-A-259, Dataverkstedet	Project Overview - Prof. Abdalnaser Sayma (CITY; UK)
10:30 - 10:45	Break
10:45 - 12:00 UiS, KE-A-259, Dataverkstedet	Presentations from 4 WP Leaders (15 minutes each + Q&A: 15 minutes for all)
12:00 - 13:00 UiS, Canteen	Lunch
13:00 - 14:45 UiS, KE-A-259, Dataverkstedet	WP1: ESR1 ~ ESR6 (10 min. each presentation + 5 min. Q&A)
14:45 - 15:15	Break
15:15 - 16:00 UiS, KE-A-259, Dataverkstedet	WP2: ESR7 ~ ESR9 (10 min. each presentation + 5 min. Q&A)

Day 2 Activities

Time CET	2021-11-09
9:00 - 9:45 UiS, KE-A-259, Dataverkstedet	My Path to Efficient PhD in Applied AI - Andrzej Tunkiel (UiS; Norway)
9:45 - 10:00	Break
10:00 - 10:45 UiS, KE-A-259, Dataverkstedet	Artificial Neural Networks: Definitions, Fundamentals, Methodologies Prof. Ehsan Mesbahi (Victoria Univ. of Wellington; New Zealand)
10:45 - 11:00	Break
11:00 - 12:00 UiS, KE-A-259, Dataverkstedet	Artificial Neural Networks: Applications Prof. Ehsan Mesbahi (Victoria Univ. of Wellington; New Zealand)
12:00 - 13:00 UiS, Canteen	Lunch
13:00 - 13:45 UiS, KE-E-101 Auditorium	WP3: ESR10 ~ ESR12 (10 min. each presentation + 5 min. Q&A)
13:45 - 14:00	Break
14:00 - 14:45 UiS, KE-E-101 Auditorium	WP4: ESR13 ~ ESR15 (10 min. each presentation + 5 min. Q&A)
15:00 - 16:30	Visit to Test Facility, Risavika
18:30 - 21:00	Dinner, FireLake, Radisson Blu

Day 3 Activities

Time CET	2021-11-10
10:00 - 10:45 UiS, KE-A-259, Dataverkstedet	Why Do Time and Stress Management Go Hand in Hand? Susanna Lyddon (Right Brain Training; UK)
10:45 - 11:00	Break
11:00 - 11:45 UiS, KE-A-259, Dataverkstedet	Communication of the Research Results: How to Reach the Public Riva Walter (Genoa Univ.; Italy)
11:45 - 12:30 UiS, KE-A-259, Dataverkstedet	Sum-up - Workshop Evaluation
12:30 - 13:30 UiS, Canteen	Lunch
13:30 - 14:30	Tour to "Iron Age Farm"
14:30 - 17:30	Guided City Tour

OLD STAVANGER

It is often the small area just west of the harbour called Old Stavanger that is pointed out as representative of the entire wooden city of Stavanger. The wooden city of Stavanger entails around 8000 houses in several different styles – from empire to Art Nouveau and functionalism. The wooden housing is mainly from Stavanger's settlements before the Second World War. In the old days, it was quite common to bring your house if you moved from one place to another. This is the case for several of the houses in Old Stavanger. The houses were logged in timber, making it fairly easy to dismantle and bring along when moving. Several of the houses have an arch on top of the roof built to expand the living quarters. It has a flat top and is asymmetrically placed on top of the roof. It is referred to as the Stavanger arch. Stavanger has received several awards for its efforts to preserve Old Stavanger. (Visit on Wednesday afternoon, November 10)



FARGE GATA

It was hairdresser Tom Kjørsvik who came up with the idea of completely renewing this previously quiet and rather dull street, Øvre Holmegate. Kjørsvik's vision was to pump some new and much-needed life into the street, a process that proved to be a lengthy one; it lasted more than four years. The artist Craig Flannagan created the colour scheme for the painting of the houses and the plan had to be approved by landlords and the city council, a process not necessarily done in a flash. The new colours did eventually come into place though, and it truly livened up the street. (Visit on Wednesday afternoon, November 10)



IRON AGE FARM

The Iron Age Farm at Ullandhaug is a reconstructed farmstead from the Migration Period (350-550 AD). The farm is located around three kilometres from the Stavanger city centre, with a magnificent view of the Northern Jæren region and Hafrsfjord.

The farm is as the only farm of its kind in Norway, reconstructed on the original archaeological site. The three houses have equipment and domestic utensils, and there is a fire burning on the original fireplaces. On the Iron Age Farm, you are greeted by the mistress and the people on the farm. (Visit on Wednesday afternoon, November 10)



ULLANDHAUG TOWER

Ullandhaugtårnet is a telecommunication tower and landmark at Ullandhaug in Stavanger. The top of the tower rises 202 meters above sea level, which makes the mast Stavanger's highest point including buildings. The tower is now run by Lyse. There are stairs a couple of floors up from the ground floor to a viewing plateau that is open to the public. In 1896, the Harald Tower was built in memory of the battle of Hafrsfjord on the square where the Ullandhaug Tower is located today. Part of the tower was destroyed during World War II, and the rest was demolished in 1963. In 1964, Televerket built the Ullandhaug tower next to the remains. (Visit on Wednesday afternoon, November 10)



SVERD I FJELL

(English: Swords in Rock) was put in place to celebrate an ancient battle that ended up uniting a portion of Norway under one banner, but it's not always easy to see that past how awesome the monument's three giant Viking swords are.

The Battle of Hafrsfjord in 872 is widely regarded as the conflict that finally achieved unity amongst the warring factions of western Norway. In reality, the process of unification likely took hundreds of years, but the popular legend is that it was this one battle that achieved peace. The decisive battle was thought to have taken place between King Harald Fair Hair and two lesser forces. King Harald finally trounced the opposing forces and Norway was brought under his rule. (Visit on Wednesday afternoon, November 10)



Risavika Gas Centre DA

is an international test centre established in 2005 through a joint venture between Statoil, Norske Shell, Lyse, the International Research Institute of Stavanger (IRIS) and the University of Stavanger. It offers research, development and large-scale equipment testing of various components for sustainable production and the usage of natural gas, as well as integration with renewable energy sources. Also amongst the centre's offerings is the design of tests, as well as the design of connections between test units and technical infrastructure. Furthermore, the company can provide site preparation, connection, commissioning, operation, monitoring, decommissioning and dismantling of test units. The centre has an outdoor test area for pilot plants, as well as indoor test areas specifically designed for experiments and pilot test. Each test area has access to highly skilled operational staff, and the supply of personnel for testing 24 hours a day, seven days a week. Risavika Gas Centre also offers the design of tests for its customers should they need it, as well as the arrangement of meetings and seminars. Risavika Gas Centre's outdoor test area is comprised of a 5000 square meter test ground covered with a mixture of asphalt and gravel, and includes nine individual test areas. The centre also has its own combined heat and power (CHP) hall, which is designed for equipment that needs connection to the power grid or the district heating grid.

The company also has its own turbine combustion laboratory, where it has a 100 kWe gas turbine with an external combustion chamber for combustion temperature surveillance. The power produced by the turbine here can be exported to the power grid, whereas the heat is exported to the district heating grid. The turbine is currently being utilised by IRIS and the University of Stavanger for investigations of combustion and performance when mixing natural gas and biogas. Furthermore, the company has recently acquired a 1.85 MWe gas turbine for testing purposes and to be used as an environmentally friendly flare. Together with the University of Stavanger a test and research programme is currently being developed.

"We are considering tests such as performance, noise and emissions and corresponding remedies for NOx reduction, steam injection integration with renewables, off-gas combustion; (high CO2 content in fuel), re-circulation of exhaust gas, combined cycle, steam turbine, H2S rich fuel gas, NG - H2 combustion, LNG fed turbine for marine propulsion, improved anti-icing systems, oxyfuel turbine tests, and finally vibrations, monitoring and control," says Sigurd Gaard, business development manager at Risavika Gas Centre.

