John-Morgan Manos

Curriculum Vitae

February 2026

Department of Earth and Space Sciences
University of Washington
Seattle, WA 98103

Email: jmanos@uw.edu

Research Interests

- Better understanding glacier dynamics using new seismological, radar, and geodetic methods.
- Ice flow and dynamical modeling using machine learning and finite element modeling.
- Ice-ocean-atmosphere interactions and implications for future climate change.

Education

Ph.D. Earth and Space Sciences, University of Washington, 2026 (expected)

B.S. Atmospheric Sciences, Ohio State University, 2018

Positions

2018 – 2021 Remote Sensing Engineer, Maxar Technologies Inc.

2015 – 2018 Undergraduate Researcher, Byrd Polar and Climate Research Center

Publications

2026 Stoll, N., Shaya, M., Kirkpatrick, L., Freitag, J., Hishamunda, V., **Manos, J.-M.**, et al. (2026). Fabric, texture, and bubble characteristics of the million-year old Allan Hills blue ice core ALHIC1901. https://eartharxiv.org/repository/view/11519/

2025 Hoffman, A., Hoffman, A. O., Christianson, K., Karplus, M. S., Agnew, R. S., Pearce, E., Ranganathan, M., Anandakrishnan, S., Cortez, S. A., Beres, M., Bingham, R., Booth, A. D., Borthwick, L., Bodart, J. A., Broome, A. L., Cameron, E. F., Case, E., Clark, R. A., Hehlen, M. E., Holschuh, N., Hunt, M., Johnson, J., **Manos J.-M.**, et al. (2025). Geophysical surveys and instrument incubation program across a glacier grounding zone: Eastwind Glacier's contribution to McMurdo ice shelf mass balance. https://doi.org/10.22541/essoar.173687398.85162904/v1

2025 Chien, C.-C., Gerstoft, P., Hatfield, W., Hollberg, L., Lipovsky, B. P., **Manos, J.-M**., et al. (2025). Calibrating strain measurements: A comparative study of DAS, strainmeter, and seismic data. *Earth and Space Science*, 12, e2024EA003940. https://doi.org/10.1029/2024EA003940

2024 **Manos J-M**, Gräff D, Martin ER, et al. DAS to discharge: using distributed acoustic sensing (DAS) to infer glacier runoff. *Journal of Glaciology*. 2024;70:e67. doi:10.1017/jog.2024.46

Oral Presentations at Professional Meetings

2025 **Manos, J. M.**, Lipovsky, B. P., Shaya, M., & Shapero, D. (2025). Old Ice Preservation Explained by Stagnation Flow in the Allan Hills BIA, Antarctica. *AGU25*.

2025 **Manos, J-M**., Lipovsky, B. P., Shaya, M., Shapero, D. (2025, September). Old Ice Preservation Explained by Stagnation Flow in the Allan Hills BIA, Antarctica. Presented at the 2025 COLDEX Annual Meeting.

2024 Neff, P. D., Steig, E. J., Menounos, B., Andreasen, J., Kirkpatrick, L., Hall, B., **Manos, J-M**., Hawkins, A., Lipovsky, B. P. (2024, December). The Combatant Col Ice Core project: a 219 meter-long ice core and geophysical observations of a firn aquifer at Mt. Waddington, southern Coast Mountains, BC, Canada. *AGU Fall Meeting Abstracts*, *2024*, C51B-08.

2024 Lipovsky, B., Abadi, S., Denolle, M., Gaete Elgueta, V., Gräff, D., **Manos, J.-M**., Ni, Y., Shi, Q., Sprinkle, P., Wilcock, W., and Williams, E.: New Earth and Planetary Science Discoveries Enabled by the Optical Fiber Sensing Revolution, Galileo conference: Fibre Optic Sensing in Geosciences, Catania, Italy, 16–20 Jun 2024, GC12-FibreOptic-95, https://doi.org/10.5194/egusphere-gc12-fibreoptic-95, 2024.

2024 **Manos, J.M.**, Gräff, D., & Lipovsky, B. (2024). Observations From an Active Seismic Distributed Acoustic Sensing Survey, Combatant Col, British Columbia. SSA Annual Meeting, Anchorage, Alaska, Apr 29 - May 3, In SSA Annual Meeting Program (pp. 1236).

2024 **Manos, J.M.**, Gräff, D., & Lipovsky, B. (2024). Englacial shearing in the context of old ice preservation. In EGU General Assembly Conference Abstracts (pp. 6772).

2023 **Manos, J.**, Gräff, D., Lipovsky, B., Shaya, M., Horlings, A., Conway, H. (2023) Past century ground surface temperatures inverted from borehole thermometry Allan Hills, Antarctica. Presented at the 2023 COLDEX Annual Meeting.

2023 **Manos, J.**, Gräff, D., Lipovsky, B. (2023) Using Distributed Temperature Sensing for ice borehole thermometry. Presented at the second annual US Ice Core Open Science Meeting.

2022 **Manos, J.**, Lipovsky, B., Fichtner, A., Gräff, D., Martin, E. R., Paitz, P., & Walter, F. (2022). Using distributed acoustic sensing (DAS) to constrain glacier surface melt [89A3753]. presented at 2022 IGS International Symposium on Maritime Glaciers, 19-24 June.

Poster Presentations at Professional Meetings

2024 **Manos, J.**, & Lipovsky, B. P. (2024). Climate Signals Captured by State-of-the-Art Englacial Temperature Measurements in the Allan Hills, Antarctica. *Graduate Climate Conference 2024 annual meeting*.

2023 Cruz, C., **Manos, J. M.**, & Lipovsky, B. P. (2023). Laboratory Experiments and Modeling of Hydraulic Fractures in Briny Ice. *AGU23*.

2023 Shaya, M., Horlings, A. N., Hills, B. H., **Manos, J. M.**, Conway, H., Fegyveresi, J. M., ... & Fudge, T. J. (2023). Interpreting Ice Flow at the Allan Hills, Antarctica Using Polarimetric Radar Measurements of Ice Fabric. *AGU23*.

2022 **Manos, J.-M.**, Lipovsky, B., Fichtner, A., Gräff, D., Martin, E., Paitz, P., & Walter, F. (2022). Optical fibers listen to the death sounds of glaciers. In *AGU fall meeting*. (C22D-0792).

2022 Lipovsky, B. P., **Manos, J.-M.**, Ni, Y., Denolle, M., Bodin, P., Winebrenner, D. P., Hollberg, L., & Zumberge, M. A. (2022). Distributed Acoustic Sensing in the Puget Sound and Puget Lowlands, Washington, USA. *AGU Fall Meeting Abstracts*, *2022*, S15A-05.

2021 **Manos, J.**, Lipovsky, B., Fichtner, A., Gräff, D., Martin, E. R., Paitz, P., & Walter, F. (2021). From DAS to Discharge: Using Distributed Acoustic Sensing to Estimate the Hydrological

Response of the Rhonegletscher, Switzerland. [C25C-0849]. presented at 2021 Fall Meeting, AGU, 13-17 Dec.

2020 Schoessow, F., Soni, N., **Manos**, **J.**, Mark, B.G., DeGrand, J., Vega, E.M., Reinemann, S., and Porinchu, D. Multi-annual measures of rock glacier-wide volume change and surface kinematics in Great Basin National Park. Abstract GC026-0020. 2020 Fall Meeting, AGU, all virtual, 1-17 Dec.

2019 Soni, N., Mark, B.G., **Manos**, **J.**, Vega, M.E., Schoessow, F., DeGrand, J.Q., Reinemann, S.A., and Porinchu, D.F. Interannual Rock Glacier Surface Elevation Changes using UAS in Great Basin National Park, Nevada. Submitted abstract #633654. 2019 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.

2018 Schoessow, F.S., **Manos, J.**, Mark, B.G., DeGrand, J., Soni, N., Reinemann, S., and Porinchu, D. Mapping rock glacier surface elevation changes in Great Basin National Park, Nevada. Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592. doi:10.1130/abs/2018AM-324542. Paper #84-8 presented at the Geological Society of America Annual Meeting, Indianapolis, IN, 4-7 November.

2018 **Manos, J.**, B.G. Mark, J. DeGrand and O. Wigmore. Annual Surface Elevation Change of the Lehman Rock Glacier in Great Basin National Park, Nevada, USA. Poster presented at Association of American Geographers Annual Meeting, New Orleans, LA. Physical Geography Poster Session II #046. 12 April.

2018 **Manos, J.**, B.G. Mark, J. DeGrand and O. Wigmore. Annual Surface Elevation Change of the Lehman Rock Glacier in Great Basin National Park, Nevada, USA. Poster Presented at Denman Undergraduate Research Forum Annual Meeting, Ohio State University, Columbus, OH. Session #1, Poster #134. 3 April.

Awards and Honors

2023 Program on Climate Change Graubard Fellowship – Three quarters RA funding
2023 COLDEX supplement award – RA funding and research support
2022 Best Glaciology Talk
University of Washington, Department of Earth and Space Sciences Research Gala 2022
2018 Cum Laude
2018 Edward J. “Ned” Taaffe Award – $1000
Recognizes the most outstanding Atmospheric Sciences, Climate, and Physical Geography graduates.
2018 Garry McKenzie & Henry Brecher Undergraduate Scholarship – $600
Stipend to be used to facilitate research efforts or offset travel to present at academic conferences.
2018 Office of Energy and Environment Sustainability Award Finalist
Presented at the 2018 Denman Undergraduate Research Forum at the Ohio State University.
2015 – 2018 Dean’s List – AU15, SP16, AU16, SP17, AU17, and SP18 semesters

Fieldwork

2025 Puget Sound, Washington distributed acoustic sensing (DAS) for Orcas experiment including fiber optic cable deployment from vessel.

2024 – 2025	South Pole, Antarctica summer season ice penetrating radar surveying, seismic node array deployment, magnetotellurics array deployment, and distributed acoustic sensing (DAS) surface deployment.
2023 – 2024	Allan Hills, Antarctica summer season radar surveying, repeat ApRES, and fiber optic sensing of shallow boreholes.
2023	Combatant Col, BC, Canada distributed fiber optic sensing on surface and shallow borehole.
2022 – 2023	Allan Hills, Antarctica summer season radar surveying and fiber optics deployments.
2022	Whidbey Island, Washington distributed acoustic sensing (DAS) deployment.
2021	Ocean Observatories Initiative Regional Cabled Array DAS deployment, Oregon.
2021	DAS deployment on the Alpental Ski Resort and Easton Glacier on Mt. Baker, Cascade Range, Washington.
2016 – 2018	Great Basin Research Experience, Great Basin National Park, 3 seasons.

Teaching

ESS401: Field Geology with GIS, Teaching Assistant, SU25

Mentorship

Undergraduate Students

2025 –	Nathan Yandell, icequake detection and locating
2023 – 2024	Cody Cruz, hydraulic fracture of ice

Professional Society Memberships

International Glaciological Society (IGS)
American Geophysical Union (AGU)
American Association of Geographers (AAG)
European Geophysical Union (EGU)
Seismological Society of America (SSA)

Professional Service

2026	Journal of Glaciology reviewer
2025	European Research Council Starting Grant reviewer
2025	EarthScope Consortium 2025 GAGE/SAGE workshop plenary session co-chair
2024	SSA annual meeting “Applications and Discoveries in Cryoseismology Across Spatial and Temporal Scales” session co-convener

Outreach and Engagement

2025	Invited talk at the bi-weekly University of Washington Computing for the Environment (CS4Env) meeting.
2024	Interviewed by EarthScope Consortium about my research in distributed acoustic sensing and big data which was published as part of their “Cloud Conversation” YouTube series.

2024	Graduate student representative responsible for communications between graduate students and department faculty.
2024	Graduate student representative on the graduate and undergraduate student Awards Committee.
2023	Distributed fiber optic sensing research in Antarctic highlighted in Between Spheres – Earth and Space Sciences Magazine, Vol. 1.
2023	Graduate student mentor of undergraduate student in the Opportunities in Glacier InVEstigation (OGIVE) undergraduate summer research program.
2023	Graduate student lead of the Opportunities in Glacier InVEstigation (OGIVE) undergraduate summer research program.
2022	Graduate student mentor to an incoming first year Department of Earth and Space Sciences graduate student.
2022	Advised on the development of an animation depicting light backscatter in fiber optic cables for a University of Washington UW News article.
2022	Presented recent research findings in a talk titled “Glacier discharge prediction using machine learning and acoustic wavefield detection” at the 2022 Department of Earth and Space Sciences Research Gala.
2022	Invited to present "Optical fiber constraints on glacier surface mass balance and meltwater discharge" at the Glaciology Lunch seminar series at the University of Washington.
2022	Invited to present current Distributed Acoustic Sensing research on glaciers at the weekly Seismolunch seminar series at the University of Washington.
2021	Assisted in resume review of current undergraduate or graduate students in the Atmospheric Sciences program at The Ohio State University.
2021	Served as graduate mentor to undergraduate student in Earth and Space Sciences Department to foster professional connections and share knowledge, experience, and expertise.
2021	Participated in the Earth and Space Sciences peer mentoring program for which I am a peer mentee to a second year PhD student within the department.
2019	Presented new technologies in satellite image enhancement and educated colleagues in quality validation procedures during annual quality summit at Maxar Technologies.
2019	Acted as talent recruiter for Maxar Technologies at annual career fairs at Colorado State University.
2018	Invited to present undergraduate research to the National Park Service and visitors of Great Basin National Park.

2018	Invited to discuss undergraduate research during the "Takeover Tuesday" event hosted by the Office of Undergraduate Research & Creative Inquiry at Ohio State which highlights new and innovative research being conducted by undergraduate students.
2018	Interviewed by an Ohio State University journalist about my research as an undergraduate which was featured on the Ohio State University website frontpage.
2018	Elected President of the Scarlet and Gray Weather Forecasting Team at Ohio State University, mentored a team of undergraduate weather enthusiasts in weather forecasting, and helped create point weather forecasts for the Columbus area.
2017	Featured in The Lantern's *Humans of OSU* segment where I discussed my academic goals and my passion for climate research.
2016	Created a video showcasing the research taking place during the 2016 Great Basin Research Experience expedition which was featured on the Byrd Polar and Climate Research Center website.
2016	Investigated wildfire history in Great Basin National Park which was featured in the 2016 Ohio State Severe Weather Symposium brochure.
2015 – 2018	Served as an active member of the Meteorology Club at Ohio State University.