

Dr. Lizz Ultee

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Appointments

Assistant Professor, Geology, Middlebury College, USA 2021 –
Postdoctoral Fellow, Earth & Atmos. Sci., Georgia Tech, USA 2021
Postdoctoral Associate, Earth, Atmos. & Planet. Sci., MIT, USA 2018 - 2021

Education

Ph.D., Climate & Space Science, University of Michigan, USA 2014 - 2018
B.Sc.H. Mathematical Physics, Queen's University, Canada 2009 - 2013
Undergrad. research internship, University of Toronto, Canada 2011

Peer-reviewed contributions

Ultee, L., Felikson, D., Minchew, B., Stearns, L.A., and Riel, B. 'Helheim Glacier ice velocity variability responds to runoff and terminus position, but at different timescales.' Manuscript in re-review. Preprint available on ESSOAR: doi: 10.1002/essoar.10506878.1

Ultee, L., Coats, S., and Mackay, J. 'Glacial runoff buffers drought through the 21st century.' *Earth System Dynamics Discussions*. Preprint available in discussion phase: doi: 10.5194/esd-2021-94

Ultee, L. and Bassis, J. N. (2020) 'SERMeQ model produces realistic upper bound on calving retreat for 155 Greenland outlet glaciers.' *Geophysical Research Letters* 47(21). doi: 10.1029/2020GL090213

Ultee, L., Meyer, C.R., and Minchew, B. M. (2020). 'Tensile strength of glacial ice deduced from observations of 2015 collapse of Eastern Skaftá Cauldron, Vatnajökull Ice Cap, Iceland.' *Journal of Glaciology* 66(260): 1024–1033. doi: 10.1017/jog.2020.65

Bassis, J. N. and **Ultee, L.** (2019). 'A thin film viscoplastic model for calving glaciers: an upper bound on calving retreat.' *Journal of Geophysical Research: Earth Surface*. 124: 2036–2055. doi: 10.1029/2019JF005160

Ultee, L., Arnott, J. C., Bassis, J. N., and Lemos, M. C. (2018). 'From ice sheets to main streets: Intermediaries connect climate scientists to coastal adaptation.' *Earth's Future* 6(3): 299–304. doi: 10.1002/2018EF000827

Boone, L., **Ultee, L.**, Waisanen, E., Newell, J., Thorne, J. A., and Hardin, R. (2018). 'Collaborative creation and implementation of a Michigan Sustainability Case on urban farming in Detroit.' *Case Studies in the Environment* 2(1): 1–13. doi: 10.1525/cse.2017.000703

Ultee, L. and Bassis, J. N. (2017). 'A plastic network approach to model calving glacier advance and retreat.' *Frontiers in Earth Sciences* 5(24). doi:10.3389/feart.2017.00024.

Ultee, L. and Bassis, J. N. (2016). 'The future is Nye: an extension of the perfect plastic approximation to tidewater glaciers.' *Journal of Glaciology* 62(236): 1143–1152. doi:10.1017/jog.2016.108.

Awards

- 2021 **Early Career Scientist Medal**, International Glaciological Society. Scientific contributions to glaciology; community service
- 2020 **MIT School of Science Spot Award**, Service to the postdoctoral community
- 2018 **Michigan Sustainability Cases IMPACT Award**, Public benefit accruing from an academic effort
- 2016 **NSF-GRFP Honorable Mention (2 years)**, US National Science Foundation
- 2015 **Community-Engaged Pedagogy Fellow**, U. Michigan Rackham Graduate School
- 2014 **Regents' Fellowship**, University of Michigan Regents

Teaching & Supervision

2020 – **Research advising**, 3 Middlebury undergrad theses; 2 MIT interns
Feb - May 2022 **GEOL 202: Climate Dynamics**, Middlebury College
Sep - Dec 2021 **GEOL 362: Glaciology**, Middlebury College
Jun - Jul 2019 **Glaciología y recursos hídricos**, Clubes de Ciencia Perú
Jan - Apr 2018 **CLIM 405: Knowing Climate Change**, University of Michigan

Lima, PE
Ann Arbor, US

Service to the Scientific Community

2020-2022	Publications Committee member , International Glaciological Society	
2021	Organizing committee , NSF Polar Risk Management Workshop	
2018 -	Reviewer , Nature, GRL, JAMES, Geosci. Model Dev., Frontiers in Earth Sci.; NASA Cryosphere panels; IPCC Special Report on Oceans & Cryosphere	
2020	Advisor , GeoLatinas coding initiative GeoHackeo	
2019	International Instructor , Clubes de Ciencia Perú	Lima, PE
2017 - 2018	Chair , Conference Organizing Committee, MUSE Initiative	Ann Arbor, US
2015 - 2016	UNFCCC Civil Society Observer , COP21 Paris climate negotiations	Paris, FR

Select Presentations

2021	A stochastic approach to ice sheet surface mass balance for sea-level forecasting , Invited presentation for Utrecht University IMAU Colloquium.	—
”	Glacial drought buffering through the 21st century , Dartmouth Ice & Climate Seminar	Hanover, US
2020	An upper bound on 21st century outlet glacier retreat , Invited presentation for University of Copenhagen IceFlow Seminar.	—
”	Seasonal to multi-annual speedup and slowdown of Greenland outlet glaciers inferred from time-dependent remote sensing observations. , European Geosciences Union Assembly 2020. Coauthors B. Riel, B. Minchew	—
2019	Multi-lingual Jupyter notebooks for learning the Open Global Glacier Model , American Geophysical Union Fall Meeting 2019. Coauthors F. Maussion, Z. L. Schirmeister, D. Frisinghelli, and T. León Rojas.	San Francisco, US
”	Fracture thresholds of glacier ice during cauldron collapse and surface loading , American Geophysical Union Fall Meeting 2019. Coauthors C. R. Meyer, B.M. Minchew, T. Jóhanesson, A. Robel	”
”	Simulating 21st century iceberg calving from the Greenland Ice Sheet with SERMeQ , Invited presentation for the Interagency Arctic Research Policy Committee’s Glaciers and Sea Level Team.	—
”	The solid-ice contribution to sea level rise from Greenland outlet glaciers, large and small , Climate Seminar at Woods Hole Oceanographic Institution	Woods Hole, US
2018	Resilience to glacier change , University of Edinburgh Geosciences special seminar	Edinburgh, UK
”	Modelling the calving contribution to sea level from Alaska and Greenland , POLAR2018	Davos, CH
2017	Shaping glaciology for sea-level adaptation , Graduate Climate Conference. Coauthors J. C. Arnett, J. N. Bassis, and M. C. Lemos.	Woods Hole, MA
”	Calving glacier networks simulated with a simple approximation , Research visit to Open Global Glacier Model development team.	Bremen, DE
2016	Sea level rise: Alaska’s global contribution and local effects , Aleutian Life Forum	Unalaska, US

Public Science Communication

2019	Fractura del hielo glaciar y su contribución al nivel del mar , Public lecture in Spanish	Lima, PE
2018	Michigan Sustainability & Environment public reception , Organizing chair & presenter	
2017	Skype a Scientist , Paired with 6th grade science class	
2016	Good COP, Bad COP: Bringing the Paris Climate Talks Back to Ann Arbor , Event organizer	
”	City limits to climate change: Climate justice from neighborhoods to negotiations , Radio broadcast interview on It’s Hot in Here	

Affiliations

International Glaciological Society, Society for Industrial and Applied Mathematics, American Geophysical Union