# Alia J. Lesnek

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School of Earth and Environmental Sciences
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## EDUCATION

2019 **University at Buffalo, Buffalo, NY**
Ph.D. in Geology

2013 **University of Florida, Gainesville, FL**
B.S. in Geological Sciences

## PROFESSIONAL APPOINTMENTS

2021-present **Queens College and The Graduate Center, CUNY, New York, NY**
Assistant Professor

2019-2021 **University of New Hampshire, Durham, NH**
Postdoctoral Research Associate

2014-2019 **University at Buffalo, Buffalo, NY**
Graduate Research Assistant

## RESEARCH INTERESTS

**Quaternary science**

- Glacier and ice sheet response to abrupt climate change
- Physical processes governing ice sheet advance and retreat
- Impacts of Earth surface change on ancient human migration and settlement patterns
- Mapping Quaternary surficial deposits using field techniques, remote sensing, and GIS

**Geochronology**

- Improving field, laboratory, and analytical methods for cosmogenic nuclide dating
- Cosmogenic nuclide production rate calibrations

## PUBLICATIONS

Total citations: 812, h-index: 15, i10-index: 17

**Published**

(18) **Lesnek, A.J.,** Licciardi, J.M., Briner, J.P., Baichtal, J.F., (2026). Cosmogenic $^{36}$Cl surface exposure constraints on late Pleistocene coastal refugia in the eastern Mount Edgecumbe Volcanic Field, Alaska: *Scientific Reports*. https://doi.org/10.1038/s41598-026-68405-w.

(17) **Lesnek, A.J.,** Licciardi, J.M., Hidy, A.J., Anderson, T.S. (2024). Technical note: Optimizing the in situ cosmogenic $^{36}$Cl extraction and measurement workflow for geologic applications: *Geochronology*, v. 6, no. 3, p. 475-489.

(16) **Lesnek, A.J.** (2023). Windows of opportunity for the peopling of the Americas: *Proceedings of the National Academy of Sciences*, v. 120, no. 10, e2300979120.

(15) Price, B.N., Stansell, N.D., Fernández, A., Licciardi, J.M., **Lesnek, A.J.,** Sorensen, M.K., Castillo, E.J., Muñoz, A., Shutkin, T., Ciocca, I., and Galilea, I. (2022). Chlorine-36 surface exposure dating of Late-Holocene moraines and glacial mass balance modeling, Monte Sierra Nevada, South-Central Chilean Andes (38°S): *Frontiers in Earth Science*, 1128.

(14) Darvill, C. M., Menounos, B., Goehring, B. M., and **Lesnek, A. J.** (2022). Cordilleran Ice Sheet stability during the last deglaciation: *Geophysical Research Letters*, e2021GL097191.

(13) Walcott, C. K., Briner, J. P., Baichtal, J. F., **Lesnek, A. J.,** and Licciardi, J. M. (2022). Cosmogenic ages indicate no MIS 2 refugia in the Alexander Archipelago, Alaska: *Geochronology*, v. 4, no. 1, p. 191–211.

(12) Baichtal, J.F., **Lesnek, A.J.,** Carlson, R.J., Schmuck, N., Smith, J.L., Landwehr, D.J., and Briner, J.P. (2021). Late Pleistocene and early Holocene sea-level history and glacial retreat interpreted from shell-bearing marine deposits of Southeastern Alaska: *Geosphere*, v. 17, no. 6, p. 1590–1615.

(11) Young, N.E., Briner, J.P., Miller, G.H., **Lesnek, A.J.,** Crump, S.E., Pendleton, S.L., Schwartz, R., Schaefer, J.M. (2021). Pulsebeat of early Holocene glaciation in Baffin Bay from high-resolution beryllium-10 moraine chronologies: *Quaternary Science Reviews*, v. 270, 107179.

(10) Young, N.E., **Lesnek, A.J.,** Cuzzone, J.K., Briner, J.P., Badgeley, J.A., Balter-Kennedy, A., Graham, B.L., Cluett, A., Lamp, J.L., Schwartz, R., Tuna, T., Bard, E., Caffee, M.W., Zimmerman, S.R.H., and Schaefer, J.M. (2021). Cosmogenic isotope measurements from recently deglaciated bedrock as a new tool to decipher changes in Greenland Ice Sheet size: *Climate of the Past*, v. 17, p. 419-450.

(9) Briner, J.P., Cuzzone, J.K., Badgeley, J.A., Young, N.E., Steig, E.J., Morlighem, M., Schlegel, N.J., Hakim, G.J., Schaefer, J., Johnson, J.V., **Lesnek, A.J.,** Thomas, E.K., Allan, E., Bennie, O., Cluett, A.A., Csatho, B., de Vernal, A., Downs, J., Larour, E., and Nowicki, S. (2020). Greenland Ice Sheet mass loss rate will exceed Holocene values this century: *Nature*, v. 586, p. 70-74.

(8) **Lesnek A.J.,** Briner, J.P., Baichtal, J.F., Lyles, A.S. (2020). New constraints on the last deglaciation of the Cordilleran Ice Sheet in coastal Southeast Alaska: *Quaternary Research*, v. 96, p. 140-160.

(7) Downs, J.Z., Johnson, J.V., Briner, J.P., Young N.E., **Lesnek, A.J.,** Cuzzone, J.K. (2020). West Greenland Ice Sheet retreat history reveals elevated precipitation during the Holocene thermal maximum: *The Cryosphere*, v. 14, p. 1121-1137.

(6) Young, N.E., Briner, J.P., Schaefer, J.M., Miller, G.H., **Lesnek, A.J.,** Crump, S.E., Thomas, E.K., Pendleton, S.L., Cuzzone, J.K., Lamp, J., Zimmerman, S., and Caffee, M. (2020). Reply to Carlson (2020) comment on "Deglaciation of the Greenland and Laurentide ice sheets interrupted by glacier advance during abrupt coolings", *Quaternary Science Reviews*, 106329.

(5) **Lesnek, A.J.,** Briner, J.P., Young, N.E., Cuzzone, J.K. (2020). Maximum Southwest Greenland Ice Sheet recession in the Early Holocene: *Geophysical Research Letters*, v. 47, no. 1, e2019GL083164.

(4) Young, N.E., Briner, J.P., Miller, G.H., **Lesnek, A.J.,** Crump, S.E., Thomas, E.K., Pendleton, S.L., Cuzzone, J.K., Lamp, J., Zimmerman, S., Caffee, M., Schaefer, J.M. (2020). Deglaciation of the Greenland and Laurentide ice sheets interrupted by glacier advance during abrupt coolings: *Quaternary Science Reviews*, v. 229, 106091.

(3) **Lesnek, A.J.,** Briner, J.P., Lindqvist, C., Baichtal, J.F., Heaton, T.H. (2018). Deglaciation of the Pacific coastal corridor directly preceded the human colonization of the Americas: *Science Advances*, v. 4, no. 5, eaar5040.

(2) **Lesnek, A.J.,** Briner, J.P. (2018). Response of a land-terminating sector of the western Greenland Ice Sheet to early Holocene climate change: Evidence from $^{10}$Be dating in the Søndre Isortoq region: *Quaternary Science Reviews*, v. 180, p. 145-156.

(1) Briner, J.P., Tulenko J.P., Kaufman, D.S., Young N.E., Baichtal, J.F., **Lesnek, A.** (2017). The Last Deglaciation of Alaska: *Cuadernos de Investigación Geográfica*, v. 43, p. 429-448.

**Submitted**

Kodama, S., Pico, T., Lucas E. M., **Lesnek, A.J.**, Coonin, A.N., Robel, A.A., Lau, H.C.P, Ward, B., Solid-Earth Feedbacks Primed Cordilleran Ice Sheet for Rapid Demise after the Last Glacial Maximum. Submitted to *Proceedings of the National Academy of Sciences*, September 2026.

Lucas E. M., Kodama, S., Pico, T., Stoker, B.J., **Lesnek, A.J.**, Dalton, A.S., ICE-NADI-1: A new deglacial ice sheet thickness history (25-1 ka) for North America using empirically-constrained ice margins with implications for global sea level contributions, relative sea level, and vertical land motion. Submitted *to Climate of the Past*, July 2026.

## FUNDING

Total awarded at Queens College to date: $1,009,792

**Submitted**

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|---|---|
| Pending | Collaborative Research: Integrated ice-sheet, sea-level, and solid Earth interactions in Southeast Alaska from the Last Glacial Maximum to 2100 CE; National Science Foundation, Lead PI. $537,212 to Queens College |

**Awarded at Queens College**

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| 2026 | CAREER: Evaluating controls on marine-terminating outlet glacier stability in Southwest Alaska (ANS-2539133); National Science Foundation, Sole PI. $846,287 |
| 2026 | JennyCal: A new cosmogenic nuclide production rate calibration for western North America; PSC-CUNY Research Award Program. Sole PI. $7,000 |
| 2025 | Back to the future: Reconstructing the collapse of an Alaskan paleo-ice stream to improve climate change projections; PSC-CUNY Research Award Program. Sole PI. $6,000 |
| 2025 | Testing climatic controls on catastrophic ice stream collapse in the eastern Aleutian Islands; The Explorers Club. Sole PI. $5,000 |
| 2024 | Evaluating patterns, drivers, and geomorphic impacts of ice stream collapse in the northern Gulf of Alaska; CUNY JFRASE. Sole PI. $40,005 |
| 2024 | NSF Faculty Travel Grant; Competitive grant to offset costs of presenting research and participating in professional development activities at 2024 AGU Annual Meeting. $1,700 |
| 2024 | Acquisition of an unmanned aerial vehicle for high-resolution remote sensing of landscapes and ecosystems; GRTI. Lead PI (Co-Is: P. Val, G. O'Mullan, D. Soule). $41,300 |
| 2023 | Leveraging precise paleoshoreline reconstructions and geostatistical modeling to assess human responses to rapid sea-level change; PSC-CUNY Research Award Program. Sole PI. $6,000 |
| 2023 | Upgrading rock crushing capabilities in the School of Earth and Environmental Sciences to support research in climate science, surface processes, tectonics, and volcanology; Queens College Research Enhancement Program. Lead PI (Co-Is: M.A. Longpré, P. Val). $15,000 |

2023 A three-dimensional reconstruction of ice sheet change in New York's Hudson Valley; The Eppley Foundation for Research. Sole PI. $18,000

2022 Assessing climatic and non-climatic controls on southeastern Laurentide Ice Sheet retreat; Queens College Math & Natural Sciences Faculty Development Program. Sole PI. $20,000

2022 Dating Quaternary slope failures in Grand Teton National Park, Wyoming using cosmogenic nuclides; PSC-CUNY Research Award Program. Sole PI. $3,500

**Awarded prior to my appointment at Queens College**

2020 Quantifying rates of Quaternary landscape evolution in Grand Teton National Park using in situ cosmogenic $^{10}$Be, $^{14}$C, and $^{36}$Cl dating; University of Wyoming-National Park Service Research Station Small Grants Program. Lead PI. $5,000

2018 College of Arts and Sciences Dissertation Fellowship; University at Buffalo. $6,000

2017 Doctoral Dissertation Research: Late Pleistocene Glaciation in Southeastern Alaska: Assessing the Sensitivity of a Marine-terminating Ice Sheet to Changing Environmental Conditions (BCS-1657065); National Science Foundation. Co-I (PI: J. Briner). $15,999

2017 Visiting Graduate Student Travel Grant; National Lacustrine Core Facility. $1,000

2016 Pegrum Professional Development Award; University at Buffalo. $500

2016 Graduate Student Conference Travel Grant; University at Buffalo. $500

2015 Graduate Student Research Grant; Geological Society of America. $1,875

2012 University Scholar Award; University of Florida. $2,000

## HONORS AND AWARDS

2024 CUNY Junior Faculty Research Award in Science and Engineering

2019 College of Arts and Sciences Research Poster Winner, University at Buffalo

2018 Solène Pouget Prize for Scientific Contributions to Society, University at Buffalo

## INVITED SEMINARS

2026 Where did interglacial sediments survive beneath ice sheets? Testing a machine learning approach on Baffin Island, Arctic Canada. Lamont-Doherty Earth Observatory, October 21, Palisades, NY.

2026 On thin ice: Alaska's glaciers from the Ice Age to today. Queens College School of Earth and Environmental Sciences Colloquium, September 23, Flushing, NY.

2026 Proposal writing in upper-level STEM courses. Pedagogies of Writing Workshop, Queens College Center for Excellence in Teaching, Learning & Leadership, March 23, Flushing, NY.

2025 Assessment in the School of Earth and Environmental Sciences. Queens College Assessment Showcase, December 5, Flushing, NY.

2025 Shaking of the Ice Age: Linking glacier retreat to fault motion in the Greater Yellowstone region. City College of New York Earth and Atmospheric Sciences Colloquium, May 13, New York, NY.

2024 Late Pleistocene climate and tectonics in the Teton Range, Wyoming, Paleoglaciers seminar, February 22, Online.

2023 Reconstructing Late Quaternary climate and tectonics with glacial deposits in the Teton Range, Wyoming. Queens College School of Earth and Environmental Sciences Colloquium, September 13, Flushing, NY.

2022 A geologic perspective on human migration to the Americas. Brooklyn College Department of Earth and Environmental Sciences Colloquium, December 6, Online.

2022 Searching for Ice Age refugia along North America's Pacific coast. Doctoral Program in Earth and Environmental Sciences Colloquium Series, CUNY Graduate Center, April 28, New York, NY.

2022 Glacial Geology and Geochronology of Southeast Alaska. Southeast Alaska Discovery Center: Friday Night Insight, March 25, Online.

2021 Greenland Ice Sheet mass loss will exceed Holocene values this century. Baruch College Climate Scholars seminar, September 20, Online.

2021 A land of ice and fire: Late Quaternary deglaciation, sea level change, and volcanism on America's Northwest Pacific coast. Queens College School of Earth and Environmental Sciences Colloquium, February 17, Online.

2020 A land of ice and fire: Late Quaternary deglaciation, sea level change, and volcanism on America's Northwest Pacific coast. University College Dublin seminar series, November 11, Online.

2020 Unraveling the Last Deglaciation: Case Studies from Greenland and Alaska. Queens College School of Earth and Environmental Sciences Colloquium, March 12, Flushing, NY.

2018 Deglaciation of the North Pacific coast and the peopling of the Americas. University New Hampshire Department of Earth Sciences, November 30, Durham, NH.

2018 The last deglaciation of the Greenland and Cordilleran ice sheets: Reconstructions from Southwest Greenland and Southeast Alaska. University of Maine Climate Change Institute seminar, October 25, Orono, ME.

2018 Deglaciation of the Pacific coastal corridor: Causes, consequences, and remaining questions. International Quaternary Webinar (hosted by University of Massachusetts at Amherst), September 19, Online.

2017 Holocene fluctuations of the western Greenland Ice Sheet. National Lacustrine Core Facility (LacCore), October 10, Minneapolis, MN.

**CONFERENCE PRESENTATIONS**

Underline denotes advisee author

2026 Kalika, D.D., **Lesnek, A.J (presenter).**, Briner, J.P., Cuzzone, J.K., Where did pre-Holocene interglacial sediments survive the ice? Testing a machine learning approach on Baffin Island. Oral presentation at 2026 Arctic Workshop, March 20, Buffalo, NY.

2026 Capone B., **Lesnek, A.J.**, Interpreting ice flow dynamics of the Cordilleran Ice Sheet through streamlined subglacial bedform mapping in Southeast Alaska. Poster presentation at 2026 Arctic Workshop, March 20, Buffalo, NY.

2026 Creel, J., **Lesnek, A.J.**, Assessing the relative influence of topography and climate on Little Ice Age glaciers of the Alaska Peninsula. Poster presentation at 2026 Arctic Workshop, March 20, Buffalo, NY.

2026 Narine, S., **Lesnek, A.J.**, Reconstructing Little Ice Age Glacier Extents in the Stikine-LeConte Wilderness, Southeast Alaska. Poster presentation at 2026 Arctic Workshop, March 20, Buffalo, NY.

2025 **(INVITED) Lesnek, A.J**., Briner, J.P., Cuzzone, J.K., Caron, L., Han, H.K., Capone, B., Narine, S., Ice sheet and glacier reconstructions for data-model comparison in Southeast Alaska. Oral presentation at 2025 AGU Annual Meeting. December 16, New Orleans, LA.

2024 Kalika, D.D., **Lesnek, A.J**., Evaluating Last Interglacial Sediment Preservation Beneath the Laurentide Ice Sheet Using Predictive Modeling. Poster presentation at 2024 AGU Annual Meeting. December 13, Washington, D.C.

2024 Capone, B., **Lesnek, A.J.,** Interpreting Cordilleran Ice Sheet dynamics during the Last Glacial Maximum through subglacial landform mapping in Southeast Alaska. Poster presentation at 2024 AGU Annual Meeting. December 9, Washington, D.C.

2024 Ihnatiuk, M., **Lesnek, A.J.**, Gavillot, Y., Licciardi, J.M., Assessing the Influence of Pleistocene Glaciations on Slip Rates of the Emigrant Fault, Northern Greater Yellowstone, Montana, USA. Poster presentation at 2024 AGU Annual Meeting. December 9, Washington, D.C.

2024 Taib, R., **Lesnek, A.J.**, Reconstructing Laurentide Ice Sheet retreat timing and processes in the lower Hudson Valley, NY with cosmogenic $^{10}$Be dating. Poster presentation at 2024 AGU Annual Meeting. December 9, Washington, D.C.

2024 **Lesnek, A.J.**, Licciardi, J.M., Briner, J.P., Cosmogenic $^{36}$Cl Dating of Postglacial Relative Sea-level Change at the Mount Edgecumbe Volcanic Field, Alaska. Poster presentation at 2024 AGU Annual Meeting. December 9, Washington, D.C.

2024 (**INVITED) Lesnek, A.J.,** Licciardi, J.M., Hidy, A.J., Anderson, T.S., Briner, J.P., Cosmogenic chlorine-36 dating of Earth surface change: Recent progress and future directions, Oral presentation at 2024 GSA Connects meeting. September 23, Anaheim, CA.

2024 Ihnatiuk, M., **Lesnek, A.J.,** Assessing the Influence of Pleistocene Glaciations on Slip Rates of the Emigrant Fault, Northern Greater Yellowstone, Montana, USA, Poster presentation at the CUNY VSURF/TS3 Conference, August 8, New York, NY.

2023 Taib, R., Kalika, D.D., **Lesnek, A.J.,** Reconstructing Laurentide Ice Sheet retreat in the Hudson Valley, NY with modeling and cosmogenic $^{10}$Be dating. Poster presentation at CUNY Celebration of Undergraduate Research. May 31, New York, NY.

2022 **Lesnek, A.J.,** Licciardi, J.M., Taib, R., Cosmogenic $^{10}$Be dating of late Pleistocene landforms along the eastern Teton Range front: Initial climatic and tectonic interpretations. Oral presentation at 2022 GSA Connects meeting. October 9, Denver, CO.

2022 Crump, S.E., Larsen, D.J., Licciardi, J.M., **Lesnek, A.J.,** Muscott, A., Wang, L., Glacier response to Late Glacial abrupt climate events in the Teton Range,

Wyoming, USA. Oral presentation at 2022 GSA Connects meeting. October 9, Denver, CO.

2022 **Lesnek, A.J.,** Licciardi, J.M., Late Quaternary slip rates of the Teton fault, Wyoming, from cosmogenic $^{10}$Be dating. Poster presented at 2022 AMQUA Biennial Meeting. June 8, Madison, WI.

2022 **Lesnek, A.J.,** Licciardi, J.M., Briner, J.P., Baichtal, J.F., Walcott, C.K., Reconstructing late Quaternary volcanic activity and surface exposure at the Mount Edgecumbe Volcanic Field, Alaska. Oral presentation at the NSF Southeast Alaska Workshop. May 24, Buffalo, NY.

2021 **Lesnek, A.J.,** Licciardi, J.M., Briner, J.P., Baichtal, J.F., Walcott, C.K., Volcanism, glaciation, and sea-level change at the Mount Edgecumbe Volcanic Field, Alaska: Implications for human occupation of the Northwest Pacific coast. Poster presented at 2021 AGU Fall Meeting. December 13, New Orleans, LA.

2021 Walcott, C.K., Briner, J.P., Baichtal, J.F., **Lesnek, A.J.,** Licciardi, J.M., Of humans and glaciers – a glacial chronology from the coastal Pacific migration route. Oral presentation at 2021 AGU Fall Meeting.

2021 Ward, D., Licciardi, J.M., Goehring, B., **Lesnek, A.J.,** Transdimensional Bayesian inversion of multi-isotope cosmogenic nuclide measurements. Oral presentation at 2021 AGU Fall Meeting.

2021 Price, B.N., Fernández, A., Stansell, N.D., Licciardi, J.M., **Lesnek, A.J.,** Sorensen, M.K., Castillo, E.J., Muñoz, A., Ciocca, I., Mark, B.G., Shutkin, T., Chlorine-36 Surface Exposure Dating and Glacial Sensitivity Analysis of late-Holocene Moraines, South-Central Chilean Andes (38°S). Poster presented at 2021 AGU Fall Meeting.

2021 **Lesnek, A.J.,** Licciardi, J.M., Briner, J.P., Baichtal, J.F., Walcott, C.K., Exposing the history of volcanism and sea-level changes at the Mount Edgecumbe Volcanic Field in Southeast Alaska using cosmogenic nuclides. Oral presentation at 50$^{th}$ Annual International Arctic Workshop, April 15, Online.

2020 Thomas, E.K., Cuzzone, J.K., Briner, J.P., Badgeley, J.A., Cluett, A.A., Downs, J., **Lesnek, A.J.,** Young, N.E., Allan, E., Bennike, O., Csatho, B., de Vernal, A., Hakim, G.J., Johnson, J.V., Larour, E., Morlighem, M., Nowicki, S., Schaefer, J., Schlegel, N.J., Steig, E.J., Turrin, M., Precipitation modulates Greenland Ice Sheet size during the Holocene. Oral presentation at 2020 AGU Fall Meeting, December 15, Online.

2020 **Lesnek, A.J.,** Larsen, D.J., Licciardi, J.M., A multi-proxy reconstruction of Pleistocene-Holocene denudation rates in the eastern Teton Range, Wyoming. Poster presented at 2020 AGU Fall Meeting, December 10, Online.

2020 **Lesnek, A.J.,** Licciardi, J.M., Thackray, G.D., Constraining Late Quaternary offset rates along the Teton Fault, Wyoming, using cosmogenic $^{10}$Be dating of alluvial landforms. Poster presented at 2020 GSA Annual Meeting, October 28, Online.

2019 Briner, J.P., Cuzzone, J.K., Badgeley, J.A., Allan, E., Bennike, O., Cluett, A.A., Csatho, B., Corcoran, M.C., de Vernal, A., Downs, J., Hakim, G.J., Johnson, J.V., Larour, E., **Lesnek, A.J.,** Morlighem, M., Nowicki, S., Schaefer, J., Steig, E.J., Thomas, E.K., Young, N.E., Greenland Ice Sheet mass loss rate will exceed Holocene values this century. Oral presentation at 2019 AGU Fall meeting, San Francisco, CA.

2019 **Lesnek, A.J.,** Briner, J.P., Young, N.E., Cuzzone J.K., Maximum Greenland Ice Sheet recession in the Early Holocene. Poster presented at 2019 AGU Fall Meeting, December 10, San Francisco, CA.

2019 Young, N.E., Briner, J.P., **Lesnek, A.J.,** Balter, A., Cuzzone, J.K., Graham, B.L., Schaefer, J., Constraining periods of reduced Greenland Ice Sheet extent using in situ $^{10}$Be-$^{14}$C-$^{26}$Al measurements in recently exposed bedrock surfaces. Poster presented at 2019 AGU Fall Meeting, December 10, San Francisco, CA.

2019 Cuzzone, J.K., Morlighem, M., Schlegel, N.J., Larour, E., Briner, J.P., Young, N.E., **Lesnek, A.J.,** Badgeley, J.A., Steig, E.J., Hakim, G.J., Investigating the role climate reconstructions play in the simulated retreat history of southwestern Greenland during the Holocene using the Ice Sheet System Model (ISSM), Poster presented at 2019 AGU Fall Meeting, December 10, San Francisco, CA.

2018 Briner, J.P., Young, N.E., Allan, E., Badgeley, J.A., Bennike, O., Cluett, A.A., Csatho, B., Corcoran, M.C., Cuzzone, J.K., de Vernal, A., Downs, J., Hakim, G.J., Johnson, J.V., Larour, E., **Lesnek, A.J.,** Morlighem, M., Schaefer, J., Steig, E.J., Thomas, E.K., Turrin, M., The Snow on Ice Project: A data-model collaboration for assessing Greenland Ice Sheet change during periods of Arctic warmth. Poster presented at 2018 AGU Fall Meeting, Washington, D.C.

2018 Young, N.E., Miller, G.H., Briner, J.P., Schaefer, J.M., Crump, S.E., **Lesnek, A.J.,** Pendleton, S.L., Ice-sheet sensitivity to abrupt climate change. Poster presented at 2018 AGU Fall Meeting, Washington, D.C.

2018 Nichols, S., Briner, J.P., **Lesnek, A.J.,** Reconstructing Holocene ice sheet margin history near Kangiata Nunaata Sermia, Southwest Greenland, using radiocarbon dated proglacial-threshold lake sediments. Poster presented at 2018 AGU Fall Meeting, Washington, D.C.

2018 **Lesnek, A.J.,** Briner, J.P., Baichtal, J.F., Rapid Cordilleran Ice Sheet retreat during Heinrich Stadial 1. Oral presentation at 2018 AGU Fall Meeting, December 10, Washington, D.C.

2018 **Lesnek, A.J.,** Briner, J.P., Young N.E., Synthesizing Holocene Greenland Ice Sheet chronology for data-model comparison. Poster presented at Joint CANQUA/AMQUA Biennial Meeting, August 10, Ottawa, ON.

2018 Sbarra, C., Briner, J.P., **Lesnek, A.J.,** Baichtal, J.F., Glacial erosion rate for the Cordilleran Ice Sheet in Southeast Alaska using cosmogenic $^{10}$Be concentrations in bedrock and perched boulders. Poster presented at Northeastern Section GSA Meeting, 19 March, Burlington, VT.

2018 **Lesnek, A.J.,** Briner, J.P., Young, N.E., Cuzzone, J.K., Downs, J.Z., Johnson, J.V., Holocene Greenland Ice Sheet extent for data-model comparison. Oral presentation at 48$^{th}$ Annual International Arctic Workshop, April 5, Boulder, CO.

2017 **Lesnek, A.J.,** Briner, J.P., Baichtal, J.F., Sbarra, C., Latest Pleistocene deglaciation of the Cordilleran Ice Sheet in southeastern Alaska. Poster presented at 2017 GSA Annual Meeting, October 23, Seattle, WA.

2017 Young, N.E., Miller, G.H., Briner, J.P., Schaefer, J.M., Crump, S.E., **Lesnek, A.J.,** Pendleton, S.L., Early Holocene evolution of the Laurentide and Greenland Ice Sheets. Oral presentation at 2017 GSA Annual Meeting, October 22, Seattle, WA.

2017 **Lesnek, A.J.,** Briner, J.P., Roop, H.A., Cluett, A.A., Thomas, E.K., Young, N.E., Constraints on western Greenland Ice Sheet extent during the middle Holocene

from proglacial threshold lakes. Poster presented at 47th Annual International Arctic Workshop, March 23, Buffalo, NY.

2016 Schweinsberg, A.D., Briner, J.P., Miller, G.H., **Lesnek, A.J.,** Lifton, N.A., Clements, S., Holocene Mountain Glacier Variability in the Sukkertoppen Region, Western Greenland. Poster presented at 2016 AGU Fall Meeting, December 12, San Francisco, CA.

2016 **Lesnek, A.J.,** Briner, J.P., It takes two: New constraints on Cordilleran Ice Sheet extent and retreat from $^{10}$Be and radiocarbon dating. Oral presentation at 2016 AGU Fall Meeting, December 11, San Francisco, CA.

2016 **Lesnek, A.J.,** Briner, J.P., It takes two: Using $^{10}$Be and radiocarbon dating to decipher the glacial history of southeastern Alaska. Oral presentation at 46th Annual International Arctic Workshop, April 2, Boulder, CO.

2015 **Lesnek, A.J.,** Briner, J.P., Schweinsberg, A.D., Lifton, N.A., Toward a master chronology for western Greenland's Fjord Stade Moraines: New $^{10}$Be ages from the Søndre Isortoq region. Oral presentation at 2015 AGU Fall Meeting, December 17, San Francisco, CA.

2015 **Lesnek, A.J.,** Briner, J.P., Schweinsberg, A.D., Lifton, N.A., A preliminary $^{10}$Be chronology of the Fjord Stade Moraines in the Søndre Isortoq region, western Greenland. Poster presented at 2015 Northeastern Section GSA Meeting, March 23, Bretton Woods, NH.

2013 **Lesnek, A.,** Martin, J.B., Deuerling, K., Hydrochemical Evidence for Differential Weathering in Proglacial and Deglaciated Streams in Western Greenland. Poster presented at University of Florida Undergraduate Research Symposium, March 23, Gainesville, FL.

## TEACHING

**Queens College**

Introduction to Planet Earth – Spring 2022, Spring 2023, Fall 2024, Spring 2026, Spring 2027
Sediments and Landscapes – Fall 2021, Fall 2022, Spring 2024, Fall 2025
GIS in Geoscience – Fall 2022, Fall 2023, Spring 2025, Fall 2026
Ice Ages and Paleoclimate – Spring 2024, Fall 2025
History of Earth and Life – Fall 2025 (partial)

**University of New Hampshire**

Historical Geology – Spring 2020, Spring 2021
Paleoceanography – Fall 2020
Innovation Scholars I – Fall 2020
Innovation Scholars II – Spring 2021

**University at Buffalo**

Glacial Geology – Fall 2017
Environmental Remote Sensing (TA) – Spring 2019
Geology Field Camp (TA) – Summer 2018
Natural Hazards (TA) – Fall 2014, Fall 2015, Fall 2018
Climate Change (TA) – Spring 2015, Spring 2016

## STUDENT MENTORING

### Graduate

Amado Cordova (Ph.D. dissertation advisor, 2026-present, Queens College)
Amado Cordova (M.A. thesis advisor, 2025-2026, Queens College)
Jody Creel (Ph.D. dissertation advisor, 2024-present, CUNY Graduate Center)
Beatrice Capone (Ph.D. dissertation advisor, 2023-present, CUNY Graduate Center)
Devina Kalika (M.A. thesis advisor, 2024-2025, Queens College)
Rania Taib (M.A. thesis advisor, 2023-2025, Queens College)

Amaury De Jesus (Ph.D. thesis committee, 2026-present, CUNY Graduate Center)
Pedro Oliviera (Ph.D. thesis committee, 2025- present, CUNY Graduate Center)
Julia Sandke (M.A. thesis committee, 2025-present, Queens College)=
Tasfia Zaman (M.A. thesis committee, 2025, Queens College)
Vitali Badziai (Ph.D. thesis committee, 2024-present, CUNY Graduate Center)
Kelsey Barker (Ph.D. thesis committee, 2024-present, Rowan University)
Renato da Silva (Ph.D. thesis committee, 2024-present, CUNY Graduate Center)
Amanda Feltz (M.A. thesis committee, 2023-2024, Queens College)
Leslie Jarrett (M.A. thesis committee, 2023-present, Queens College)
Justin Kersh (M.A. thesis committee, 2022-2024, Queens College)
Lisa Hlinka (Ph.D. thesis committee, 2022-present, CUNY Graduate Center)
Julia Brazo (M.S. thesis committee, 2021-2023, University of New Hampshire)
Calen Rubin (M.S. thesis committee, 2020-2022, University of New Hampshire)

### Undergraduate

Camila Lopez (2026-present)
Jessica Persaud (2026-present)
Shane Narine (2025-2026)
Amado Cordova (2024-2025)
Mariia Ihnatiuk (2024-2025)
Kimberly Lutchman (2023-2024)
Devina Kalika (2022-2024)
Adrian Sterling (2022-2023)
Rania Taib (2022-2023)

## SERVICE AND OUTREACH

**Journal reviewer:** Applied Computing and Geoscience, Boreas, Climate of the Past, The Cryosphere, Geochronology, Geology, Geophysical Research Letters, The Holocene, Nature Communications, Nature Geoscience, Oceanography, Proceedings of the National Academy of Sciences, Quaternary Research, Quaternary Science Advances, Quaternary Science Reviews

**Ad hoc reviewer:** NSF: Arctic Natural Sciences, CAREER, Water Landscape and Critical Zone Processes; Irish Research Council

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| 2025-present | Personnel and Budget committee, School of Earth and Environmental Sciences, Queens College |
| 2024-present | Chair, Assessment committee, School of Earth and Environmental Sciences, Queens College |
| 2024-present | Ph.D. admissions committee, Department of Earth and Environmental Sciences, CUNY Graduate Center |
| 2024-2026 | Faculty collaborator, Queens STEM Academy |

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|---|---|
| 2024 | Research mentor, CUNY Transfer to STEM Student Success Program |
| 2024 | Co-convener for oral session at Geological Society of America Northeastern Section Meeting: "Glacial Geology and Geomorphology of Northeastern North America: Current Gaps and Future Directions" |
| 2023-2024 | Ad hoc Geology curriculum committee, School of Earth and Environmental Sciences, Queens College |
| 2022-present | Member, Paleoglaciers Working Group |
| 2022 | Co-convener for technical session at GSA Connects: "The Last Glacial–Interglacial Transition in Western North America: Paleoclimate Proxies, Environmental Responses, and Data-Model Comparisons" |
| 2021-2022 | Organizer for Queens College Earth and Environmental Sciences Colloquium |
| 2021 | Primary convener for oral session at AGU Fall Meeting: "Human responses to Late Quaternary Paleoenvironmental Change" |
| 2021 | Panelist, Negotiating for an Academic Position, Woods Hole Oceanographic Institution |
| 2020, 2021 | Panelist, Scientific Writing Workshop: Essential Skills for Earth Scientists, AGU Fall Meeting |
| 2019 | Primary convener for technical session at AGU Fall Meeting: "Catching cosmic rays: Advances in using cosmogenic nuclides to quantify earth surface processes" |
| 2019 | Co-convener for technical session at GSA Annual Meeting: "Cordilleran Ice Sheet through the Quaternary: Chronology, paleoenvironments, and implications" |
| 2019-present | Focus area maintainer and moderator, Informal Cosmogenic nuclide Exposure-age Database (ICE-D) |
| 2017-2019 | Faculty Liaison, Department of Geology, University at Buffalo |
| 2017 | Local organizing committee, NSF-sponsored workshop on Greenland Ice Sheet Stability |
| 2017 | K-12 Education and Outreach Committee, Buffalo March for Science |
| 2014-2017 | Graduate Student Association Senator, University at Buffalo |

**MEDIA**

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|---|---|
| 2024 | When did humans get to South America? This giant shelled mammal fossil may hold clues<br>Quoted on NPR's *All Things Considered* |
| 2022 | Scientists have unearthed what could be the world's oldest ice core<br>Quoted in *Nature News* |
| 2022 | Peopling of the Americas<br>Guest on *PNAS Science Sessions* podcast |
| 2021 | Sitka Nature Show Episode #241<br>Guest on KCAW Radio (Sitka, Alaska) |
| 2020 | Stone artifacts hint that humans reached the Americas surprisingly early<br>Quoted in *Science News* |
| 2020 | Continental ice sheet left Southeast Alaska thousands of years earlier<br>Guest on KFSK Community Radio (Petersburg, Alaska) |

2020 Current, past Tongass employees essential to Cordilleran Ice Sheet research
Tongass National Forest Newsletter

2019 First Americans arrived at least 16,000 years ago, and probably by boat
Quoted in *PBS NOVA*

2019 2,000-Year-Old Tattoo Tool Found in Washington Storage Closet
Quoted in *Gizmodo*

2018 Humans May Have Reached North America by More Than One Route
*Gizmodo*

2018 Boulder-sized Clues to How Humans Settled the Americas
*The New York Times*

2018 The First Americans 'island hopped' down the west coast past the glaciers
Guest on *Quirks & Quarks* podcast

2018 How Did Ancient Humans Travel to America from Asia? New Research Looks at Pacific Coast
*Newsweek*

2018 New map of Alaska's ancient coast supports theory that America's first people arrived by boat
*Science Magazine*

**PROFESSIONAL DEVELOPMENT**

2026 Pedagogies of Writing Workshop, Queens College Center for Excellence in Teaching, Learning & Leadership
2025 Summer Python Intensive, CUNY Graduate Center
2025 Python Scripting for Geoprocessing Workflows course, Esri
2025 NSF CAREER Bootcamp, CUNY Advanced Science Research Center
2024 Mastering Geospatial Visualizations with GMT/PyGMT, AGU24 Pre-conference workshop
2023 GIS for Climate Action course, Esri
2023 Introduction to Python for Earth Sciences Workshop, City College of New York
2022 Early Career Geoscience Faculty Workshop, National Association of Geoscience Teachers
2021 Grants 101 Bootcamp, CUNY Advanced Science Research Center
2021 Unlearning Racism in the Geosciences (URGE), University of New Hampshire
2020 "Introduction to Inclusive Teaching" course, University of New Hampshire
2018 NSF NAVIGATE Project participant
2017 Associate level certification, Center for the Integration of Research, Teaching and Learning

**AFFILIATIONS**

American Geophysical Union (AGU)
American Quaternary Association (AMQUA)
Center for the Integration of Research, Teaching, and Learning (CIRTL)
Geological Society of America (GSA)
National Association of Geoscience Teachers (NAGT)