NTNU – Trondheim
Norwegian University of Science and Technology

NTNU co-operation with UC Berkeley

Asbjørn Rolstadås
Vice Dean for Research, Faculty of Engineering Science and Technology

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Co-operation with UC Berkeley

- Most NTNU faculties have a large and unexplored potential to develop cooperation with groups at Berkeley.
- Several groups at NTNU have already a well established cooperation which goes years back in time.
- Exchange students program in place
Within **Architecture and building technology** we already have a long-term cooperation and good relations to Berkeley and LBL. The national research center for environmental friendly energy “Zero-Emission Buildings” (ZEB), which is led by NTNU, is very interested in a further development of the cooperation within the field of ZEB. “**Buildings of the future**” (ie. smart and energy efficient) is mentioned as a strategically interesting topic for the center to support.

Se more info here: [http://www.sintef.no/Projectweb/ZEB/](http://www.sintef.no/Projectweb/ZEB/)

Contacts:

Prof. **Anne Grete Hestnes**, Center Director;
phone: +47 7359 5037, +47 9115 1081
e-mail: [annegrete.hestnes@ntnu.no](mailto:annegrete.hestnes@ntnu.no)

Prof. **Arild Gustavsen**, Leader of Work Package 1
phone: +47 7359 5065, +47 9936 3674
e-mail: [arild.gustavsen@ntnu.no](mailto:arild.gustavsen@ntnu.no)
The Medical faculty have prioritized neuroscience and health services research as the most promising areas for cooperation. Head of Department of Public Health and General Practice, Prof. Jon Magnussen, has recently been a year at Berkeley and is very keen on a follow up for the activities in the area of health services. More at http://www.ntnu.edu/ism/english

Contact: Prof. Jon Magnussen; phone: + 47 7359 7573, or +47 93009681
E-mail: jon.magnussen@ntnu.no

Neuroscience is very well developed at NTNU. It is a Kavli center with a high international ranking. Contact and cooperation with Berkeley is of course of potential interest. Exchange opportunities should initially be opened to high-potential graduate students only, and should be tailored to their specific needs. See more at: http://www.ntnu.no/cbm/

Contacts:

Edvard I. Moser, Professor and director
Moser group
Phone: +47 7359 8278
edvard.moser@ntnu.no

May-Britt Moser, Professor and co-director
Moser group
Phone: +47 7359 8277
may-britt.moser@ntnu.no
Within ICT and Mathematics, the dept. of **Cybernetics** and the dept. of **Mathematics** are very positive to new instruments that can facilitate and extend already ongoing cooperation. Some groups within Mathematics have had a relationship over many years, and several professors have experienced Berkeley as an attractive place to spend a sabbatical. More at: [http://www.ntnu.edu/imf/](http://www.ntnu.edu/imf/)

Our cybernetic group suggests “**Control Systems Theory and Robotics (Cybernetics)**” as a field to prioritize, with **Electrical Engineering and Computer Science**, at Berkeley as partner, specifically: Dean of the College of Engineering, Professor Shankar Sastry. More about NTNU at: [http://www.itk.ntnu.no/english](http://www.itk.ntnu.no/english)

Contacts:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Phone Numbers</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Sverre Smalø</td>
<td>Head of Dept. for Mathematical Sciences</td>
<td>+47 7359 1750, +47 4829 3975</td>
<td><a href="mailto:sverresm@math.ntnu.no">sverresm@math.ntnu.no</a></td>
</tr>
<tr>
<td>Prof. Kristin Ytterstad Pettersen</td>
<td>Head of Dept. for Engineering Cybernetics</td>
<td>+47 7359 4346, +47 9189 7191</td>
<td><a href="mailto:Kristin.Ytterstad.Pettersen@itk.ntnu.no">Kristin.Ytterstad.Pettersen@itk.ntnu.no</a></td>
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The area of **engineering** is wide and unfortunately not yet fully explored with respect to mutual interests, but there are certainly a high potential for closer relations. The Dept. of Marine Engineering at NTNU is together with the Cybernetic and Biology departments very interested in a further cooperation with Berkeley in the interdisciplinary field of **Marine Monitoring**. Berkeley is in fact also a partner in a national Centre of Excellence application “Autonomous Marine Operations and Systems” (AMOS), which has passed the first stage evaluation.

More about Dept. of Marine Technology at: [http://www.ntnu.edu/imt/english](http://www.ntnu.edu/imt/english)

Contact:

Prof. Asgeir Sørensen,
[http://www.marin.ntnu.no/~assor/](http://www.marin.ntnu.no/~assor/)
Dept. of Marine Technology
Phone: +47 9189 7457
asgeir.sorensen@ntnu.no
In cooperation with and co-funded by Statoil, NTNU has until recently been involved in a project with Berkeley about **project management** – “Success criteria for mega projects”. From our side we would like to see this work being continued, especially since our institutional partner Statoil also promotes this activity.

A project proposal on **open innovation** and better understanding of the innovation concept and processes has been developed with, and supported by Henry Chesbrough (the academic ‘father’ of open innovation) at Haas Business School in Berkeley. This was unfortunately not supported by the Norwegian Research Council, but we suppose there will be more interest for this field in the years to come.

Contact:

Head of Research, Per Morten Schiefloe  
NTNU Social Research  
Phone: +47 73596323 or +47 90115516  
[Per.Morten.Schiefloe@svt.ntnu.no](mailto:Per.Morten.Schiefloe@svt.ntnu.no)
Natural Sciences as biology and biotechnology find Berkeley highly relevant for cooperation. “System- and Synthetic biology” are very interesting areas. Prof. Sergey Zotchev from NTNU is right now on a sabbatical at SynBERC (Synthetic Biology Engineering Research Center), and is cooperating with Jay Keasling, who is the head of SynBERC.
See: [http://www.ntnu.edu/biotechnology](http://www.ntnu.edu/biotechnology)

Contact:

Head of Dept. Prof. Kjetil Rasmussen
Phone: +47 7359 4034
kjetil.rasmussen@biotech.ntnu.no

The Dept. of Biology is also flagging «molecular biology» and «ecology” as highly potential themes for joint activities. More at: [http://www.ntnu.edu/biology](http://www.ntnu.edu/biology)

Contact:

Head of Dept. Prof. Bjørn Munro Jenssen
Phone: +47 7359 6073 or +47 9189 7120
bjorn.munro.jenssen@bio.ntnu.no
The Social Sciences at NTNU have an established relationship and cooperation agreement with Dept. of Sociology at Berkeley. This is the same agreement as also the other Norwegian universities have. We want to continue and strengthen this cooperation, and preferably extend the scientific scope of the cooperation to include all social sciences. Prof. Trond Petersen has been crucial for this agreement to the benefit of about 25 students from NTNU, who use this opportunity each semester.

See more about the Faculty of Social Sciences at: http://www.ntnu.edu/svt/english

Contact:

Dean, Jan Morten Dyrstad
Phone: + 47 73 59 19 06
Mobile: +47 91897142
jan.dyrstad@svt.ntnu.no
NTNU has also developed very strong research groups in the energy field, under the umbrella of the **strategic area Energy and Petroleum – Resources and Environment**, more than 1200 people work to bring forward new knowledge and solutions needed by society to create a cleaner and more sustainable future. This include around 200 professors and more than 400 doctoral students and postdocs. See more at: [http://www.ntnu.edu/energy](http://www.ntnu.edu/energy)

A combined search in Scopus and ISI for 2010, 2011 and 2012, gives 18 unique co-publications between UC Berkeley and NTNU, within the following areas:
Areas of future co-operation

- Buildings of the future (Zero Emission Buildings)
- Neuroscience
- Marine monitoring (an interdisciplinary field)
- System- and Synthetic Biology
- Social sciences