

# Greenland Ice Sheet Stability – Lessons from the Past

University of Bergen, April 19-21, 2023

Final Program

**Tuesday 18 April:** Early ice breaker (17:00 Henrik) and later ice breaker (19:00) and panel on sea level rise impacts (20:00) at Litteraturhuset Bergen.

Day 1   Wednesday 19 April 2023	
08:30	Badge pick-up, presentation file load and mingle (coffee, Jusbygget foyer)
09:00	<b>Welcome and Introduction</b> (Auditorium 2, Jusbygget)
09:15	Louise Sime   The Greenland Ice Sheet during the Last Interglacial: what do we learn from ice cores and models? ( <b>Keynote</b> )
09:45	Uta Krebs-Kanzow   The Greenland Ice Sheet surface mass balance in warmer climates: competing role of precipitation and radiative response
09:55	Lev Tarasov   A joint ice sheet and GIA history matching for the last 2 glacial cycles
10:05	Daniel Topal   Atmospheric-circulation constrained model sensitivity recalibrates Greenland Ice Sheet melt projections
10:15	Ilaria Tabone   Holocene thinning in central Greenland controlled by the Northeast Greenland Ice Stream
10:25	Charlotte Rahlves   Uncertainties in Greenland Ice Sheet evolution and related sea-level projections
10:35	<b>Coffee Break</b> (Jusbygget foyer)
11:00	Lightning Poster Talks (2 mins each)
12:00	<b>Lunch</b> (Seminar room 1, Jusbygget)
13:00	Poster Session (Seminar rooms 4 & 5, Jusbygget)
14:30	Karita Kajanto   Holocene warmth necessary for the Little Ice Age advance of Sermeq Kujalleq ( <b>Keynote ECS</b> , Auditorium 2, Jusbygget)
15:00	Breakout Session 1
16:00	Group Discussion (report from breakouts)
16:30	<b>Excursion to Fløyen</b>
17:00	<b>Meet at Fløibanen</b>
17:30	<b>Group Photo at Fløyen</b>

Day 2   Thursday 20 April 2023	
09:00	<b>Introduction and Re-cap</b> (Auditorium 2, Jusbygget)
09:10	Vivi Pedersen   The influence of surface processes on solid Earth, ice sheet, and sea level ( <b>Keynote</b> )
09:40	Andreas Born   Uncertainties from climate-ice sheet interactions

09:50	Therese Rieckh   Evaluating the Greenland Ice Sheet interior: design and applicability of the layer age tracer ELSA
10:00	Patrick Heimbach   Paleochronometry of the Greenland Ice Sheet via control methods
10:10	Rachel Oien   The Little Ice Age Maximum of the Greenland Ice Sheet
10:20	Tancrede Leger   Towards a Greenland-wide empirical reconstruction of ice-sheet Holocene retreat informed by former ice extent markers
10:30	<b>Coffee Break</b> (Jusbygget foyer)
11:00	Camilla Andresen   Marine sediment core data for ice sheet model validation
11:10	Yunyi Wang   Sea ice dynamics in the Fram Strait during a D-O cycle
11:20	Martin Miles   Synchronous and asynchronous behaviour of Helheim, Ferris and Midgard Glaciers
11:30	Dave Roberts   The retreat and thinning history of the Northeast Greenland ice stream
11:40	Marc Oliva   Deglaciation patterns and climate variability in NE Greenland
12:00	<b>Lunch</b> (Seminar room F, Dragefjellet)
13:00	Breakout Session 2
14:00	Group Discussion (reports from breakouts + discussion)
15:00	<b>Coffee Break</b> (Seminar room F, Dragefjellet)
15:30	Joseph MacGregor   Peeling back the Greenland Ice Sheet: What can we learn from its radiostratigraphy? ( <b>Keynote</b> , Auditorium 2, Jusbygget)
16:00	Introduction to SINERGIS project
17:00	<b>End of Day 2</b>
18:30	<b>Workshop dinner @ Søtt+Salt, Thormøhlens Gate 51b (main course fish or gnocci)</b>

Day 3   Friday 21 April 2023	
09:00	<b>Introduction and Re-cap</b> (Auditorium 2, Jusbygget)
09:10	Anne de Vernal   Past sea-surface conditions around Greenland based on proxy data ( <b>Keynote</b> )
09:40	Michele Petrini   Response of the Greenland Ice Sheet to temperature overshoot scenarios
09:50	Laura Dietrich   The importance of sublimation for the surface mass balance of the Greenland Ice Sheet accumulation zone
10:00	Alun Hubbard   The incipient role of hydrofracture on ice sheet vulnerability
10:10	Rachel Carr   Variability in forecast surface mass balance drives uncertainties in predicted 21st Century mass loss from three major Greenland outlet glaciers
10:20	Ankit Pramanik   Simulating hydrology and tracer dynamics in a subglacial environment underneath the Greenland Ice Sheet

<b>10:30</b>	<b>Coffee break</b> (Jusbygget foyer)
<b>11:00</b>	Guy Paxman   Automated mapping and classification of subglacial valleys across Greenland: insights into ice sheet history
<b>11:10</b>	Jay Johnson   U.S. Ice Drilling Program Sub glacial rock coring and agile ice coring drills
<b>11:20</b>	Jason Briner   Seeking interglacial isotopes at the Greenland Ice Sheet bed
<b>11:30</b>	Matt Osman   Reconstructing the Greenland Ice Sheet during the Last Interglacial warm period: preliminary results ( <b>Keynote ECS</b> )
<b>12:00</b>	<b>Lunch</b> (Seminar room F, Dragefjellet)
<b>13:00</b>	Breakout Session 3
<b>14:00</b>	<b>Coffee Break</b> (Seminar room F, Dragefjellet)
<b>14:30</b>	Group Discussion (reports from breakouts + discussion)
<b>15:30</b>	Introduction to Ghub project
<b>16:30</b>	<b>End of Day 3</b>

#### Notes:

For keynote speakers please plan your talks to be 25 mins + 5 mins for questions.

For 10-minute slots please plan your talks to be 8 mins + 2 mins for questions.

Lightening poster talks (Day 1) each have a 2-minute slot.

Poster boards are A0 portrait.

#### **Poster Presentations (alphabetical by author):**

1. **Mike Bentley** | Observations from an epishelf lake of modified warm Atlantic water at the grounding line of 79N Glacier, NE Greenland
2. **Josep Bonsoms Garc a** | Thermodynamics and circulation patterns in Greenland
3. **David Chandler** | Supraglacial streams drive deep englacial warming
4. **Johan Faust** | Greenland Ice Sheet collapse during past interglacials
5. **Julia Garcia-Oteyza** | Holocene glacial oscillations in the NE Greenland
6. **Jakob Gradl** | Using basal meltwater isotope composition to constrain geothermal heat flux in Greenland
7. **Kelly Hogan** | KANG-GLAC: A new UK project marrying observations and models for Kangerlussuaq Glacier, SE Greenland
8. **Robert Law** | Which glacier (sliding) processes do basal traction inversion procedures actually account for?
9. **Eigil Lippert** | Modelling ice flow variability of the Kangerlussuaq Glacier, southeast Greenland, during 1900-2021
10. **Karlee Prince** | Preliminary results of relative sea level changes in NW Greenland
11. **Maxim Shapovalov** | Showcasing early-stage capabilities of IceModel

12. **Elizabeth Thomas** | Climate and environment of northwestern Greenland during ancient warmth: preliminary lipid biomarker results from the sediments beneath the Camp Century ice core
13. **Michael Town** | Potential impacts of isotopic post-depositional modification on ice sheet elevation reconstruction
14. **Olivia Truax** | Insights into Holocene Arctic climate evolution from paleoclimate data assimilation
15. **Philipp Voigt** | Inverse modelling of the englacial stratigraphy of the Greenland Ice Sheet
16. **Sophie Goliber** | Ghub: A new community-driven data-model resource for ice-sheet scientists
17. **Lara Pérez** | IODP 1011-Pre – NorthGreen Northeast Greenland Glaciated Margin

**In association with:**



**Organising committee:** Camilla Andresen, Andreas Born, Jason Briner, Heiko Goelzer, Kelly Hogan, Robert Law, Kerim Nisancioglu, and Therese Rieckh.