

# MARGARET MURAKAMI

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## EDUCATION

University of Helsinki	Master's Programme in Atmospheric Science Geophysics of the Hydrosphere Study Track	Graduation: May 2023
The University of Texas at Austin	Bachelor of Science with Honors, Geology Certificate, Computer Science	2017-2021
Seisen University	Nanotechnology Program in Tokyo, Japan	May 2018

## SKILLS

Proficient: Python, JavaScript, HTML, CSS, PHP, MySQL, Techlog, G+ Suite, Git, IHS Petra, Microsoft Office  
Exposure: C++, Fortran, Java, MATLAB, ArcMap and ArcGIS

## RELATED EXPERIENCE

**Institute for Atmospheric and Earth System Research – Helsinki, FI** May 2022 – *Present*  
*Research Assistant*

- Modelled Lagrangian floats using the Regional Ocean Modelling System (ROMS)
- Visualized results from ROMS to observe float trajectories originating in East Antarctic coastal polynyas
- Investigated and performed a statistical analysis of water mass transformations within the Prydz Bays

**Gulf Coast Carbon Center – Austin, TX** September 2018 – May 2021  
*Outreach Coordinator, Research Assistant*

- Performed rapid multiple-well correlations using dynamic programming on large datasets using Python
- Modelled and visualized porous-scale two-phase fluid dynamics using high-performance computing
- Learned how to compile and analyze geophysical well-bore data from offshore areas for carbon capture
- Coordinated with schoolteachers to organize educational events and taught school children about carbon sequestration

## PUBLICATIONS

Bakhshian, S., **Murakami, M.**, Hosseini, S.A., and Kang, Q. (2020). Scaling of Imbibition Front Dynamics in Heterogenous Porous Media. *Geophysical Research Letters*, 47(14), <https://doi.org/10.1029/2020GL087914>

## PRESENTATIONS

**TACC Symposium for Texas Researchers** September 2019  
Scientific Poster Session  
“A high-performance lattice Boltzmann solver with applications to multiphase flow in porous media”  
**Murakami, M.**, Bakhshian, S., and Hosseini, S.A.

**Gulf Coast Carbon Center Sponsor Meeting** August 2019  
Research Open House  
“Modeling approaches to CO<sub>2</sub> plume migration and trapping in storage sites”  
Bakhshian, S., Wen, B., **Murakami, M.**, and Hosseini, S.A.

## LEADERSHIP EXPERIENCE

**Geoscience Leadership Organization for Women – Vice President ('20-'21), Treasurer ('19-'20)** Fall 2019 – present

- Managed a \$3,000 budget for speakers, meetings, and special events
- Volunteered to inspire young girls to learn about geoscience and STEM topics

## ADDITIONAL INFORMATION

**Honors:** Best Undergraduate Poster, UT Energy Week, 2020; Joan Echols Scholarship Fund in Geoscience, 2020; Best Poster Award, Bureau of Economic Geology Research Symposium, 2019; J.D. and V.L. Langston Endowed Scholarship Fund in Geology and Geophysics, 2019; Honda-Ohio State Math Medal Award, 2016

**Interests:** Ultramarathon Running, Harp, Scuba Diving