

Minmin Fu

Contact Information	University of Southampton School of Ocean and Earth Science Waterfront Campus National Oceanography Centre Southampton SO14 3ZE	M.J.Fu@soton.ac.uk minminfu.github.io
Current Position	University of Southampton <i>Lecturer in Climate Science</i> Research interests: Climate Dynamics, Climate Change, Numerical Modeling, Paleoclimate, & El Niño Yale University <i>Flint Postdoctoral Fellow</i> Faculty Host: Prof. Alexey Fedorov	May 2025 – Present Sep 2022 – May 2025
Education	Harvard University Ph.D., Earth and Planetary Sciences Advisor: Prof. Eli Tziperman University of California, Davis B.A. Physics, B.A. Mathematics GPA: 3.95, <i>Highest Honors</i>	Sep 2016 – May 2022 Sep 2013 – May 2016
Awards	2022 Flint Postdoctoral Fellowship, Yale University 2019 Harvard University Certificate of Distinction in Teaching, Bok Center 2016 William Benjamin and Jill Kowal Award, Harvard University	
Publications	Zhu, F., Hopcroft, P.O., Albani, S., Fu, M. , Crocker, A.J., Xuan, C., & Wilson, P.A. (2026). Dipole in North African dust deposition between the pre-industrial and Last Glacial Maximum controlled by meridional temperature gradients. (<i>submitted</i>) Fu, M. , Graham, R.J., & Abbot, D.S. (2026). Paleogeography strongly influences CO ₂ threshold for Sturtian Snowball Earth initiation. (<i>submitted</i>) Graham, R.J., Cael, B.B., Fu, M. , & Abbot, D.S. (2026). Shifting mechanisms of climate stabilization across the Phanerozoic. (<i>submitted</i>) Fu, M. & Fedorov, A.V. (2026). Contrasting Tropical SST Warming in Two Climate Models: The Roles of Winds, Clouds, Evaporative Cooling, and Ocean Dynamics. (<i>in revision</i>) Borreggine, M., Powell, E.M., Fu, M. , Yang, X., Weeks, E., Zhang, B., Wilkinson, K., Mitrovica, J.X., Tryon, C., & Meadow, R. (2026). Combin-	

ing Paleocurrents and Sea Level in a Least-Cost Pathway Model of Human Dispersal from Sunda to Sahul, 65–45,000 Years Ago. (*in revision*)

Koepnick, K., **Fu, M.**, & Tziperman, E. (2026). Comparing the surface mass balance of the Laurentide Ice Sheet during the last deglaciation with geophysical reconstructions. (*in revision*)

Griffin, C., Gernon, T. M., **Fu, M.**, Rugen, E. J., Spencer, A. M., Warrington, G., & Hincks, T. K. (2026). Interannual to multidecadal climate oscillations occurred during Cryogenian glaciation. *Earth and Planetary Science Letters*, 679, 119891.

Wilcox, P.S. & **Fu, M.** (2025). Minimal AMOC impact in Alaska during the Younger Dryas. *Paleoceanography and Paleoclimatology*, 40(12), p.e2025PA005324.

Baek, S.H., Lora, J.M., Skinner, C.B., **Fu, M.** & Zhu, J. (2025). Atmospheric and oceanic energy transport during North Atlantic freshening events: influences of moisture transport and hydrologic cycle feedbacks. *Climate Dynamics*, 63(8), p.301.

Stuivenvolt-Allen, J., Fedorov, A., **Fu, M.**, & Heede, U. (2024). Widening of wind-stress anomalies amplifies ENSO in a warming climate. *Journal of Climate*, 38(2), 497-512.

Fu, M. & Fedorov, A. (2024). Impacts of an active Pacific Meridional Overturning Circulation on the Pliocene climate and hydrological cycle. *Earth and Planetary Science Letters*, 642, 118878.

Fu, M., Abbot, D. S., Koeberl, C., & Fedorov, A. (2024). Impact-induced initiation of Snowball Earth: A model study. *Science Advances*, 10(6), eadk5489.

Smith, A. J., Ito, E., Burls, N., Clarke, L., Donders, T., Hatfield, R., ... & PlioWest Working Consortium (2023). Workshop report: PlioWest–drilling Pliocene lakes in western North America. *Sci. Dril.*, 32, 61–72

Fu, M. & Fedorov, A. (2023) The role of Bjerknes and shortwave feedbacks in the tropical Pacific SST response to global warming. *Geophysical Research Letters*, 50:e2023GL105061.

Fu, M. (2022). Revisiting western United States hydroclimate during the last deglaciation. *Geophysical Research Letters*, 50(3):e2022GL101997.

Baum, M. & **Fu, M.** (2022). Simple Stochastic Modeling of Snowball Probability Throughout Earth History. *Geochemistry, Geophysics, Geosystems*, 23(11):e2022GC010611.

Bhattacharya, T., Feng, R., Tierney, J.E., Knapp, S., Burls, N.J., & **Fu, M.**

(2022). Expansion and intensification of the North American Monsoon during the Pliocene. *AGU Advances*, 3(6):e2022AV000757.

Baum, M, **Fu, M.**, & Bourguet, S. (2022). Sensitive dependence of global climate to continental geometry. *Geophysical Research Letters*, e2022GL098843.

Fu, M., Cane, M.A., Molnar, P., & Tziperman, E. (2022). Warmer Pliocene upwelling site SST leads to wetter subtropical coastal areas: a positive feedback on SST. *Paleoceanography*, 37(2):e2021PA004357.

Fu, M., Cane, M.A., Molnar, P., & Tziperman, E. (2021). Wetter Subtropics Lead to Reduced Pliocene Coastal Upwelling. *Paleoceanography*, 36(10):e2021PA004243.

Fu, M. & Tziperman, E. (2021). A model study of the role of convection in the dynamics of westerly wind bursts. *Journal of Climate*, 34(15):6235–6246

Fu, M. & Tziperman, E. (2019). Essential ingredients to the dynamics of westerly wind bursts. *Journal of Climate*, 32(17):5549–5565

**Book
Chapters**

Fu, M. & Tziperman, E. (2022). “Clouds”, Global Warming Science. *Princeton University Press*

Invited Talks

Ocean Worlds at Southampton seminar (January 2026)
Lanzhou Workshop: Tibetan Uplift, Asian Aridification, and the Climate System (August 2025)
University of Southampton SOES seminar (July 2024)
WHOI Climate and Paleo Seminar (May 2024)
Harvard Earth and Planetary Sciences ClimaTea seminar (April 2024)
MIT Earth Atmospheric and Planetary Sciences Sack Lunch Seminar (April 2023)
Yale Atmosphere, Oceans, Climate Dynamics Seminar (November 2022)
Brown Climate and Environment Group Lunch Bunch (October 2022)
University of Chicago Geophysical Sciences Special Seminar (December 2021)
ICDP PlioWest Workshop (September 2021)

**Community
Service**

2026 Session Convener: EGU General Assembly “Past warm climate lessons to navigate into the future: Advances in proxy reconstructions and modelling”
2023–2024 Yale Atmosphere Ocean Climate Dynamics Seminar Organizer
2023 Session Convener: AGU Fall Meeting “Reconstructing Regional Hydrologic Changes Across Climatic Boundaries in the Recent Past”
2023 New Haven Science Fair Volunteer
2020 National Collegiate Research Conference Judge
2019 Harvard ClimaTea Seminar Organizer
2017 Cambridge Science Fair Moderator

**Review
Service**

Peer Review for:

US National Science Foundation
Israel Science Foundation
Nature Communications
Journal of Geophysical Research - Atmospheres
Paleoceanography and Paleoclimatology
Journal of Climate
Geophysical Research Letters
Communications Earth & Environment
Geological Society of America Bulletin
Climate Dynamics