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Stephen Outten

Senior Researcher

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Education

- 2006 — 2010 Philosophy Doctorate in Atmospheric Dynamics, University of East Anglia
- 2005 — 2006 Masters of Science in Atmospheric Science, University of East Anglia
- 1996 — 2000 Masters of Physics in Astrophysics, College of Cardiff, University of Wales

Employment

- 2011 — present Research Scientist/Senior research scientist, Climate Dynamics and Prediction, Nansen Environmental and Remote Sensing Center, Bergen, Norway
- 2011 — 2011 Research Scientist, Climate Modelling Group, Uni Research AS, Bergen, Norway
- 2010 — 2011 Postdoctorate Researcher, G.C.Rieber Climate Group, Nansen Environmental and Remote Sensing Centre, Bergen Norway
- 2005 — 2009 PhD candidate, School of Environmental Science, University of East Anglia, UK
- 2003 — 2005 Trainer and Consultant, Cherry Blue Ltd. (Formerly Concepts Wales Ltd.), Bridgend, UK

Mobility

- 2014 (6 weeks) Nansen International Centre (**NIERSC**), St Petersburg, Russia
- 2011 (3 weeks) National Centre for Atmospheric Research (**NCAR**), Boulder, U.S.

Student Supervision

- 2021 — present *Harikrishnan Ramesh* (PhD student, University of Bergen, Norway)
- 2018 — 2022 *Stina Olandersson* (PhD student, University of Bergen, Norway)
- 2018 (informal) *Eoin Downing* (Masters candidate, Maynooth University, Ireland)
- 2017 — 2019 (informal) *Fabio Mangini* (PhD candidate, NERSC, Norway)

2011 (informal) *Stephanie Mayer* (PhD student, University of Bergen, Norway)
2010 (informal) Mentor to MSc student (Nansen Centre, Norway)

Teaching Activities

2021 — present Lecturer, GEOF345 Remote Sensing in Oceanography and Meteorology, University of Bergen, *with Prof Johansen - see references*
2020 Lecturer, Numerical modelling course, CHES, University of Bergen
2011 Course organiser, Climate modelling with WRF, ADPC, Thailand
2008 — 2009 Teaching assistant, Atmospheric physics, University of East Anglia
2007 — 2008 Teaching assistant, Geophysical modelling, University of East Anglia
2003 — 2005 Professional trainer of intermediate and advanced IT and soft skills

Institutional Responsibilities

2022 — Present Leader of Hazards theme at the Bjerknnes Centre
2021 — Present NERSC liaison to CHES research school
2019 — Present Host and co-organiser of Bjerknnes Centre podcasts
2019 — 2020 Co-leader of Hazards theme at the Bjerknnes Centre
2017 — 2019 Founding member of IT Advisory Panel for Nansen Centre
2016 — 2017 Deputy group leader for Climate Processes Group, Nansen Centre
2016 — 2017 Member of web advisory group, Nansen Centre, Norway

Commissions of Trust

2021 Internal examiner for MSc defence, University of Bergen, Norway
2015 External examiner for MSc defence, University of Bergen, Norway
2011 — Present Reviewer for 10+ international journals including *Scientific Reports*, *Nature* publishing group, *Journal of Climate*, *Climate Dynamics*, *Journal of Geophysical Research*, *Geophysical Research Letters*, *Quarterly Journal for the Royal Meteorological Society*, *Tellus A*

Major Projects and Proposals

I have participated in 17 national and EU projects, and 6 smaller seed funded projects. I have been work package leader in six projects and PI in six projects. Selected highlights:

2020-2021 Synthesis paper on Eurasian Cooling (Lead with Prof. Camille Li)
2018-2021 SKD EMULATE GCM biases and European extreme events (WP Lead)
2015-2017 H2020 GAIA-CLIM (Co-author and Project manager in 2015)
2011-2013 NFR RECON Extreme winds assessment for construction (WP Lead)
2005-2009 GFDex, Wind jets around Greenland (participant and field campaign)

Selected Publications

Total Publications: 22 peer reviewed articles, 10 as lead author, 967 citations h-index 14 (Google Scholar)

1. Outten S, and S. Sobolowski (2021): Extreme wind projections over Europe from the Euro-CORDEX regional climate models, *Weather and Climate Extremes*, doi: 10.1016/j.wace.2021.100363 (1 citation)

2. Davy R. and Outten S. (2020): The Arctic Surface Climate in CMIP6: Status and Developments since CMIP5, *Journal of Climate*, doi:10.1175/JCLI-D-18-0058.1 (34 citation)
3. Outten S, I Esau, and OH Otterå, (2018): Bjerknnes compensation in the CMIP5 climate models, *Journal of Climate*, doi:10.1175/JCLI-D-18-0058.1 (12 citations)
4. Robock A, Outten S (2018) Volcanoes: Role in climate, Reference module in Earth Systems and Environmental Science, Elsevier publishing, doi:10.1016/B978-0-12-409548-9.11423-X (35 citations)
5. Bethke I, Outten S, Otterå O H, Hawkins E, Wagner S, Sigl M, and Thorne P, (2017): Potential volcanic impacts on future climate variability, *Nature Climate Change*, 10.1038/nclimate3394 (29 citations)
6. Forzieri G, Feyen L, Russo S, Vousdouskas M, Alfieri L, Outten S, Migliavacca M, Bianchi A, Rojas R and Cia A (2016): Multi-hazard assessment in Europe under climate change, *Climatic Change*, doi: 10.1007/s10584-016-1661-x (189 citations)
7. Outten S, Esau I, (2013): Extreme winds over Europe in the ENSEMBLES regional climate models, *Atmospheric Chemistry and Physics*, 13, 5163-5172, doi:10.5194/acp-13-5163-2013 (31 citations)
8. Outten S, Esau, I, (2012): A link between Arctic sea ice and recent cooling trends over Eurasia. *Climatic Change*, 110, 1069-1075 (140 citations)
9. Outten S, Renfrew IA, Petersen GN, (2009): An easterly tip jet off Cape Farewell, Greenland. Part II: Simulations and Dynamics. *Quarterly Journal of the Royal Meteorological Society*, 135, 1934- 1949 (37 citations)
10. Renfrew IA, Moore GWK, Kristjánsson JE, Ólafsson H, Gray SL, Petersen GN, Bovis K, Brown P, Fore I, Haine T, Hay C, Irvine EA, Oghuishi T, Outten S, Pickart R, Shapiro MA, Sproson D, Swinbank R, Wooley A, Zhang S, (2008): The Greenland Flow Distortion experiment. *Bulletin of the American Meteorological Society*, 88, 1307–1324 (89 citations)

Invited Presentations

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| 2021 | Re-assessing extreme sea level events through interplay of tides and storm surges, Kartverket, Remote |
| 2021 | Arctic-Eurasian teleconnections, South Korean's ambassador to Norway, Bjerknnes Centre |
| 2021 | Complexities of extreme events, India's ambassador to Norway, Bjerknnes Centre |
| 2020 | MUSC on a Virtual Machine, HIRLAM Management Group Meeting, Norway |
| 2019 | Adaptation for extreme winds, Workshop on Climate Extremes, Switzerland |
| 2016 | Extreme winds in RCMs, RMetS/NCAS High Impact Weather conference, U.K. |
| 2015 | Multi-decadal variability of heat transport, International Symposium on Arctic Research during Arctic Science Summit Week (ASSW), Japan |
| 2014 | Eurasian wintertime cooling, Main Geophysical Observatory, Russia |

Selected Outreach

I have been authored articles in 3 technical reports, created 3 software tools available on GitHub and elsewhere, prepared text with journalists for 4 articles and hosted 13 podcasts

- 2022 The hunt for ancient DNA under the sea ice, *Bjerknes Podcast*
- 2021 AI flooding the flooding research, *Bjerknes Podcast*
- 2020 Are extremes getting more extreme?, *Bjerknes Christmas Lectures*
- 2020 Storm tracks – A conveyor belt of warm moist air, *Bjerknes Podcast*
- 2019 HIRLAM single column model MUSC as Virtual Machine, *HIRLAM website*
- 2019 Atmospheric river detection algorithm, *Software available on GitHub*
- 2017 Volcanic Eruptions Can Cool the Planet, But They Won't Save Us From Climate Change, *Newsweek article*

Field Campaigns

- 2007 Greenland Flow Distortion experiment (GFDex), Keflavik, Iceland,

Organisation of Scientific Meetings

- 2018 Co-organiser, Mid-latitude dynamics hack-a-thon, Norway
- 2011 Conference organiser, NorWRF international conference, Norway

Vocational Training (selected)

- 2021 Machine learning, Nansen Centre
- 2018 Statistical modelling of extreme events, Nansen Centre
- 2018 CMIP6 workshop, Bjerknes Center
- 2018 Bayesian methods for climate scientists, Bjerknes Center
- 2018 How to publish in Nature, Bjerknes Centre
- 2017 Geoscience with R and Rstat, Nansen Center
- 2017 The nuts and bolts of blogging with Wordpress, EGU
- 2016 Introduction to Google Earth Engine, EGU
- 2016 Causal inference in the geosciences, EGU
- 2015 MSCA Individual Fellowship Proposal Writing Workshop, Bergen
- 2015 Writing Successful Grants, Bergen
- 2013 ERC starting grant writing course, Bergen
- 2011 Setting up and running WRF for climate downscaling, NCAR

References

Prof Peter Thorne
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