

Curriculum Vitae

AGATHA M. DE BOER

Professor

in Physical Oceanography and Paleoclimate Modelling



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Higher education degrees and courses

- ◆ 2019, UL2NAT: Teaching and Learning in the Sciences, 7.5 HP university course
- ◆ 2011, Postgraduate Certificate in Higher Education Practice, University of East Anglia, UK
- ◆ 2003, Ph.D. in Physical Oceanography, Florida State University, FL, United States
- ◆ 1997, M.Sc. coursework in Nuclear Reactor Physics, Potchefstroom University, South Africa
- ◆ 1994, B.Sc. Honors, Physics, University of Pretoria, South Africa
- ◆ 1993, B.Sc. (*cum laude*), Physics, Mathematics, University of the Orange Free State, South Africa

Professional employment

- ◆ 2023-present, Professor of Physical Paleooceanography, Department of Geological Sciences and the Bolin Centre for Climate Research, Stockholm University.
- ◆ 2013-2023, Docent and Associate Professor of Physical Paleooceanography, Department of Geological Sciences and the Bolin Centre for Climate Research, Stockholm University.
- ◆ 2011-2013, Associate Professor in Paleo-ocean modelling, Department of Geological Sciences and the Bolin Centre for Climate Research, Stockholm University.
- ◆ 2010, Guest Lecturer, Gothenburg University, Sweden.
- ◆ 2007-2011, Research Council UK fellow, University of East Anglia (UEA), UK
- ◆ 2006-2007, Senior Research Associate, Environmental Science Department, University of East Anglia, UK. Supervisor: Andrew Watson
- ◆ 2003-2006, Postdoctoral fellow in Program for Atmospheric and Oceanic Sciences, Princeton University, USA. Supervisor: Robert Toggweiler
- ◆ 1998-2003, Graduate Research Assistant, Florida State University, USA. PhD supervisor: Doron Nof
- ◆ 1994-1997, Senior Physicist, Eskom (South African electricity public utility), South Africa. Responsible for nuclear reactor physics and radiation protection studies.

Parental leave

- ◆ 2015-2016, Four months 100% parental leave. Nine months 80% parental leave.

Research and networking grants

- ◆ 2023-2027: **P.I.** *Contract research to produce several climate modelling time slices during the last 300 million years.* Getech Group Plc., 4 620 000 sek.
- ◆ 2022-2024: **Co-P.I.** *The fate of the Gulf Stream in a changing climate (FutureGS).* Formas, 2 994 000 sek. The principal applicant was Torben König. 1 011 000 sek of the total assigned for a postdoc working under my supervision at Stockholm University
- ◆ 2021-2025: **P.I.** *The Arctic cryosphere at the Last Interglacial; an analogue for the future?* Swedish Research Council, 3 380 000 sek.
- ◆ 2020-2024: **Co-P.I.** *Subpolar plankton invasions in the Arctic Ocean during past interglacials: a fingerprint for Greenland ice sheet collapse?* Swedish Research Council, 3 620 000 sek. The principal applicant was Helen Coxall with one other applicant, Matt O-Regan.
- ◆ 2019: **P.I.** Research visit to George Mason University. Ivar Bendixson fund, 82,300 sek
- ◆ 2017-2021: **P.I.** *North Atlantic Deep Water formation initiated by the closure of the Barents Sea Seaway – a potential trigger for Antarctic glaciation.* Swedish Research Council, 3 200 000 sek.
- ◆ 2009: **P.I.** UK-RSA networking grant for collaboration between the space science and climate science communities, South African Research Council and UK Royal Society, 47 000 sek.
- ◆ 2014-2021: **P.I.** Acquired funding for five international workshops on various research topics such as the Southern Ocean Circulation, the Miocene, and Eocene-Oligocene Transition, and the Arctic during warm climates. Bolin Centre for Climate Research, ~500 000 sek.

Scholarships, awards, and smaller grants

- ◆ 2018, Docent travel stipend from the Högskoleförening stiftelse (foundation of the Stockholm University Association), 12 000 sek
- ◆ 2013-2016, Various grants from Bolin Centre for travel and publications, ~100 000 sek
- ◆ 2010, UEA Teaching fellowship (~50 000 sek)
- ◆ 2010, Gothenburg University 3 month invited guest lectureship
- ◆ 2010, Selected as a UK representative in the UK-Australia Frontiers of Science
- ◆ 2007, RCUK academic fellowship
- ◆ 2003, Accepted to the highly selective Physical Oceanography Dissertation Symposium (PODS) that is fully sponsored by the US National Science Foundation
- ◆ 2002, Outstanding Graduate Student Award, Dept. of Oceanography, FSU, USA
- ◆ 1990-1993, Full Study Scholarships from Eskom (Electricity Utility Company), South Africa
- ◆ 1990-1993, Academic Scholarships, University of Orange Freestate and University of Pretoria, South Africa

National and international leadership

- ◆ 2019-present, Vice President of the International Association of the Physical Sciences of the Ocean (IAPSO). For more information, see: <https://iapso-ocean.org/>
- ◆ 2022, Member of International Union of Geophysics and Geodesy (IUGG) fellow selection committee.
- ◆ 2021&2023, Chair and member of award committee for Prince Albert I Medal (for significant work in the physical and chemical sciences of the oceans).
- ◆ 2016-2022, Member of the Swedish National Committee for Geophysics (SNG). For more information, please see: <http://www.geofysiska.se/index.html>
- ◆ 2015-2019, Member of executive committee of the IAPSO.
- ◆ 2018, Elektor from Stockholm University for the Swedish Research Council.
- ◆ 2013-2019, Co-leader of Bolin Centre for Climate Research, Research Area 1 "Atmosphere and Ocean Dynamics and Climate".
- ◆ 2007-2013, Member of the leadership board of the international Earth Science Women's Network (ESWN). Leader of the European branch of ESWN.

University leadership and service

- ◆ 2021-present, Member of the board of the Department of Geological Sciences
- ◆ 2022-present, Section representative on SU internationalization group
- ◆ 2018-2021, Supplement member on the board of the Department of Geological Sciences
- ◆ 2021, Section representative for Sigrid Arrhenius stipendium
- ◆ 2013-2021, Co-founder and co-manager of the Bolin Centre Mentoring Program that provides cross-departmental mentorship annually to 20-30 junior scientists.
- ◆ 2018-2020, Department representative in Section for Earth and Environmental Sciences
- ◆ 2016-2017, Member of equality and equal opportunity group for Stockholm University Section for Earth and Environmental Sciences
- ◆ 2018-present, Director of Studies of Master's Program in Climate Sciences
- ◆ 2010-2011, Served on Ph.D. Studentship election panel for Department of Environmental Science, UEA.

Editorial assignments

- ◆ 2022-present, Paleoclimate Section Editor, PLOS-Climate, <https://journals.plos.org/climate>.

Referee assignment for research publications in international journals and books

Nature Geoscience ◆ Nature Communications ◆ Geophysical Research Letters ◆ Journal of Physical Oceanography ◆ Journal of Geophysical Research- Oceans ◆ Atmosphere-Ocean ◆ Reviews in Geophysics ◆ Ocean Science ◆ American Geophysical Union Solas book ◆ Global Biochemical Cycles ◆ Earth System Dynamics ◆ Paleoceanography and paleoclimatology ◆ Climate Dynamics ◆ Philosophical Transactions of the Royal Society ◆ Geology ◆ Willey publishers ◆ Climates of the Past ◆

Referee assignments related to research funding, awards, and policy

- ◆ 2022, Judge for the European Geophysical Union (EGU) assembly Outstanding Student and PhD candidate Presentation Award
- ◆ 2015-2021, Reviewer of Scientific Committee on Oceanic Research (SCOR) working group proposals.
- ◆ 2020, Reviewer of UN Decade of Ocean Science for Sustainable Development.

- ◆ 2017, 2019, Eugene LaFond medal (for scientist from a developing country) award committee.
- ◆ 2019, Referee for IAPSO Best Practice Group proposals.
- ◆ 2017, Reviewer for the UK national environmental research council (NERC).
- ◆ 2006, 2007, 2009, 2017, Reviewer for the US National Science Foundation (NSF).

Appointments on PhD examining committees

- ◆ 2023, Abhay Prakash (Examiner, SU, Sweden).
- ◆ 2022, Isabelle Giddy (Examiner, University of Cape Town, South Africa).
- ◆ 2022, Isabelle Giddy (Examiner, University of Gothenburg, Sweden).
- ◆ 2021, Fanny LHardy (Opponent/Examiner, University Paris-Saclay, France).
- ◆ 2020, Eivind Olavson Straume (Opponent, University of Oslo, Norway).
- ◆ 2019, Alba Legarda Lissari (Examiner, University of Zaragoza, Spain).
- ◆ 2019, Daniele Reghellin (Chair, SU, Sweden).
- ◆ 2014, Joakim Kjelsson (Examiner, SU, Sweden).
- ◆ 2014, Per Pemberton (Examiner, SU, Sweden).
- ◆ 2013, Maxime Ballarotta (Examiner, SU, Sweden).
- ◆ 2013, Raza Ranjha (Examiner, SU, Sweden).
- ◆ 2011, Helene Reinertsen Langehaug (Opponent, University of Bergen, Norway).

Invited appointments declined due to personal travel constraints

- ◆ 2019, Opponent for PhD defence for Jonathan Rheinländer, University of Bergen, Norway.
- ◆ 2019, Thesis defence committee for Ola Kalén, University of Gothenburg, Sweden.

Appointment on other SU examining committees

- ◆ 2021, Abhay Prakash (Examiner PhD-Halftime).
- ◆ 2016, Pedro Petro (Examiner SU Licentiate).

Appointments as faculty tenure position evaluator

- ◆ 2023, Pedagogic evaluator for tenure track position, Stockholm University.
- ◆ 2019, Evaluator of person for tenure at Alfred Wegener Institute, Germany.

Science outreach

- ◆ 2021, Produced demonstrations of simple ocean and atmospheric phenomena for the Bolin Science Climate Festival.
- ◆ 2014-2016, Organized activities at annual Bolin Days for Children. I developed experiments in a water tank on a rotating table and used salt water, dye, and ice cubes to help children get an intuitive feel for oceanic and atmospheric phenomena.
- ◆ 2010, Public lecture at Birkbeck, London, UK.

Planning and organizing conferences

- ◆ As member of the IAPSO executive committee, I have help to organized several of their assemblies. This level of planning included, for example, decisions on sessions, conveners and site locations. These are specifically;
 - The IAPSO assembly in Berlin (2023, ongoing planning)
 - Online substitute for cancelled IAPSO assembly in Busan (2021)
 - The IAPSO assembly in Montreal (2019)
 - The IAPSO assembly in Cape Town (2017)
- ◆ 2023, Lead-convenor for symposium on Arctic Ocean Physics and Biochemistry in a Changing Climate at the IAPSO assembly, Berlin, Germany.
- ◆ 2019, Co-organized a Bolin Center for Climate Research "Miomeet" international conference on the Miocene Climates, Stockholm.
- ◆ 2019, Lead-convenor for symposium on Meridional Overturning Circulation in the Ocean at the IAPSO assembly, Montreal, Canada
- ◆ 2018, Convened a Bolin Center for Climate Research international workshop on the Middle Miocene Climate, Stockholm.
- ◆ 2017, Co-convenor for symposium on Meridional Overturning Circulation in the Ocean at the IAPSO assembly, South Africa
- ◆ 2017, Co-organized a Bolin Center for Climate Research international workshop on the Eocene Oligocene Transition, Stockholm.

- ◆ 2014, Organized an international workshop on the Southern Ocean Dynamics, Stockholm.
- ◆ 2013-2019, in my capacity as co-leader of Research Area 1 of the Bolin Centre for Climate Research, I helped organize the Bolin Days each November and also organized two “meet-and-great” type meetings at the Stora Skuggans Vårdshus conference facilities.
- ◆ 2013, I organized an official networking event for the Earth Science Women’s Network at the EGU assembly in Vienna.
- ◆ 2010, I was selective as a UK representative by the UK Royal Society to help organize the Royal Society UK-Australia Frontiers of Science meeting, bringing together young scientists from eight scientific disciplines across the UK and Australia for information exchange and collaboration.

Postdoctoral research supervision

- ◆ 2022-present, Marie Sicard
- ◆ 2020-2023, Flor Vermassen (co-supervisor)
- ◆ 2020-2021, Srinath Krisnan
- ◆ 2015-2019, David Hutchinson
- ◆ 2016-2018, Part-time: Catherine Bradshaw, UK met office.

Ph.D. student supervision

- ◆ 2021-present, Trusha Naik
- ◆ 2010-2014, Robert Graham, *Received award for best Ph.D. thesis in the Faculty of Science.*
- ◆ 2008-2012, Matthew Thomas

Masters project supervision

- ◆ 2020, Cristina Passet (co-supervision)
- ◆ 2011, Thomas Postans

Undergraduate project supervision

- ◆ 2011, Rickard Warren
- ◆ 2010, Abigail Phillips, Thomas Stammer, James Wren, Jenna McGregor, and Abigail Mason

Teaching

- ◆ 2018-2023, Masters in Climate Science, director of studies, SU
- ◆ 2018-2022, Quantitative Methods in Geoscience 1st year level, course director, SU
- ◆ 2014-2023, Paleoclimatology and the Ocean System distance course, co-teacher, SU
- ◆ 2020-2023, The Ocean's Role in the Climate System on Geological Timescales, Master's level, course director, SU
- ◆ 2012-2023, Paleoceanography and Paleoclimatology I (formerly called Marine Geology II), 2nd or 3rd year level, co-teacher, SU
- ◆ 2018-2023, The ocean, introductory evening course, co-teacher, SU
- ◆ 2014, Paleo-oceans and the Paleoclimate System, Masters level, co-teacher, SU
- ◆ 2013, Climate change throughout Earth's history, Stockholm Summer School, teacher, SU
- ◆ 2010-2011, Atmosphere and Oceans, 1st year level, course director and sole teacher, UEA
- ◆ 2009-2010, Oceanography 2nd and 3rd year Field Course in Oban Scotland, teacher, UEA
- ◆ 2010, First year environmental science student field course in Slapton, UK, teacher, UEA
- ◆ 2008, Introductory Computing for Environmental Scientists, course director, UEA
- ◆ 2007, Basic Environmental Physics, 1st year level, teacher, UEA

Courses and workshops in education

- ◆ 2019, Short course on the Nya online system for student applications.
- ◆ 2018, Workshop on the Ladok online system for course announcements.
- ◆ 2018, 12 steps to succeed as a teacher
- ◆ 2018, What is academic teachership? Workshop for experienced university teachers in the Natural Science faculty
- ◆ 2018, Online short course on using the Athena educational platform
- ◆ 2012, Short course on using the Mondo educational platform
- ◆ 2010, Best Practice in Research Supervision⁺, facilitated by Queens Mary College (London) Education and Staff Development Centre, UK.
- ◆ 2010, Advising Students⁺, Centre for Staff Education and Development, UEA, UK.

- ◆ 2010, Public lecture on the ocean circulation for the Birkbeck Ecology Society, Imperial College, London.

Field work

- ◆ 2009, JC32 South Atlantic section, six-weeks. Performed dissolved inorganic carbon and alkalinity measurements.
- ◆ 2001, SFTREII six-week research cruise to measure mixing in salt finger regions.

Presentations and lectures

All oral presentations unless otherwise indicated. Invited talks are in italics

- ◆ *Keynote talk at Swedish Climate Symposium, Norrköping, Sweden, 2022*
- ◆ Presentation at EGU assembly, Vienna, Austria, 2022
- ◆ *Invited talk at EGU assembly, cancelled due to Covid-19, 2020*
- ◆ *Seminar at Princeton University, USA - cancelled due to Covid-19, 2020*
- ◆ Seminar at NOAA Geophysical and Fluid Dynamics Laboratory - cancelled due to Covid-19, 2020
- ◆ *Seminar at George Mason University - cancelled due to Covid-19, 2020*
- ◆ Presentation on Arctic flow at IAPSO assembly, Montreal, Canada, 2019
- ◆ Presentation on Eocene-Oligocene Transition at IAPSO assembly, Montreal, Canada, 2019
- ◆ Presentation at International Arctic Workshop, Stockholm, Sweden, 2019
- ◆ *Crafoord Price Symposium invited speaker, Stockholm, Sweden, 2018*
- ◆ *Seminar at Oxford University, Oxford, UK, 2018*
- ◆ *Seminar at British Antarctic Survey, Cambridge, UK, 2018*
- ◆ Presentation at workshop on Middle Miocene Climate, Stockholm, Sweden, 2018
- ◆ *Presentation at workshop on Arctic Dynamics, Stockholm, Sweden, 2018*
- ◆ Presentation at IAPSO assembly, Cape Town, South Africa, 2017
- ◆ *Presentation at workshop on Southern Ocean and Climate, Stockholm, Sweden, 2017*
- ◆ Poster presentation at Paleoclimate Model Intercomparison meeting, Stockholm, Sweden, 2017
- ◆ *Presentation at workshop on Glacial Climate Puzzles, Stockholm, Sweden, 2016*
- ◆ Poster presentation at International Conference on Paleoclimate, Utrecht, Netherlands, 2016
- ◆ *Presentation at workshop on Atlantic Meridional Overturning, Stockholm, Sweden, 2015*
- ◆ *Presentation at IAPSO assembly, Prague, Czech republic, 2015.*
- ◆ *Presentation at workshop on Southern African Rainfall, Stockholm, Sweden, 2014*
- ◆ Presentation at workshop on Southern Ocean, Stockholm, Sweden, 2014
- ◆ *Presentation at Gateways Conference, Jerusalem, Israel, 2013*
- ◆ Poster presentation at EGU, Vienna, Austria, 2013
- ◆ *Presentation at IAPSO assembly, Gothenburg, Sweden, 2013*
- ◆ *Presentation at Bolin Days, Stockholm, Sweden, 2013*
- ◆ *Presentation at Lund University, Lund, Sweden, 2012*
- ◆ Presentation at Ocean Sciences Meeting, Salt Lake City, USA, 2012
- ◆ *Seminar at L'OCEAN, Paris, France, 2012*
- ◆ *Presentation at workshop on Walin Framework, Stockholm, Sweden, 2012*
- ◆ *Poster presentation, Agulhas Conference, Cape Town, South Africa, 2012*
- ◆ *Seminar at Cambridge University, Cambridge, UK, 2011*
- ◆ *Seminar at Proudman Oceanographic Laboratory, Liverpool, UK, 2011*
- ◆ *Seminar at Southampton University, UK, 2011*
- ◆ Seminar at University of East Anglia, Norwich, UK, 2011
- ◆ *Seminar at Gothenburg University, Gothenburg, Sweden, 2010*
- ◆ *Seminar at Imperial College, London, UK, 2010*
- ◆ *Seminar at UK Met Office, Exeter, 2010*
- ◆ *Seminar at Stockholm University, Sweden, 2010.*
- ◆ *Public lecture Birkbeck, London, UK, 2010*
- ◆ Presentation at UK-RAPID workshop. Reading, UK, 2009
- ◆ *Seminar at Hermanus Magnetic Observatory, Hermanus, South Africa, 2009*
- ◆ Presentation at IAPSO assembly, Montreal, Canada, 2009
- ◆ Presentation at UK ocean modelling meeting, Oxford, UK, 2009
- ◆ Presentation at UK Challenger meeting, Bangor, UK, 2008
- ◆ Presentation at UEA-Cefas day, Norwich, UK, 2008

- ◆ Presentation at Ocean Sciences Meeting, Orlando, USA, 2008
- ◆ *Seminar at Yale University, Ocean Forum, USA, 2008*
- ◆ *Seminar at Bern University, Switzerland, 2007*
- ◆ *Seminar at British Antarctic Survey, Cambridge, UK, 2007*
- ◆ Presentation at IAPSO assembly, Perugia, Italy, 2007
- ◆ *Seminar at Potsdam Institute for Climate Research, Potsdam, Germany, 2007*
- ◆ *Seminar at Reading University, Reading, UK, 2007*
- ◆ *Presentation at workshop on Nordic Seas, Bergen, Norway, 2006*
- ◆ Seminar at University of East Anglia, 2006
- ◆ *Seminar at Southampton Oceanography Institute, UK, 2006*
- ◆ Presentation at Rapid meeting, Birmingham, UK, 2006
- ◆ Seminar at Geophysical Fluid Dynamics Laboratory, Princeton, USA, 2005
- ◆ Presentation at EGU conference, Vienna, Austria, 2005
- ◆ Presentation at Proper workshop, Amsterdam, Netherlands, 2004
- ◆ Presentation at Physical Oceanography Dissertation Symposium, Hawaii, USA, 2003
- ◆ Presentation at EGS conference, Nice, France, 2003