

Julia R. Andreasen (she/her)

NASA FINESST Future Investigator | Ph.D. Student

CONTACT & INTERESTS

University of Minnesota Twin Cities, S401 Soils, 1991 Upper Buford Circle, Saint Paul, MN 55108
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Glaciology | Airborne Remote Sensing | Ice Cores | GIS | Ice Shelf Dynamics Earth Observation of the Cryosphere | Synthetic Aperture Radar and Interferometry

EDUCATION

Ph.D. in Land and Atmospheric Science (expected) 2024

University of Minnesota, Twin Cities

Advisor: Dr. Peter D. Neff, *Minor in Geographic Information Science*

Master of Research in Climate and Atmospheric Science 2019

University of Leeds, UK

Advisor: Anna E. Hogg, Dissertation: “*The Analysis of Circum-Antarctic Calving Fronts- How have Antarctica’s Major Ice Shelves Changed in the Past 10 Years?*”

Bachelor of Science in Atmospheric Sciences 2018

The Ohio State University, Columbus

Green Engineering Scholar, *Minor in Women’s Gender and Sexuality Studies*

RESEARCH EXPERIENCE

National Aeronautics and Space Administration (NASA)

NASA FINESST Research Fellow

Twin Cities, MN

Sep 2021-Present

- Awarded 3-year NASA FINESST Fellowship for my research, "Constructing radar snow accumulation time series to improve understanding of surface mass balance processes and recent climate in coastal West Antarctica," advised by Dr. Peter Neff.

University of Minnesota SWAC Department

Twin Cities, MN

Graduate Research Assistant

2020: Aug - Dec, 2021: June - Aug

- Adapted CReSIS-derived code of NASA’s Operation IceBridge snow radar data to analyze coastal West Antarctic Ice Sheet snow accumulation with Dr. Peter Neff in the Soil, Water, and Climate (SWAC) Department

University of Leeds School of Earth and Environment

Leeds, UK

Centre for Polar Observation & Modeling Researcher

Oct 2018 - Sep 2019

- Manually delineated 34 Antarctic ice shelf calving fronts from 2009- 2019 to provide an archive of ice shelf change around the entire periphery with Dr. Anna Hogg

The Ohio State University School of Geography

Columbus, OH

Climate Analytics Undergraduate Research Assistant

Nov 2017- Aug 2018

- Analyzed 2016 hurricane outage data to understand the effects of tropical cyclone tracks & forecast errors on hurricane outage prediction models with Dr. Steven Quiring

Undergrad Lead Lab Researcher in Charcoal Paleoclimatology

Sep 2015- Apr 2018

- Dissected lake sediment cores and analyzed the charcoal content to create a fire history dating back thousands of years with Dr. Bryan Mark and Jim DeGrand

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WORK
EXPERIENCE

Byrd Polar Research Center <i>Undergraduate Field Assistant</i>	Columbus, OH <i>Summers 2016, 2017</i>
	<ul style="list-style-type: none">Attended research expeditions to Great Basin National Park, Nevada to extract alpine sediment lake cores, collect stream water samples, record a network of humidity/temperature data loggers, and take aerial imagery of the rock glacier
Nanotechnology Bing Research Group- University of Maryland <i>Research Assistant</i>	College Park, MD <i>Summer 2013</i>
	<ul style="list-style-type: none">Worked closely with graduate students to develop a biodegradable filter that separates water from oil, in order to find a sustainable solution for oil-spills

NASA Goddard Space Flight Center <i>Experiential Learning Graduate Student and Summer Intern</i>	Greenbelt, MD <i>Mar 2020- Aug 2020</i>
	<ul style="list-style-type: none">Assessed reanalysis products (MERRA-2 and ERA5 datasets) for tropical glaciers and compared these multi-decadal values to aerial satellite measurementsAnalyzed Planet satellite imagery of tropical debris glaciers in South America over several-year periods

National Community Reinvestment Coalition (NCRC) <i>Research and GIS Intern</i>	Washington, DC <i>Summer 2017</i>
	<ul style="list-style-type: none">Analyzed home mortgage/small business lending big data (14 mil. entries) with PowerBI. Utilized ArcGIS (desktop/online) to create data maps representative of NCRC research and created GIS presentations for NCRC members on banking deserts and housing issues

Environmental Protection Agency (EPA) <i>Office of the Administrator; Summer Intern</i>	Washington, DC <i>Summer 2015</i>
	<ul style="list-style-type: none">Created, presented, and instigated project on Idle Reduction, green cleaning products (Safer Choice), and innovative EPA GIS tool: Environmental Justice Screening and Mapping Tool (EJScreen)

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PUBLISHED
WORK

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- In Progress: **Andreasen, J.R.**, Hogg, A. E., and Selley, H., Annual Area Changes of Antarctic Ice Shelves from 2009-2019. *The Cryosphere*.
- Neff, P.D., **Andreasen, J.R.**, Roop, H.A., Pundsack, J., Howe, B., Jacobs, G., Lassner, D., Yoshimi, G., and Timm, K. (2021). *2021 Antarctic Subsea Cable Workshop Report: High-Speed Connectivity Needs to Advance US Antarctic Science*. October 1, 2021. University of Minnesota, Saint Paul, MN, USA.
- Rohrbach, K., Li, Y., Zhu, H., Liu, Z., Dai, J., **Andreasen, J.** and Hu, L., 2014. A cellulose based hydrophilic, oleophobic hydrated filter for water/oil separation. *Chemical Communications*, 50(87), pp.13296-13299.

TALKS &
POSTERS

- E. Atekwana, **J. Andreasen**, R. Bryant, and J. Cisneros, "Finding Your Place for Change: How and Where to Take an Active Role in DEI Initiatives as Early Career Researchers and Students" *AGU Fall Meeting*, Abstract TH13C
Invited Panelist, New Orleans, LA, Dec. 13, 2021
- Andreasen, J.** "Snow Accumulation Time Series of Coastal WAIS" (Oral) *Hercules Dome Ice Core Community Workshop and Science Planning Meeting*
Invited Presenter Virtual Meeting due to COVID-19, May 10, 2021
- Andreasen, J.** "Annual Area Changes of Antarctic Ice Shelves from 2009-2019" (Poster)
Graduate Student Climate Conference
Virtual Meeting due to COVID-19, Nov. 1, 2020.
- Andreasen, J.** "Annual Area Changes of Antarctic Ice Shelves from 2009-2019" (Oral) *West Antarctic Ice Sheet Workshop*
Virtual Meeting due to COVID-19, Sep. 24, 2020.
- Andreasen, J.** "The Analysis of Circum-Antarctic Calving Fronts- How have Antarctica's Major Ice Shelves Changed in the Past 10 Years?" (Poster), *Women in Antarctica Symposium: Celebrating 50 years of Exploration*
Columbus, OH, Oct. 18, 2019

HONORS &
GRANTS

NASA Future Investigator, NASA FINESST Grant - \$134,993.50	2021 - 2024
University of Minnesota, Provost's Award - \$8,250	2020
The Ohio State University, Green Engineering Scholar - Honor	2018
The Ohio State University, National Buckeye Scholarship - \$54,000	2014 - 2018
Washington, DC, DC Tuition Assistance Grant Award - \$40,000	2014 - 2018

TEACHING
EXPERIENCE

University of Minnesota Department of Soil, Water, and Climate	Twin Cities, MN
<i>Graduate Teaching Assistant</i>	<i>Jan 2021 - May 2021</i>

- Instructed, graded, and facilitated discussions for 270 undergraduate students to learn about current Environmental Issues both through a scientific and social justice lens

OUTREACH

Polar Impact Co-Organizer and Volunteer Coordinator	Jan 2021- Present
Create and publish content for the Weekly Features (Ongoing)	
Facilitated COP 26 Social Media Takeovers, Oct 29 - Nov 29, 2022	
UMN Outreach Through Science and Art (OSA) Co-Organizer	Oct 2021- Present
Facilitated Science of Sound Exhibit, Northrop Auditorium- Feb 22, 2022	
UMN Earth Science Student Research Symposium Committee Member	Oct 2021- Present
Upcoming: Earth Science Student Research Symposiu, Mar 31 - Apr 1, 2022	
UMN Soil Water and Climate DEI Committee Member	Nov 2021- Present
Member of the Department and Personal Development Working Group	

MEMBER

American Geophysical Union (AGU)
International Glaciological Society (IGS)