

Program for the IGS Nordic Branch meeting, 28-30 October 2010, Auditorium B

Thursday, 28

12:30-13:30

Registration

13:30-13:40

Welcome and practical matters

13:40-15:40

Calving, dynamics and historical records

convenor: Jon Ove Hagen

13:40

D. Benn: Calving Laws for Ice Sheet Models: Where Next?

14:10

T. Zwinger: Implementing Calving into a Full Stress Model

14:25

M. Schäfer: Basal drag pattern inferred from surface velocities for Vestfonna ice-cap (Svalbard) with a Full-Stokes model

14:40

K. Grunewald: Balkan glacier features as witnesses of local-regional climate-ecological changes

14:55

S. Nussbaumer: Historical glacier fluctuations of Jostedalbreen and Folgefonna, southern Norway, reassessed by new documentary evidence, and their connection to climate

15:10

K. Kjær: The quest for the lost picture and surface detection change of the Greenland Ice Sheet

15:25

J. Moore: The historical global sea level budget

15:40-16:10

Coffee break

16:10-17:55

Ice cores

convenor: Christine Hvidberg

16:10

D. Dahl Jensen: Greenland ice cores tell tales on the extent of the Greenland Ice Sheet during the warm climate Eemian period 120.000 years BP.

16:40

D. Divine: Thousand yearlong reconstruction of winter air temperature variations in Longyerbyen, Svalbard Archipelago and Vardø, northern Norway, based on Svalbard ice core oxygen isotope data.

16:55

M. Koutnik: Inferring histories of accumulation rate, ice thickness, and ice flow from ice-sheet internal layers

17:10

D. Samyn: Dating and multivariate analysis of Svalbard ice core data: a nitrogen perspective in 20th century

17:25

P. Vallelonga: High-Resolution Continuous Flow Analysis of chemical signals in Greenland ice and snow

17:40

M. M. Magnússon: Report from the IGS office

18:00-20:00

Ice breaker reception

Friday, 29

9:00-10:30

The Link between the cryosphere and other parts of the Earth System.

9:00

M. Pejrup: Short introduction to the new Earth System Science Centre at the Faculty of Science KU

9:10

B. Elberling: High N₂O production from thawing permafrost

9:30

S. Christensen: What terrestrial ecosystems do to atmosphere gases at elevated temperature. Regulation of CO₂, CH₄, and N₂O differ.

9:50

K. Richardson: Ocean carbon uptake under different climate regimes

10:10

H. Hannesdóttir: Modelling the response of Vatnajökull's southeast outlet glaciers to climate change

10:30-11:00

Coffee break

11:00-12:00

Modeling

convenor: Gudfinna Adalgeirsdottir

11:00

R. Mottram: The Surface Mass Budget of the Greenland Ice Sheet 1989 – 2009

11:15

A. M. Solgaard: Using atmospheric circulation patterns to assess precipitation over Greenland in the EC-Earth model

11:30

T. Sato: Modeling the flow of the Antarctic Ice Sheet and ice shelves with the model SICOPOLIS and the SeaRISE set-up

- 11:45 J. Ahlkrona: Updating the ice sheet model SICOPOLIS with an improved treatment of ice flow
- 12:00-13:00 Lunch**
- 13:00-15:00 Surface properties and more** Convenor: Carleen Tijm-Reijmer
- 13:00 S. Guðmundsson: Tephra, mass- and energy balance: the influence of the Eyjafjallajökull eruption 2010 on Icelandic ice caps
- 13:15 C. E. Bøggild: Quantifying the glacier ice albedo from black carbon and other aerosols
- 13:30 V. Bednenko: Influence of carbon pollutions on radiation characteristic snow cover in Barentsburg of archipelago Spitsbergen
- 13:45 S. Ingvander: Antarctic Snow Grain Size variability at regional, local and sample scale and its relation to satellite retrieved Snow Grain Size information.
- 14:00 O. Järvinen: FINNARP 2009 Antarctica expedition: Solar radiation transfer measurements in snowpack
- 14:15 B. Kutschan: Brine channel formation in sea ice - Turing structures or phase field pattern?
- 14:30 A. Ahlstrøm: PROMICE - Monitoring the mass loss of the Greenland Ice Sheet
- 14:45 E. V. Laursen: DMI meteorological data available for glaciology –and vice versa!
- 14:53 A. Kääb: Particle movement on sorted circles measured from repeat terrestrial photos
- 15:00-16:30 Posters and coffee**
- 16:30-18:00 Subglacial hydrology** Convenor: Alun Hubbard
- 16:30 P. Nienow: Seasonal evolution of subglacial drainage and ice motion at the margin of the Greenland Ice Sheet
- 17:00 G. A. Jones: Passive Seismic monitoring of in-situ lake drainage on the Greenland Ice Sheet
- 17:15 I. Willis: Structure, morphology and water flux of a subglacial drainage system, Middalsbreen, Norway
- 17:30 M. Jackson: Simultaneous measurements of surface motion, basal pressure and seismicity at Engabreen glacier, northern Norway.
- 17:45 C. Rye: Quantifying the predictive uncertainty of numerical mass balance models
- 19:00 - Dinner at restaurant Riz Raz, please register before Oct. 24, price 200 dkr**
- Saturday, 30**
- 9:00-10:30 Mass balance** Convenor: Rickard Petterson
- 9:00 H. Machguth: Surface Mass Balance of the Greenland Ice Sheet in the Paakitsoq Area, Illulisat, West Greenland - Scenarios and Related Uncertainties
- 9:15 L. M. Andreassen: Langfjordjøkelen, a rapid shrinking glacier in northern Norway
- 9:30 C. R. Denby: The geodetic glacier mass balance of Jan Mayen for the period 1949 to 2008
- 9:45 B. Carlsson: Precipitation patterns and variations over Nordaustlandet dynamically downscaled from re-analysis data
- 10:15 M. Engelhardt: Can meteorological data from SeNorge be used as input for mass balance modelling on Norwegian glaciers?
- 10:30 S. Mutz: Impact of large-scale circulation modes, regional temperature and precipitation on the mass balance of South Norwegian glaciers
- 10:45 M. Citterio: The GlacioBasis glacier monitoring programme at A.P. Olsen Ice Cap (Zackenberget, NE Greenland)
- 10:30-11:00 Coffee break**
- 11:00-12:30** Convenor: Liss M. Andreassen
- 11:00 S. H. Winsvold: Assessing glacier area change in Finnmark, northern Norway, using maps and Landsat imagery
- 11:15 T. Jóhannesson: Mapping the Surface and Surface Changes of Icelandic Ice Caps with LIDAR
- 11:30 V. Pohjola: Mass change of Vestfonna, Svalbard Archipelago
- 11:45 J. O. Hagen: The new Nordic centre of excellence: Stability and Variations of Land Ice (SVALI)

Posters:

Posters will be up during the entire meeting. The dedicated poster session will be Friday from 15-16:30.

1. C. Vega: In situ melting experiments: evaluating nitrate relocation after percolation events by means of stable nitrate isotopes
2. Mai Winstrup: Dating of Ice Cores using Visual Stratigraphy
3. Christine S. Hvidberg, Lars B. Larsen, Susanne L. Buchardt, Dorthe Dahl-Jensen, Sebastian B. Simonsen, Louise S. Sørensen, René Forsberg: Flow and rate of ice thickness change at the NEEM drill site, North Greenland
4. Ann-Marie Berggren, Ala Aldahan, Göran Possnert, Anna Sturevik Storm: Surface and snow pit ^{10}Be from the NEEM drill site, Greenland
5. Christo Buizert, Vasilii V. Petrenko, Jeffrey L. Kavanaugh, Kurt M. Cuffey, Nathaniel A. Lifton, Jeffrey P. Severinghaus and Thomas Blunier: Modeling *in situ* cosmogenic production of radiocarbon in Taylor Glacier, Antarctica
6. Hallgeir Elvehøy, Liss M. Andreassen, Rune Engeset, Miriam Jackson and Bjarne Kjølmoen: Revision of long term mass balance records, a case study of Engabreen, Norway.
7. Heid Torborg: Evaluation of different automatic image matching methods for deriving glacier displacements
8. Jacek A. Jania, Dariusz Ignatiuk, Sebastian Sikora: Seasonal fluctuations of velocities on Hans Glacier ice-cliff (Spitzbergen, Svalbard)
9. M. Svanem, A. Chapuis, M. Sund, Berthier, E. and C. Rolstad Denby: Terrestrial photogrammetry for velocity measurement of Kronebreen calving front
10. Helena Psaros: Longitudinal coupling in ice dynamics during the spring and summer regime on Storglaciären, Kebnekasie, Sweden.
11. Patrick J. Applegate, Nina Kirchner, Emma J. Stone, Ralf Greve: Simple Bayesian calibration of a quasi-equilibrated Greenland ice sheet model
12. P. Lucas-Picher, J. H. Christensen, G. Aðalgeirsdóttir, M. Stendel and R. Mottram: Very high-resolution regional climate modelling over Greenland
13. Aslak Grindsted: A simple model for the response of mountain glaciers to climate scenarios
14. Hrafnhildur Hannesdóttir: Modelling the response of Vatnajökull's southeast outlet glaciers to climate change
15. Thomas Gölles: Modeling Oxygen Isotope distribution in the Greenland ice sheet
16. Katrin Lindbäck: Characterising subglacial conditions and processes for land terminating section of the Greenland Ice Sheet using geophysical methods
17. Manfred Stober: Elevation change and flow velocities at Swiss-Camp 1991 – 2008 and recent flow velocities at the Eqip Sermia glacier (West Greenland)
18. Alison Banwell, Ian Willis, Neil Arnold, Andreas Ahlstrom and Marco Tedesco: Meltwater Generation and Routing at Paakitsoq, West Greenland: Insights from a Distributed, Physically Based Numerical Model
19. Emilie Beaudon: Spatial and temporal variability of precipitation volume and snow chemistry on Vestfonna ice cap (Svalbard, Nordaustlandet).

20. Kjetil Melvold, Thomas Skaugen: Spatial distribution of snow depth at Hardangervidda Mountain, Norway, measured by airborne laser scanning
21. Torbjørn Ims Østby: Distributed Surface Energy- and Mass Balance Modeling of Austfonna, Svalbard
22. Sebastian B. Simonsen, Louise S. Sørensen, Gudfinna Adalgeirsdottir and Christine S. Hvidberg: Mass balance of the Greenland Ice Sheet.– From volume to mass change.
23. Jeppe Malmros: Method for monitoring changing snow/ice cover across mid Greenland, a bottom-up approach
24. Philipp Rastner, Tobias Bolch, Horst Machguth, Frank Paul: A new glacier inventory for South-Eastern Greenland from LANDSAT and ASTER GDEM data: Applied methods and challenges
25. Bernd Kutschan, Silke Thoms, Klaus Morawetz, Sibylle Gemming: Brine channel formation in sea ice - Turing structures or phase field pattern?
26. Elin Högström: Changes in surface hydrology of a land terminating section of Western Greenland ice sheet using GIS
27. Jack Kohler: ICESat elevations in Antarctica along the 2007-09 Norway-USA Traverse: validation with ground-based GPS
28. Andreas Bech Mikkelsen: Modelling the hydrology in an area of the Greenland Ice Sheet, Kangerlussuaq, West Greenland with Mike SHE
29. A. Sinisalo, K. Langley, H. Anshütz, E. Isaksson, S.-E. Hamran, M. J. Øyan, H. Goodwin, J. O. Hagen, J. Kohler, A. Humbert and O. A. Nøst: Ice Thickness and bottom topography of Fimbul ice shelf revealed by a ground based FMCW radar
30. Signe Bech Andersen, Andreas P. Ahlstrøm, Dirk van As, Michele Citterio, Søren Nielsen Marianne B. Wiese and Charlotte T. Thomsen: A public database with data from the Programme for Monitoring of the Greenland Ice Sheet

Films:

Friday 29, 12-16:30 two films from the SWIPA project will be shown continuously.

The SWIPA project, Climate Change and the Cryosphere: Snow, Water, Ice and Permafrost in the Arctic - 18 min

The Greenland Ice Sheet in a Changing Climate – 18 min