

Taryn E. Black

Ph.D. Candidate
University of Washington

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ATG 208B / RTB 562

EDUCATION

- 2016-09 – present **Ph.D. Earth and Space Sciences**
Graduate Certificate in Climate Science
 University of Washington
- 2013-08 – 2016-05 **M.S. Earth and Atmospheric Sciences**
 Georgia Institute of Technology
- 2009-09 – 2013-06 **B.S. Earth and Space Sciences (Dept. Honors, *cum laude*)**
B.S. Physics
 University of Washington

RESEARCH EXPERIENCE

- 2016-09 – present **Graduate Research Assistant**
Polar Science Center, Applied Physics Laboratory, University of Washington
 Investigations of glacier terminus processes on weekly to decadal time scales
- 2020-06 – 2020-08 **Future Park Leaders Intern**
Kenai Fjords National Park, U.S. National Park Service
 Understanding and communicating the rapid loss of coastal glaciers through terminus mapping
- 2013-08 – 2016-05 **Graduate Research Assistant**
School of Earth and Atmospheric Sciences, Georgia Institute of Technology
 Effects of pulsating flow on eruption column dynamics

TEACHING EXPERIENCE

- 2021-06 – present **Field Science Guide**
 Mountain Madness
 Cascade Glacier Walking Tour
- 2020 Autumn
 2018 Summer
 2018 Spring **Graduate Teaching Assistant**
Department of Earth and Space Sciences, University of Washington
 ESS 431: Principles of Glaciology
 ESS 101: Introduction to Geology and Societal Impacts
 ESS 213: Evolution of the Earth
- 2020 Winter **Predoctoral Instructor**
College of the Environment, University of Washington
 CENV 500: Communicating Science to the Public Effectively
- 2015-06 – 2016-05 **Professional Development Assistant Instructor**
Gwinnett County (Georgia) Public Schools/Georgia Institute of Technology
 Math and Science Partnership, K-5 Science Endorsement Program

Graduate Teaching Assistant*School of Earth and Atmospheric Sciences, Georgia Institute of Technology*

2014 Spring

EAS 2600: Earth Processes

FIELD EXPERIENCE

Glaciology

2020-08 Nisqually Glacier (Mount Rainier, WA) – mass balance, repeat photography
 2019-07 Coleman Glacier (Mount Baker, WA) – ice-penetrating radar
 2016-08 Columbia Glacier (Cascades, WA) – mass balance
 2013-02 West Antarctic Ice Sheet – rock sampling, ice-penetrating radar, traverse support

Volcanology

2016-03 Trans-Mexican Volcanic Belt – rock and ash sampling, ground truthing
 2015-08 Mount St. Helens (WA) – supervised projects and field trips for GeoGirls camp
 2014-04 Aegean Islands (Greece) – pumice sampling/analysis, volcanic stratigraphy

Other Earth Science

2020-08 Mount Rainier National Park (WA) – alpine lake surveys, amphibian surveys
 2016-05 Quebrada Honda (Bolivia) – paleosol collection, stratigraphy
 2012 Summer UW-ESS 400 (Dillon, MT) – structural geology, glacial geology, fluvial geomorphology

FELLOWSHIPS AND AWARDS

2021 Best Glaciology Talk, ESS Research Gala
 2019 Pacific Science Center Science Communication Fellow
 2014 National Science Foundation Graduate Research Fellowship
 2013 Georgia Tech Graduate President's Fellowship

ACADEMIC SERVICE

2020-09 – present Peer Mentor – UW-ESS First-Year Mentoring Program
 2019-08 – present Board Member – UW Engage (science communication program)
 2018-09 – present Graduate Representative – UW-ESS Curriculum Committee
 2018-08 – present Coordinator – UW-ESS New Student Welcome Guide
 2017-02 – present Coordinator – UW-ESS Graduate Student Housing Survey
 2018-09 – 2020-12 Graduate Representative – UW-ESS Graduate Representative to the Faculty
 2018-12, 2019-12 Peer Mentor – CryoMentoring, AGU Fall Meeting
 2019-09 Panelist – UW-Coll. Environment New Grad Student Orientation
 2017-06 – 2018-06 Graduate Representative – UW-Coll. Environment Student Advisory Council
 2018-01 – 2018-04 Committee Member – UW-ESS Research Gala
 2017-01 – 2018-03 Coordinator – UW-ESS Glaciology Lunch
 2017-01 – 2017-02 Committee Member – UW-ESS Prospective Student Open House
 2016-10 Committee/Webmaster – Northwest Glaciologists Meeting
 2014-01 – 2016-05 Co-founder/Organizer – GT-EAS Women in Geosciences
 2014-05 – 2015-05 Committee Chair – GT-EAS First-Year Mentoring

PUBLIC SCIENCE COMMUNICATION

* indicates invited contribution

Speaking

- 2021-03-31 The ice edges of the not-green land are going away
ESS Research Gala “UpGoer5” session, virtual
- 2020-11-22 * Geology and Paleocology of the Puget Sound
[\[watch it here\]](#)
Delridge Neighborhood Development Association, Wetland Workshop Series, virtual
- 2020-09-24 The 440-mile view: Monitoring glacier change from space
[\[watch it here\]](#)
UW ESS Rockin’ Out Speaker Series, virtual
- 2020-09-09 400 miles high and 1400 miles away: Studying glacier change in Kenai Fjords National Park
[\[watch it here\]](#)
Future Park Leaders of Emerging Change, PechaKucha Series, virtual
- 2020-05-12 * How much, how fast? Watching glacier change in Greenland
[\[watch it here\]](#)[\[video abstract\]](#)
Skype a Scientist: No Time Like the Presentation Speaker Series, virtual
- 2019-11-13 * Rapid Changes: The evolution of ice sheets and how we study them
Association for Women in Science, Seattle Chapter, Seattle, WA
- 2019-04-02 How much, how fast? Deciphering a record of glacier change in Greenland
[\[watch it here\]](#)
Town Hall Seattle, UW Engage Science Speaker Series, Seattle, WA
- 2019-03-08 * How much, how fast? Building a record of glacier change in Greenland
Seattle University, Arctic Environmental Change course, Seattle, WA
- 2018-03-30 The big ice up top is getting smaller: pictures from a space box
ESS Research gala, “UpGoer5” session, Seattle, WA

Writing

Building Relationships to Promote Science-Based Decision Making. *Union of Concerned Scientists USA Blog*, 2018-03-02, with M. Diamond and E. Kahle. Retrieved from <https://blog.ucsusa.org/science-blogger/building-relationships-to-promote-science-based-decision-making>

Other Service Activities

- 2019-03 – present Guest Speaker – Skype a Scientist
- 2019 – present Activity Coordinator – Polar Science Weekend (glaciers and ice cores)
- 2017 – present Volunteer – Polar Science Weekend @ Pacific Science Center
- 2016-09 – present Volunteer – UW-ESS Rockin’ Out (*K12 outreach group*)
- 2020-07-17 Guest Speaker – GeoFORCE, UT Austin (virtual)
- 2019-09 –2020-06 Volunteer – Letters to a Pre-Scientist
- 2019-12-20 Panelist – Winterfest climate panel, The Northwest School, Seattle, WA
- 2019-04-16 Guest Speaker – Honors Earth Science, Timbercrest Middle School, Woodinville, WA
- 2019-04-12 Guest Speaker – Freshmen Earth Science, Monroe High School, Monroe, WA
- 2015-08 Volunteer – GeoGirls summer camp, Mount St. Helens Institute/USGS

PROFESSIONAL SKILLS

Certifications

Basic First Aid/CPR, Wilderness First Aid, PADI Open Water Diver

Scientific Computing

Python (pandas/geopandas, xarray, cartopy, numpy), MATLAB, ArcGIS, Git/GitHub, Bash, Markdown

SCIENTIFIC PUBLICATIONS

In Review

Goliber, S., **T. Black**, G. Catania, J. Lea, H. Olsen, D. Cheng, S. Bevan, A. Bjørk, C. Bunce, J.R. Carr, T. Cowton, A. Gardner, D. Fahrner, E. Hill, I. Joughin, N. Korsgaard, A. Luckman, T. Moon, T. Murray, A. Sole, M. Wood, and E. Zhang (2021) TermPicks: A century of Greenland glacier terminus data for use in machine learning applications. Earth System Science Data.

Black, T. and I. Joughin (2021) Multi-decadal retreat of marine-terminating outlet glaciers in northwest and central-west Greenland. The Cryosphere.

Datasets

Joughin, I., T. Moon, J. Joughin, and **T. Black** (2015, 2017) MEaSURES Annual Greenland Outlet Glacier Terminus Positions from SAR Mosaics, Version 1. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. doi: doi.org/10.5067/DC0MLBOCL3EL.

Journal Articles

Spector, P., J. Stone, G. Balco, T. Hillebrand, M. Thompson, and **T. Black** (2020) Miocene to Pleistocene glacial history of West Antarctica inferred from nunatak geomorphology and cosmogenic-nuclide measurements on bedrock surfaces. American Journal of Science, 320 (8) 637-676; DOI: 10.2475/10.2020.01

SCIENTIFIC PRESENTATIONS

* indicates invited contribution

Talks

Black, T. and I. Joughin. Climatic drivers of outlet glacier retreat in northwestern and west-central Greenland. ESS Research Gala, virtual, 2021-04-01.

Black, T. and D. Kurtz. Satellite observations of coastal glacier change at Kenai Fjords National Park. Northwest Glaciologists, virtual, 2020-10-15.

Black, T. and I. Joughin. An annual record of outlet glacier termini in northwestern Greenland from 1972 – 2018. Northwest Glaciologists, Corvallis, OR, 2019-10-05.

* **Black, T.** Observations of Greenlandic marine-terminating outlet glaciers on multiple time scales. Oceanography Graduate & Postdoc Symposium, Seattle, WA, 2019-05-31.

Black, T. and I. Joughin. A Multidecadal Record of Outlet Glaciers in Northwestern Greenland. ESS Research Gala, Seattle, WA, 2019-04-04.

Posters

Goliber, S., **T. Black**, J. Lea, D. Cheng, and G. Catania. IcePicks: a collaborative database and toolset for identifying Greenland outlet glacier termini. Abstract C004-0016 presented at 2020 AGU Fall Meeting, Online, 2020-12-07.

- Goliber, S., **T. Black**, and G. Catania. IcePicks: a collaborative database of Greenland outlet glacier termini. Abstract EGU2020-11237 presented at EGU General Assembly 2020, Online, 2020-05-06. doi: <https://doi.org/10.5194/egusphere-egu2020-11237>
- Black, T.** and I. Joughin. Controls on multi-decadal variability of marine-terminating outlet glaciers in northwestern Greenland. Abstract C41C-1475 presented at 2019 AGU Fall Meeting, San Francisco, CA, 2019-12-12.
- Black, T.** and I. Joughin. Multidecadal climate response of outlet glaciers in northwestern and west central Greenland. Abstract C11C-1137 presented at 2018 AGU Fall Meeting, Washington D.C., 2018-12-10.
- Black, T.** and I. Joughin. Multidecadal outlet glacier changes in northwestern and west central Greenland. Graduate Climate Conference, Packwood, WA, 2018-11-03.
- Black, T.** Housing and lifestyle patterns among ESS graduate students. ESS Research Gala, Seattle, WA, 2017-03-30.