# AMY JENSON

ajjenson@alaska.edu ◇ (218) 242-1806 ◇ https://github.com/amyjenson

## EDUCATION

**University of Alaska Fairbanks** *Aug 2022 - Present*
Ph.D. Geophysics (GPS: 4.0) Advisor: Dr. Martin Truffer

**Monatana State University** *Aug 2020 - May 2022*
M.S. Mathematics (GPA: 3.85) Advisors: Dr. Scott McCalla
Thesis: *Saline fluid flow in an ice-walled channel: a modeling perspective* Dr. Mark Skidmore

**University of Alaska Southeast** *Aug 2016 - May 2020*
B.S. Mathematics (GPA: 3.98) 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