

# Atmosphere-Ocean Interaction Workshop, Bergen, Norway, 12-14 April 2010

Venue: Hotel Augustin, C. Sundtsgate 22, N-5004 Bergen

[<http://www.openstreetmap.org/?mlat=60.39608&mlon=5.31766&zoom=15>]

## Draft programme

### *Monday April 12*

09:30 – 11:00 Registration

11:15 - 12:00 Guest lecture at Geophysical Institute, University of Bergen (UiB)  
[<http://www.openstreetmap.org/?mlat=60.38368&mlon=5.33202&zoom=15>]

*Laurence Padman, Earth & Space Research, Corvallis, Oregon*

Roles of tides in polar oceanography, including melting of Antarctic ice shelves

12:30 – 13:30 Lunch

13:45 – 14:30 Welcome and introduction

14:30 - 14:50 *Peter M. Haugan, Geophysical Institute, UiB*

New opportunities for air-sea interaction research

15:00 - 15:30 Break

15:30 - 15:40 *Marius Årthun, Geophysical Institute, UiB*

Ocean heat loss and cold deep water formation in the Barents Sea

16:00 - 16:20 *Ole Segtnan, Geophysical Institute, UiB [with Tore Furevik and Alastair D. Jenkins]*

Heat and freshwater budgets of the Nordic Seas

16:30 - 16:50 *Anna Sjöblom, The University Centre in Svalbard (UNIS)*

Air-sea interaction in the High Arctic

17:00           **End of afternoon session**

## **Tuesday April 13**

- 09:15 - 09:30 Introduction to day 2 of workshop
- 09:30 - 09:50 *Craig McNeil, APL, University of Washington, Seattle*  
Variability in the ratio of N<sub>2</sub> to O<sub>2</sub> fluxes during storms and hurricanes
- 10:00 - 10:20 *Alastair D. Jenkins, UniResearch & Geophysical Institute UiB*  
An overview of the effects of ocean waves on the adjacent atmospheric and oceanic boundary layers
- 10:30 - 11:00 Break
- 11:00 - 11:20 *Hubert Branger, IRPHE/CNRS, Marseille*  
Air-flow characteristics in the very close vicinity of surface wind waves
- 11:30 - 11:50 *Johnny A. Johannessen, Nansen Environmental and Remote Sensing Center, Bergen*  
Satellite SAR range Doppler velocity retrievals
- 12:00 - 12:20 *Knut-Frode Dagestad, Nansen Environmental and Remote Sensing Center, Bergen*  
The need for accurate, modelled ocean surface wave spectra for retrieval of wind, waves and currents from Synthetic Aperture Radar imagery
- 12:30 - 13:30 Lunch
- 13:30 - 13:50 *Andrei Pushkarev, Waves and Solitons LLC, USA and Lebedev Physical Institute, Moscow [with Donald Resio, and Vladimir E. Zakharov]*  
New understanding of wind input parameterizations
- 14:00 - 14:20 *Stanislav Ermakov, Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod*  
On damping of long waves due to interaction with short wind waves
- 14:30 - 14:50
- 15:00 - 15:30 Break
- 15:30 - 15:50 *Sergei Gulev, IORAS, Moscow*  
Statistical determination of extreme turbulent air-sea heat fluxes
- 16:00 - 16:20 *Lars Robert Hole, met.no, Bergen*  
*BLOWAVE*: Surface wave effects in the upper ocean and consequences for biological modeling
- 16:30           **End of session, day 2**
- 19:30           **Workshop dinner**

## **Wednesday April 14**

09:15 - 09:30 Introduction to day 3 of workshop

09:30 - 09:50 *Laurence Padman, Earth & Space Research, Corvallis, OR, USA*  
Tidal contribution to ocean/atmosphere heat and salt exchange through sea ice

10:00 - 10:20 *Øyvind Sætra, met.no, Oslo*  
Why ocean models need sea-state dependent momentum fluxes!

10:30 - 11:00 Break

11:00 - 11:10 *Siri Kalvig (StormGeo & University of Stavanger) and Olav Krogsæter (StormGeo & University of Bergen)*  
Introduction to discussion: Atmosphere-wave model coupling

11:10 - 11:45 Discussion on atmosphere-wave-current-turbulence model coupling

11:45 - 11:55 *Helene R. Langehaug, Nansen Environmental and Remote Sensing Center*  
Introduction to discussion: Open-ocean convection in numerical climate models

11:55 - 12:30 Discussion on convection and regional/oceanic scale atmosphere-ocean interaction processes

12:30 - 13:30 Lunch

13:30 - 14:30 Final review/discussion and summary

14:30 **End of workshop**