



Programme for the 14th Bolin Days 2022

November 14

Early Career Researcher Event for PhD students and postdoctoral researchers with the focus on how to develop successful interdisciplinary proposals

Geoscience building William-Olsson

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| 13:00 - 13:10 | Welcome and information |
| 13:10 - 13:45 | PowerPoint karaoke
Improvisation group activity with presentation of slides produced by others beforehand. |
| 13:45 - 14:15 | Fika |
| 14:15 - 15:00 | Finding ideas for an interdisciplinary research proposal
Interdisciplinary brainstorm - Group work |
| 15:00 - 16:20 | Presentations of the research ideas |
| 16:20 - 16:50 | Closing remarks by Henrik Aspeborg, Office for Research, Engagement and Innovation Services at SU and Thorsten Blenckner, Stockholm Resilience Centre |
| 17:00 - + | After-work |

November 15

Aula Magna

Zoom: <https://stockholmuniversitv.zoom.us/j/65355730778>

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| 09:30 - 10:00 | Registration and coffee |
| 10:00 - 11:30 | Session 1: Greetings from the Bolin Centre leadership
Chairs of the session: Johan Nilsson and Martin Jakobsson |
| 10:00 - 10:15 | Welcome and practical information: Chairmen of the board and directorate |
| 10:15 - 10:40 | Ilona Riipinen: Interactions between atmospheric composition, clouds and climate |
| 10:40 - 11:05 | Gustaf Hugelius: Interactions between climate and northern soils |
| 11:05 - 11:30 | Ilona Riipinen and Gustaf Hugelius: Future outlook – update and discussion on the ongoing process for a new strategic plan for the Bolin Centre |



- 11:30 - 13:00** **Lunch and posters, support activities available on site**
- 13:00 - 14:30** **Session 2: Research Theme 4: Climate, ecosystems and biodiversity**
Chairs of the session: Karl Gotthard and Regina Lindborg
- 13:00 - 13:05 Introduction: Karl Gotthard and Regina Lindborg
- 13:05 - 13:20 Johan Ehrlén: Long-term responses to warming – What can we learn from studies of plants in geothermally heated ecosystems?
- 13:20 - 13:35 Edana Jean Lord: Population genomics of the muskox' resilience in the near absence of genetic variation
- 13:35 - 13:50 Marianne Stoessel: Effects of climate and land-use change on grazing in northern Fennoscandia
- 13:50 - 14:05 Anna Scaini: The value of water in a changing climate: citizen's perception and scientific challenges
- 14:05 - 14:20 Loke von Schmalensee: Cross-seasonal trade-offs in thermal adaptation in two closely related butterflies with drastically diverging population dynamics
- 14:30 - 15:00** **Fika**
- 15:00 - 16:30** **Session 3: Research Theme 1: The physical-chemical climate system**
Chairs of the session: Frida Bender, Torben Koenigk, Thorsten Mauritsen.
- 15:00 - 15:10 Radovan Krejci: What we have learned at highest atmospheric observatory on our planet at Chacaltaya in Bolivia
- 15:10 - 15:20 Ines Bulatovic: Large-eddy simulation of a two-layer boundary-layer cloud system from the Arctic Ocean 2018 expedition
- 15:20 - 15:30 Kristofer Krus: MLDown: A Python framework for providing high-resolution climate data using deep learning based statistical downscaling
- 15:40 - 15:50 Linnea Larsson Huusko: Stronger Response to the Aerosol Indirect Effect due to Cooling in Remote Regions
- 15:50 - 16:00 Ramon Fuentes Franco: Heavy precipitation events over Northern Europe during winter modulated by a weaker NAO variability by the end of the 21st century
- 16:00 - 16:10 Jonathan Wiskandt: High Resolution Ocean modelling of plume dynamics and basal melting at Ryder Glacier, North Greenland
- 16:10 - 16:20 Clare Flynn: Hadley Circulation Sensitivity to Turbulent Drag
- 16:20 - 16:30 Geert Brethouwer: FLOW physics for climate, Nordita program, May 2023, Stockholm
- 17:45 - 22:00** **Mingle and Dinner at the Nobel Museum, Gamla Stan (Stortorget 2)**



November 16

Aula Magna and Geoscience building

Zoom <https://stockholmuniversity.zoom.us/j/65355730778>

- 09:30 - 10:00** **Registration and coffee**
- 10:00 - 11:30** **Session 4: Invited presentations from collaborating centres**
Chairs of the session: Ilona Riipinen and Gustaf Hugelius
- 10:00 - 10:05 Introduction: Ilona Riipinen and Gustaf Hugelius
- 10:05 - 10:20 Line Gordon: Stockholm Resilience Centre
- 10:20 - 10:35 Christoph Humborg: Baltic Sea Centre
- 10:35 - 10:50 Francesco Fuso-Nerini: KTH Climate Action Centre
- 10:50 - 11:05 Zahra Kalantari: KTH Water Centre
- 11:05 - 11:20 Anna Sobek: Stockholm University's Centre for Circular and Sustainable Systems (SUCCeSS)
- 11:20 - 11:30 Margret Steinhorsdottir: Swedish Biodiversity Data Infrastructure
- 11:30 - 13:00** **Lunch and posters, support activities available on site**
- 13:00 - 14:30** **Session 5: Research Theme 3: Past Climates**
Chair of the session: Margret Steinhorsdottir
- 13:00 - 13:05 Introduction: Margret Steinhorsdottir
- 13:05 - 13:25 Sam Slater: Palaeontological ghost busting: What cryptic 'ghost' nannofossils can tell us about past global warming events
- 13:25 - 13:40 Allison Hsiang: New automated approaches for biodiversity and climate using deep learning and high-throughput imaging
- 13:40 - 13:55 Frederik Schenk: Rapid deglaciation driven by much warmer summers due to high continentality
- 13:55 - 14:10 Qiong Zhang: Multi-centennial Holocene variability in proxies and climate model simulations
- 14:10 - 14:30 Fredrik C. Ljungqvist: Climate and grain yields in early modern Spain, Switzerland and Sweden
- 14:30 - 15:00** **Fika**



- 15:00 - 16:30** **Session 6: Research theme 2: Water, Biogeochemical Cycles and Climate**
Chair of the session: Volker Brüchert and Fernando Jaramillo
- 15:00 - 15:15 Volker Brüchert: Shallow-water methane emissions from vegetated coastal ecosystems
- 15:15 - 15:30 Birgit Wild: Subsea permafrost in the Laptev Sea: Origin of organic matter and potential for greenhouse gas production after thaw
- 15:30 - 15:45 Maganizo Kruger Nyasulu: Green - Blue Water potential for Food Production in Africa: A Hydroclimatic Regime Assessment
- 15:45 - 16:00 Francisco Pena: Quantifying water extent changes of wetlands with deep learning
- 16:00 - 16:15 Luigia Brandimarte: Spatio-temporal dynamics of flood risk
- 16:15 - 16:30 Katherine Power: Impacts of large-scale Saharan solar farms on the global terrestrial carbon cycle using EC-Earth model
- 16:30 - 17:00** **Concluding remarks, presentation of poster competition winners**
Ilona Riipinen and Gustaf Hugelius
- 17:00 - 22:00** **Geopub and Cèilidh in the Geoscience building**