

Arctic Workshop 2015

Program Summary

SUNDAY 10 MAY

University of Bergen, Natural Science Building 'Realfagbygget', Allégaten 41*
17:30–19:30 **Icebreaker Reception** *Department of Earth Sciences, 3rd floor*

MONDAY 11 MAY

University of Bergen, Law Building 'Dragefjellet', Magnus Lagabøtes plass 1*
8:00–8:50 **Check-in and Registration** *Atrium* (Upload presentations. Set up posters.)
09:00 **Introduction and Welcome** *Auditorium 2*
09:20 **Paleoceanography I** *Auditorium 2*
10:50 Morning Break *Atrium*
11:10 **Paleoceanography II** *Auditorium 2*
12:25 LUNCH *Cafeteria*
13:05 **Atmosphere–Ocean–Ice Modelling** *Auditorium 2*
14:50 Afternoon Break *Atrium*
15:10 **Glaciology I** *Auditorium 2*
17:00 **POSTER SESSION** *Atrium and Auditorium 2*
18:00 End of science sessions for Monday

University of Bergen, Natural Science Building 'Realfagbygget', Allégaten 41*
19:00 **Students-only pizza and beverages** *Department of Earth Sciences, 3rd floor*

TUESDAY 12 MAY

University of Bergen, Law Building 'Dragefjellet', Magnus Lagabøtes plass 1*
8:00–8:20 **Check-in and registration** *Atrium* (Upload presentations.)
08:30 **Surface and subsurface environments** *Auditorium 2*
10:15 Morning Break *Atrium*
10:35 **Glaciology II** *Auditorium 2*
12:20 LUNCH *Auditorium 2*
13:00 **Paleoceanography III** *Auditorium 2*
14:30 Afternoon Break *Atrium*
14:50 **Paleoclimate – “Changes in Arctic hydroclimate”** *Auditorium 2*
16:35 End of science sessions – Announcements

Radisson Blu Royal Hotel, Bryggen*
19:00 **Workshop Banquet** (optional) *Vaagen*

WEDNESDAY 13 MAY

University of Bergen, Natural Science Building 'Realfagbygget', Allégaten 41*
9:00–18:00 (approximately) **Post-conference Excursion** (optional)

END OF ARCTIC WORKSHOP

[*see map pg. 11](#)

Arctic Workshop 2015

Program Details

Sunday 10 May

University of Bergen, Natural Science Building 'Realfagbygget', Allégaten 41

Icebreaker Reception

17:30–19:30

(Department of Earth Science
3rd floor, PhD room 3153)

Monday 11 May

University of Bergen, Law Building 'Dragefjellet', Magnus Lagabøtes plass 1

A.M. MONDAY 11 MAY

8:00 – *Check-in, registration, presentation upload, poster placement* (Atrium)
8:50

Welcome and Introduction (Auditorium 2)

9:00 **Introduction**
Jostein Bakke and Martin Miles

9:10 **Welcome**
Tore Furevik

Paleoceanography I – Atlantic Arctic (Auditorium 2)

Chair: TBD

9:20 **Early Pliocene Nordic Seas palaeoceanography – relation with ocean gateways**
De Schepper, Stijn; Schreck, Michael; Beck, Kristina M.; Mangerud, Gunn;
Matthiessen, Jens

9:35 **Sea-ice extent in the Nordic Seas around the Pliocene–Quaternary transition**
Clotten, Caroline; Fahl, Kirsten; Stein, Rüdiger; De Schepper, Stijn


9:50 **Last glacial phases on the southern Norwegian margin – evidence from upper continental slope sediment cores.**
Becker, Lukas W. M.; Sejrup, Hans Petter; Hjelstuen, Berit Oline; Hafliðason, Hafliði;
Berstad, Ida

10:05 **Holocene millennial-scale variability of the East Greenland Current and warm subsurface Atlantic waters in northern Denmark Strait**
Perner, Kerstin; Jennings, Anne E.; Andrews, John T.; Moros, Matthias;
Wacker, Lukas; Jansen, Eystein

10:20 **On the reconstruction of ocean circulation and climate based on the “Gardar Drift”**
Mjell, Tor Lien; Langehaug, Helene R.; Otterå, Odd Helge; Eldevik, Tor;
Ninnemann, Ulysses S.; Kleiven, Helga (Kikki) F.

10:35 **A brief history of climate - the northern seas from the Last Glacial Maximum to global warming**
Eldevik, Tor; Risebrobakken, Bjørg; Bjune, Anne E.; Carin Andersson; Birks, H. John B.;
and 8 others


10:50  **Morning Break (20 min.)**

-
- 11:10 **History of seafloor methane emissions and relationship to Pleistocene climatic events**
Schneider, Andrea; Panieri, Giuliana; Lepland, Aivo; Knies, Jochen
-
- 11:25 **Natural variability of benthic foraminiferal assemblages and metal concentrations in the Ingøydjupet trough, SW Barents Sea**
Dijkstra, Noortje; Junttila, Juho; Husum, Katrine; Carroll, JoLynn; Hald, Morten
-
- 11:40 **Mg/Ca-paleo thermometry for cold water benthic foraminifera: development and application from the Arctic Water-Atlantic Water boundary of the European Arctic**
Skirbekk, Kari; Hald, Morten; Junttila, Juho; Marchitto, Thomas Jr.
-
- 11:55 **Reconstruction of the annual climate variability of North Atlantic water masses flowing into the Arctic: A molluscan sclerochronological approach**
Bonitz, Fabian G. W.; Andersson, Carin; Trofimova, Tamara
-
- 12:10 **Spawning dynamics of Northeast Arctic cod: a life history perspective**
Opdal, Anders Frugård; Fiksen, Øyvind; Vikebø, Frode B.; Jørgensen, Christian
-
- 12:25  **Lunch Break (40 min.) – Cafeteria**

P.M. MONDAY 11 MAY**Atmosphere–Ocean–Ice Modelling**

(Auditorium 2)

Chair: TBD

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- 13:05 **Controlled meteorological (CMET) balloon profiling of the Arctic atmospheric boundary layer around Spitsbergen compared to a mesoscale model**
Roberts, Tjarda J.; Dütsch, Marina; Hole, Lars R.; Voss, Paul B.
-
- 13:20 **Climatology of the atmospheric boundary-layer in the high latitudes**
Davy, Richard; Esau, Igor
-
- 13:35 **A 23-year Arctic ice-ocean reanalysis with the TOPAZ system using an Ensemble Kalman Filter**
Bertino, Laurent; Xie, Jiping; Counillon, Francois
-
- 13:50 **Multi-decadal variability in the Arctic**
Outten, Stephen; Esau, Igor
-
- 14:05 **The stabilizing effect of sea-ice on a freshwater perturbation**
Jensen, Mari Fjalstad; Nisancioglu, Kerim Hestnes; Nilsson, Johan
-
- 14:20 **Could massive Arctic sea ice export to the North Atlantic be the real cause of abrupt climate change during the last deglaciation?**
Coletti, Anthony J.; Condrón, Alan
-
- 14:35 **Subpolar versus subtropical freshwater forcing: The different role of icebergs and meltwater in triggering abrupt climate change**
Condrón, Alan
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- 14:50  **Afternoon Break (20 min.)**

Glaciology I

(Auditorium 2)

Chair: TBD

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- 15:10 **Simulated englacial tracer transport to reconstruct past climates and ice sheet volumes**
Born, Andreas
-
- 15:25 **Growth and decay of the last Eurasian Ice Sheets; a chronological database and time-slice reconstruction, DATED-1**
Hughes, Anna; Gyllencreutz, Richard; Mangerud, Jan; Svendsen, John Inge; Lohne, Øystein S.
-
- 15:40 **Glacial and climate history over the last 60,000 yrs inferred from lake records in the Polar Urals, Russian Arctic**
Svendsen, John-Inge; Bakke, Jostein; Bjune, Anne; Hafliðason, Hafliði; Nordvik Hovland, Morten
-
- 15:55 **A dynamical marine-based ice sheet on the n-Norwegian shelf, from late MIS-3 to Heinrich Stadial 1**
Brendryen, Jo; Hafliðason, Hafliði; Rise, Leif; Chand, Shyam; Vanneste, Maarten; Longva, Oddvar; L'Heureux, Jean S.; Forsberg, Carl F.
-
- 16:10 **Interpreting the moraine record of debris-covered glaciers: A Neoglacial case study on Baffin Island, Arctic Canada**
Crump, Sarah; Anderson, Leif; Miller, Gifford H.; Anderson, Robert S.
-
- 16:25 **Regeneration of entombed bryophytes in arctic ecosystems: Expanding the shelf life of totipotency beyond glaciation**
La Farge, Catherine; Miller, Gifford; Bao, Tan
-
- 16:40 **GIS-analyses of lake density and terrain ruggedness to identify ice-sheet erosional impacts on the exposed shield of Baffin Island, Eastern Canadian Arctic**
Ebert, Karin
-

Poster Session – List of Presentations: pgs. 8 –10

(Atrium and Auditorium 2)

17:00–18:00

University of Bergen, Natural Science Building 'Realfagbygget', Allégaten 41

Students-only pizza and beverages(Department of Earth Science,
3rd floor)

19:00–

Tuesday 12 May

University of Bergen, Law Building 'Dragefjellet', Magnus Lagabøtes plass 1

A.M. TUESDAY 12 MAY

8:00 – **Check-in, registration, presentation upload** (Atrium)
8:20

Surface and subsurface environments (Auditorium 2)

Chair: TBD

8:30 **Late Pliocene - Pleistocene depositional environments in the northern North Sea**

Reinardy, Benedict; Hjelstuen, Berit; Sejrup, Hans Petter; Augedal, Hans

8:45 **The Weichselian chronostratigraphical framework of the Kongsfjorden Fan System, W-Spitsbergen**

Wiberg, Daniel H.; Haflidason, Haflidi; Laberg, Jan Sverre

9:00 **Morphologies and triggers of submarine mass failures in Frobisher Bay, Baffin Island, Nunavut**

Deering, Robert; Bell, Trevor; Forbes, Don

9:15 **Dynamic simulations of potential methane release from the East Siberian continental slope sediments**

Stranne, Christian; Jakobsson, Martin; O'Regan, Matt

9:30 **Effects of excess ground ice on projections of permafrost in a warming climate**

Lee, Hanna; Swenson, Sean C.; Slater, Andrew G.; Lawrence, David M.

9:45 **Exploring of subsurface flowpaths in arctic hillslopes**

Votyek, Emily; Rushlow, Caitlin; Godsey, Sarah; Singha, Kamini

10:00 **Climate, grass growth, and hay yield in northeastern Iceland A.D. 1700 to 1950**

Ogilvie, Astrid; Sigurðardóttir, Ragnhildur; Júlíusson, Árni Daníel; Hreinsson, Viðar; Hicks, Megan

10:15  **Morning Break (20 min.)**

Glaciology II (Auditorium 2)

Chair: Jason Briner

10:35 **Holocene tephra on South Georgia**

Oppedal, Lea Toska; Bakke, Jostein; Balascio, Nicholas; Øyvind, Paasche

10:50 **Arctic Holocene glacier fluctuations reconstructed from lake sediments at Mitrahelvøya, Spitsbergen**

Røthe, Torgeir; Bakke, Jostein; Vasskog, Kristian; Gjerde, Marthe; D'Andrea, William J.; Bradley, Raymond S.

11:05 **A full Holocene record of glacier variability on Svalbard reveals a dynamic Holocene in the Arctic**


van der Bilt, Willem G. M.; Bakke, Jostein; Vasskog, Kristian; D'Andrea, William J.

11:20 **Fluctuations of local glaciers in western Greenland during the late Holocene**

Schweinsberg, Avriel D.; Briner, Jason P.; Miller, Gifford H.; Bennike, Ole

11:35 **Deglaciation and late Holocene glacier re-advances beyond the LIA extension in Hornsund, Svalbard, based on 10Be surface exposure ages**

Gislefoss, Lina; Linge, Henriette; Hormes, Anne; Fabel, Derek; Xu, Sheng


-
- 11:50 **The deglaciation of Kongsfjorden, Svalbard, based on surface exposure dating of glacial erratics and Quaternary mapping of Blomstrandhalvøya**
Grant, Oliver; Linge, Henriette; Hormes, Anne; Fabel, Derek; Xu, Sheng
-
- 12:05 **Reconstructing southwestern Scandinavian Ice Sheet history using 10Be dating**
Gump, Dale; Briner, Jason P.; Svendsen, John-Inge; Mangerud, Jan
-
- 12:20  **Lunch Break (40 min.) – Auditorium**

P.M. TUESDAY 11 MAY

Paleoceanography III – N American and Atlantic Arctic

(Auditorium 2)

Chair: Martin Miles

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- 13:00 **Was Baffin Bay covered by an ice shelf during the LGM and H1?**
Jennings, Anne; Andrews, John; Ó Cofaigh, Colm; St-Onge, Guillaume; Belt, Simon;
 Cabedo-Sanz, Patricia
-
- 13:15 **Marine signature of early Holocene glacial events of the eastern margin of the Laurentide Ice Sheet**
Pearce, Christof; Andrews, John T.; Bouloubassi, Ioanna; Hillaire-Marcel Claude;
 Jennings, Anne E.; Olsen, Jesper; Williams, James; Kuijpers, Antoon;
 Seidenkrantz, Marit-Solveig
-
- 13:30 **Age and origin of multiple ice-rafted debris horizons in the Canadian Beaufort Sea: implications for Arctic Ocean stratigraphy and paleoclimate**
Lakeman, Thomas; Pieńkowski, Anna J.; Nixon, F. Chantel; Furze, Mark F. A.; Blasco, Steve; Andrews, John T.
-
- 13:45 **The marine signal of a collapsing ice margin: the catastrophic advance and collapse of the end Pleistocene Viscount Melville Sound Ice Shelf, Canadian Arctic Archipelago**
Furze, Mark F. A.; Pieńkowski, Anna J.; Nichols, Keir A.; Reedman, Amy;
 Esteves, Mariana S. R.; Cage, Alix G.; Bennett, Robbie
-
- 14:00 **Atlantic water inflow in the early Holocene Northwest Passage marked by planktonic foraminifera (*Neogloboquadrina pachyderma*)**
Pienkowski, Anna J.; Cage, Alix G.; Furze, Mark F. A., de Figueiredo Martins, A. S.,
 England, John; MacLean, B.; Blasco, Steve
-
- 14:15 **Holocene paleomagnetic synchronized records from the Arctic**
Ólafsdóttir, Sædís; Bakke, Jostein; Stoner, Joseph
-
- 14:30  **Afternoon Break (20 min.)**

Paleoclimate – “Changes in Arctic Hydroclimate”

(Auditorium 2)

Chairs: Ray Bradley and Jostein Bakke

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- 14:50 **High Resolution brGDGT-based paleotemperatures from Marine Isotope Stage 31 at Lake El'gygytgyn: a 50,000 year long interglacial in Siberia prior to the Mid-Pleistocene Transition?**
De Wet, Greg; Castañeda, Isla; Brigham-Grette, Julie; Salacup, Jeff
-
- 15:05 **Holocene environmental changes in the Skallingen area, eastern North Greenland, based on a lacustrine record**
Bennike, Ole; Wagner, Bernd

-
- 15:20 **Algal pigments display varying response to Holocene climate variability between lakes in Baffin Island and Iceland**
Florian, Christopher R.; Miller, Gifford H.; Geirsdottir, Áslaug; Fogel, Marilyn L.; Wolfe, Alexander P.; Vinebrooke, Rolf D.
-
- 15:35 **Using modern gridded climate data to help interpret terrestrial paleoclimate records: Application to Iceland and the North Atlantic region**
Anderson, Leif; Geirsdóttir, Áslaug; Miller, Gifford
-
- 15:50 **Abrupt centennial-scale departures superimposed on Holocene insolation forcing across the northern North Atlantic**
Geirsdóttir, Áslaug; Miller, Gifford H.; Briner, Jason; Schweinsberg, Avriel; Pendleton, Simon; Larsen, Darren; Florian, Christopher
-
- 16:05 **High-resolution hydroclimate records from glacier-fed lakes**
Vasskog, Kristian; Bakke, Jostein; Nielsen, Pål Ringkjøb; Meidell, Susanne
-
- 16:20 **Regime shifts in the northern North Atlantic during the past 6,000: A record of seabird population size and precipitation isotopes on Bjørnøya, Svalbard**
De Andrea, William J.; Hormes, Anne; Bakke, Jostein; Nicolaisen, Line
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END OF SCIENCE SESSIONS

Announcements

Radisson Blu Royal Hotel, Bryggen

Conference dinner (optional)
19:00–

(Vaagen)

Wednesday 13 May

University of Bergen, Natural Science Building 'Realfagbygget', Allégaten 41

Post-conference excursion (optional)
9:00–18:00 (approximately)

(Allégaten 41)

Wear hiking shoes and weatherproof clothing

END OF ARCTIC WORKSHOP 2015 – Thanks for attending!

Poster Session

List of presentations

- 1 **Combining terrestrial and marine glacial archives – a geomorphological map of Nordenskiöldbreen forefield, Svalbard**
Allaart, Lis; Friis, Nina; Ingólfsson, Ólafur; Schomacker, Anders; Håkansson, Lena; Noormets, Riko
- 2 **Sea surface temperature variability in the eastern Nordic Seas during the Pliocene**
Bachem, Paul Eduard; Risebrobakken, Bjørg; McClymont, Erin
- 3 **'Black ice' formation in the Hurrungane mountains, Norway?**
Bergbjørn, Anna Karin; de Villiers, Simon; Yde, Jacob Clement
- 4 **Active layer thickness and soil organic carbon of frozen peatlands: relationship and spatial variability (CALM R1, western Siberia, Russia)**
Bobrik, Anna; Goncharova, Olga; Matyshak, Georgy
- 5 **The Latest Pleistocene and Holocene glacier record from the Brooks Range, Arctic Alaska**
Briner, Jason P.; Pendleton, Simo; Ceperley, Liz; Kaufman, Darrell; Zimmerman, Susan
- 6 **High-resolution Holocene reconstruction of Annabreen glacier from proximal Gjøavatnet Lake sediments, Amsterdamøya, NW Svalbard**
de Wet, Greg; Bakke, Jostein; Gjerde, Marthe
- 7 **Bio-monitoring using benthic foraminiferal assemblages – examples from the SW Barents Sea**
Dijkstra, Noortje; Junttila, Juho; Sørensen, Steffen Aagaard
- 8 **A sub-centennial view of Holocene modulations within the Earth's largest ice and freshwater pathway: The East Greenland Current**
Dylmer, Christian Valdemar; Miles, Martin
- 9 **Neoglaciation and Little Ice Age (LIA) glaciers and ice caps on Svalbard**
Farnsworth, Wesley R.; Ingólfsson, Ólafur; Schomacker, Anders; Retelle, Michael
- 10 **Arctic and Subarctic Ostracode Database: Biogeographic and paleoceanographic applications**
Gemery, Laura; Cronin, T. M.; Briggs, Jr., W. M.; Brouwers, E. M.; Stepanova, A.; Wood, A. M.; Yasuhara, M.
- 11 **Reconstructed Holocene glacier activity and Neoglacial winter precipitation at Ålfotbreen, western Norway, using distal glacier-fed lake sediments**
Gjerde, Marthe; Bakke, Jostein; Vasskog, Kristian; Nesje, Atle; Hormes, Anne
- 12 **Coastal to Central: Integrating late-Holocene lacustrine climate proxies in NW Iceland**
Gunnarson, Sydney; Geirsdóttir, Áslaug; Miller, Gifford
- 13 **The frequency and pattern of the volcanic activity in the N-Atlantic petrographic province during the last glacial period: a record from the deep-sea core PS2644, South Greenland Sea**
Haflidason, Haflidi; Voelker, Antje H. L.
- 14 **Mapping glacier change between the end of "Little Ice Age" and 2008 using orthophotos and a DEM**
Hamré; Moa; Rosqvist, Gunhild; Jansson, Peter; Holmlund, Per
- 15 **Reconstructing Holocene climate and ice cap evolution in Vestfirðir, Iceland**
Harning, David; Geirsdóttir, Áslaug; Miller, Gifford

16	To what extent can the available historical temperature proxy network be utilised for investigating Arctic amplification <u>Hind, Alistair; Zhang, Qiong</u>
17	Acoustic communication signals underneath the Arctic sea ice <u>Hope, Gaute; Sagen, Hanne</u>
18	Deglaciation history of Bjørnøya, Svalbard, between 25 ka and 12.9 ka <u>Hormes, Anne; Briner, Jason</u>
19	A 2000 year record of marine climate variability from Arnarfjörður, NW Iceland <u>Jónsdóttir, Ingibjörg R.; Ólafsdóttir, Sædís; Geirsdóttir, Áslaug</u>
20	The Barents Sea phytoplankton decadal dynamics <u>Korosov, Anton</u>
21	Seasonal changes in benthic foraminifera assemblages in surface sediments of Adventfjorden (west Spitsbergen) – preliminary winter studies results <u>Kucharska, Małgorzata; Łacka, Magdalena; Pawłowska, Joanna; Lønne, Ole Jørgen; Zajączkowski, Marek</u>
22	New insight on the age and geomorphic history of tuyas in the northern volcanic zone of Iceland from cosmogenic ³⁶Cl surface exposure dating <u>Licciardi, Joseph M.; Houts, Amanda N.; Bryce, Julia G.; Finkel, Robert C.; Zimmerman, Susan H.</u>
23	Microbial diversity and community structure along a glacier forefield chronosequence at Styggeðalsbreen, central Norway <u>Mateos-Rivera, Alejandro; Øvreås, Lise; Reigstad, Laila J.; Finster, Kai W.; Yde, Jacob C.</u>
24	Trends in the normalized difference vegetation index (NDVI) associated with urban development in arctic and subarctic Western Siberia <u>Miles, Victoria; Esau, Igor; Davy, Richard; Kurchatova, Anna</u>
25	Chronology of the last retreat of the Norwegian Channel Ice Stream <u>Morén, Björn M.; Sejrup, Hans Petter; Hjelstuen, Berit Oline</u>
26	New magnetostratigraphic results from the Polar Urals, Russia: indication of a short lasting excursion <u>Ólafsdóttir, Sædís; Svendsen, John-Inge; Bakke, Jostein; Hafliðason, Hafliði; Stoner, Joseph; Hovland, Morten N.</u>
27	An emerging perspective on Quaternary cryosphere–climate interactions and landscape evolution on Cumberland Peninsula, Baffin Island <u>Pendleton, Simon; Miller, Gifford; Crump, Sarah</u>
28	Using ¹⁰Be dating to improve the history of the Svalbard-Barents Sea Ice-Sheet on Kong Karls Land, Svalbard: preliminary results <u>Philipps, William; Briner, Jason P.; Koffman, Toby; Hormes, Anne</u>
29	Holocene equilibrium line altitude (ELA) reconstructions in Sarek National Park, northern Sweden <u>Regnéll, Carl; Hormes, Anne</u>
30	Environmental impact of submarine mine tailings deposited between 1972–1978 in Repparfjorden, northern Norway – preliminary results <u>Skirbekk, Kari; Sternal, Beata; Junttila, Juho; Forwick, Matthias; Carroll, JoLynn</u>
31	XRF analysis of lacustrine sediment from Linnévatnet, Svalbard <u>Strand, Sarah</u>

32 **Earth Surface Sediment Laboratory (EARTHLAB)**

Støren, Eivind Wilhelm Nagel; Bakke, Jostein

33 **Challenges and perspectives in coastal environmental reconstructions based on
Arctica islandica sclerochronological records from the eastern Norwegian Sea**

Trofimova, Tamara; Andersson, Carin

34 **Marine outlet glacier stability on centennial time scales**

Åkesson, Henning; Nisancioglu, Kerim H.; Svendsen, John-Inge; Mangerud, Jan;
Hughes, Anna; Vasskog, Kristian; Nick, Faezeh M.

