

# Austin J. Carter

Ph.D. Student, Scripps Institution of Oceanography  
University of California - San Diego  
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## EDUCATION

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- Scripps Institution of Oceanography, UC San Diego - La Jolla, CA** 2020–2025 (*expected*)  
Ph.D., Earth Sciences: Geosciences of the Earth, Oceans, and Planets  
Cumulative GPA: 3.93/4.00
- University of Michigan - Ann Arbor, MI** 2018  
B.S., Earth and Environmental Sciences, High Honors  
Major GPA: 3.92/4.00 Cumulative GPA: 3.83/4.00

## RESEARCH EXPERIENCE

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- Scripps Institution of Oceanography - East Antarctica** 2019–2020  
*Staff Research Associate*
- Participated in the United States Antarctic Program as a National Science Foundation grantee
  - Drilled three 150-meter ice cores at the remote Allan Hills Blue Ice Area over the course of 45 days
- U.S. Geological Survey - Anchorage, AK** 2017–2018  
*Research Intern / Thesis Student*
- Performed regression analysis on ice core data collected from the Wolverine Glacier using MATLAB
  - Interpreted data trends to provide insights on how annual firn layers are preserved
- University of Washington REU - Seattle, WA** 2016  
*Research Intern*
- Designed a database for cumulative snow and ice samples to ensure data integrity and accuracy
  - Drilled and sampled a 27-meter-deep ice core on the Wolverine Glacier, AK
- Juneau Icefield Research Program - Juneau, AK** 2015  
*Research Intern*
- Analyzed the chemistry of snow across the Juneau Icefield to understand regional climate and weather patterns
  - Conducted long-running surveys of glacier dynamics and mass balance

## LABORATORY EXPERIENCE

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- Biogeochemistry and Environmental Isotope Geochemistry Laboratory - Ann Arbor, MI** 2016–2017  
*Lab Assistant*
- Prepared tree roots collected from the Hubbard Brook Experimental Forest for analysis of nutrient uptake
  - Welded rhenium and tungsten metal filaments onto metal posts for measuring lead and strontium isotopes
- Glaciochemistry and Isotope Geochemistry Laboratory - Ann Arbor, MI** 2015–2016  
*Lab Assistant*
- Examined the proportion of mineral weathering within a glacial watershed in Greenland using strontium isotopes
  - Utilized column chromatography techniques to isolate strontium isotopes from glacial meltwater samples

## PROFESSIONAL EXPERIENCE

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- Partner Engineering and Science, Inc. - Chicago, IL** 2018–2019  
*Staff Assessor*
- Assessed commercial and multi-family real estate for potential environmental liabilities
  - Evaluated historical, regulatory, and database records to predict the presence of hazardous materials

## **AWARDS AND RECOGNITION**

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U.S. Department of Defense: Antarctica Service Medal	2021
NSF GRFP Honorable Mention	2021
NSF GRFP Honorable Mention	2020
Earth Dept. Undergraduate Academic Excellence Award (University of Michigan)	2018
James B. Angell Scholar (Consecutive semesters with all A's)	2017–2018
Graham Undergraduate Sustainability Scholar	2016–2018

## **GRANTS AND SCHOLARSHIPS**

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Antarctic Science Ltd. Grant (1,000€)	2021
Awards for Geochronology Student Research2 (\$9,000)	2021
AGU Cryosphere Innovation Award - Flash Freeze Competition (\$1,000)	2020
Scripps First-Year Fellowship (\$32,000)	2020–2021
Graham Scholars Award (\$3,500)	2017
University of Michigan Arctic Internship Fellowship (\$2,000)	2017
Alaska Geological Society Scholarship Award (\$500)	2017
Coleman Global Experience Scholarship (\$1,000)	2017
University of Washington Travel Grant (\$500)	2016
Global Experience Scholarship (\$4,136)	2016
Undergraduate Research Opportunity Program Travel Grant (\$1,000)	2015
National Italian American Foundation Scholarship (\$5,000)	2014
Robert A. Schuele Scholarship (\$53,200)	2014

## **OUTREACH**

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Scripps Peer Mentor Program - Mentor	2021–Present
Summer Undergraduate Research Fellowship - Mentor	2021–Present
Grad Pals Program - Mentor	2021–Present
SIO 90: Undergraduate Seminar - Guest Speaker	2021
LGBTQ+ at UCSD: Then & Now - Host	2021
SIO Open House - Student Host	2021
“Becoming an Earth Scientist” Guest Speaker: Royal Oak High School	2020
AGU LGBTQ+ Networking - Event Facilitator	2020
Queer@Scripps - Co-Lead	2020–Present
Letters to a Pre-Scientist - Pen Pal	2020–Present
Skyped with 6 <sup>th</sup> and 9 <sup>th</sup> Grade Students from McMurdo Station, Antarctica	2019

## **PROFESSIONAL AFFILIATIONS**

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International Association of Cryospheric Sciences	2020–Present
Association of Polar Early Career Scientists	2020–Present
California Association of Environmental Professionals	2020–Present
Geological Society of America	2020–Present
International Glaciological Society	2016
American Geophysical Union	2015–2017, 2021–Present
Undergraduate Research Opportunity Program	2015
Foundation for Glacier and Environmental Research	2015–Present

## **VIRTUAL MEETING ATTENDANCE**

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Hercules Dome Ice Core Workshop	2021
American Geophysical Union Fall Meeting	2020
Geological Society of America Annual Meeting	2020
West Antarctic Ice Sheet Workshop	2020

## **PUBLICATIONS, POSTERS, & PRESENTATIONS**

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**Carter, A.**; Aarons, S.M.; Higgins, J.A.; Shackleton, S.; Epifanio, J.; Morgan, J.D.; Severinghaus, J.P.; Brook, E.J.; Kurbatov, A. Characterizing the Source of Mineral Dust in Ice from the Allan Hills, East Antarctica during the Last Interglacial Period. *American Geophysical Union Fall Meeting 2021 (forthcoming)*. December 2021, New Orleans, LA

Aarons, S.M.; Norris, E.D.; **Carter, A.**; Munk, L.A.; Jenckes, J. Dust-climate archive time machines. *American Geophysical Union Fall Meeting 2021 (forthcoming)*. December 2021, New Orleans, LA

**Carter, A.**; Kurbatov, A. The importance of creating a comprehensive list of ice cores drilled around the world. *Ice Core Working Group Meeting*. 8 March 2021, Virtual

**Carter, A.**; Blum, J.; O'Neel, S.; Klein, E.S. The oxygen and hydrogen isotope evolution of snow, firn, and ice throughout a melt season on Wolverine Glacier, AK. *Bachelor of Science Honors Thesis, High Honors*. 26 April 2018

O'Neel, S.; Sass, L.; Koch, J.C.; Littell, J.S.; Klein, E.S.; Marshall, H.P.; LeWinter, A.; Larsen, C.F.; Hill, D.F.; Hood, E.R.; Sawicki, S.; **Carter, A.** From Icefield to Ocean: Investigating Biophysical Linkages at Wolverine Glacier Alaska. *American Geophysical Union Fall Meeting 2016*. 12 December 2016, San Francisco, CA

**Carter, A.**; Robbins, M.; Aciego, S.M.; Stevenson, E. Determining the Extent of Subglacial Grinding and Meltwater Routes in Southern Greenland. *Michigan Geophysical Union Symposium 2016*. 7 April 2016, Ann Arbor, MI

**Carter, A.**; Robbins, M.; Aciego, S.; Stevenson, E. Determining the Extent of Subglacial Grinding and Meltwater Routes in Southern Greenland. *American Geophysical Union 2016 Virtual Poster Showcase*. 26 March 2016

Dennis, D.; **Carter, A.**; Clinger, A.E.; Eads, O.L.; Gotwals, S.; Gunderson, J.D.; Hollyday, A.E.; Klein, E.S.; Markle, B.R.; Timms, J.R. A Survey of Spatial and Seasonal Water Isotope Variability on the Juneau Icefield, Alaska. *American Geophysical Union Fall Meeting 2015*. 14 December 2015, San Francisco, CA