# 2nd Korea–Nordic Strategic Seminar for Research Collaboration

Date: 22 – 23 April 2024

Venue: NORCE

Topic: High-latitude Earth Climate system

Day 1 (22nd April)

| | |
|---|---|
| 09:00 | Welcome by Kikki Kleiven (Director of the Bjerknes Centre) and Øyvind Paasche (Director of NORCE Climate) |
| **Session 1: Permafrost and vegetation (Room BGO-NP-G110)** | |
| 09:30 | Jong-Seong Kug (SNU): Negative $CO_2$ emissions mitigate extremes of land hydrological cycle via a vegetation physiological feedback |
| 09:55 | Kjetil Aas (CICERO): Small-scale cryospheric processes in ESMs - what are we missing and what can we do? |
| 10:20 | Coffee Break |
| 10:50 | Norman Steinert (CICERO): Reduced permafrost-carbon emissions from Northern Hemisphere cooling during temperature overshoot |
| **Session 2: The high latitudes in strong mitigation scenarios (Room BGO-NP-G110)** | |
| 11:15 | Jerry Tjiputra (NORCE): Impacts of solar geoengineering on marine system |
| 11:45-12:45 | Lunch (NORCE cantina) |
| 13:00 | Friederike Fröb (UiB): Multiple habitat stressors of cold-water corals under net-zero and negative emissions |
| 13:25 | Michele Petrini (NORCE): Overview of Greenland Ice Sheet coupling in the Norwegian Earth System Model and an application under climate mitigation scenarios |
| 13:50 break/walk to the Bjerknes Seminar room | |
| 14:15 | **Bjerknes Seminar** talk by Prof. Kug: Deep Ocean warming-induced irreversible climate changes under climate mitigation scenarios (Bjerknes Seminar room) |
| | |
| **Session 3: Atmospheric circulation and sea-ice(Bjerknes Seminar room)** | |
| 15:30 | Camille Li (UiB): Midlatitude-polar linkages - some thoughts on Eurasian Cooling and Arctic cyclones |
| 15:55 | Joo-Hong Kim (KOPRI): Observed driving mechanism of summer sea ice melt by an intense Arctic cyclone |
| 16:20 | Sang-Yoon Jun (KOPRI): Wintertime surface air temperature relationship between the Arctic and Eurasia in the late Holocene transient climate simulation |
| 16:45 | Seokwoo Son (SNU): Responses of storm track and blocking to CO2 removal |
| 18:30 | Dinner (Bryggeloftet & Stuene Restaurant) |

Day 2 (23rd April)

| Session 4: Ocean circulation and heat uptake (Bjerknes Seminar room) | |
|---|---|
| 09:30 | Ji-Hoon Oh (SNU): Forthcoming tipping point of AMOC collapse despite climate mitigation efforts |
| 09:55 | Nadine Goris (NORCE): The emergence of the Gulf Stream and interior western boundary as key regions to constrain the future North Atlantic carbon uptake |
| 10:20 | Helene Asbjørnsen (UiB): Deconstructing future AMOC decline at 26.5°N |
| 10:45 | Coffee break |
| 11:10 | Yechul Shin (SNU): Delayed Early Warning Signal for the Collapse of the Deep Water Formation in the North Atlantic |
| 11:35 | Jörg Schwinger (NORCE): A tipping point of AMOC decline and recovery in zero-emission NorESM simulations? |
| 12:00 | Lunch (Søtt+Salt) |
| | |
| 14:00 | Open discussion |
| 18:00 | Dinner (Spisekroken) |