Laura A. Stevens, Ph.D. ⟨ *she/they* ⟩

Department of Earth Sciences, University of Oxford
South Parks Road, OX1 3AN, Oxford, UK

e-mail: laura.stevens@earth.ox.ac.uk
ORCID iD: 0000-0003-0480-8018

EDUCATION

Massachusetts Institute of Technology, Cambridge, Mass. 2017
Woods Hole Oceanographic Institution, Woods Hole, Mass.
Ph.D., Geophysics: *Influence of meltwater on Greenland Ice Sheet dynamics.*
Advisor: Sarah B. Das (WHOI)

Wellesley College, Wellesley, Mass. 2011
B.A., Geosciences; *Certificate*, Hooprolling.

EMPLOYMENT

Associate Professor of Climate and Earth Surface Processes, Earth Sciences, Oxford 2020–
Supernumerary Fellow, University College, Oxford 2020–
Graduate Research Fellow/Guest Investigator/Summer Student Fellow, WHOI 2011–2017

RESEARCH AIM

To observe and understand the physical processes modulating ice flow on Earth using geophysical, oceanographic, and atmospheric observations; computational modeling; statistical inquiry; and inverse methods.

PUBLICATIONS († = advisee; ⋆ = joint first authorship)

In review

[18] †Zhang, H., Katz, R.F., and **L.A. Stevens** (*In open review.*). Viscoelastic mechanics of tidally induced lake drainage in the Amery grounding zone. *The Cryosphere.*

Published

[17] **Stevens, L.A.**, Das, S.B., Behn, M.D., McGuire, J.J., Lai, C.-Y., Joughin, I., †Larochelle, S., and M. Nettles (2024). Elastic stress coupling between supraglacial lakes. *Journal of Geophysical Research: Earth Surface,* 129, e2023JF007481. doi:10.1029/2023JF007481.

[16] Banwell, A.F., Willis, I.C., **Stevens, L.A.**, Dell, R.L. and D. MacAyeal (2024). Observed meltwater-induced flexure and fracture at a doline on George VI Ice Shelf, Antarctica. *Journal of Glaciology.* Published Online 2024:1–14. doi:10.1017/jog.2024.31.

[15] **Stevens, L.A.**, Nettles, M., Davis, J.L., Creyts, T.C., Kingslake, J., Hewitt, I.J., and A. Stubblefield (2022). Tidewater-glacier response to supraglacial lake drainage. *Nature Communications,* 13:6065. doi: 10.1038/s41467-022-33763-2.

[14] †Zhang, H., Davis, T., Katz, R.F., **Stevens, L.A.,** and D. May (2022). Basal hydrofractures near sticky patches. *Journal of Glaciology,* 69(275):475-486. doi: 10.1017/jog.2022.75.

[13] **Stevens, L.A.**, Nettles, M., Davis, J.L., Creyts, T.C., Kingslake, J., Ahlstrøm, A.P., and T.B. Larsen (2021). Helheim Glacier diurnal velocity fluctuations driven by surface melt forcing. *Journal of Glaciology,* 68(267):77-89. doi: 10.1017/jog.2021.74. (+cover photo)

[12] Wearing, M.G., **Stevens, L.A.**, Dutrieux, P., and J. Kingslake (2021). Ice-shelf basal melt channels stabilized by secondary flow. *Geophysical Research Letters,* 48:1-11. doi: 10.1029/2021GL094872.

[11] Lai, C.-Y., **Stevens, L.A.**, Chase, D.L., Creyts, T.C., Behn, M.D., Das, S.B., and H.A. Stone (2021). Hydraulic transmissivity inferred from ice-sheet relaxation following Greenland supraglacial lake drainages. *Nature Communications,* 12:3955. doi: 10.1038/s41467-021-24186-6.

[10] MacAyeal, D.R., Sergienko, O.V., Banwell, A.F., Macdonald, G.J., Willis, I.C., and **L.A. Stevens** (2021). Treatment of ice-shelf evolution combining flow and flexure. *Journal of Glaciology,* 67(265):885-902. doi:10.1017/jog.2021.39.

[9] Banwell, A.F., Datta, R.T., Dell, R.L., Moussavi, M., Brucker, L., Picard, G., Shuman, C.A., and **L.A. Stevens** (2021). The 32-year record-high surface melt in 2019/2020 on north George VI Ice Shelf, Antarctic Peninsula. *The Cryosphere,* 15:909–925. doi:10.5194/tc-15-909-2021.

[8] Keisling, B.A., Bryant, R., Golden, N., **Stevens, L.A.**, and E. Alexander (2020). Does our Vision of Diversity Reduce Harm and Promote Justice? *Geological Society of America (GSA) Today,* 30:64–65. doi:10.1130/GSATG429GW.1.

[7] Wagner, T.J.W., Straneo, F., Richards, C.G., Slater, D., **Stevens, L.A.**, Das, S.B., Singh, H. (2019). Large spatial variations in the flux balance along the front of a Greenland tidewater glacier. *The Cryosphere,* 13:911–925. doi:10.5194/tc-13-911-2019.

[6] Chaput, J., Aster, R.C., McGrath, D., Baker, M.G., Anthony, R.E., Gerstoft, P., Bromirski, P., Nyblade, A., Stephen, R.A., Wiens, D., Das, S.B., and **L.A. Stevens** (2018). Near-surface environmentally forced changes in the Ross Ice Shelf observed with ambient seismic noise. *Geophysical Research Letters,* 45:181–187. doi:10.1029/2018GL079665.

[5] **Stevens, L.A.**, Hewitt, I., Das, S.B., Behn, M.D. (2018). Relationship between Greenland Ice Sheet surface speed and modeled effective pressure. *Journal of Geophysical Research: Earth Surface*, 123:2258–2278. doi:10.1029/2017JF004581.

[4] **Stevens, L.A.**, Behn, M.D., Das, S.B., Joughin, I., Noel, B. P. Y., van den Broeke, M., and T. Herring (2016). Greenland Ice Sheet flow response to runoff variability. *Geophysical Research Letters*, 43:11,295–11,303. doi:10.1002/2016GL070414. (+cover photo)

[3] **Stevens, L.A.**, Straneo, F., Das, S.B., Plueddemann, A.J., Kukulya, A.L., and M. Morlighem (2016). Linking glacially modified waters to catchment-scale subglacial discharge using autonomous underwater vehicle observations. *The Cryosphere*, 10:417–432. doi:10.5194/tc-10-417-2016.

[2] Carmichael, J.D., Joughin, I., Behn, M.D., Das, S.B., King, M.A., **Stevens, L.A.**, and D. Lizarralde (2015). Seismicity on the Western Greenland Ice Sheet: Surface Fracture in the Vicinity of Active Moulins. *Journal of Geophysical Research: Earth Surface*, 120:1082–1106. doi:10.1002/2014JF003398.

[1] **Stevens, L.A.**, Behn, M.D., McGuire, J.J., Das, S.B., Joughin, I., Herring, T., Shean, D.E., and M.A. King (2015). Greenland supraglacial lake drainages triggered by hydrologically induced basal slip. *Nature*, 522:73–76. doi:10.1038/nature14480.

Datasets, Repositories, Commentary, Theses, &c

[11] Banwell., A.F., Willis, I.C., **Stevens, L.A.,** Dell, R.L. and D. R. MacAyeal (2024). Dataset for: Banwell et al. 2024: Observed meltwater-induced flexure and fracture at a doline on George VI Ice Shelf, Antarctica, *Journal of Glaciology*. U.S. Antarctic Program (USAP) Data Center. doi:10.15784/601771.

[10] **Stevens, L.A.** and †S. Larochelle (2024). Elastic stress coupling between supraglacial lakes (Version v1.2). *Zenodo repository*. doi:10.5281/zenodo.10650188.

[9] **Stevens, L.A.**, Nettles, M., Davis, J.L., Creyts, T.C., Kingslake, J., Hewitt, I.J., and A. Stubblefield (2022). Tidewater-glacier response to supraglacial lake drainage (Version v1.0). *Zenodo repository*. doi:10.5281/zenodo.7023662.

[8] **Stevens, L.A.** (2022). Cover photo: Working on a Harbortronics time-lapse camera system on George VI Ice Shelf, Antarctica, as part of the project Ice-shelf Instability Caused by Active Surface Meltwater Production, Movement, Ponding and Hydrofracture. *Journal of Glaciology*, 68(268):f1.

[7] **Stevens, L.A.**, Nettles, M., Davis, J.L., Creyts, T.C., Kingslake, J., Ahlstrøm, A.P., and T.B. Larsen (2021). Helheim Glacier diurnal velocity fluctuations driven by surface melt forcing (Version v1.0). *Zenodo repository*. doi:10.5281/zenodo.465644.

[6] **Stevens, L.A.**, Straneo, F., Das, S.B., Plueddemann, A.J., and A.L. Kukulya (2019), Water, Temperature, Salinity, and others collected from Autonomous Underwater Vehicle in Sarqardleq Fjord, West Greenland from 2012-07-18 to 2012-07-24 (NCEI Accession 0208235). *NOAA National Centers for Environmental Information*. https://accession.nodc.noaa.gov/0208235.

[5] MacFerrin, M. & co-signatories from the Next Generation Polar Leadership Symposium (2019), Next generation of polar researchers agree on three priorities. *Nature*, 570:36.

[4] **Stevens, L.A.**, Hewitt, I., Das, S.B., Behn, M.D. (2018). Relationship between Greenland Ice Sheet surface speed and modeled effective pressure (Version v1.0). *Zenodo repository*. doi:10.5281/zenodo.1299945.

[3] Das, S.B., Behn, M.D., Joughin, I., and **L.A. Stevens** (2018), 22 GPS/GNSS datasets associated with Greenland Fractures 2011-2014, UNAVCO, Inc., GPS/GNSS Observations Dataset. doi:10.7283/T55T3J80.

[2] **Stevens, L.A.** (2017), Influence of meltwater on Greenland Ice Sheet dynamics. PhD Thesis, MIT, Cambridge, Mass. uri:hdl.handle.net/1721.1/113800.

[1] **Stevens, L.A.** (2011), Quantifying the composition of a mixed carbonate-siliciclastic sand matrix: A comparative study between XRD, XRF, and point counting methodology. Undergraduate Thesis, Wellesley College, Wellesley, Mass.

GRANTS

In review

[10] **UKRI MR/X032833/1** Submitted: June 2024
Solicitation: UKRI Future Leaders Fellowship Round 9
Diagnosing mechanisms of accelerated sea-level contributions from Northwest Greenland
PI: **L.A. Stevens** (U. of Oxford).
Project Mentors: Nanna Karlsson (GEUS); Meredith Nettles (Columbia U.); and Peter Nienow (Edinburgh).
Project Partners: Ching-Yao Lai (Stanford U.); Isabel Nias (Liverpool); and Donald Slater (Edinburgh).

Active

[9] **NERC NE/Y000838/1** (£917k) September 2024–August 2027
Solicitation: NERC Pushing the Frontiers
Accelerated carbon dioxide release from sedimentary rocks in a warming world
PI: Bob Hilton (U. of Oxford).
Co-Is: Julie Cosmidis, Samar Khatiwala, and **L.A. Stevens** (U. of Oxford); Edward Tipper (U. of Cambridge).
Project Partners: Jemma Wadham (U. of Tromsø) and Mark Garnett (NEIF Radiocarbon Facility).

[8] **EPSRC EP/Y030907/1** (£11.9M) April 2024–September 2032
Solicitation: UKRI Centre for Doctoral Training
UKRI AI Centre for Doctoral Training in AI for the Environment — Intelligent Earth
PI: Philip Stier (U. of Oxford).
Co-Is/Management Team: Hannah Christensen, Andrew Markham, Stephen Roberts, Roberto Salguero-Gomez, **L.A. Stevens**, Louise Slater, and Yee Whye Teh (U. of Oxford).

[7] **US NSF/GEO-UK, NERC NE/Y002369/1** (£300k) September 2023–August 2026
Solicitation: NSF Office of Polar Programs (Arctic Natural Sciences) and NERC
NSFGEO-NERC: Collaborative Research: Understanding surface-to-bed meltwater pathways across the Greenland Ice Sheet using machine-learning and physics-based models
NSF PI: Ching-Yao Lai (Stanford U.); NSF Co-I: Leigh Stearns (U. of Kansas).
NERC PI: **L.A. Stevens**; and NERC Co-I: Ian Hewitt (U. of Oxford).

[6] **Oxford University Press** (£38k) August 2021–July 2026
Solicitation: John Fell Oxford University Press Fund for Early Career Researchers
Radar and remotely sensed observations of ice-sheet deformation
PI: **L.A. Stevens**.

[5] **NSF-ANS 20-03464** ($723k) October 2020–September 2024
Solicitation: NSF Office of Polar Programs, Arctic Natural Sciences
Greenland Ice Sheet dynamic response to inland expansion of a hydrologically-active ice-sheet bed
PI: **L.A. Stevens**. Co-Is: Meredith Nettles and Jonathan Kingslake (Columbia U.).
July 2020: PI Transfer from **L.A. Stevens** to Meredith Nettles (Columbia U.).

[4] **NSFGEO-NERC, NSF-OPP 18-41739** ($805k) June 2019–September 2024
NSFGEO-NERC: Ice-shelf Instability Caused by Active Surface Meltwater Production, Movement, Ponding, and Hydro-fracture
PI: Alison Banwell (U. of Colorado Boulder). Co-Is: Douglas MacAyeal (U. of Chicago), **L.A. Stevens**, and Ian Willis (Scott Polar Research Institute, U. of Cambridge)

Completed

[3] **Horton Research Grant,** AGU Hydrology Section ($10k) 2015–2017

[2] **NSF Graduate Research Fellowship Program (GRFP)** ($138k) 2012–2017

[1] **WHOI Summer Student Fellowship Program** ($6k) 2011

TEACHING

Department of Earth Sciences, University of Oxford

For the first years:

Modern Climate Processes — Cryosphere & Sea Level annually in Hilary Term, 2023–

Mathematics for Earth Scientists: Probability & Statistics Hilary Term, 2023–2024

Co-taught with Profs. Paula Koelemeijer (Calculus) & Andrew Walker (Scientific Computing)

For the second years:

Fundamentals of Climate Change annually in Hilary Term, 2024–

Co-taught with Profs. Helen Johnson & Rosalind Rickaby

Field Methods in Geologic Mapping annually in assorted terms, 2021–

Localities: Coastal Southwest England; Isle of Skye, Scotland; Pembrokeshire, Wales.

For the third years:

Climate Dynamics (Ice Sheets & Glaciers) annually in Hilary Term, 2021–

For the fourth years/MPhils:

Topics in Oceanography & Climate annually in Michaelmas Term, 2022–

Co-taught with Profs. Heather Bouman & Helen Johnson

For the DTP Earth Systems Course:

Dynamic response of ice sheets and glaciers to climate annually in Michaelmas Term, 2022–

ADVISING

Department of Earth Sciences, University of Oxford (Research Advising)

Postdoctoral Researchers

Stacy Larochelle, Ph.D.; postdoc position funded by NSF-ANS 20-03464 2022–2024

(co-advised with Prof. Meredith Nettles)

Hanwen Zhang, (soon-to-be) D.Phil.; postdoc position funded by NE/Y002369/1 2024–

(co-advised with Prof. Ian Hewitt)

Forthcoming 28-month position in subglacial hydrology and geochemistry 2025–

funded by NE/Y000838/1; co-advised with Prof. Bob Hilton.

DPhil Researchers

Hanwen Zhang; ERC DPhil studentship (co-advised with Prof. Richard Katz) 2020–2024

- *Hydrofractures near sticky patches and tidal grounding zones*

MSc Researchers

Emily Falconer 2023–2024

Natalie Turner (co-advised with Dr. Hanwen Zhang) 2024–

University College, University of Oxford (College Advising)

DPhil Researchers

Rebecca Colquhoun; NERC DTP (advised by Prof. Jessica Hawthorne) 2020–

Adam Lindholm; NERC DTP (advised by Dr. Roger Close) 2023–

DOCTORATE EXAMINATIONS

Internal Examiner for Dr. Oliver Tooth (U. of Oxford, advised by Prof. Helen Johnson) 2024

- *Lagrangian Views of the Overturning Circulation in the subpolar North Atlantic Ocean*

External Examiner for Dr. Paul Halas (U. of Bergen, Norway, advised by Dr. Basile de Fleurian) 2023

- *Observations of Greenland Ice Velocities and Impact of Surface Melt*

Internal Examiner for Dr. Sam Cornish (U. of Oxford, advised by Prof. Helen Johnson) 2021
Understanding Freshwater Changes in the Arctic Ocean

HONORS

- Teddy Hall Relays First Place Department Team: "Icy Maths" 2024
- EGU Arne Richter Union Award (Citation) 2024
- Holiday Party Award: "Always in the Field," Earth Sciences, University of Oxford 2021
- Masters of Arts (by resolution), University of Oxford 2021
- NSF Next Generation of Polar Researchers Leadership Symposium 2019
- Editor's Citation for Excellence in Refereeing for *Geophysical Research Letters* 2018
  Recommended by Dr. Julienne Stroeve, University College London
- United States Antarctic Service Medal 2016/17
- AGU Hydrology Section Horton Research Grant 2015
- NSF Graduate Research Fellowship Program (GRFP) 2012
- WHOI Summer Student Fellowship (SSF) 2011
- Phi Beta Kappa, *cum laude,* Honors in the major (Geosciences), Sigma Xi, Wellesley College 2011
- Margret D. Thompson Award for Geosciences Scholarship, Wellesley College 2011
- Sara F. Langer Memorial Award in Geology, Wellesley College 2010
- American Mineralogist Undergraduate Award, Mineralogical Society of America 2009

INVITED TALKS AT CONFERENCES

[6] **Stevens, L.A.**, Banwell, A.F., Behn, M.D., Chase, D.L., Das, S.B., Dell, R., †Falconer, E., Joughin, I., Lai, C.-Y., †Larochelle, S., †Lu, G.J., McGuire, J.J., Nettles, M., Okal, M., Rines, J., and I.C. Willis (2024), Supraglacial Lake Drainages: from process puzzle to subglacial diagnostic. Arne Ritcher Award Lecture, 2024 EGU General Assembly, Vienna, Austria. EGU24-11275. April 14-19.

[5] **Stevens** (2023), Influence of Meltwater on Greenland Ice Sheet Dynamics: Interdisciplinary perspectives from a decade of teamwork. Presented at the 2023 Schmidt Science Fellows Global Meeting, Oxford, UK. Oct. 24.

[4] **Stevens, L.A.**, Das, S.B., Behn, M.D., McGuire, J.J., Joughin, I., Nettles, M., and J. Kingslake (2021), Stress coupling between Greenland supraglacial lakes during rapid drainage. Presented at the 2021 International Union of Geodesy and Geophysics (IUGG) International Associations Cryospheric Sciences (IACS) Virtual Atmosphere-Cryosphere-Ocean Seminar Series (VACO-21), Worldwide. July 19–23.

[3] **Stevens, L.A.**, Behn, M.D., McGuire, J.J., Das, S.B., Joughin, I., Herring, T., Shean, D.E., and King, M.A. (2018), Communicating the mechanics of Greenland Ice Sheet supraglacial lake drainages to diverse audiences. Presented at the 2018 UNAVCO Science Workshop, Broomfield, CO. March 11–15.

[2] **Stevens, L.A.**, Hewitt, I., Das, S.B., and Behn, M.D. (2017), Temporal variations in the relationship between surface speed and modeled effective pressure on the western margin of the Greenland Ice Sheet. Presented at the 2017 Fall Meeting, AGU, New Orleans, LA. Dec 11–15.

[1] **Stevens, L.A.**, Straneo, F., Das, S.B., Plueddemann, A.J., and Kukulya, A.L. (2016), Linking glacially modified waters to catchment-scale subglacial discharge using autonomous underwater vehicle observations. Presented at Ocean Outlook 2015: Icy Oceans, Woods Hole, Mass. Apr. 7–8.

COLLOQUIA & SEMINARS

[25] U. of Cardiff, Department of Geosciences Seminar, Cardiff, Wales. Mar. 2023.

[24] l'École Normale Supérieure (ENS), Laboratoire de Géologie Seminar, Paris, France. Nov. 2022.

[23] U. of Edinburgh, School of Geosciences Hutton Club Seminar, Edinburgh, Scotland. Mar. 2022.

[22] U. of Oxford, Atmospheric, Oceanic and Planetary Physics Dept. Seminar, Oxford, UK. Feb. 2022.

[21] Colby College, Dept. of Geology Seminar, Waterville, ME. Mar. 2021.

[20] Behn-Olive Geodynamics Seminar Series, Worldwide. Mar. 2021.

[19] U. of Cambridge, Dept. of Applied Mathematics and Theoretical Physics, Geophysical and Environmental Processes Seminar, Cambridge, UK. Mar. 2021.

[18] U. of Oxford, Earth Sciences Dept. Brown Bag Seminar, Oxford, UK. Nov. 2020.

[17] Dartmouth College, Thayer School of Engineering Jones Seminar, Hanover, NH. Nov. 2020.

[16] Yale U. Climate Symposium, Geology & Geophysics, New Haven, CT. *Cancelled!*

[15] U. of Oxford, Earth Sciences Dept. Seminar, Oxford, UK. Feb. 2020.

[14] Northwestern U., Earth & Planetary Sciences Dept. Seminar, Evanston, IL. Feb. 2020.

[13] Smith College, Geosciences Dept. Seminar, Northampton, Mass. Feb. 2020.

[12] Boston College, Earth & Environmental Sciences Colloquium, Newton, Mass. Jan. 2020.

[11] Middlebury College, Geology Dept. Seminar, Middlebury, VT. Jan. 2020.

[10] U. of Wisconsin-Madison, Dept. of Geosciences Colloquium, Madison, WI. Sept. 2019.

[9] WHOI, Dept. of Geology and Geophysics Seminar, Woods Hole, Mass. June 2019.

[8] Stanford U., Dept. of Geophysics Seminar, Stanford, CA. Feb. 2019.

[7] Georgia Institute of Technology, EAS Dept. Seminar, Atlanta, GA. Jan. 2019.

[6] Rutgers, Dept. of Geography Seminar & Early Career Chat, Piscataway, NJ. April 2018.

[5] WHOI, Coastal Ocean & Fluid Dynamics Lab Seminar, Woods Hole, Mass. Aug. 2017.

[4] Scripps Institution of Oceanography, Polar Seminar, La Jolla, CA. Jan. 2017.

[3] U. of Chicago, Geophysical Sciences Dept. Seminar. Chicago, IL. Jan. 2017.

[2] Wellesley College, Geosciences Dept. Seminar. Wellesley, Mass. Feb. 2016.

[1] U. of Oxford Mathematical Institute, Mathematical Geoscience Seminar. Oxford, UK. Nov. 2015.

SERVICE (2020 onwards)

—∘ Management Team/Co-I representing the Department of Earth Sciences, Univ. Oxford 2023–
Intelligent Earth: UKRI AI Centre for Doctoral Training in AI for the Environment

—∘ EarthScope Consortium: Associate Member Representative for Univ. Oxford 2023–

—∘ Deputy Director of Graduate Studies 2022–
Department of Earth Sciences, Univ. Oxford

—∘ Faculty Advisor, *Lithoqueers* (LGBTQIA+ Affinity Group) 2021–
Department of Earth Sciences, Univ. Oxford

—∘ Mental Health First Aider 2021–
Department of Earth Sciences, Univ. Oxford

—∘ Committee Member, EEDI Committee 2020–
Department of Earth Sciences, Univ. Oxford

—∘ Committee Member, Departmental Committee 2020–
Department of Earth Sciences, Univ. Oxford

—∘ Proposal Reviews [4] 2018–
NSF Division of Earth Sciences, Postdoctoral Fellowship (EAR-PF)
NSF Office of Polar Programs, Antarctic Glaciology (OPP-AG)
Royal Society Te Apārangi, Te Pūtea Rangahau A Marsden

—∘ Paper Reviews [33] 2016–
Annals of Glaciology, The Cryosphere, Earth and Planetary Res. Letts., Earth System Science Data, Geology, Geophysical Research Letters, J. of Geophysical Research: Earth Surface, J. of Geophysical Research: Oceans, J. of Glaciology, Nature, Nature Communications, Nature Geoscience, Proceedings of the National Academy of Sciences, and Science Advances.

—∘ Co-organizer with Profs. Julie Cosmidis and Claire Nichols 2020–2023
Earth Sciences Department Seminar, Univ. Oxford

—∘ Associate Member Representative for Univ. Oxford 2020–2023
UNAVCO, Inc.

- Admissions Interview Panel for "Physical Climate System" focus area 2022
  NERC DTP in Environmental Research, Univ. of Oxford
- Co-author with Drs. Chris Carr and Lauren Simkins 2021
  Name Change Policy for International Glaciological Society Journals
- Panelist, NERC DTP in Environmental Research, Univ. of Oxford 2021
  "LGBTQ+ Voices & Communities: Enabling Inclusivity in Environmental Research"
- Panelist, Earth Science Postdoctoral Scientists, Univ. of Oxford 2021
  "Applying to Institutional Postdoctoral Fellowships and Faculty Positions in the US"
- Host Researcher, Polar Horizons 2021 2021
  Diversity in Polar Science Initiative, British Antarctic Survey
- Session Co-convener, AGU Fall Meeting 2020 2020
  "Advances in Glacier Hydrology"; "Controls on Marine-Terminating Glacier, Ice Stream, and Ice Shelf Dynamics in Observations and Models"

WORKSHOPS & INTENSIVE COURSES

- Crevasse Risk Management and Safety Workshop 2021
  NSF Office of Polar Programs *(invited participant)*
- LGBT+ Role Models Workshop for University Staff 2021
  Equality & Diversity Unit, University of Oxford
- NSF Next Generation of Polar Researchers Leadership Symposium 2019
  USC Wrigley/Boone Center for Environmental Leadership, Catalina Island, CA *(selected participant)*
- Communicating Science for Impact Short Course 2018
  2018 UNAVCO Science Workshop, Boulder, CO
- MIT Kauffman Teaching Certificate Program 2017
  MIT Teaching and Learning Laboratory *(selected participant)*
- MIT Science Policy Initiative Congressional Visit Day 2015
  MIT Washington Office, Washington, D.C. *(selected participant)*
- MIT Science Policy Initiative Executive Agencies Visit Day 2014
  MIT Washington Office, Washington, D.C. *(selected participant)*
- Advanced Climate Dynamics Course: "Dynamics of the Greenland Ice Sheet" 2014
  Arctic Station, Qeqertarsuaq, Disko Island, West Greenland *(selected participant)*
- ComSciCon, Harvard University, Cambridge, Mass. 2014
  Communicating Science Workshop for Graduate Students *(selected participant)*
- Stability and Variations of Arctic Land Ice, Subglacial Hydrology Short Course 2013
  University of Iceland, Reykjavík, Iceland
- Geologic Field Mapping Course, University of Otago, Dunedin, New Zealand 2010

TRAINING & CERTIFICATIONS

- Mental Health First Aider Certification, Mental Health First Aid England 2021–2027
  Initial Course (2021); Re-certification Course (2024)
- 1-day Basic Mountaineering Skills Course, 2022
  Mooney Mountain Guides, Concord, NH, USA
- Fieldwork Safety Overseas Training, University of Oxford 2022
- British Antarctic Survey Field Training Modules 1–4 2021
- Antarctic Pre-Deployment Training & First Aid Course, British Antarctic Survey 2021
- British Antarctic Survey Field Training Modules 1–4 2019
- Arctic Field Training, Polar Field Services 2016
- Wilderness First Aider Certification 2016–2018
  University of Colorado Emergency and Wilderness Medicine

—○ 2-day Advanced Mountaineering Skills Course 2015
International Mountain Climbing School, North Conway, NH, USA

—○ 1-day Basic Mountaineering Skills Course, 2014
International Mountain Climbing School, North Conway, NH, USA

—○ Expeditionary Mountaineering (35 days) 2012
National Outdoor Leadership School (NOLS), Coyhaique, Chile

MEDIA COVERAGE

—○ Rex, C. (2024) Stress mapping reveals secrets of coupled supraglacial lake drainages by hydro-fracture. *U. of Oxford Press Release.*

—○ Rex, C. (2024) Ice shelves fracture under weight of meltwater lakes. *U. of Oxford Press Release.*

—○ Johnson, S. (2022) Clocking a speeding glacier reveals the fate of a disappearing lake. *EarthScope Consortium.*

—○ Hilton, S. (2022) Study reveals new insights into how fast-moving glaciers may contribute to sea level rise. *U. of Oxford Press Release.*

—○ Dewsbery, S. (2022) Expedition Data Recovery. *The Martlet, University College, U. of Oxford.*

—○ Kelly, M. (2021) Rise and fall of water blisters offers glimpse beneath Greenland's thick ice sheet. *Princeton University Press Release*.

—○ Bayer, C. (2020) This International Women's Day, Meet Four Wellesley Students and Alumnae Advocating for A Gender Equal World. *Wellesley College Press Release*.

—○ Provided commentary for Gramling, C. (2019) Expanding ice slabs are increasing Greenland's contribution to sea level rise. *Science News*.

—○ Makalintal, B. (2016) Glacier Pacer. *Wellesley Magazine*.

—○ Lippsett, L. (2015) Scientists Find Trigger That Cracks Lakes. *Oceanus*.

—○ Chu, J. (2015) A check on runaway lake drainage. *MIT News*.

—○ Mooney, C. (2015) Scientists finally have an explanation for why huge lakes atop Greenland are vanishing. *Washington Post*.

—○ Mok, H.-F. (2015) Wellesley in STEM: Interview with Laura Stevens, PhD Student at MIT and WHOI. *Wellesley Underground*.

—○ Davis, M., (2013) Source to Sink: Exploring Greenland's Supraglacial Lakes and Sarqardleq Fjord. *Polar Field Services Field Notes Blog*.

—○ Taylor, A. and J. Raedle (2013) Greenland: A Global Warming Laboratory. *The Atlantic*.

FIELD EXPEDITIONS

Columbia & Oxford: Supraglacial Lakes on the Greenland Ice Sheet 2022(x2), 2023, 2024
Greenland Ice Sheet dynamic response to inland expansion of a hydrologically active ice-sheet bed
GNSS, pRES, temperature, and pressure-sensor installation, maintenance, and removal.

Colorado, Chicago, Oxford, & Cambridge: George VI Ice Shelf, Antarctic Peninsula 2019, 2021
Ice-shelf instability caused by active surface meltwater production, movement, ponding, and hydro-fracture
Installation, maintenance, and recovery of GPS array, shallow firn cores, firn-column thermistors, Automatic Weather Stations (AWS), and pressure transducers.

Scripps Institution of Oceanography & WHOI: Ross Ice Shelf, Antarctica 2016
Dynamic Response of the Ross Ice Shelf to Wave-induced Vibrations
Recovery of GPS and broadband-seismic arrays.

WHOI: East African Rift, Botswana 2014
Incipient Continental Rifting in the Okavango Rift, Botswana
Deployed 800-km-long active seismology line with the SEISORZ team.

WHOI: Disko Island and the Greenland Ice Sheet 2014
Investigating the influence of sea-surface variability on ice sheet mass balance and outlet glacier behaviour using

records from Disko Bugt, West Greenland
Shallow ice cores, snow-pit sampling, ice-penetrating radar.

WHOI: Supraglacial Lakes on the Greenland Ice Sheet 2013, 2014
Influence of hydrofracture and surface melt variability on Greenland Ice Sheet flow
GPS installation, maintenance, and removal; ground survey of hydro-fracture scarps.

WHOI: Saqardleq Fjord, West Greenland 2013
Seasonal fluxes across submarine ice sheet margins: A pilot study in West Greenland
Fjord hydrography survey via small boat and helicopter.

Sea Education Association: WHOI Jake Pierson Summer Cruise 2012
SSV Corwith Cramer, New England Continental Shelf, oceanographic deployments.

PROFESSIONAL AFFILIATIONS

500 Queer Scientists

A LONG LIST OF CONFERENCE ABSTRACTS

[46] *Award Lecture*: **Stevens, L.A.**, Banwell, A.F., Behn, M.D., Chase, D.L., Das, S.B., Dell, R., †Falconer, E., Joughin, I., Lai, C.-Y., †Larochelle, S., †Lu, G.J., McGuire, J.J., Nettles, M., Okal, M., Rines, J., and I.C. Willis (2024), Supraglacial Lake Drainages: from process puzzle to subglacial diagnostic. Arne Ritcher Award Lecture, 2024 EGU General Assembly, Vienna, Austria. EGU24-11275. April 14-19.

[45] *Talk*: Banwell, A.F., Willis, I.C., **Stevens, L. A.**, Dell, R., and D. MacAyeal (2024). Observed and modelled meltwater-induced flexure and fracture at a doline on north George VI Ice Shelf, Antarctica. 2024 EGU General Assembly, Vienna, Austria. EGU24-12334. April 14-19.

[44] *Poster*: Kilpatrick, A., Banwell, A.F., Dell, R.L., **Stevens, L. A.**, Willis, I.C., and D. MacAyeal (2023). Whole-Sky Photography as a Means to Study Cloud Forcing of Ice-Shelf Surface Conditions. 2023 AGU Annual Meeting, San Francisco, CA. Dec. 11–15.

[43] *Talk*: †Larochelle, S., **Stevens, L. A.**, Nettles, M., Kingslake, J., †Lu, G.J., Lau, N., Behn, M.D., Fan, W., and S.B. Das (2023). Spatiotemporal evolution of englacial stress during synchronous, hydro-fracture-driven drainages of neighboring supraglacial lakes. 2023 AGU Annual Meeting, San Francisco, CA. Dec. 11–15.

[42] *Poster*: Lau, N., Behn, M.D., Fan, W., Das, S.B., McGuire, J.J., †Larochelle, S., **Stevens, L. A.**, Nettles, M., and J. Kingslake (2023). Development of an efficient subglacial meltwater system in response to rapid drainage of Greenland supraglacial lakes inferred from surface deformation. 2023 AGU Annual Meeting, San Francisco, CA. Dec. 11–15.

[41] *Talk*: †Lu, G.J., Kingslake, J., Nettles, M., **Stevens, L. A.**, and †S. Larochelle (2023). Observation of supraglacial lake drainages using Autonomous phase-sensitive Radio Echo Sounders (ApRES). 2023 AGU Annual Meeting, San Francisco, CA. Dec. 11–15.

[40] *Talk*: †Larochelle, S., **Stevens, L. A.**, Nettles, M., Kingslake, J., †Lu, G.J., Lau, N., Behn, M.D., Fan, W., and S.B. Das (2023). Synchronous, hydro-fracture-driven drainages of neighboring supraglacial lakes and their impact on ice flow. 2023 West Antarctica Ice Sheet Initiative Meeting, Cloquet, MN. Sept. 25–28.

[39] *Talk*: †Zhang, H., Katz, R.F., and **L.A. Stevens** (2023). Supraglacial lake drainage by tidally induced hydrofracture on Amery Ice Shelf. International Glaciological Society International Symposium on the Edges of Glaciology, Limerick, Ireland. July 2–7.

[38] *Poster*: Banwell, A.F., MacAyeal, D., Willis, I.C., **Stevens, L. A.**, and R. Dell (2023). Observed and modelled meltwater-induced flexure and fracture on George VI Ice Shelf, Antarctica. 2023 EGU General Assembly, Vienna, Austria. EGU23-9972. April 23–28.

[37] *Poster*: Lai, C.-Y., **Stevens, L.A.**, Behn, M., and S. Das (2023). Relaxation of water-filled blisters via flow through the subglacial drainage system. 2023 EGU General Assembly, Vienna, Austria. EGU23-11012. April 23–28.

[36] *Poster*: Gjerde, G., Behn, M.D., and **L. A. Stevens** (2022). Western Greenland Ice Sheet response to late season melt events: Implications for the evolution of subglacial hydrology. 2022 AGU Annual Meeting, Chicago, IL. Dec 12–16.

[35] *Poster*: **Stevens, L. A.**, Nettles, M., Davis, J.L., Creyts, T.C., Kingslake, J., Hewitt, I.J., and A. Stubblefield (2022). Tidewater-glacier response to supraglacial lake drainage. 2022 AGU Annual Meeting, Chicago, IL. Dec 12–16.

[34] *Poster*: †Zhang, H., Katz, R.F., **Stevens, L.A.,** Davis, T., and D. May (2022). Supraglacial lake drainage initiated by tidally induced hydrofracture on Amery Ice Shelf. 2022 AGU Annual Meeting, Chicago, IL. Dec 12–16.

[33] *Poster*: MacAyeal, D., Banwell, A.F., Dell, R., Willis, I.C., and **Stevens, L. A.** (2022). Time-Lapse Photography as a Witness to George VI Ice Shelf's record-high melt in the 2019/2020 melt season. International Symposium on Ice, Snow and Water in a Warming World (Cryosphere 2022), International Glaciological Society, Reykjavík, Iceland, Aug 21–26.

[32] *Poster*: Banwell, A.F., MacAyeal, D., Dell, R., Willis, I.C., and **Stevens, L. A.** (2022). Preliminary Analysis of Melt-Induced Ice-Shelf Flexure on George VI Ice Shelf Observed with GNSS. International Symposium on Ice, Snow and Water in a Warming World (Cryosphere 2022), International Glaciological Society, Reykjavík, Iceland, Aug 21–26.

[31] *Talk*: †Zhang, H., Davis, T., Katz, R.F., **Stevens, L.A.,** and D. May (2022). Basal hydrofractures near sticky patches. 2022 EGU General Assembly, Vienna, Austria. EGU22-5140. May 23–27.

[30] *Poster*: Gjerde, G., Behn, M.D., and **L. A. Stevens** (2021). Investigating transient speed-up associated with a late season melting event on the western Greenland Ice Sheet. 2021 Fall Meeting, AGU, New Orleans, LA. Dec 13–17.

[29] *Invited Talk*: **Stevens, L.A.**, Das, S.B., Behn, M.D., McGuire, J.J., Joughin, I., Nettles, M., and J. Kingslake (2021). Stress coupling between Greenland supraglacial lakes during rapid drainage. Presented at the 2021 International Associations of Cryospheric Sciences (Online) Annual Assembly, Worldwide. July 19–23.

[28] *Poster*: **Stevens, L. A.**, Das, S.B., Behn, M.D., Nettles, M., Kingslake, J., and I. Joughin (2020). Stress coupling between neighbouring supraglacial lakes during rapid drainage. 2020 Fall Meeting, AGU, San Francisco, D.C., Dec 7–11.

[27] *Talk*: Lai, C.-Y., **Stevens, L. A.**, Chase, D.L., Creyts, T.C., Behn, M.D., Das, S.B., and H.A. Stone (2020). Seasonally evolving hydraulic transmissivity beneath Greenland supraglacial lakes. 2020 Fall Meeting, AGU, San Francisco, D.C., Dec 7–11.

[26] *Talk*: Banwell, A.F., Datta, R.T., Dell, R.L., Moussavi, M., Brucker, L., Picard, G., Shuman, C.A., and **L. A. Stevens** (2020). 32-year record-high surface melt in 2019/2020 on north George VI Ice Shelf, Antarctic Peninsula. 2020 Fall Meeting, AGU, San Francisco, D.C., Dec 7–11.

[25] *Talk*: MacAyeal, D., Banwell, A.F., Sergienko, O.V., Macdonald, G.L., Willis, I.C., and **Stevens, L. A.** (2020). A low-order model of ice-shelf evolution combining flow and flexure. 2020 Fall Meeting, AGU, San Francisco, D.C., Dec 7–11.

[24] *Talk*: Banwell, A.F., MacAyeal, D., **Stevens, L. A.**, Willis, I., Dell, B. and Dunmire, D. (2020). Ice-shelf instability due to surface meltwater systems on the George VI Ice Shelf. 2020 European Geophysical Union General Assembly, Vienna, Austria, May 3–8.

[23] *Talk*: **Stevens, L. A.**, Nettles, M., Davis, J.L., Creyts, T.C., Kingslake, J., and A. Stubblefield (2019). Flow response to supraglacial lake drainage events implicates partially channelized subglacial drainage system beneath Helheim Glacier, East Greenland. 2019 Fall Meeting, AGU, San Francisco, D.C., Dec 9–13.

[22] *Talk*: Lai, C.-Y., Chase, D., **Stevens, L. A.**, Creyts, T.C., and Stone, H.A. (2019). Relaxation of ice-sheet uplift on a porous bed. Bulletin of the American Physical Society, 72nd Annual Meeting of the APS Division of Fluid Dynamics, Seattle, WA, Nov 23–26.

[21] *Poster*: Wearing, M., **Stevens, L. A.**, Dutrieux, P., Kingslake, J. (2019). Ice-shelf secondary flow counteracts the growth of sub-shelf basal channels. 2019 West Antarctic Ice Sheet Meeting, Julian, CA, Oct 16–18.

[20] *Talk*: **Stevens, L. A.**, Nettles, M., Davis, J.L., Creyts, T.C., and Kingslake, J. (2018). Role of melt forcing in diurnal velocity fluctuations of Helheim Glacier, East Greenland. 2018 Fall Meeting, AGU, Washington, D.C., Dec 10–14.

[19] *Poster*: Wagner, T. J. W., Straneo, F., Rickards, C. G., Slater, D., **Stevens, L. A.**, Das, S. B., Singh, H. (2018). Large spatial variations in the frontal mass budget of a Greenland tidewater glacier. 2018 Fall Meeting, AGU, Washington, D.C., Dec 10–14.

[18] *Poster*: Wearing, M., **Stevens, L. A.**, Dutrieux, P., Kingslake, J. (2018). Ice-shelf secondary flow counteracts growth of sub-ice-shelf channels. 2018 Fall Meeting, AGU, Washington, D.C., Dec 10–14.

[17] *Talk*: **Stevens, L. A.**, Nettles, M., Davis, J.L., Creyts, T.C., and Kingslake, J. (2018). Role of melt forcing in diurnal velocity fluctuations of Helheim Glacier, East Greenland. West Antarctic Ice Sheet Initiative Meeting, Palisades, New York, Sep 16–19.

[16] *Talk*: Trusel, L.D., Pope, A., Moussavi, M., Das, S.B., and **Stevens, L. A.** (2018), Water on the Antarctic Ice Sheet: Quantifying surface melt via radar satellites, to be presented at the SCAR/IASC POLAR 2018 Meeting, Davos, Switzerland, June 15–26.

[15] *Invited Talk*: **Stevens, L.A.**, Behn, M.D., McGuire, J.J., Das, S.B., Joughin, I., Herring, T., Shean, D.E., and King, M.A. (2018), Communicating the mechanics of Greenland Ice Sheet supraglacial lake drainages to diverse audiences. Presented at the 2018 UNAVCO Science Workshop, Broomfield, CO. March 11–15.

[14] *Invited Talk*: **Stevens, L.A.**, Hewitt, I., Das, S.B., and Behn, M.D. (2017), Temporal variations in the relationship between surface speed and modeled effective pressure on the western margin of the Greenland Ice Sheet. Presented at the 2017 Fall Meeting, AGU, New Orleans, LA. Dec 11–15.

[13] *Invited Talk*: **Stevens, L.A.**, Straneo, F., Das, S.B., Plueddemann, A.J., and Kukulya, A.L. (2016), Linking glacially modified waters to catchment-scale subglacial discharge using autonomous underwater vehicle observations. Ocean Outlook Meeting 2015: Icy Oceans, Woods Hole, Mass. Apr. 7–8.

[12] *Talk*: **Stevens, L. A.**, Behn, M.D., Das, S.B., Joughin, I., van den Broeke, M., Herring, T., and McGuire, J.J. (2015), The role of meltwater variability in modulating diurnal to inter-annual ice-sheet flow: New insights from a decade of high-temporal resolution GPS observations on the western Greenland margin. Presented at the 2015 Fall Meeting, AGU, San Francisco, California. Dec 14–18.

[11] *Talk*: **Stevens, L. A.**, Straneo, F., Das, S.B., Singh, H., Plueddemann, A.J., van den Broeke, M., and Morlighem, M. (2015), Evidence of multiple distinct subglacial meltwater plumes observed using the REMUS-100 autonomous underwater vehicle. Abstract 73A1865, International Symposium on Contemporary ice-sheet dynamics, International Glaciological Society, Cambridge, UK. Aug 17–22.

[10] *Talk*: **Stevens, L. A.**, Behn, M.D., Das, S.B., Joughin, I., McGuire, J.J., Herring, T., van den Broeke, M. (2015), Seasonal ice-flow variability surrounding three Greenland rapid supraglacial lake drainages. Abstract 72A1752, International Symposium on Hydrology of Glaciers and Ice Sheets, International Glaciological Society, Höfn, Iceland. Jun 21–26.

[9] *Talk*: **Stevens, L. A.**, Straneo, F., Das, S.B., Singh, H., Plueddemann, A.J. (2015), Detection and characterization of multiple distinct subglacial meltwater plumes using the REMUS-100 autonomous underwater vehicle. Presented at the New England Glaciology Meeting, Woods Hole, Mass. Apr. 16–17.

[8] *Poster*: Das, S.B., Evans, M., Frey, K., Osman, M., Smith, B., **Stevens, L. A.**, Trussel, L., York, A., Bingham, M. (2014), Using Coastal Ice Cap Records to Investigate Maritime Climate and Ice Sheet Processes in West Greenland. Abstract C13B-0434. 2014 Fall Meeting, AGU, San Francisco, Calif., Dec 15–19.

[7] *Poster*: **Stevens, L. A.**, Behn, M.D., McGuire, J.J., Das, S.B., Joughin, I., Herring, T., Shean, D.E., and King, M.A. (2014), Hydrologically Induced Basal Slip Triggers Greenland Supraglacial Lake Drainages. Abstract C53B-0302 presented at the 2014 Fall Meeting, AGU, San Francisco, Calif. Dec 15–19.

[6] *Talk*: Das, S.B., Behn, M.D., Joughin, I.R., Fahnestock, M.A., McConnell, J.R., **Stevens, L. A.**, Straneo, F., Plueddemann, A.J., Singh, H. (2013), The fate of Greenland meltwater: Progress and challenges in understanding the influence of surface melt on ice sheet dynamics and runoff in a highly transient hydrologic system, Abstract C44A-01. 2013 Fall Meeting, AGU, San Francisco, Calif., Dec 9–13.

[5] *Poster*: Straneo, F., Das, S.B., Singh, H., Plueddemann, A.J., Richards, C., Mankoff, K.D., **Stevens, L. A.**, (2013), Observations of a subglacial discharge plume at the edge of a Greenland tidewater glacier, Abstract OS11A-1635. 2013 Fall Meeting, AGU, San Francisco, Calif., Dec 9–13.

[4] *Talk*: **Stevens, L. A.**, Behn, M.D., Das, S.B., Joughin, I.R., Herring, T., King, M.A., McGuire, J.J. (2013), Contrasting ice sheet response to early and late summer rapid supraglacial lake drainage events on the Greenland Ice Sheet, Abstract C43D-02 presented at the 2013 Fall Meeting, AGU, San Francisco, Calif. Dec 9–13.

[3] *Talk*: **Stevens, L. A.**, Behn, M.D., Das, S.B., Joughin, I.R., King, M.A., (2013), Constraining ice sheet viscoelastic response to supraglacial lake drainage events, 7th Graduate Climate Conference, Woods Hole Oceanographic Institution, Woods Hole, Mass. Nov 1–3.

[2] *Poster*: **Stevens, L. A.**, Behn, M.D., Das, S.B., Joughin, I.R., King, M.A., (2013), Constraining ice sheet visco-elastic response to supraglacial lake drainage events, Program for Arctic Regional Climate Assessment (PARCA) Meeting, Goddard Space Flight Center, Greenbelt, Maryland. Jan 29.

[1] *Poster*: **Stevens, L. A.**, Ortiz, A.C., Ramatchandirane, C.G., Stenquist, A.G., and Argow, B.A., (2010) Transport vs. Source: Quantifying Seasonal Controls on Beach Sediment Characteristics in Vieques, P.R., USA. Geological Society of America Abstracts with Programs, 42(5):100.