

AMY JENSON

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EDUCATION

University of Alaska Fairbanks

Ph.D. Geophysics (GPA: 4.00)

Aug 2022 - Present

Advisor: Dr. Martin Truffer

Monatana State University

M.S. Mathematics (GPA: 3.85)

Aug 2020 - May 2022

Advisors: Dr. Scott McCalla

Thesis: *Saline fluid flow in an ice-walled channel: a modeling perspective*

Dr. Mark Skidmore

University of Alaska Southeast

B.S. Mathematics (GPA: 3.98)

Aug 2016 - May 2020

Advisor: Dr. Jason Amundson

CURRENT APPOINTMENT

Fall 2022 - Present Graduate Research Assistantship, University of Alaska Fairbanks

PUBLICATIONS

1. **Jenson, A.**, Skidmore, M., Beem, L., Truffer, M., and McCalla, S.M.: Modeling saline fluid flow through subglacial ice-walled channels and the impact of density on fluid flux. *EGUsphere* [preprint].
<https://doi.org/10.5194/egusphere-2023-792>, 202X.
2. **Jenson, A.**, Amundson, J.M., Kingslake, J., and Hood, E.: Long-period variability in ice-dammed glacier outburst floods due to evolving catchment geometry. *The Cryosphere*.
<https://doi.org/10.5194/tc-16-333-2022>, 2022.

PRESENTATIONS

1. **Jenson, A.**, McCalla, S., Skidmore, M.: Saline fluid flow in ice-walled channels. *Northwest Glaciologists* (2022) Oral Presentation
2. **Jenson, A.**, Amundson, J.M., Kingslake, J., and Hood, E.: Evolving outburst flood hazards and impacts from glacier-dammed lakes: A case study of Mendenhall Glacier (Áak'w T'áak Sít'), Alaska *International Glaciological Society* (2022) Oral Presentation
3. **Jenson, A.**, Amundson, J.M., Kingslake, J., and Hood, E.: How do changes in glacier and basin geometry affect the evolution of ice-dammed glacier outburst floods? *American Geophysical Union Fall Meeting* (2021) Oral Presentation
4. **Jenson, A.**, Amundson, J.M., Kingslake, J., and Hood, E.: Evolution of glacial lake outburst floods over annual to decadal timescales. *Northwest Glaciologists* (2020) Oral Presentation

SCHOLARSHIPS, AWARDS, AND GRANTS

2022 - 2024 Schaible Geophysical Institute Fellowship, University of Alaska Fairbanks
2022 Outstanding Graduate Teaching Assistant, Montana State University
2020 - 2022 Mildred Livingston Grant Presidential Scholarship, Montana State University
2020 Outstanding Graduate in Mathematics, University of Alaska Southeast
2019 - 2020 Biomedical Learning and Student Training Undergraduate Research Grant
2019 - 2020 Alumni Association Scholarship
2019 - 2020 Ron Seater Mathematics Award, University of Alaska Southeast
2016 - 2018 University of Alaska Southeast Leadership Award

2016 - 2020 Alaska Performance Scholarship Tier 1
2016 - 2020 Wrangell Scholarship
2016 - 2020 University of Alaska Scholar

RESEARCH EXPERIENCE

- **Aug 2022 - present** Research Assistant, University of Alaska Fairbanks
 - Modeling glacier dynamics and subglacial hydrology using Elmer/Ice with Dr. Martin Truffer
- **Mar 2021 - May 2023** M.S. Thesis Research, Montana State University
 - Adapted subglacial hydrology model to account for salinity with Drs. McCalla and Skidmore
 - Wrote manuscript on results of modeling, article in posted as a preprint in *The Cryosphere*
- **Sep 2019 - Jun 2021** Research Technician, University of Alaska Southeast
 - Modeled the evolution of outburst floods as a glacier retreats with Dr. Jason Amundson
 - Wrote peer reviewed paper on results of modeling, article in published in *The Cryosphere*
- **Aug 2019 - May 2020** Undergraduate Research Experience, University of Alaska Southeast
 - Wrote funded proposal (BLaST) to model transmission of yellow fever with Dr. Megan Buzby
 - Developed a system of differential equations and analyzed numerical solutions in MATLAB

TEACHING EXPERIENCE

- **Summer 2022** Instructor of Record for Calculus I (2 sections), Montana State University
- **Spring 2022** Lab Instructor for Calculus II, Montana State University
- **Fall 2021** Instructor of Record for Calculus I, Montana State University
- **Spring 2021** Instructor of Record for Survey of Calculus, Montana State University
- **Fall 2019** Backcountry Navigation Teaching Assistant, University of Alaska Southeast
- **Spring 2018** English Language Teaching Assistant, Associazione Italo Americana, Trieste, Italy

CERTIFICATIONS

2020 - Present Avalanche Level 1, University of Alaska Southeast
2019 - Present Wilderness First Responder, NOLS Wilderness Medicine

TECHNICAL SKILLS

Expertise: MATLAB, LaTeX, Github
Proficient: Python, Inkscape, QGIS

SELECTED OUTREACH AND SERVICE

Fall 2022 Reviewed manuscript for *The Cryosphere*
Spring 2022 Facilitated group of middle school girls for MSU STEAM day
Spring 2019 Volunteered at STEM events for elementary students, Juneau, AK

PROFESSIONAL AFFILIATIONS

2021 - Present International Glaciological Society (IGS)
2021 - Present American Geophysical Union (AGU)
2019 - Present Pi Mu Epsilon Mathematics Honor Society