The Norwegian University of Science and Technology (NTNU) in Trondheim represents academic eminence in technology and the natural sciences as well as in other academic disciplines ranging from the social sciences, the arts, medicine, teacher education, architecture to fine art. Cross-disciplinary cooperation results in innovative breakthroughs and creative solutions with far-reaching social and economic impact.

Faculty of Engineering Science and Technology
Faculty of Information Technology, Mathematics and Electrical Engineering

Employment for the future!

15 PhD Fellowships or Post Doctoral positions on Offshore Wind Technology

The Norwegian government has established eight national research centers on climate friendly energy generation, one of which is the Norwegian Research Centre for Offshore Wind Technology (NOWITECH).

NTNU, SINTEF and IFE are research partners and leading national and international companies are industrial partners (i.e. StatoilHydro, Statkraft, Vestas, Dong Energy and several more). Recognized international research organizations are collaborating with the Centre (i.e. MIT, DTU/Risø, NREL).

We are collaborating with relevant centers at NTNU, such as the Center for Ships and Ocean Structures (www.cesos.ntnu.no) and the Center for Integrated Operations in the Petroleum Industry (www.ntnu.no/iocenter).

Already more than 30 professors and researchers are engaged in this field together with a significant number of PhD and postdocs. See www.sffe.no for more details. With the establishment of NOWITECH, the research in offshore wind in Norway is significantly increased.

The industrial benefits of this enhanced research are anticipated to contribute to stronger market position for Norwegian suppliers both in international as well as national markets. The results of this focused research effort are also expected to more large scale use of offshore wind technology and thus reduce CO_2 emissions and the climate change.

NOWITECH is planning to engage at least 25 PhDs and postdocs, and is announcing 15 positions for the first period of the research program.

IVT 27/09 (PhD)
Quantitative analysis of the aerodynamic performance of the wind turbine rotor by use of Navier-Stokes CFD.
Qualifications: Suitable background would be within computational mathematics, scientific programming, fluid mechanics.
For further information please contact Professor Trond Kvamsdal (trond.kvamsdal@math.ntnu.no)

IVT 28/09 (PhD)
Evaluation of the design criteria and dynamic forces on large floating wind turbines.
Qualifications: Suitable background would be within mechanical engineering, fluid mechanics, physics
For further information please contact Professor Ole G. Dahlhaug (ole.g.dahlhaug@ntnu.no)

IVT 29/09 (PhD or postdoc)
Lift control of wind turbine rotor blades by use of smart material devices manipulating the aerodynamic rotor properties.
Qualifications: Suitable background would be within composite mechanics, laboratory work, structural modeling.
For further information please contact Professor Andreas Echtermeyer (andreas.echtermeyer@ntnu.no)

IVT 30/09 (PhD or postdoc)
Influence of material and process parameters on fatigue of wind turbine blades in a marine environment.
Qualifications: Suitable background would be within composite materials, processing techniques, modeling.
For further information please contact Professor Andreas Echtermeyer (andreas.echtermeyer@ntnu.no)

IVT 31/09 (PhD)
Novel generator concepts for low weight nacelles. Integrated design of generator and mechanical structure for a maintenance free system.
Qualifications: Suitable background would be within electrical machine design, electrical and mechanical analysis.
For further information please contact Professor Robert Nilssen (robert.nilssen@elkraft.ntnu.no)

IVT 32/09 (PhD)
Bottom-fixed support structure for wind turbine in 30 – 70 m water depth
Qualifications: Suitable background would be within structural analysis, vibrations, computational mechanics.
For further information please contact Professor Geir Moe (geir.moe@ntnu.no)

IVT 33/09 (PhD)
Life cycle criteria and optimization of floating structures and mooring systems.
Qualifications: Suitable background would be within marine technology, ocean engineering, structural mechanics.
For further information please contact Professor Torgeir Moan (torgeir.moan@ntnu.no)

IVT 34/09 (PhD)
Analysis of switching transients in wind parks with focus on prevention of destructive effects.
Qualifications: Suitable background would be within electric power engineering, high voltage.
For further information please contact Professor Hans K. Høidalen (hans.hoidalen@elkraft.ntnu.no)

IVT 35/09 (PhD or postdoc)
Balance management with large scale offshore wind integration.
Qualifications: Suitable background would be within electric power engineering, operations research, economics.
For further information please contact Professor Gerard Doorman (gerard.doorman@elkraft.ntnu.no)

IVT 36/09 (PhD)
Development of market models incorporating offshore wind farms and offshore grids.
Qualifications: Suitable background would be within power systems with focus on transmission, electricity markets, technical/economical background
For further information please contact Professor Olav Fosso (olav.fosso@elkraft.ntnu.no)

IVT 37/09 (PhD)
Maintenance optimization of wind farms from design to operation (models, methods, framework).
Qualifications: Suitable background would be within reliability, maintenance, logistics.
For further information please contact Professor Jørn Vatn (jorn.vatn@ntnu.no)

IVT 38/09 (PhD)
Novel coating and surface treatment for improved wear resistance.
Qualifications: Suitable background would be within materials technology, chemistry, physics.
For further information please contact Professor Roy Johnsen (roy.johnsen@ntnu.no)

IVT 39/09 (PhD or postdoc)
Comparative study of floating concepts.
Qualifications: Suitable background would be within marine technology, ocean engineering, system design.
For further information please contact Professor Torgeir Moan (torgeir.moan@ntnu.no)

IVT 40/09 (PhD)
Assessment of benefits of downwind rotors due to weight savings using new and thinner airfoils and improved directional stability of turbine.
Qualifications: Suitable background would be within fluid mechanics, aerodynamics.
For further information please contact Professor Per-Åge Krogstad (per.a.krogstad@ntnu.no)

IVT 41/09 (PhD)
Design of control systems for load mitigation and stabilization of floating wind turbines.
Qualifications: Suitable background would be within control systems, engineering cybernetics.
For further information please contact Professor Thor I. Fossen (fossen@ieee.org)

Salaries
PhD candidates are remunerated in code 1017 in the State salary scale 45-51, gross NOK 353000to NOK 391 500 per annum (before tax), depending on qualifications.

Post.doc fellows are remunerated in code 1352, in the State salary scale 57-76, gross NOK 435 500 to NOK 625 900 per annum (before tax), depending on qualifications. PhD candidates are normally remunerated at wage level 45, whereas Post.doc fellows are normally remunerated at wage level 57.
There will be a 2 % deduction to the Norwegian Public Service Pension Found from gross salary.

Other information
The engagement period is 2 years for Post doctorate fellowships. For PhD research fellowships the engagement period is either 3 years or alternatively 4 years, including 25 % of teaching assistance at the bachelor's and master's degree level. A master degree is requisite for application for PhD fellowships.

The appointment of the PhD or Postdoc fellows will be made according to Norwegian guidelines for universities and university colleges. Applicants for a PhD position are obliged to engage on an organized research programme, and appointment requires approval of the applicant's plan for PhD study.

The position adheres to the Norwegian Government's policy of balanced ethnicity, age and gender. Persons with immigrant background are encouraged to apply. NTNU's objective is to increase the number of females in scientific positions. Female applicants are therefore encouraged to apply.

All applicants must be able to communicate fluently in English (in speaking and writing).

Good skills in Norwegian are also preferred. Applicants must indicate their level skills in English and Norwegian.

All applications shall include certified copies of academic transcript, CV and for foreign applicants TOFL score, and be submitted electronically through www.jobbnorge.no marking the application with the relevant IVT number. You can only apply for a maximum of 3 positions, and the priority shall be indicated. The attachments to the applications shall be gathered in one single file.

Application deadline: April 30th 2009.

For general information on NOWITECH, contact Jan Onarheim (jan.onarheim@ntnu.no).

NOWITECH

CENTRE FOR ENVIRONMENT-FRIENDLY ENERGY RESEARCH
Established by the Research Council of Norway

SINTEF NTNU IFE