

CV – Stefan Sobolowski, PhD

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d.o.b.: 11/06/1972

EDUCATION

2010	PhD, Earth and Environmental Engineering, Columbia University, NYC, USA
2005	M.A., Physical Geography, Hunter College, CUNY, NYC, USA
1995	B.A., Anthropology, Vassar College, Poughkeepsie, NY, USA

POSITIONS – CURRENT & PREVIOUS

2018-	Research Professor (Forsker I), NORCE Norwegian Research Centre AS, Climate & Environment, Bergen, Norway
2017-2018	Research Professor (Forsker I), Uni Research Climate, Bergen, Norway
2011-2017	Senior Research Scientist (Forsker II), Uni Research Climate, Bergen, Norway
2010-2011	Postdoctoral fellow, Dept. of Geosciences, University of North Carolina, Chapel Hill, NC, USA
2009-2010	Teaching Assistant, Dept. Earth and Environmental Engineering, Columbia University, NYC, NY, USA
2009-2010	Teaching Assistant, Environmental Science and Policy Master's Program, Columbia University, NYC, NY, USA
2006-2007	NSF GK12 Fellow Columbia University, NYC: STEM curriculum development for the Columbia Secondary School and visiting science teacher Booker T. Washington Middle School, NYC, NY, USA
2005-2010	Graduate Research Assistant, Columbia University, NYC, NY, USA

PROJECT MANAGEMENT EXPERIENCE

[Only projects dating back to 2015 are shown; Over the past decade I have helped bring over 10million Euros in external funding to my home institute, 50million Euros in total]

Year	Project - Project owner - Role – Funding (total/home institute)
2020-2027	Climate Futures: Research Council of Norway center for research-based innovation nr. 309652, <i>Co-investigator / WP2 Leader / Scientific Steering Committee member. In this project I lead activities that aim to provide high-quality localized climate predictions on time scales of months to decades. (~20/2.4million Euros)</i>
2020-2024	Co-production of Climate Services for East Africa (CONFER): EU Horizon-2020 nr. 869730, <i>Co-investigator / WP2 Leader / Scientific Steering Committee member. I lead the work package tasked with improving skill of seasonal forecasts as well as development of new climate services based on hydrological and agricultural modelling. (~8.6/2.2million)</i>

	Euros)
2018-2021	Enhancing Mechanistic Understanding of mid-latitude Large-scale circulation Errors (EMULATE): SKD-internal project, <i>Principal Investigator</i> ; here we took a mechanistic view towards understanding model errors from a variety of perspectives such as midlatitude circulation (jets, stormtracks, blocking), teleconnections (tropical, Arctic) and extreme events. (~800K/160K Euros)
2017-2026	Centre for Early Sapiens Behaviour (SapienCE): Research Council of Norway centre of excellence, <i>Co-Investigator / Coordinator Global and Regional Modeling</i> ; Here I lead the global and regional modelling work and ensure close collaboration with scientists engaged in proxy climate reconstructions and archaeological research. (~13.6/2.0 million Euros)
2017-2020	Hidden Costs: Research Council of Norway grant nr. 268243, <i>Co-Investigator / WP1 Leader</i> ; this project investigated the implications of nature-based mitigation approaches; I lead the regional modelling activity where we modified the land cover to ascertain the impact of various afforestation schemes. (~1.1million/300K Euros)
2016-2022	WCRP CORDEX Flagship Pilot Study on Convection over Europe and the Mediterranean, <i>Co-Principal Investigator</i> : responsible for coordinating 28 international modeling teams that have produced the first convection permitting multi-model ensemble of climate change projections; in 2022 we will curate a special issue on the project in <i>Climate Dynamics</i> and we will make the simulations available via the ESGF (na/na)
2016-2020	Dynamics of Arctic–Midlatitude teleconnections: mechanisms, robustness, and tropical modulation (DYNAMITE): Research Council of Norway grant nr. 255027, <i>Co-Principal Investigator</i> ; We investigated and provided new insights into proposed Arctic-midlatitude teleconnections, in the process helping to reconcile a longstanding model-observation disagreement. (~1.0million/270K Euros)
2016-2019	Relevant, reliable, and robust local scale climate projections for Norway (R3): Research Council of Norway grant nr. 255397, <i>Principal Investigator</i> ; This project developed new techniques to bias adjust input data for dynamical downscaling and developed new, computationally efficient, hybrid dynamical-statistical approaches to downscaling. (~1million/600K Euros)
2016-2019	Investigating the future evolution of Norwegian glaciers and hydrological impacts: an integrated modeling approach (EVOGLAC): Research Council of Norway grant nr. 255049, <i>Co-Investigator</i> ; In EVOGLAC we developed an interactive glacier module for the WRF-Hyrdo modelling system which greatly improved runoff simulation in glaciated catchments; we then applied the system to future projections to show the importance of including glacier-atmosphere interactions for assessment of local-to-regional climate change. (~1million/350K Euros)
2015-	Co-coordinator, WCRP EURO-CORDEX, (http://www.euro-cordex.net/): Responsible for coordinating 30+ international modeling teams who undertake to downscale CMIP5 and now, CMIP6 climate change scenarios. Led CMIP6 GCM selection and ensemble design task team, which extensively evaluated GCM performance and took a balanced and robust approach to designing an RCM-GCM matrix. https://drive.google.com/file/d/1mLJuklfF78caelSLh7GilQ2xJwIxnGV1/view?usp=sharing

INSTITUTIONAL RESPONSIBILITIES

Year	Role – Description – Institute
2022-	Co-leader, Global Research Theme, the Bjerknes Centre for Climate Research
2018-2021	Research Theme Leader, Regional Climate Impacts and Modeling, NORCE Climate
2018-	Affiliate researcher, Centre for Energy and Climate Transformations (CET), University of Bergen

2017-	Co-leader, Mid-latitude dynamics research group under the Bjerknes Centre's Global Research Theme
2011-	Research scientist, The Bjerknes Centre for Climate Research, Bergen, Norway
2013-2015	Group leader, Regional Climate & Climate Services: Uni Research Climate
2013-2014	Member, founding leader group, Norwegian Centre for Climate Services

SUPERVISION OF STUDENTS, POST-DOCS, RESEARCH FELLOWS & INTERNS

2021-	Ole Wulff, Postdoc, Climate Futures, NORCE Norwegian Research Centre AS – Supervisor
2020-	Maria Karypidou, visiting PhD scientist, AUTH, Thessaloniki, Greece – Supervisor & PhD committee member
2019-	Ozan Mert Göktürk, Postdoc, SapienCE, University of Bergen, Bergen – Supervisor
2020-2022	Lorenzo Sangelantoni, visiting postdoctoral fellow, Aquila U. Italy – Supervisor
2017-2021	Siew Yu “Peter” Feng, PhD, University of Bergen – Co-supervisor
2019	Basile Poujol, Masters internship, École Normale Supérieure, Paris, France – Supervisor
2018	Lilan Chen, visiting PhD fellow, Nanjing University, Nanjing, China – Supervisor
2017	Xinshu Fu, visiting PhD fellow, Nanjing University, Nanjing, China – Co-supervisor
2015-2016	Helene Asbjørnsen, M.S., University of Bergen – Co-supervisor
2014-2015	Raymond Sellevold, M.S., University of Bergen – Co-supervisor
2011-2012	Aslaug Valved, M.S., University of Bergen – Committee member/co-supervisor
2011-2012	Espen Karlsen, M.S., University of Bergen – Committee member/co-supervisor
2012	Melissa Wrzesien, visiting student summer researcher, UNC-Chapel Hill – Supervisor

Track record mentoring early career scientists

Degree completion: 100%

Peer-reviewed papers: 6 published (7 more in-prep or in-review)

Masters continuing to PhD: 2

PhDs continuing to post-doc: 1

SELECTED PUBLICATIONS [Total publications: 52; Total citations: 2008; h-index: 21]

1. Outten, S., & Sobolowski, S. (2021). Extreme wind projections over Europe from the Euro-CORDEX regional climate models. *Weather and Climate Extremes*, 33, 100363. <https://doi.org/10.1016/j.wace.2021.100363>
2. Siew, P. Y. F., Li, C., Ting, M., Sobolowski, S. P., Wu, Y., & Chen, X. (2021). North Atlantic Oscillation in winter is largely insensitive to autumn Barents-Kara sea ice variability. *Science Advances*, 7(31), eabg4893. <https://doi.org/10.1126/sciadv.abg4893>

3. Pichelli, E., Coppola, E., Sobolowski, S., Ban, N., Giorgi, F., Stocchi, P., Alias, A., Belušić, D., Berthou, S., Caillaud, C., Cardoso, R. M., Chan, S., Christensen, O. B., Dobler, A., de Vries, H., Goergen, K., Kendon, E. J., Keuler, K., Lenderink, G., ... Vergara-Temprado, J. (2021). The first multi-model ensemble of regional climate simulations at kilometer-scale resolution part 2: Historical and future simulations of precipitation. *Climate Dynamics*. <https://doi.org/10.1007/s00382-021-05657-4>
4. Jacob, D., Teichmann, C., Sobolowski, S., Katragkou, E., Anders, I., Belda, M., Benestad, R., Boberg, F., Buonomo, E., Cardoso, R. M., Casanueva, A., Christensen, O. B., Christensen, J. H., Coppola, E., De Cruz, L., Davin, E. L., Dobler, A., Domínguez, M., Fealy, R., ... Wulfmeyer, V. (2020). Regional climate downscaling over Europe: Perspectives from the EURO-CORDEX community. *Regional Environmental Change*, 20(2), 51. <https://doi.org/10.1007/s10113-020-01606-9>
5. Pujol, B., Sobolowski, S. P., Mooney, P. A., & Berthou, S. (2020). A physically based precipitation separation algorithm for convection-permitting models over complex topography. *Quarterly Journal of the Royal Meteorological Society*, 146(727), 748–761. <https://doi.org/10.1002/qj.3706>
6. Coppola, E., Sobolowski, S., Pichelli, E., Raffaele, F., Ahrens, B., Anders, I., ... Warrach-Sagi, K. (2018). A first-of-its-kind multi-model convection permitting ensemble for investigating convective phenomena over Europe and the Mediterranean. *Climate Dynamics*. <https://doi.org/10.1007/s00382-018-4521-8>
7. Sellevold, R., Sobolowski, S., & Li, C. (2016). Investigating Possible Arctic–Midlatitude Teleconnections in a Linear Framework. *Journal of Climate*, 29(20), 7329–7343. <https://doi.org/10.1175/JCLI-D-15-0902.1>
8. Kolstad, E. W., Sobolowski, S. P., & Scaife, A. A. (2015). Intraseasonal Persistence of European Surface Temperatures. *Journal of Climate*, 28(13), 5365–5374. <https://doi.org/10.1175/JCLI-D-15-0053.1>
9. Pavelsky, T. M., Sobolowski, S., Kapnick, S. B., & Barnes, J. B. (2012). Changes in orographic precipitation patterns caused by a shift from snow to rain. *Geophysical Research Letters*, 39(18), L18706. <https://doi.org/10.1029/2012GL052741>
10. Sobolowski, S., & Pavelsky, T. (2012). Evaluation of present and future North American Regional Climate Change Assessment Program (NARCCAP) regional climate simulations over the southeast United States: NARCCAP PERFORMANCE. *Journal of Geophysical Research: Atmospheres*, 117(D1), n/a-n/a. <https://doi.org/10.1029/2011JD016430>
11. Sobolowski, S., Gong, G., & Ting, M. (2011). Investigating the Linear and Nonlinear Stationary Wave Response to Anomalous North American Snow Cover. *Journal of the Atmospheric Sciences*, 68(4), 904–917. <https://doi.org/10.1175/2010JAS3581.1>
12. Sobolowski, S., Gong, G., & Ting, M. (2010). Modeled Climate State and Dynamic Responses to Anomalous North American Snow Cover. *Journal of Climate*, 23(3), 785–799. <https://doi.org/10.1175/2009JCLI3219.1>
13. Siegfried, T., Sobolowski, S., Raj, P., Fishman, R., Vasquez, V., Narula, K., ... Modi, V. (2010). Modeling Irrigated Area to Increase Water, Energy, and Food Security in Semi-arid India. *Weather, Climate, and Society*, 2(4), 255–270. <https://doi.org/10.1175/2010WCAS1048.1>
14. Sobolowski, S., Gong, G., & Ting, M. (2007). Northern Hemisphere winter climate variability: Response to North American snow cover anomalies and orography. *Geophysical Research Letters*, 34(16). <https://doi.org/10.1029/2007GL030573>
15. Sobolowski, S., & Frei, A. (2007). Lagged relationships between North American snow mass and atmospheric teleconnection indices. *International Journal of Climatology*, 27(2), 221–231. <https://doi.org/10.1002/joc.1395>

SELECTED INVITED TALKS

[In addition, I have over 60 conference proceedings at EGU, AGU, EMS, ECCA and other smaller conferences & workshops]

- 2022 Sobolowski, S., How does climate change make storms more dangerous? *Warmer, Wetter and Wilder: Climate Festival* <https://www.varmerevaterevillere.no/>, 9, March, Bergen, Norway
- 2021 Sobolowski, S., Planned CONFER research on WRF downscaling of seasonal forecasts. *Foundational climate prediction training workshop (CONFER/ICPAC/MetOffice)*, 16, Nov., online
- 2021 Sobolowski, S. (keynote talk), The CORDEX-FPS Convection multi-model ensemble over the greater Alpine region: accomplishments, challenges, and outlook. *The Fifth Convection-Permitting Modeling Workshop 2021 (CPM2021)*, 7-9, Sept., online
- 2020 Sobolowski, S., Understanding weather extremes in a changing climate. *IUMI Webinar: Extreme weather - Does the maritime industry need to prepare for a "new normal"?* 12, March, online
- 2019 Sobolowski, S., Addressing the usability gap: critical challenges in transitioning from research to services and applications. *5th Conference on Modelling Hydrology, Climate and Land Surface Processes*. 17-19, Sept. Lillehammer, Norway
- 2019 Sobolowski, S. and C. Li, Weather and climate extremes in a changing climate. *Norwegian Hull Club Global Energy and Special Risks Seminar*. 7, February, London, UK
- 2018 Sobolowski, S. et al., The WCRP-CORDEX Flagship Pilot Study on Convection year two update: successes, challenges and the way forward. *GEWEX Workshop on Convection Permitting Modeling*. 4-6, Sept. Boulder, CO USA
- 2018 Sobolowski, S., Coppola, E., et al., A first-of-its-kind multi-model convection permitting ensemble for investigating convective phenomena over Europe and the Mediterranean. *European Geophysical Union annual meeting*, April, Vienna, Austria
- 2017 Sobolowski, S., Developing Climate Services in Norway: experiences, successes and challenges. *Rosby Center 20yr. Anniversary*. 13-14 Sept. SMHI, Norrköping, Sweden
- 2016 Sobolowski, S et al., Coordinated high resolution modeling of convective phenomena over Europe and the Mediterranean. *GEWEX Workshop on Convection Permitting Modeling*. 6-8, September, Boulder, CO USA
- 2016 Sobolowski, S et al., Precipitation seasonality, variability and associated dynamical processes over eastern Africa. *International Conference on Regional Climate – CORDEX*, May 17-20, Stockholm, Sweden
- 2014 Sobolowski, S. Why the +2C target matters. Tekna 2 Grader Magasin launch seminar, Nov. 20, NTNU, Trondheim, Norway
- 2012 Sobolowski, S, and T Pavelsky (invited), Evaluation of present and future North American Regional Climate Change Assessment Program (NARCCAP) regional climate simulations over the southeast United States. *American Geophysical Union Fall 2012 Meeting*, 3-7, Dec., San Francisco, CA, USA

TEACHING, SUMMER SCHOOLS & WORKSHOPS

- 2020 Klimathon II: A Solutions Oriented Workshop for Climate Services to Norwegian Communities, Bergen, Norway. Organized by: Reeve, M., Kvamsås, H., Sobolowski, S., Schrage, J., Waage, S., Omdahl, L., and S. Neby
- 2018 Klimathon: A Solutions Oriented Workshop for Climate Services to Norwegian Communities, Bergen, Norway, Organized by: Reeve, M., Kvamsås, H., Sobolowski, S., Kolstad, E., Vandvik, T., and S. Neby
- 2017 CHESS: Land surface modeling course, GFI Bergen, Norway, Lecturer: Hydrology
- 2017 Bergen Summer Research School, Bergen, Norway. Lecturer: Climate Services
- 2016 Arctic-CORDEX annual meeting and workshop. Organized by: Sobolowski, S., Adakudlu, M., Rinke, A. and J. Casanno. 28-30, Nov., Bergen, Norway
- 2016 R3 Stakeholder workshop. Organized by: Sobolowski, S., Neby, S. and E. Kolstad. 1, Sept. Bergen, Norway
- 2016 Bergen Summer Research School. Lecturer: European water resources in an uncertain future. 20, June, Bergen, Norway
- 2014 ResClim-IMPACT2C Summer School. Lecturer and person responsible for course design and content, logistics and organization. June 29-July 4, Rosendal, Norway
- 2013 IMPACT2C summer school. Organized by: Preuschmann, S., Jacob, D., and S. Sobolowski (Lecturers and persons responsible for course design and content, logistics and organization), August 26-September 1, Lunenburg, Germany
- 2011 Asian Disaster Preparedness Center's joint Bjernkes/NCAR WRF-workshop, Organized by: Mesquita, M., Sobolowski, S., King, M. and T. Lunde. 10-20, October, Bangkok, Thailand
- 2010 Guest Lecturer, GEOL 109 The Science of Climate Change, University of North Carolina, Chapel Hill, NC, USA
- 2010 Teaching Assistant, CIEE E3250 Hydrosystems Engineering, Columbia University, NYC, NY, USA
- 2009 Teaching Assistant, ENVP 6115 Climatology, Columbia University, NYC, NY, USA
- 2009 Teaching Assistant, ENVP 6116 Hydrology, Columbia University, NYC, NY, USA
- 2009 Teaching Assistant, CIEE E3250 Hydrosystems Engineering, Columbia University, NYC, NY, USA

COMMISSIONS OF TRUST

Year	Description - Role
2021-	Regional Focal Point (RFP) for the WCRP consultation in Europe and Western Asia ¹
2020-	Scientific Advisory Committee, Calendars [ERC, nr. 804150]
2020-	Member, Working Group for the WCRP Regional Information for Society core project

¹ Invitation letter available on request.

2020-	Member, Research Council of Norway's national reference group for Climate, Energy and Mobility in Horizon Europe ²
2019-2021	Contributing Author to the IPCC Working Group I Sixth Assessment Report: Atlas Chapter: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Atlas.pdf

AWARDS AND FELLOWSHIPS

- NASA Earth System Science Fellowship, 2006-2009: \$86,000 USD
- NSF GK-12 Fellowship 2006-2007: \$30,000 USD
- Schuster Award for outstanding master's thesis, Hunter College, New York, NY, 2005
- NOAA-CREST Center Scholarship, City College, City University of New York, New York, NY, 2005: \$18,000 USD
- Einhorn Scholarship, Hunter College, New York, NY, 2005: \$2,500 USD

PROFESSIONAL AFFILIATIONS AND SERVICE

Service

2012-2012- Thesis examiner for 10+ M.S. candidates (University of Bergen)
 Hiring committee member for 10+ PhD, post-doc and researcher positions (University of Bergen, Uni Research AS, NORCE Norwegian Research Centre AS)

Scientific meeting organization

2022 Convener EGU session CL2.4 Local scale climate change impacts, processes, and extremes

2020 Convener EGU session CL2.44 Convection permitting atmospheric modeling

2019 Co-convener EMS session UP3.5 Climate modelling

2019 Co-convener EGU session CL5.04 Convection permitting atmospheric modeling

2019 Co-convener EGU session AS1.4 Biases in weather and climate models: representing important sub-grid processes, understanding large-scale drivers and paths to improvement

Member

2012-present European Geophysical Union
 2005-present American Geophysical Union
 2005-present American Meteorological Society

Reviewer

Journal of Climate, Geophysical Research Letters, International Journal of Climatology, Bulletin of the American Meteorological Society (BAMS), Climate Services, JGR-Atmospheres, Earth and Planetary Science Letters, Climate Dynamics, Atmospheric Chemistry and Physics, Tellus-A, Austrian Climate Research Program (ACRP), National Science Foundation (USA), Belmont Forum expert reviewer

FIELDWORK

2016(Aug. 15-19) Coordinated and participated in the initial field campaign for EVOGLAC

² Invitation letter available on request.

project (see above). Tasks: establish locations for wireless weather stations, stream gauges, ablation stakes and potential snow measurement sites.

2016(Sep. 25-29) Coordinated and participated in second week of EVOGLAC field work
Tasks: install wireless weather station network across a glaciated valley; install stream gauges to evaluate discharge from Midtdalsbreen glacier and the Finse watershed.

LANGUAGES

English Written skills: native language; Oral skills: native language

Norwegian Written skills: B2; Oral skills: B2

PROFESSIONAL DEVELOPMENT

2011 Uni Research AS, Project Management Course - Duration: 2 days; Topics: Basic project management for future project managers and those responsible for smaller projects

COMMUNICATION AND OUTREACH

Over the past decade I have had several national & international media mentions. These range from interviews to requests for expert advice in popular science articles to press releases, podcasts and webinars. I have also engaged in other forms of outreach such as popular science talks for the public and industry, organizing field trips for high school students and collaborating on a climate exhibit with a local museum.

Selected Media Mentions

2021 <https://www.nrk.no/vestland/sja-vestlandsrevyen--1.15605749>
2021 [How scientific networks bring cutting-edge science upfront](#)
2021 [Tap av sjøis har nesten ingen påvirkning på været](#)
2021 [The hidden cost of planting trees](#)
2020 [Aims to reach 365 million people in east Africa with better climate predictions](#)
2020 [Bane Nor tar grep etter tre snøskred på under en uke](#)
2019 [Skogbranner i Sibir har pågått i ukesvis.](#)
2019 [Bjerknes Climate Podcast: How to predict extreme events](#)
2018 [ClimateEurope Webinar: Developing climate services in Scandinavia](#)
2015 Interview with German public radio on the impacts of a 2C world. [Link here.](#)
2010 Water Matters: News from the Columbia Water Center, 2010. The Implications of Snowcover for Climate: A conversation with Stefan Sobolowski. [Link here.](#)