

Anders Damsgaard

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SHORT BIO

My research focuses on using quantitative methods to understand contemporary and future cryosphere processes and Quaternary geology. I have particular interest in using field observations and laboratory experiments for designing and applying next-generation numerical models. These models improve the understanding of glaciological change, the formation of glacial landscapes, granular mechanics, geotechnical models, and sea ice dynamics in a changing climate.

EDUCATION

- 2010–15 **Aarhus University**
Department of Geoscience
Ph.D.+M.Sc.: “*Numerical modeling of subglacial sediment deformation*”
Supervisors: David L. Egholm and Jan A. Piotrowski.
Thesis download: <https://adamsgaard.dk/ad-thesis.pdf>
- 2006–10 **Aarhus University**
Department of Geoscience
B.Sc.: Quaternary Geology
Supervisors: Christian Kronborg and Niels T. Knudsen

ACADEMIC EXPERIENCE

- 2020–Present **Aarhus University**
Marie Skłodowska-Curie Postdoctoral Fellow, Department of Geoscience
- Coupled modeling of ice-water-till dynamics
 - Soft-bed geomorphology studies
 - Laboratory ring-shear experiments
- 2020 **Aarhus University**
External lecturer, Department of Geoscience
B.Sc. courses: The Geology of Denmark (5 ECTS), Quaternary Geology (10 ECTS)
- 2019–2020 **Stanford University**
Independent Consultant, Department of Geophysics
Visiting researcher at Aarhus University, Department of Geoscience
- Development of continuum methods for multi-phase granular flows
 - Continuum and discrete modeling of ice-water-sediment systems
- Supervisor:* Jenny Suckale
- 2017–2018 **Princeton University**
Postdoctoral Research Associate

Program in Atmospheric and Oceanic Sciences
Andlinger Center for Energy and the Environment
Geophysical Fluid Dynamics Laboratory (GFDL)
National Oceanographic and Atmosphere Administration (NOAA)

- Design of Lagrangian methods for simulating sea-ice dynamics
- Analysis of sea-ice mechanics
- Coupling of Lagrangian methods to global climate models

Supervisors: Alistair Adcroft and Olga Sergienko

2016–17 **Scripps Institution of Oceanography**

Green's Foundation Postdoctoral Scholar
Institute of Geophysics and Planetary Physics
University of California, San Diego

- Subglacial hydrology modeling
- Sediment mechanics under the West Antarctic Ice Sheet
- Rate and state friction in discrete-element models

Supervisor: Helen A. Fricker

2015 **Aarhus University**

Research assistant
Department of Geoscience

- Markov-Chain Monte Carlo inversion of cosmogenic nuclide ages
- Constructed web front and backend for MATLAB inversion tools

Supervisor: Mads F. Knudsen

OTHER PROFESSIONAL EXPERIENCE

2018–2019 **Danish Environmental Protection Agency**

Academic Technician
Ministry of Environment and Food

- Automated quality control of geological, hydrological, and geochemical data
- Development of geospatial tools for groundwater mapping using QGIS, PostGIS, and PostgreSQL

AWARDS, GRANTS, AND SCHOLARSHIPS

2020 European Union/European Commission, Horizon 2020:
Marie Skłodowska-Curie Actions Individual Fellowship
H2020-MSCA-IF-2019, 24 months, EUR 207,000.
Project: *NEMOSID: NExt-generation MOdeling of Sedimentary Ice-sheet Dynamics*

2016 Aarhus University Research Foundation:
Award for outstanding Ph.D. research in Science and Technology.

2016 XSEDE Startup Allocation, Principal Investigator: “Grain and fluid dynamics: Governors of glacier flow and earthquake initiation”, 48,000 CPU hours on GPU clusters Stampede, Comet and Bridges.

2016 NVIDIA Corporation, hardware grant (Tesla K40).

- 2016 Community Surface Dynamics Modeling System (CSDMS) Student Modeler Award 2016, University of Colorado Boulder, USA, for innovative model development in the field of earth-surface dynamics.
- 2015 Cecil H. and Ida M. Green Foundation for Earth Sciences scholarship, 50% of salary for two years.

PUBLICATIONS

- [11] Kasmalkar, I., **A. Damsgaard**, L. Goren, and J. Suckale “Shear variation at the ice-till interface changes the spatial distribution of till porosity and meltwater drainage”. Submitted to *Journal of Geophysical Research: Earth Surface*.
- [10] **Damsgaard, A.**, O. Sergienko, and A. Adcroft 2021 “The effects of ice floe-floe interactions on pressure ridging in sea ice”. *Journal of Advances in Modeling Earth Systems*, vol. 13. <https://doi.org/10.1029/2020MS002336>
- [9] **Damsgaard, A.**, L. Goren, and J. Suckale 2020 “Water pressure fluctuations control variability in sediment flux and slip dynamics beneath glaciers and ice streams”. *Communications Earth & Environment*, vol. 1(66). <https://doi.org/10.1038/s43247-020-00074-7>
- [8] **Damsgaard, A.**, A. Adcroft, and O. Sergienko 2018 “Application of discrete-element methods to approximate sea-ice dynamics”. *Journal of Advances in Modeling Earth Systems*, vol. 10, 2228–2244. <https://doi.org/10.1029/2018MS001299>
- [7] Bateman, M. D., D. A. Swift, J. A. Piotrowski, E. J. Rhodes, **Damsgaard, A.** 2018 “Can glacial shearing of sediment reset the signal used for luminescence dating?”. *Geomorphology*, vol. 306, 90–101. <https://doi.org/10.1016/j.geomorph.2018.01.017>
- [6] **Damsgaard, A.**, J. Suckale, J. A. Piotrowski, M. Houssais, M. R. Siegfried, and H. A. Fricker 2017 “Sediment behavior controls equilibrium width of subglacial channels”. *Journal of Glaciology*, vol. 63, 1034–1048. <https://doi.org/10.1017/jog.2017.71>
- [5] **Damsgaard, A.**, A. Cabrales-Vargas, J. Suckale, and L. Goren 2017 “The coupled dynamics of meltwater percolation and granular deformation in the sediment layer underlying parts of the big ice sheets”. *Poromechanics VI*. <https://doi.org/10.1061/9780784480779.024>
- [4] **Damsgaard, A.**, D. L. Egholm, L. H. Beem, N. K. Larsen, S. Tulaczyk, J. A. Piotrowski, and M. R. Siegfried 2016 “Ice flow dynamics forced by water pressure variations in subglacial granular beds”. *Geophysical Research Letters*, vol. 43, 12165–12173. <https://doi.org/10.1002/2016GL071579>
- [3] **Damsgaard, A.**, D. L. Egholm, J. A. Piotrowski, S. Tulaczyk, N. K. Larsen, and C. F. Brødstrup 2015 “A new methodology to simulate subglacial deformation of water-saturated granular material”. *The Cryosphere*, vol. 9, 2183–2200. <https://doi.org/10.5194/tc-9-2183-2015>
- [2] Brødstrup, C. F., **A. Damsgaard**, and D. L. Egholm 2014 “Ice-sheet modelling accelerated by graphics cards”. *Computers & Geosciences*, vol. 72, 210–220. <https://doi.org/10.1016/j.cageo.2014.07.019>
- [1] **Damsgaard, A.**, D. L. Egholm, J. A. Piotrowski, S. Tulaczyk, N. K. Larsen, and K. Tylmann 2013 “Discrete element modeling of subglacial sediment deformation”. *Journal of Geophysical Research: Earth Surface*, vol. 118, 2230–2242. <https://doi.org/10.1002/2013JF002830>

PRESENTATIONS

Invited talks

- [7] **Damsgaard, A.**, O. Sergienko, and A. Adcroft “Sea-ice ridging in discrete element models”. ECCOMAS Young Investigators Conference 2021, Valencia, Spain.

- [6] **Damsgaard, A.**, J. Suckale, and L. Goren “The role of granular mechanics and porous flow for ice sheet behavior in a changing climate”. 7th European Seminar on Computing (ESCO) 2020, Pilsen, Czech Republic.
- [5] **Damsgaard, A.**, J. Suckale, J. A. Piotrowski, M. Houssais, M. R. Siegfried, and H. A. Fricker “Subglacial channelized drainage on soft beds and implications for grounding-line dynamics”. Geological Society of America Annual Meeting 2017, Seattle, WA, USA.
- [4] **Damsgaard, A.**, D. L. Egholm, J. Suckale, J. A. Piotrowski, M. Houssais, M. R. Siegfried, and H. A. Fricker “Grain-scale numerical modeling of granular mechanics and fluid dynamics”. Week’s lecturer at University of Wisconsin Madison, Department of Geoscience, November 2017.
- [3] **Damsgaard, A.**, D. L. Egholm, S. Tulaczyk, J. A. Piotrowski, N. K. Larsen, M. R. Siegfried, L. H. Beem, and J. Suckale “Subglacial sediment mechanics investigated by computer simulation of granular material”. American Geophysical Union Fall Meeting 2016, San Francisco, CA, USA.
- [2] **Damsgaard, A.**, D. L. Egholm, S. Tulaczyk, N. K. Larsen, J. A. Piotrowski, M. R. Siegfried, L. H. Beem, J. Suckale, and L. Goren “Grain-scale numerical modeling of granular mechanics and fluid dynamics”. Stanford University, Department of Geoscience, July 2016.
- [1] **Damsgaard, A.**, D. L. Egholm, L. H. Beem, S. Tulaczyk, N. K. Larsen, J. A. Piotrowski, and M. R. Siegfried “Grain-scale numerical modeling of granular mechanics and fluid dynamics and application in a glacial context”. Keynote speaker at Community Surface Dynamics Modeling System (CSDMS) Annual Meeting, March 2016, Boulder, CO, USA.

Oral presentations

- [22] **Damsgaard, A.**, O. Sergienko, and A. Adcroft “Floe-scale ridging in discrete element models for sea ice”. Workshop: Modeling the Granular Nature of Sea Ice, 2021, Online, WA, USA.
- [21] Suckale, J., I. Kasmalkar, **A. Damsgaard**, E. Mantelli, A. Cabrales-Vargas, D. Li, L. Goren, and C. Elsworth “Progress on understanding the subglacial hydrology over till beds with ramifications for ice dynamics and sediment transport”. International Glaciological Society Meeting on Glacial Erosion and Sedimentation 2019, Madison, WI, USA.
- [20] Piotrowski, J. A., M. B. Holdensen, **A. Damsgaard**, W. Narloch, S. Carr, and N. K. Larsen “The ice/bed interface in past ice sheets constrained by field, experimental and numerical studies”. International Glaciological Society Meeting on Glacial Erosion and Sedimentation 2019, Madison, WI, USA.
- [19] **Damsgaard, A.**, J. Suckale (presenting author), and L. Goren “A new continuum model for till consistent with granular mechanics”. American Geophysical Union Fall Meeting 2019, San Francisco, CA, USA.
- [18] I. Kasmalkar, **Damsgaard, A.**, L. Goren, J. Suckale, and A. Cabrales-Vargas “Subglacial sediment beds resist fast ice flow by facilitating meltwater drainage”. American Geophysical Union Fall Meeting 2019, San Francisco, CA, USA.
- [17] **Damsgaard, A.**, J. Suckale, D. Li, I. Kasmalkar, J. Amundson, L. Goren, A. Cabrales-Vargas “A new continuum model for subglacial till based on granular rheology”. International Glaciological Society Meeting on Glacial Erosion and Sedimentation 2019, Madison, WI, USA.
- [16] **Damsgaard, A.**, O. Sergienko, and A. Adcroft “Lagrangian methods for modeling compressive failure in sea ice across scales”. American Geophysical Union Fall Meeting 2018, Washington, D.C., USA.
- [15] Suckale, J., C. Wheeler Elsworth, I. Kasmalkar, E. Mantelli, **A. Damsgaard**, J. D. Platt, T. Perol, J. R. Rice, and L. Goren “The surface as a window into the subsurface: Lessons from Antarctica”. American Geophysical Union Fall Meeting 2018, Washington, D.C., USA.
- [14] Suckale, J., C. Wheeler Elsworth, E. Mantelli, I. Kasmalkar, **A. Damsgaard**, J. D. Platt, T. Perol, J. R. Rice, and L. Goren “Process-based models for ice-stream shear margins”. American Geophysical Union Fall Meeting 2018, Washington, D.C., USA.
- [13] Piotrowski, J. A., M. B. Holdensen, W. Narloch, S. Carr, and **A. Damsgaard** “Laboratory experiments on till deformation: constraining the subglacial processes”. CANQUA/AMQUA, Ottawa, Canada.

- [12] Piotrowski, J. A. M. B. Holdensen, W. Narloch, S. Carr, **A. Damsgaard**, N. K. Larsen “Subglacial till deformation constrained by laboratory experiments”. European Geosciences Union, General Assembly 2018, Vienna, Austria, EGU2018–8662.
- [11] Piotrowski, J. A. M. Bering Holdensen, W. Narloch, **A. Damsgaard**, N. K. Larsen “Subglacial till deformation: Lessons from laboratory experiments”. Nordic Geological Winter Meeting 2018, Copenhagen, Denmark.
- [10] **Damsgaard, A.**, A. Adcroft, O. Sergienko, and A. Stern “Discrete-element simulation of sea-ice mechanics: Contact mechanics and granular jamming”. American Geophysical Union Fall Meeting 2017, New Orleans, LA, USA.
- [9] Kasmalkar, I., **A. Damsgaard**, A. Cabrales-Vargas, J. Suckale, and L. Goren “Grain-scale investigation of grain and melt-water interaction and implications for the dynamics of ice flow over soft sediments”. 6th Biot Conference on Poromechanics 2017, Paris, France.
- [8] Suckale, J., C. W. Elsworth, **A. Damsgaard**, L. Goren, A. Cabrales, D. Li, I. Kasmalkar, and S. Maldonado “Taking advantage of the predictive potential of process-based models for ice exploration”. American Geophysical Union Fall Meeting 2016, San Francisco, CA, USA.
- [7] **Damsgaard, A.**, D. L. Egholm, L. H. Beem, S. Tulaczyk, N. K. Larsen, J. A. Piotrowski, and M. R. Siegfried “Creep and stick-slip in subglacial granular beds forced by variations in water pressure”. West Antarctic Ice Sheet Workshop 2016, VA, USA.
- [6] **Damsgaard, A.**, D. L. Egholm, L. H. Beem, S. Tulaczyk, N. K. Larsen, J. A. Piotrowski, and M. R. Siegfried “Creep and stick-slip in subglacial granular beds forced by ocean tides”. International Glaciological Society, International Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, 2016, La Jolla, CA, USA.
- [5] **Damsgaard, A.**, D. L. Egholm, J. A. Piotrowski, S. Tulaczyk, and N. K. Larsen “Oscillations in till strength due to particle-fluid feedbacks”. International Union for Quaternary Research Congress, 2015, Nagoya, Japan.
- [4] Piotrowski, J. A., K. Tylmann, W. Narloch, W. Wysota, **A. Damsgaard**, D. L. Egholm, N. K. Larsen, and J. Lesemann. “A soft-bed system under the Scandinavian Ice Sheet: Mosaic of stable and deforming spots”. Abstract from 31st Nordic Geological Winter Meeting 2014, Lund, Sweden.
- [3] **Damsgaard, A.**, D. L. Egholm, J. A. Piotrowski, S. Tulaczyk, and N. K. Larsen “Discrete element modeling of subglacial sediment deformation”. American Geophysical Union Fall Meeting 2013, San Francisco, CA, USA.
- [2] Brødstrup, C. F., D. L. Egholm, S. V. Ugelvig, **A. Damsgaard**, and J. L. Andersen “Feedbacks between subglacial dynamics and long-term glacial landscape evolution”. American Geophysical Union Fall Meeting 2013, San Francisco, CA, USA.
- [1] Piotrowski, J. A., K. Tylmann, W. Narloch, W. Wysota, **A. Damsgaard**, D. L. Egholm, N. K. Larsen, and J. Lesemann “Subglacial mosaic of stable and deforming spots under the Scandinavian Ice Sheet: field, laboratory and numerical data”. Canadian Quaternary Association biannual meeting, August 2013, Edmonton, Canada.

Poster presentations

- [9] Kasmalkar, I., **A. Damsgaard**, L. Goren, J. Suckale, and A. Cabrales-Vargas “Subglacial Channelization Through Till Deformation and Failure at the Shear Margin”. American Geophysical Union Fall Meeting 2018, Washington, D.C., USA.
- [8] Li, D., J. Suckale, A. Cabrales, and **A. Damsgaard** “Till dynamics underneath ice streams with a nonlocal dense granular flow model”. American Geophysical Union Fall Meeting 2016, San Francisco, CA, USA.
- [7] Cabrales-Vargas, A., J. Suckale, **A. Damsgaard**, and L. Goren “Spatially variable till deformation and water transport in ice-stream shear margins from numerical simulations”. American Geophysical Union Fall Meeting 2016, San Francisco, CA, USA.

- [6] **Damsgaard, A.**, D. L. Egholm, J. A. Piotrowski, S. Tulaczyk, N. K. Larsen, and C. F. Brødstrup “Numerical modeling of particle–fluid mixtures in a subglacial setting”. American Geophysical Union Fall Meeting 2014, San Francisco, CA, USA.
- [5] **Damsgaard, A.**, D. L. Egholm, J. A. Piotrowski, S. Tulaczyk, and N. K. Larsen “Numerical modelling of granular subglacial deformation using the discrete element method”. European Geosciences Union, General Assembly 2013, Vienna, Austria, EGU2013–4026.
- [4] **Christensen, A. D.**, D. L. Egholm, J. A. Piotrowski, and S. Tulaczyk “Discrete element modelling of subglacial sediment deformation”. European Geosciences Union, General Assembly 2012, Vienna, Austria, EGU2012–2931.
- [3] Clausen, O. R., D. L. Egholm, R. Wesenberg, and **A. D. Christensen** (presenting author) “Salt movements and faulting of the overburden — can numerical modeling predict the fault patterns above salt structures?” European Geosciences Union, General Assembly 2012, Vienna, Austria, EGU2012–1615.
- [2] **Christensen, A. D.**, D. L. Egholm, and J. A. Piotrowski “Numerical modelling of sediment deformation by glacial stress”. International Union for Quaternary Research Congress 2011, Bern, Switzerland.
- [1] **Christensen, A. D.**, D. L. Egholm, and J. A. Piotrowski “Numerical modelling of subglacial sediment deformation”. European Geosciences Union, General Assembly 2011, Vienna, Austria, EGU2011–7829.

PROFESSIONAL AFFILIATIONS

- Member, American Geophysical Union (2013–present)
- Member, Geological Society of America (2017–present)
- Member, International Glaciological Society (2015–present)
- Member, European Geosciences Union (2011–2013)
- Member, CICE Consortium (2017–2019)

SELECT ACTIVITIES IN PROGRAMMING AND HIGH-PERFORMANCE COMPUTING

- Proficient programmer in C, C++, OpenMP, MPI, Python, CUDA C, Octave/MATLAB, Julia, HTML, CSS, Javascript, PHP, Postgresql, MySQL, sh/sed/awk, \LaTeX , and POSIX operating system environments.
- Creator of **sphere**, a three-dimensional discrete element method algorithm with optional fluid coupling. Written in CUDA C, C++, and Python for GPU-based simulation of grain and fluid dynamics. Uses Doxygen software reference documentation and unit testing. Free and open-source licensed. <https://src.adamsgaard.dk/sphere>
- Creator of **Granular.jl**, a two-dimensional discrete element method algorithm for sea-ice simulation with coupling to NOAA ocean and atmosphere models. Written in Julia. Uses Travis-CI automated testing and is fully documented at <https://anders-dc.github.io/Granular.jl/latest/>. Free and open-source licensed. <https://src.adamsgaard.dk/Granular.jl>
- Creator of **cosmo.au.dk**, a webpage for inversion of cosmogenic nuclide concentrations. Consists of a responsive front end using HTML and Angular and JQuery Javascript libraries, backed by PHP for queuing and MATLAB for numerical inversion. The service is running on a Ubuntu GNU/Linux virtual machine. <https://cosmo.au.dk>
- Creator of **lbm-d3q19**, a three-dimensional lattice-Boltzmann solver for incompressible Navier-Stokes fluid flow. Written in C with OpenMP parallelization. Free and open-source licensed. <https://src.adamsgaard.dk/lbm-d3q19>
- Designed, constructed, and maintained a Dell/NVIDIA 192 CPU-core GPU cluster, Aarhus University. Running Debian GNU/Linux and Torque/MAUI resource management and scheduling.
- Technical reviewer for “Getting Started with Tmux”, Packt Publishing 2014. Tmux is a software application for terminal multiplexing, useful for dealing with multiple programs from a command-line interface.

- Contributor to **Icepack** and **CICE**, numerical codes for sea-ice column physics and dynamics. <https://github.com/CICE-Consortium>
Craig, T., E. Hunke, A. DuVivier, A. Dabail, **A. Damsgaard**, J. F. Lemieux, P. Blain, M. Turner, Mhrib, T. Rasmussen, N. Jeffery “CICE-Consortium: CICE version 6.0.0, Icepack version 1.1.0”. <https://doi.org/10.5281/zenodo.1900639>
- Creator of the **scholarref** toolset for automated \LaTeX reference management. Written in POSIX shell. Free and open-source licensed. <https://adamsgaard.dk/scholarref.html>

SERVICE TO THE FIELD

Reviewer for the following agencies and academic journals:

- National Science Foundation
- Nature Geoscience
- Communications Earth & Environment
- Journal of Glaciology
- Quaternary Science Reviews
- The Cryosphere
- Journal of Geophysical Research
- Ocean Modelling
- Boreas

TEACHING AND OUTREACH

- Lecturer, The Geology of Denmark. 5 ECTS, undergraduate course. Lectures, hands-on exercises, field excursions. Aarhus University, spring semester 2020 and 2021.
- Lecturer, Quaternary Geology, 10 ECTS, undergraduate course. Lectures, laboratory exercises, field excursion. Aarhus University, spring semester 2020 and 2021.
- Lecturer, workshop on granular modeling using the discrete element method. University of Wisconsin-Madison, Department of Geoscience, November 2017.
- Guest teacher in SIO 209 “Palaeoclimate seminar”, Scripps Institution of Oceanography. Gave class on subglacial friction and ice sheet stability. April 2016.
- Guest teacher in SIO 115 “Ice in the Climate System”, Scripps Institution of Oceanography. Gave class on glacier dynamics and subglacial mechanics and hydrology. March 2016.

Supervision/mentoring

- 2021: Asger A. Larsen: M.Sc. student, Department of Geoscience, Aarhus University.
- 2021: Prayati Sharma: Erasmus Intern, Department of Geoscience, Aarhus University.
- 2021: Louise Lassen: B.Sc. student, Department of Geoscience, Aarhus University.
- 2021: Marie Winther: B.Sc. student, Department of Geoscience, Aarhus University.
- 2020–2021: Ian Madden: Graduate student, Institute for Computational & Mathematical Engineering, Stanford University.
- 2017–2021: Indraneel Kasmalkar: Graduate student, Department of Geophysics, Stanford University.
- 2018: MonTre D. Hudson: Summer intern, Program in Atmospheric and Oceanic Sciences, Princeton University.

Outreach

- Geoscience internship days 2021, presentation and field trip with highschool students. November 2021.
- DR1 Viden (Danish Broadcasting Corporation, science section of public service radio and television broadcasting company) article on quicksand in Denmark. “Det bugner med kviksand i Danmark: Sådan kommer du op af de skjulte fælder”. October 2021. <https://www.dr.dk/nyheder/viden/natur/det-bugner-med-kviksand-i-danmark-saadan-kommer-du-op-af-de-skjulte-faelder>
- Advanced Water Cycle Management Ph.D. Course, one hour lecture “The geological settings in Denmark and their impact on the groundwater system”, August 2021.
- Aarhus University U-Days 2021, one hour lecture “Fremtiden for jordens iskapper: Findes svaret i geologien eller supercomputeren?” on glaciology and climate change. February 2021.
- Branbjerg Højskole, two hour lecture “Fra Is til Os” on glaciology and geomorphology in Denmark. Salary donated to charity *Branbjerg Højskole elevstøtteforening*. October 2020.
- Podcast interview (1 hour) “The Changelog” about climate science and my research in glaciology. January 2020. <https://changelog.com/podcast/378>
- Article (two full pages) in danish newspaper “Nordjyske Stifttidende” about my research on climate change and sediment mechanics. September 2015.
- Presentations about climate change and glaciology to high-school teachers. Department of Geoscience, Aarhus University. October 2013.
- Arranged introductory talks about the research activities of faculty members. Aarhus University, 2012–2013.
- “The Rolling University” (Danish: “Det Rullende Universitet”): Held a series of lectures at local high schools about climate change. Fall 2011.
- “Nature in the tent” (Danish: “Natur i teltet”): Public outreach in the city center in Aarhus, Denmark. Summer 2009.

Teaching assistance at Aarhus University during Ph.D. studies

- Theoretical Geophysics (exercises)
- Geophysical Methods (exercises and field excursions)
- Sedimentology (exercises)
- Numerical Modeling (exercises)
- Sedimentary Processes and Environments (classes, exercises, and field excursions)
- Introductory Petrology (classes and exercises)
- Basin analysis and modeling (classes and exercises)
- Geographical Information Systems (exercises)
- Quaternary Sediments (classes and field excursion)
- Geomodeling (exercises)
- Palaeontology and stratigraphy (exercises)
- Hydrology, soil processes, and dynamic geomorphology (classes, exercises, and field excursion)