ALBIN W. WELLS

email: albin.wells@geo.uzh.ch website: albinwwells.github.io

EDUCATION

Carnegie Mellon University — **Pittsburgh, PA. Class of 2026**
Ph.D. candidate in Civil and Environmental Engineering — *GPA: 4.0/4.0*

Brown University — **Providence, RI. Class of 2021**
Sc.B. in Mechanical Engineering, Honors — *Calculated GPA: 3.9/4.0*

Taylor Allderdice High School — **Pittsburgh, PA. Class of 2017**
Valedictorian, National Honor Society, National AP Scholar with Distinction — *GPA: 4.8/4.0*

PROFESSIONAL EXPERIENCE

Post-doctoral researcher, University of Zürich, Zürich, CH — *Mar 2026–present*
Graduate Research Assistant, Carnegie Mellon University, Pittsburgh, PA — *Aug 2021–Feb 2026*
FieldEX course on Field safety and preparedness, Finse, NO — *Apr 2025*
International Summer School in Glaciology, McCarthy, AK — *Jun 2022*
Undergraduate Researcher, Brown University, Providence, RI — *Jan 2020–May 2021*
Research Intern, Centro de Investigación príncipe Felipe, Valencia, ES — *Jun 2019–Jul 2019*
Production Engineer Intern, Abiomed Inc, Aachen, DE — *May 2018–Jul 2018*
Research Intern, University of Pittsburgh, Pittsburgh, PA — *Jan 2015–Sep 2016*

RESEARCH EXPERIENCE

Albin has been involved in research since early in high school. What began as afterschool trips to a biology lab at the University of Pittsburgh as part of a high school outreach program, has developed into a passion for environmentally focused research. Currently, Albin's research aims to better predict future glacier mass loss, locally and regionally across Alaska, through field studies, modeling, and remote sensing. Albin has experience working with large-scale remote sensing data (e.g., Sentinel-1 SAR) and global glacier evolution models (e.g., PyGEM). Albin has completed 6 field campaigns to Gulkana Glacier, AK, deploying ablation stakes, open-source GNSS systems, autonomous time-lapse cameras, and ice-penetrating radar surveys.

HONORS & AWARDS

2024	Invited speaker at AGU Fall 2024 Conference
2022	Steinbrenner Institute and Heinz Presidential Fellow
2021	Dean's Fellowship, CMU College of Engineering
2021	Fulbright Fellowship in Flood Management (declined)
2021	Sigma Xi Honor Society
2021	Honors Degree in major (Mechanical Engineering)

LEADERSHIP & ENGAGEMENT

2025-present	**Co-chair** of IACS *ContinuIX* Working Group
2023-present	**Peer Reviewer** for the J. of Glaciology and U.S. Geological Survey (3x)
2022-present	**Member** of IGS, IASC, and AGU
2022-2025	**Teaching Assistant** for Water Resources Engineering (4x)
2023	**Invited Speaker** at the Pittsburgh Allderdice High School Student Research Symposium
2019-2021	**Captain** of Brown University Men's Club Soccer
2018-2019	**Vice President** of Brown International House

2018 **Afterschool Tutor** at Hope High School through the STEMS program

PUBLICATIONS

In preparation:

Wells, A., Rounce, D., and Tober, B. Alaskan glaciers in a warming climate. *Manuscript in prep*.

Published/Accepted:

Wilson, C., Rounce, D., Sass, L., **Wells,** A., Baker, E., Flanner, M., and Skiles, M. (2026) An opensource energy balance model with physically-based albedo evolution applied to Gulkana Glacier, Alaska. ***Journal of Glaciology***, *(accepted)*

Wells, A. (2026) From the ground up: integrating field measurements with remote sensing for improved glacier evolution modeling. ***Carnegie Mellon University***, doctoral dissertation

Wells, A., Rounce, D., and Fahnestock, M. (2026) Spatiotemporal patterns in glacier melt and transient snowlines across Alaska from Synthetic Aperture Radar. ***npj Climate and Atmospheric Science***, . doi:10.1038/s41612-026-01321-y

Wells, A., Tober, B., Child, S., Rounce, D., Loso, M., Hults, C., Truffer, M., Holt, J., and Christoffersen, M. (2025) An 85-year record of glacier change and refined projections for Kennicott and Root Glaciers, Alaska. ***Nature Communications****,* 16, 7835. doi: 10.1038/s41467-025-62962-w

Wells, A., Rounce, D., Sass, L., Florentine, C., Garbo, A., Baker, E., and McNeil, C. (2024) GNSS reflectometry from low-cost sensors for continuous in situ contemporaneous glacier mass balance and flux divergence. ***Journal of Glaciology*** 70, e5. doi:10.1017/jog.2024.54.

Ding, X., Wu, Y.L., Gao, J., **Wells**, A., Lee, K., and Wang, Y. (2017) Tyramine functionalization of poly(glycerol sebacate) increases the elasticity of the polymer. ***Journal of Materials Chemistry B***, 5, 6097. doi: 10.1039/C7TB01078H.

Pope, W.H., Bowman, C.A., Russell, D.A., Hatfull, G.F., and others with PHIRE Group (incl. **Wells**, A.) (2015) Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity. ***eLife*** 4:e06416. doi: 10.7554/eLife.06416

PRESENTATIONS

Wells, A. (2026, February). From the ground up: integrating field measurements with remote sensing for improved glacier evolution monitoring. Public Ph.D. dissertation defense, Pittsburgh, PA (talk)

Wells, A. (2025, December). Spatial and temporal variations in glacier melt in Alaska from Sentinel-1 SAR data. Presented at the American Geophysical Union by David Rounce, New Orleans, LA (talk)

Wells, A. (2025, October). Seasonal progression of melt and snowlines in Alaska from SAR reveals impacts of warming. Presented at Northwest Glaciologists, Kananaskis, AB, CAN (talk)

Wells, A. (2024, December). Parsing glacier mass balance and flux divergence: challenges and implications of direct field measurements on remote sensing solutions. Presented at the American Geophysical Union, Washington, DC (invited speaker)

Wells, A. (2024, March) Utilizing GNSS reflectometry with low-cost sensors for high-resolution contemporaneous glacier mass balance and flux divergence. Presented at the Steinbrenner Institute Sustainability Symposium, Pittsburgh, PA (poster).

Wells, A. (2024, October). Understanding past and future change through historical aerial photographs on Kennicott and Root glaciers, Alaska. Presented at Northwest Glaciologists, Fairbanks, AK (talk)

Wells, A. (2023, October). A novel field method for the flux divergence. Presented at Northwest Glaciologists, Seattle, WA (talk).

Wells, A. (2023, March) Deriving climatic mass balance gradients through the integration of field measurements, modeling, and remote sensing. Presented at the Steinbrenner Institute Sustainability Symposium, Pittsburgh, PA (poster)

Wells, A. (2023, March). Methods and Challenges to Understanding Glacier Response to the Climate. Presented at the Allderdice High School Research Symposium, Pittsburgh, PA (keynote speaker).

Wells, A. (2022, December). Deriving the Climatic Mass Balance Gradients of Alaskan Glaciers through the Integration of Field Measurements and Remote Sensing. Presented at the American Geophysical Union, Chicago, IL (poster).

Wells, A. (2022, October). Utilizing field measurements and models to improve remote sensing data on Gulkana Glacier. Presented at Northwest Glaciologists, Moscow, ID (talk).

Wells, A. (2022, May). Leveraging remote sensing data with in-situ measurements for enhanced understanding of Alaskan glaciers response to climate change. Presented at the NASA Sea Level Change Science Team Meeting, La Jolla, CA (virtual poster).

Wells, A. (2021, April). Characterization of Silicone Polymers for Energy Harvesting from Compliant Membrane Foils. Brown University Engineering Honors Research Symposium, Providence, RI (talk).

SKILLS

Technical: Python, MATLAB, GitHub, QGIS, Metashape, MicMac, HEC-RAS

Glaciological: PyGEM (large-scale modeling), Sentinel-1 SAR processing, gnssrefl (GNSS-reflectometry analysis), PyCorr (feature-tracking), RAGU (ice-penetrating radar analysis)

Field: Wilderness First Responder, Cryologger GVT (open-source GNSS building and installation), monitored ablation stakes, snow pits, time-lapse camera setups (for structure-from-motion photogrammetry)

Languages: English (fluent), German (fluent)