

William J. Durkin IV Ph. D.

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Education

- Ph. D. Geophysics with minors in Tectonophysics and Solid Mechanics
Cornell University, 2019
Thesis title: Investigating dynamic glacier processes, mass loss,
and coupled interactions with the solid Earth using satellite geodesy.
- B. Sc. Geophysics with minors in Mathematics and Oceanography
GPA 3.7/4.0 - Magna Cum Laude
Texas A&M University, 2014

Professional Experience

08/2019–present Byrd Postdoctoral Fellow, Byrd Polar and Climate Research Center, Ohio State University
08/2016–08/2019 Graduate Fellow, Department of Earth and Atmospheric Sciences, Cornell University
06/2019–08/2019 Graduate Research Intern, Position Navigation and Timing Group, The MITRE Corporation
08/2014–08/2016 Graduate R. A., Department of Earth and Atmospheric Sciences, Cornell University
06/2014–08/2014 Research Intern, Department of Mathematics, Texas A&M University

Fellowships and Awards

Byrd Postdoctoral Fellowship, Title: *Coupled Changes in the Cryosphere and Solid Earth at Seasonal to Interannual Timescales*; PI: **W. Durkin**, Co-I: I. Howat, T. Wilson, M. Bevis; 2019-2021.
NASA Earth and Space Science Fellowship, Title: *Coupled Changes in the Cryosphere and Solid Earth observed using Satellite Imaging Geodesy*; PI: M. Pritchard, Co-I: **W. Durkin**; 2016-2019.
EGU Outstanding Student Poster Presentation, Title: Impact of different crustal elastic models on interpreting regional GIA deformation in southeast Alaska, awarded at the European Geosciences Union's General Assembly, 2018..
Excellence in Research Award by the Cornell Department of Earth and Atmospheric Sciences, 2019.

Invited Talks

Durkin, W.J., Kachuck, S.B., Pritchard, M.E., “Impact of elastic structure variations on constraints of glacial density and GIA in southeast Alaska”, at NASA Goddard Space Flight Center, October 2018
Durkin, W.J., “Satellite Geodetic Imaging of Glacier Motion, Mass Change, and the Solid Earth's Response with application to the stability of the Mosul Dam, Iraq”, at The MITRE Corporation, April 2018

Publications

6. **Durkin, W.**, Pritchard, M., (*In Preparation*) “Seasonal deformation of Iceland consistent with rheology constrained by postseismic deformation.”
5. **Durkin, W.**, Kachuck, S., Pritchard, M., (2019) “The importance of the inelastic and elastic structure of the crust in constraining glacial density, mass change, and isostatic adjustment from geodetic observations in southeast Alaska” *Journal of Geophysical Research: Solid Earth*
4. Willis, M., Zheng, W., **Durkin, W.**, Pritchard, M., Ramage, J., Dowdeswell, J., Benham, T., Bassford, R., Stearns, L., Glazovsky, A., Macheret, Y., Porter, C., (2018) “Massive Destabilization of an Arctic Ice Cap” *Earth and Planetary Science Letters* Volume 502, 15 November 2018, Pages 146-155.

3. Berthier, E, Larsen, C., **Durkin, W.**, Willis, M., Pritchard, M., (2018) “Brief communication: Unabated wastage of the Juneau and Stikine icefields (southeast Alaska) in the early twenty-first century” *The Cryosphere* 12.4: 1523-1530.
2. **Durkin W. J.**, Bartholomaeus T. C., Willis M. J., Pritchard M. E., (2017) “Dynamic Changes at Yahtse Glacier, the Most Rapidly Advancing Tidewater Glacier in Alaska.” *Front. Earth Sci.* 5:21. doi: 10.3389/feart.2017.00021
1. Zhang, J., Sager W. W., **Durkin W. J.**, (2016) "Morphology of Shatsky Rise oceanic plateau from high resolution bathymetry." *Marine Geophysical Research*: 1-17

Presentations

- Durkin, W. J.**, Pritchard M. E., (2019) “Seasonal deformation of Iceland consistent with rheology constrained by postseismic deformation”, In Workshop on Glacial Isostatic Adjustment in Ottawa, Canada, Oral
- Durkin, W. J.**, Kachuck, S.B., Pritchard M.E., (2018) “Impact of elastic structure variations on constraints of glacial density and GIA in southeast Alaska”, In AGU Fall Meeting Abstracts, Poster
- Zheng, W., Pritchard, M.E., Willis, M.J., **Durkin, W.J.**, Stearns, L.A., (2018) “The evolution of a large glacier surge of Vavilov Ice Cap, Severnaya Zemlya, since 2013”, In AGU Fall Meeting Abstracts, Posters
- Durkin, W. J.**, Kachuck, S.B., Pritchard M. E., (2018) “Impact of different crustal elastic models on interpreting regional GIA deformation in southeast Alaska”, In Northwest Glaciologists’ Meeting 2018, University of Alaska, Fairbanks, Oral
- Durkin, W.**, Willis, M., Zheng, W., Pritchard, M., Ramage, J., Dowdeswell, J., Benham, T., Bassford, R., Stearns, L., Glazovsky, A., Macheret, Y., Porter, C., (2018) “Catastrophic Collapse of an Arctic Ice Cap” In the 2018 International Glaciological Society Symposium, Oral
- Durkin, W. J.**, Kachuck, S.B., Pritchard M. E., (2018) “Impact of different crustal elastic models on interpreting regional GIA deformation in southeast Alaska”, In EGU General Assembly Conference Abstracts, Poster
- Durkin, W. J.**, Kachuck, S.B., Pritchard M. E., (2018) “Impact of different crustal elastic models on interpreting regional GIA deformation in southeast Alaska”, In the 2018 UNAVCO Science Workshop, Poster
- Durkin, W. J.**, Pritchard M. E., (2017) “Elastic Uplift Rates in Southeast Alaska Constrained with Space Geodesy”, In Workshop on Glacial Isostatic Adjustment and Elastic Deformation in Reykjavik, Iceland Poster
- Durkin, W. J.**, Pritchard M. E., (2017) “Coupled changes in the cryosphere and solid earth”, In 47th International Arctic Workshop, Talk
- Durkin, W. J.**, Bartholomaeus, T. C., Willis, M. J., Pritchard, M. E. (2016), “Dynamics of Alaska’s fastest-advancing tidewater glacier measured through remote sensing”, In AGU Fall Meeting Abstracts, Poster
- Willis M. J., Zheng W., **Durkin W. J.**, Pritchard M. E., Ramage J. M., Dowdeswell J. A., Benham T. J., Glazovsky A., Macheret Y., Porter C. C., (2016) “Rapid Collapse of the Vavilov Ice Cap, Russian High Arctic”, In AGU Fall Meeting Abstracts, Talk
- Pritchard M. , Elliott J., **Durkin W.**, Zheng W., Elifuraha S., Ntambila D., Chindandali P., Nooner S., Henderson S., (2016) “GPS and InSAR observations of ground deformation in the northern Malawi (Nyasa) rift from the SEGMeNT project”. In AGU Fall Meeting Abstracts, Poster
- Durkin, W. J.**, Melkonian, A. K., Pritchard, M. E., Willis, M. J., Bartholomaeus, T. C. (2015), “Controls on interannual and seasonal terminus velocity and position of Yahtse Glacier in SE Alaska”, In AGU Fall Meeting Abstracts, Poster

- Orsi, A., Zielinski, N., **Durkin, W. J.**, Clark, P., Wiederwohl, C., Rosenberg, M. A., ... & Shevenell, A. (2015). On the Revealing Firsthand Probing of Ocean-Ice-Atmosphere Interactions off Sabrina Coast During NBP1402. In *AGU Fall Meeting* (pp. PP24A-02).
- Durkin, W. J.**, Melkonian, A. K., Pritchard, M. E., Willis, M. J., Bartholomaus, T. C. (2015), “Imaging Geodesy of the Stikine Icefield, Juneau Icefield, and St. Elias Range in Southeast Alaska”, Earthscope National Meeting, Poster
- Durkin, W. J.**, Zhang, J., & Sager, W. W. (2013), “Implications for Morphology and Tectonic History of Shatsky Rise from High Resolution Bathymetry”, In AGU Fall Meeting Abstracts, Poster.

Service

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| 2019 | Designed and led “Expanding Your Horizons: Can you hear the light?” outreach program workshop to teach middle school girls introductory topics in circuitry and wireless communication |
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