Matthew B. Osman

Personal information

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Social media	None **No, that's not an oversight.*
Research foci	Data assimilation, ice cores, Arctic & midlatitude dynamics, paleoclimatology, proxy development, data analysis, statistics, inverse methods

Professional appointments

2023 –	**Assistant Professor**, *Dept. of Geography, University of Cambridge, UK*
2022 –	**Research Affiliate**, *Dept. of Geology, University of Arizona, USA*
2019–2022	**Postdoctoral Researcher**, *Climate Systems Center, University of Arizona, USA*

Education

2014–2019	**Ph.D. in Climate Science**, *Massachusetts Institute of Technology / Woods Hole Oceanographic Institution (MIT/WHOI) Joint Program, USA*
	Thesis: Greenlandic ice archives of North Atlantic Common Era climate
2010–2014	**BA in Geology *with Distinction***, *Augustana College, USA*
	Concentrations: Mathematics and Environmental Studies
	Graduated summa cum laude

Philosophae

I believe that human-caused climate change is the foremost crisis facing humanity today.

I believe in equality for all, and that we need everyone's unique insights to address the climate crisis.

I believe in the power of the golden rule.

Selected failures

Way too many to count

Selected honors and awards

Marie Skłodowska-Curie Actions (MSCA) Postdoc Fellowship (offer declined)

European Commission-funded

Ocean Outlook Research Fellowship

6-month research fellowship, Bjerknes Centre for Climate Research, Norway

National Defense Science and Engineering Graduate (NDSEG) fellowship

U.S. Department of Defense-funded

Fulbright Research Fellowship to Sweden (offer declined)

U.S. Department of State-funded research fellowship to University of Stockholm

Dr. C. Leland Horberg Scholarship in Geology

Awarded to top graduating Augustana College Geology senior

Glenn T. Seaborg Science Award *finalist*

Augustana College's sole nominee (1/2600 students)

NASA Field Research Award

Juneau Icefield Research Program award fellowship

Scientific publications

In the queue

~ **Osman, M.B.**, S.B. Das and Madsen, C. (ant. Nov. 2022 submission): Rapid Greenland climate changes foreshadow collapse of Norse settlements, *in prep for GRL*.

~ **Osman, M.B.** and Abell, J. (ant. Spring 2023 submission): Mid-Pliocene westerly changes in PlioMIP2 (working title), *in prep for Climate of the Past.*

~ **Osman, M.B.** et al. (invited contribution; ant. Summer 2023 submission): The deglacial evolution of Northern Hemisphere jet stream changes, *in prep for Quaternary Science Reviews.*

~ Koffman, B., Criscitiello, A., Guest, S. and **Osman, M.B**., (ant. Winter 2022/23 submission): Five decades of international partnerships in ice core sciences, *in prep for The Cryosphere*

~ King, J., Tierney, J., **Osman, M. B.,** Anchukaitis, K., Judd, E. (ant. Winter 2022/23 submission): DASH: A MATLAB Toolbox for Paleoclimate Data Assimilation, *in prep for Geoscientific Model Development.*

~ Jiang, Z et al. (ant. Dec. 2022 submission): Simulated trends in the Atlantic Meridional Overturning Circulation during the Holocene, *in prep for GRL*.

~ Hansen, J. et al. (ant. Nov. 2022 submission): Global warming in the pipeline, *submitted to Oxford Open Climate Change*.

~ Abell, J. et al. (ant. Winter 2022/23 submission): Spatial and temporal variability of marine sediment solid-phase iron speciation in the North Pacific Ocean, *in prep for EPSL*.

Published

Nov. 2021 **Osman, M.B.**, J.E. Tierney, J. Zhu, R. Tardif, J. King, G.J. Hakim and C.J. Poulsen: Globally resolved surface temperatures since the Last Glacial Maximum, *Nature*, **599**, 239-244, 2021.

Nature News and Views highlight, here.

Non-peer reviewed (EarthArXiV) pre-print, here.

Sep. 2021 **Osman, M.B.**, S. Coats, J.R. McConnell, N. Chellman, S.B. Das: North Atlantic jet stream projections from a 1,250 year context, *Proceedings of the National Academy of Sciences*, **118**(38), e2104105118, 2021.

Selected as "In this issue" cover highlight

Sep. 2021 **Osman, M.B.**, B.E. Smith, L.D. Trusel, S.B. Das, J.R. McConnell, N. Chellman, M. Arienzo, and H. Sodemann: Enhanced sensitivity of west Greenland ice caps to last millennium climate change, *Nature Geoscience*, **14**, 756–761, 2021.

Selected as Journal cover highlight

Aug. 2021 Criscitiello, A.S., T. Geldsetzer, R. Rhodes, M. Arienzo, J.R. McConnell, N. Chellman, **M.B. Osman**, J.J. Yackel, and S. Marshall: Marine aerosol records of

	Arctic sea-ice and polynya variability from new Ellesmere and Devon Island firn cores, Nunavut, Canada, *JGR Oceans*, **126**, e2021JC017205, 2021. `
May 2019	**Osman, M.B.**, Das, S.B., Trusel, L.D., Evans, M., Fischer, H., Grieman, M., Kipfstuhl, S., McConnell, J.R., Saltzman, E.: Industrial-era decline of subarctic Atlantic productivity, *Nature*, **569**, 551-555, 2019.
Dec. 2018	Trusel, L.D., Das, S.B., ***Osman, M. B.**, et al.: Nonlinear rise in Greenland runoff in response to post-industrial Arctic Warming, *Nature*, **564**, 104–108, 2018.
Nov. 2017	**Osman, M.B.**, Das, S.B., Marchal, O., and Evans, M.J.: Methanesulfonic acid (MSA) migration in polar ice: Data synthesis and theory, *The Cryosphere*, **11**, 2439-2462, 2017.
	Selected as 2017 editor's highlight
Nov. 2017	**Osman, M.,** Zawadowicz, M. A., Das, S. B., and Cziczo, D. J.: Real time analysis of insoluble particles in glacial ice using single particle mass spectrometry, *Atmos. Meas. Tech.*, **10**, 4459-4477, 2017.

My pride and joy

This little beast:

Last updated: Nov. 2022