KELLY BEST LAZAR

PERSONAL DATA

Assistant Professor
Engineering and Science Education
Environmental Engineering and Earth Sciences
Clemson University
Clemson, SC 29634
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EDUCATION

- Ph.D., The Ohio State University, 2014, Geological Sciences
- M.S., East Carolina University, 2010, Geology
- B.S., North Carolina State University, 2007, Geology

PROFESSIONAL EXPERIENCE

- Clemson University, 2018-present, Assistant Professor, Engineering and Science Education, Environmental Engineering and Earth Sciences;
- Clemson University, 2016-2018, Postdoctoral Fellow, Environmental Engineering and Earth Sciences
- Capital University, 2015, Adjunct Professor
- The Ohio State University, 2015, Instructor, School of Earth Sciences; 2013-2014, Head Graduate Teaching Assistant, School of Earth Sciences; 2010-2013, Graduate Research Assistant, Byrd Polar and Climate Research Center
- East Carolina University, 2007-2010, Graduate Research and Teaching Assistant
- North Carolina State University, 2006-2007, Undergraduate Teaching Assistant, Undergraduate Lab Coordinator

CONSULTING EXPERIENCE

- Tuskegee University, Tuskegee, Alabama (2021-present), evaluator for NSF IUSE grant

MEMBERSHIPS

- Member, Geological Society of America, GSA (2008-present)
  - Secretary/Treasurer, Marine and Coastal Geosciences Division (2022-present)
  - Past Chair, Geoscience Education Division (2021-2022). *Previously served as Second Vice Chair (2018), First Vice Chair (2019), and Chair (2020).*
- Member, Society for Advancement of Chicanos/Hispanics and Native Americans in Science, SACNAS (2020-present)
- Member, International Association for Geoscience Diversity (2018-present)
- Member, National Association of Geoscience Teachers, NAGT (2016-present)
- Member, Cushman Foundation for Foraminiferal Research, (2016-present)
- Member, Earth Science Women's Network (2020-present)
- Member, National Science Teachers Association, NSTA (2018-present)
- Member, American Geophysical Union, AGU (2016-2018)

HONORS AND AWARDS

1. Lazar, K. and Moysey, S., 2019. Virtual Reality Geoscience Field Trips: Bringing the World into the Classroom. **Invited presentation**, **Coalition for National Science Funding Exhibition, Washington, D.C**. (April 2019). Chosen by three geoscience professional societies (American Geophysical Union, Geological Society of America, and American Geosciences Institute) as their sole representative for their submission to this exhibition for members of Congress, the National Science Board, and others. Visit also involved Congressional visits on Capitol Hill.

2. Qualitative Research Methods (QRM) Scholar, University of Maryland program funded by NSF, 2021-2022 Cohort.

3. Tigers ADVANCE Building Bridges to Success Awardee. Awarded to bring Dr. Karen McNeal (Auburn University) to campus (delayed due to COVID-19), (2019-2020).

PUBLICATIONS

* = graduate student when work conducted; ** = undergraduate student when work conducted

Google Scholar H-Index: 7

Books and Monographs

1. Moysey, S.M. and Lazar, K.B., 2019. Guidelines for using Virtual Reality as a Tool for Field-Based Learning in the Earth Sciences, In: S. Macdonald and R. Lansiquot, *Interdisciplinary Perspectives on Virtual Place-Based Learning,* Palgrave Macmillan.

Prior to Clemson

2. Rashid, H., Otieno, F.O., Best, K.M., and C. K. Shum, 2013. Analysis of Paleoclimate Records for Understanding the Tropical Hydrologic Cycle in Abrupt Climate Change. *Climate Vulnerability: Understanding and Addressing Threats to Essential Resources*. Elsevier Inc., Academic Press, 127–139 pp. [ISBN: 9780123847034]

Refereed Journal Publications

Published & Accepted

1. *Bolick, M.A., *Thomassen, M., *Apland, J., **Spencer, O., Nicole, F., *Tran, S., Voigt, M.K., and Lazar, K.B., 2024. Project-Based Learning in Interdisciplinary Spaces: A Case Study in Norway and the United States. Education Sciences 14(8): 866, https://doi.org/10.3390/educsci14080866
2. *Boyd. E.A. and Lazar, K.B., 2024. "I'm still here and I want them to know that": Student experiences and effects of concealable identities on Undergraduate Research Science Capital. Chemistry Education Research and Practice, DOI: 10.1039/D4RP00094C.
3. *Boyd, E.A., Lazar, K.B., and Voigt, M., 2024. Humanizing geoscience education research through participant-driven visual representation, Journal of Geoscience Education 72(1), 15–23. https://doi.org/10.1080/10899995.2023.2193551
4. *Boyd, E.A., Lazar, K.B., Moysey, S., 2024. Big data to support geoscience recruitment: Novel adoption of topological data analysis in geoscience education. GSA Bulletin 136 (3-4): 1458–1468, DOI:10.1130/B36889.1.
5. *Bowman, C., Lazar, K.B., Carraway, E., Ladner, D., and Whitmire, S., 2024. Fluvial Concentrations of Microplastics in a Suburban Micro-Watershed: Sampling Methodology and Analysis. Environmental Engineering Science, https://doi.org/10.1089/ees.2024.0109.
6. *Boyd, E.A. and Lazar, K.B. Undergraduate Research Science Capital: Measuring Capacity to Engage in Research. *Accepted (Summer 2024)*, PLOS ONE.
7. *Boyd, E.A. and Lazar, K.B. Development of the Undergraduate Research Science Capital Scale. *Accepted (Summer 2024)*, Scholarship and Practice of Undergraduate Research.
8. Walker, E.B. and Lazar, K.B., 2022. Students as science content creators and evaluators: A case study of video documentary storytelling in science education. Journal of College Science Teaching 52(2): 3-8.
9. *Boyd, E.A. and Lazar, K.B., 2022. "I made the right decision": A case study of student geoscience persistence and involvement surrounding an international field experience. Journal of Geoscience Education, https://doi.org/10.1080/10899995.2022.2036045.
10. Lazar, K.B. and Moysey, S.M., 2020. Enabling student self-guided field expeditions in geoscience with the GeoXploration Platform for mobile apps. Applied Computing and Geosciences, https://doi.org/10.1016/j.acags.2020.100028.
11. Dipre, G., Polyak, L., Kuznetsov, A., Oti, E., Ortiz, J., Brachfeld, S., Xuan, C., Lazar, K., and Cook, A., 2018. Plio-Pleisocene sedimentary record from the Northwind Ridge: first insight into paleoclimatic evolution of the western Arctic Ocean for the last >5 Ma. Arktos 4:24 https://doi.org/10.1007/s41063-018-0054-y

Prior to Clemson Faculty Position

12. Lazar, K.B., Moysey, S.M., Brame, S., Coulson, A., Lee, C., and Wagner, J., 2018. Breaking out of the traditional lecture hall: Geocaching as a tool for experiential learning in large geology service courses. Journal of Geoscience Education 66: 17–185.
13. Rashid, H., Piper, D.J.W., Lazar, K.B., McDonald, K., and Saint-Ange, F., 2017. The Holocene Labrador Current: changing linkages to atmospheric and oceanographic forcing factors. Paleoceanography DOI: 10.1002/2016PA003051.
14. Lazar, K.B. and Polyak, L., 2016. Pleistocene benthic foraminifers in the Arctic Ocean: implications for sea-ice and circulation history. Marine Micropaleontology 126: 19–30.
15. Lazar, K.B., Polyak, L., and Dipre, G., 2016. Reexamination of the creation of Cassidulina neoteretis (Foraminifera) and its use as a Pleistocene biostratigraphic marker in the western Arctic Ocean. Journal of Foraminiferal Research 46: 115–123.
16. Lazar, K.B., Mallinson, D.J., and Culver, S.J., 2016. Late Quaternary development of the Croatan Beach Ridge Complex, Bogue Sound, Bogue Banks, NC, USA and implications for coastal evolution. Estuarine, Coastal and Shelf Science 174: 49–64.
17. Polyak, L., Best, K.M., Crawford, K.A., Council, E.A., and St-Onge, G., 2013. Quaternary history of sea ice in the western Arctic Ocean based on foraminifera. Quaternary Science Reviews 79: 145–156.

In Review

1. *Conner, S. and Lazar, K.B. Development of the Four-Phase Geoscience Interest Scale. In review, Journal of Geoscience Education

Conference Proceedings (Reviewed)

1. **Harrison, **S., Sarambo, S.E., **Weaver, N., Moysey, S., Lazar, K.B., Wu, R., 2024. Turtle VR: Virtual Reality Field Experience for Geological Engineering Education Enhancement. 2024 IEEE Frontiers in Education (FIE) Conference, eCF Paper Id: 1571004708.
2. Solomon, J.T., Poozesh, S., *Song, H., McNeal, K., Beckingham, L.E., Lazar, K.B., 2023. Building High-Level Environmental Behavior into HBCU Engineering. American Society of Engineering Education (ASEE) Annual Conference, Baltimore, MD (June 2023).
3. *Rudolph, B., *Musick, G., *Wiitablake, L., Lazar, K., Mobley, C., Boyer, M., Moysey, S., Robb, A., and Babu, S., 2020. Investigating the Display Fidelity of Popular Head-Mounted Display Systems on Spatial Updating and Learning in VR. 15th International Symposium on Visual Computing.

Conference Proceedings (Abstracts)

1. *Conner, S. and Lazar, K.B., 2024. Measuring introductory student interest in geoscience using the new four-phase geoscience interest scale (FPGIS). GSA Connects 2024, annual meeting of the Geological Society of America, Anaheim, CA (September 2024).
2. *Gleasman, G., Lazar, K.B., and DeWolf, S., 2024. Impact of Hurricane Ian on carbon dioxide (CO2) flux in tidal wetlands of North Inlet-Winyah Bay, South Carolina. GSA Connects 2024, annual meeting of the Geological Society of America, Anaheim, CA (September 2024).
3. **King, A. and Lazar, K.B., 2024. Faithfulness of Foraminifera to depositional environments: A meta-analysis of studies in the southeastern United States. GSA Connects 2024, annual meeting of the Geological Society of America, Anaheim, CA (September 2024).
4. **McKinney, C., *Conner, S., and Lazar, K.B., 2024. Development of a concept inventory for coastal studies systems thinking: A socio-scientific approach. GSA Connects 2024, annual meeting of the Geological Society of America, Anaheim, CA (September 2024).
5. **Spencer, O., Voigt, M., Lazar, K., *Bolick, M., 2024. Designing Course Curriculum to Expand Humanitarian Engineering Initiatives at Clemson University. Poster presentation at the 8th Annual Summer Creative Inquiry + Undergraduate Research Showcase, Clemson, SC.
6. *Boyd, E.A. and Lazar, K.B., 2024. Potential Effects of Undergraduate Research Participation on Student Well-being. Biennial Conference on Chemical Education, Lexington, KY (July 2024).
7. *Paz, S.S., Abayomi, B.A., Lazar, K.B., McLamore, E.S., Ladner, D., and Vanegas, D.C., 2024. Toward engineered wastewater reuse in hydroponic cultivation: Electrochemical Apta-Sensor for *Escherichia coli* O157: H7 monitoring in a combined AnMBR-NFT system. Gordon Research Conference: Nanoscale Science and Engineering for Agriculture and Food Systems, Manchester, NH (June 2024).

8. **Small, E., *Conner, S., and Lazar, K.B., 2024. Exploration of SEM and Raman analytical techniques to determine microplastic incorporation in foraminifera. Geological Society of America, Southeastern Section Meeting, Asheville, NC (April 2024).
9. **Spencer, O., *Bolick, M., Lazar, K., Voigt, M., 2024. Fostering Empowerment in Interdisciplinary STEM Education: Student Lead Curriculum Development. Poster presentation at Clemson University 19th Annual Focus on Creative Inquiry Forum, Clemson, SC (April 2024).
10. *Bowman, C., Lazar, K.B., Carraway, E., Ladner, D., Whitmire, S., 2024. Fluvial Microplastics in Surface Waters of an Urban Freshwater Watershed. Clemson Hydrogeology Symposium, Clemson, SC (March 2024).
11. **Small, E., *Conner, S., and Lazar, K.B., 2024. Multi-instrument Investigation of Potential Microplastic Incorporation within Foraminiferal Tests, Charleston, South Carolina. Clemson Hydrogeology Symposium, Clemson, SC (March 2024).
12. *Conner, S. and Lazar, K., 2024. Comparing Student Interest in Geoscience to their Risk and Exposure to Water-related Geohazards. Clemson Hydrogeology Symposium, Clemson, SC (March 2024).
13. *Bolick, M.A., Voigt, M., and Lazar, K.B., 2024. Fostering Empowerment in STEM Education: Student-Led Curriculum Development. Fourteenth Research Conference in Mathematics Education (MADIF-14), Orebro, Sweden (March 2024).
14. *Boyd, E.A. and Lazar, K., 2023. Student Experiences with Accessibility: Barriers and Opportunities to Undergraduate Research Experiences. Geological Society of America Abstracts with Programs, GSA Connects 2023, Pittsburgh, PA (October 2023).
15. *Conner, S. and Lazar, K., 2023. Connecting Risk, Water Hazard Interest, and Career Motivations with Pre-Existing Data and Student Survey Responses: An Interdisciplinary Approach. Geological Society of America Abstracts with Programs, GSA Connects 2023, Pittsburgh, PA (October 2023).
16. **Johnson, B., Lazar, K.B., and Lee, C., 2023. Trends in Blue Indices through Time as Captured by Near-Shore Time Series Photographs. Geological Society of America Abstracts with Programs, GSA Connects 2023, Pittsburgh, PA (October 2023).
17. Lazar, K.B., Babu, S., *Boyd, E.A., Boyer, D.M., *Gleasman, G., Mobley, C., Moysey, S.M., *Tolchinsky, M., 2023. Multi-Institutional Investigation of the Use of Virtual Reality in Undergraduate Introductory Geoscience Courses. Geological Society of America Abstracts with Programs, GSA Connects 2023, Pittsburgh, PA (October 2023).
18. *Bowman, C., Lazar, K.B., Whitmire, S., and Carraway, E., 2023. Spatial Distribution of Microplastics within Hunnicutt Creek, SC. Clemson Hydrogeology Symposium, Clemson, SC (April 2023).
19. **McCluskey, C., Lazar, K.B., and *Boyd, E.A., 2023. Analysis of Metals of Concern in Sediments of Lake Hartwell, SC. Clemson Hydrogeology Symposium, Clemson, SC (April 2023).
20. **Purney, C. and Lazar, K.B., 2023. Microplastics in Surface Water and Sediments of Lake Hartwell, SC. Clemson Hydrogeology Symposium, Clemson, SC (April 2023).
21. *Boyd, E.A. and Lazar, K.B., 2023. Factors influencing science transfer student participation in undergraduate research. National Institute for the Study of Transfer Students [NISTS] Annual Conference, virtual (February 2023).
22. **Bowman, C., Lazar, K.B., Whitmire, S., and Carraway, E., 2022. Microplastic Trapping Efficiency within a Low-Cost Sediment Trap. Geological Society of America Abstracts with Programs, GSA Connects 2022, Denver, CO (October 2022).
23. *Boyd, E.A., *Conner, S., and Lazar, K.B., 2022. Identification of Science Students' Opportunities and Barriers to Undergraduate Research Experiences. Geological Society of America Abstracts with Programs, GSA Connects 2022, Denver, CO (October 2022).
24. *Gleasman, G. and Lazar, K., 2022. Measuring Soil Gas Flux in Dynamic Coastal Environments with Low-Cost Instrumentation. Geological Society of America Abstracts with Programs, GSA Connects 2022, Denver, CO (October 2022).
25. *Gleasman, G., Babu, S., Boyer, D.M., *Hagge, K., Lazar, K.B., Mobley, C., Moysey, S.M., *Wittablake, L., and Wu, R., 2022. Assessing Presence in Geoscience Virtual Field Trips. Geological Society of America Abstracts with Programs, GSA Connects 2022, Denver, CO (October 2022).
26. *Boyd, E.A., Lazar, K.B., Voigt, M. (2022) Reducing researcher bias: Participant-driven visual representation in qualitative education research. Biennial Conference on Chemical Education, Purdue University, West Lafayette, IN (July 2022).
27. Lazar, K., **Bowman, C., Whitmire, S., and Carraway, E., 2022. Development of New, Low-cost Sediment Traps for Riverine Microplastic Quantification. Frontiers in Hydrology Annual Meeting Abstracts with Program, San Juan, PR (June 2022).

28. Carraway, E., Lazar, K., Whitmire, S., **Bowman, C., and *Gleasman, G., 2022. Promoting Collaborative and Interdisciplinary Studies of Microplastics at Clemson University by Acquisition of Rapid Measurement Instrumentation (Agilent8700 LDIR). CAFLS Water Symposium, Clemson, SC (May 2022).
29. **Bowman, C., Lazar, K., Whitmire, S., Carraway, E., *Gleasman, G., 2022. Sediment Trap Development and Quantification of Microplastics Deposition in the Black and Waccamaw River Systems, South Carolina. In: Geological Society of America, North Central-Southeastern Joint Section Meeting Abstracts with Program, Cincinnati, OH (April 2022).
30. *Gleasman, G., Lazar, K., DeWolf, S., 2022. Novel Design and Methodology for Investigating Soil Gas Flux in Tidal Wetland Environments. Clemson Hydrogeology Symposium, Clemson, SC (March 2022).
31. **Leitch, N., Lazar, K., **Anderson, K., *Gleasman, G., *Boyd, E., and Lee, C., 2022. A Multiproxy Approach for Understanding Environmental Change in Marsh Environments, Croatan Sound, NC. Clemson Hydrogeology Symposium, Clemson, SC (March 2022).
32. *Gleasman, G. and Lazar, K., 2021. Design and methodology for investigating carbon (CO2) flux during high energy storm events in tidal wetlands: A present and historical approach. Geological Society of America Abstracts with Programs, 53(6), doi: 10.1130/abs/2021AM-367657.
33. *Boyd, E.A., Lazar, K.B., and Moysey, S.M., 2021. Topological data analysis as a tool to assess geoscience student recruitment potential. Geological Society of America Abstracts with Programs, 53(6), https://doi.org/10.1130/abs/2021AM-370931.
34. *Corradino, J., Gallagher, E.D., Scribner, E., Lazar, K., Brame, S., Fidler, M., and Murdoch, L.C., 2021. Student experiences and perceptions of skill development in a multi-modal field course: Application of the Cognitive Apprenticeship Framework. Geological Society of America Abstracts with Programs, 53(6), doi: 10.1130/abs/2021AM-370972.
35. **Waling, A., Lazar, K., and Smith, N.A., 2021. Determining the provenance of Hagood Mill (SC) millstones using x-ray fluorescence and light-density spectroscopy. Geological Society of America Abstracts with Programs, 53(6), doi: 10.1130/abs/2021AM-368165.
36. **Anderson, K., Lazar, K.B., and Lee, C.M. Foraminifera as Indicators of Environmental Change & Potential Metal Contamination, Croatan Sound, NC. In: REU: Resilience and Adaptation to Coastal Change Across Virtual Communities (C2-Virtual-C) Summer Symposium (July 2021).
37. *Boyd, E.A. and Lazar, K.B., 2021. A new technique for visualizing undergraduate geoscience student involvement. In: Geological Society of America, Southeastern Section Meeting Abstracts with Program, Virtual (April 2021).
38. *Hagge, K., *Gleasman, G., Wu, R., Boyer, D.M., Lazar, K.B., and Moysey, S.M. A framework to support the classification of virtual reality experiences in environmental education. In: American Geophysical Union Annual Meeting Abstracts, Virtual (December 2020).
39. *Boyd, E.A. and Lazar, K.B., 2020. “Letting them in on the secret”: A mixed methods analysis of female student experiences on an international field experience. In: Abstracts with Programs, GSA Connects 2020, Virtual (October 2020).
40. *Gleasman, G., *Hagge, K., Wu, R., Boyer, M., Lazar, K.B., Moysey, S., 2020. Designing a conceptual framework for evaluating virtual reality learning experiences: The VR Affordances Evaluation Tool (VR-AET). In: Geological Society of America National Meeting, Abstracts with Programs, GSA Connects 2020, Virtual (October 2020).
41. *Wiitablake, L.M., *Boyd, E.A., Wu, R., Lazar, K.B., and Moysey, S.M., 2020. Examining student interest change in geoscience following a smartphone-based VR field experience. In: Geological Society of America National Meeting, Abstracts with Programs, GSA Connects 2020, Virtual (October 2020).
42. **Jordan, M., Lazar, K., Carraway, E., 2020. Depositional Record of Plastic on a Catcher Beach, Sint Joris Baai, Curacao. In: Society of Environmental Toxicology and Chemistry (SETAC), Carolinas Regional Meeting, Virtual (May 2020).
43. *Gleasman, G., Lazar, K., Gleasman, C., 2020. Conceptual Framework for Improvement of Science Communication: The Inclusive Bridge between Contemporary Research and Geoscience Education. In: Tennessee STEM Education Research Conference, Cookeville, TN (January 2020).
44. *Wiitablake, L.M., *Boyd, E.A., Lazar, K.B., Moysey, S.M., 2020. Building a Preliminary Conceptual Framework for Student Interest in the Geosciences within the Context of a Virtual Reality Field Experience. In: Tennessee STEM Education Research Conference, Cookeville, TN (January 2020).
45. Walker, E. and Lazar, K., 2019. Science Education at the Interface of STEM & Film Production. In: Clemson University Teaching Symposium, Clemson, SC (December 2019).

46. Tallapragada, M., Lazar, K., Walker, E., 2019. Visual Science communication strategies: Training and assessing communication materials developed by emerging STEM professionals and science communicators. Panel presentation In: National Communication Association Annual Meeting, Baltimore, MD (November 2019).
47. **Weaver, N., **Guevara, M., **Gibel, M., *Wiitablake, L., Moysey, S., Wu, R., Lazar, K., 2019. Promoting Environmental Education in Coastal Regions Using Virtual Reality. In: North Carolina Coastal Conference, Wilmington, NC (November 2019).
48. Moysey, S. and Lazar, K., 2019. Leveraging mobile devices to scale-up field learning in real and virtual environments. In: Geological Society of America Annual Meeting, Phoenix, AZ (September 2019).
49. Moysey, S., *Sellers, V., Lazar, K., Boyer, D.M., Mobley, C., Babu, S., **Rudolph, B., *Musick, G., and *Wiitablake, L., 2019. Virtual reality exploration of Grand Canyon as a means of geoscience engagement. In: Geological Society of America Annual Meeting, Phoenix, AZ (September 2019).
50. *Sellers, V., Moysey, S., Lazar, K., and Benson, L., 2019. Changes in geology interest after a virtual reality geology field experience. In: Geological Society of America Annual Meeting, Phoenix, AZ (September 2019).
51. *Wiitablake, L., Lazar, K., and Moysey, S., 2019. Considerations in developing a geoscience virtual reality field experience: An education perspective. In: Geological Society of America Annual Meeting, Phoenix, AZ (September 2019).
52. **Caldwell, J. and Lazar, K., 2019. The Impact of Different Modes of Science Communication on the Behavioral Intentions of Students Related to Geoscience. Clemson Hydrogeology Symposium, Clemson, SC (April 2019).
53. **Sutherland, R. and Lazar, K., 2019. Predicting Future Ocean Acidification Effects on Foraminifera, Scotts Head and Champagne Beach, Dominica. Clemson Hydrogeology Symposium, Clemson, SC (April 2019).
54. **Brown, Z. and Lazar, K., 2019. Impact of ocean acidification on benthic foraminifera of Toucari Bay and Purple Turtle, Dominica. In: Geological Society of America, Abstracts with Programs, Southeast Regional Meeting, Charleston, SC (March 2019).
55. **Staub, A., Lazar, K., and Moysey, S., 2019. The sediment record as an indicator of changing ocean-lagoon dynamics, Boka Ascension, Curacao. In: Geological Society of America, Abstracts with Programs, Southeast Regional Meeting, Charleston, SC (March 2019).
56. Moysey, S. and Lazar, K., 2018. Using Technology to Increase Student Connectedness to Nature. In: American Geophysical Union Annual Meeting, Washington, D.C. (December 2018).
57. Lazar, K. and Moysey, S., 2018. Impact of exploratory geoscience activities on students' connectedness to nature. In: Geological Society of America Annual Meeting, Indianapolis, IN (October 2018).
58. **Hibberts, S., Lazar, K. and Moysey, S., 2018. Place-Based Learning to Promote Climate Change Literacy in the Marshall Islands. In: Geological Society of America Annual Meeting, Indianapolis, IN (October 2018).
59. Shuller-Nickles, Lazar, K. Fidler, M., and Lee, C., 2018. A response to the call for increased female faculty in the geosciences. In: Geological Society of America Annual Meeting, Indianapolis, IN (October 2018).
60. **Staub, A., Lazar, K. and Moysey, S., 2018. Foraminiferal and sedimentological evidence of environmental change in an incised inlet, Boka Ascension, Curaçao, Lesser Antilles. In: Geological Society of America Annual Meeting, Indianapolis, IN (October 2018).

Prior to Clemson Faculty Appointment

61. Lazar, K. and Moysey, S., 2018. Science communication as a conduit for geoscience engagement in non-major students. In: Earth Educators' Rendezvous Abstracts, 4th Annual Meeting, Lawrence, KS (July 2018).
62. **Hibberts, S., Lazar, K.B., and Moysey, S.M., 2018. Sedimentological and foraminiferal evidence of potential paleostorm activity on Dominica, Lesser Antilles. In: Geological Society of America, Abstracts with Programs, Southeast Regional Meeting, Knoxville, TN (April 2018).
63. **Thomas, M., Lazar, K.B., and Smith, N.A., 2018. Using Fossils to Determine the Geologic Origin of the Hagood Millstone (Pickens, SC). Clemson Hydrogeology Symposium, Clemson, SC (April 2018).
64. Lazar, K., Rashid, H., Vermooten, M., and Mingqui, D., 2017. Abrupt changes in bottom water benthic foraminiferal assemblages during Heinrich events 1-4. In: American Geophysical Union Abstracts, Annual Meeting, New Orleans, LA (December 2017).

65. Lazar, K. and Moysey, S., 2017. Outdoor experiential learning to increase student interest in geoscience careers. In: American Geophysical Union Abstracts, Annual Meeting, New Orleans, LA (December 2017).
66. Moysey, S. and Lazar, K., 2017. Virtual Reality as a Story Telling Platform for Geoscience Communication. In: American Geophysical Union Abstracts, Annual Meeting, New Orleans, LA (December 2017).
67. Lazar, K., 2017. Fumaroles & Foraminifera: Chronicling effects of decreased pH on benthic foraminifera of Dominica. In: Geological Society of America, Abstracts with Programs, Annual Meeting, Seattle, WA (October 2017).
68. Lazar, K. and Moysey, S., 2017. Integrating geocaching and immersive technologies to encourage greater geoscience exploration and engagement. In: Geological Society of America, Abstracts with Programs, Annual Meeting, Seattle, WA (October 2017).
69. **Brazil, T. and Lazar, K., 2017. Predicting Future Effects of Climate Change based on Distribution of Calcifying Benthic Foraminifera of Dominica. Eureka! Calhoun Honors College, Clemson University, Program with Abstracts, Clemson, SC (August 2017).
70. **Faber, E., **Hibberts, S., Lazar, K., Moysey, S., 2017. Immersive Technology and Experiential Learning as Tools to Increase Geoscience Engagement. In: 5th Annual Summer Undergraduate Research Symposium, Clemson, SC (July 2017).
71. Lazar, K.B., Moysey, S.M., Wagner, J.R., Coulson, A., Brame, S., 2017. Geocaching as a tool for experiential learning and self-guided adventures in large geology courses. In: Earth Educators' Rendezvous Abstracts, 3rd Annual Meeting, Albuquerque, NM (July 2017).
72. Moysey, S.M., Boyer, M., *Sellers, V., Lazar, K., Mobley, C., 2017. Immersion versus Interaction: How do platform choices impact the design of VR learning experiences in the geosciences? In: Virtual Worlds Education Conference Abstracts, Melbourne, FL (June 2017).
73. Moysey, S.M., Lazar, K.B., Boyer, D.M., Mobley, C., and *Sellers, V., 2016. From Geocaching to Virtual Reality: Technology tools that can transform courses into interactive learning expeditions. In: American Geophysical Union Abstracts, Annual Meeting, San Francisco, CA (December 2016).
74. Rashid, H., Marche, B., Vermooten, M., Piper, D.J.W., Lazar, K., Brockway, B., and Fournier, E., 2016. An ultra-high resolution last deglacial marine sediment record of the Northwest Atlantic Ocean. In: American Geophysical Union Abstracts, Annual Meeting, San Francisco, CA (December 2016).
75. Lazar, K.B., Moysey, S.M., Wagner, J.R., Brame, S.E., *Abbott, K.A., *Wykel, J.M., *Nguyen, S., *Duvall, A.V., 2016. Take a Hike: Geocaching as an experiential learning tool in introductory geology courses. In: Geological Society of America, Abstracts with Programs, Annual Meeting, Denver, CO (September 2016).
76. **Laird, J.T. and Lazar, K.B., 2016. Understanding the Fate and Characteristics of Dispersed Oil Remnants from the 2010 Deepwater Horizon Oil Spill and Persisting Impacts to Gulf Coast Beaches. Eureka! Calhoun Honors College, Clemson University, Program with Abstracts, Clemson, SC (August 2016).
77. Lazar, K.B., Moysey, S.M., Lee, C.M., Schlautman, M.A., Wagner, J., Brame, S., and Carbajales-Dale, P., 2016. Growing the geoscience community through experiential learning activities with non-geoscience majors. In: Earth Educators' Rendezvous Abstracts, Annual Meeting, Madison, WI (July 2016).
78. Lazar, K.B., 2016. Using foraminifera to decipher the fate and characteristics of dispersed oil remnants from the 2010 Deepwater Horizon oil spill. Clemson University Research Symposium, Clemson, SC (May 2016).
79. Lazar, K.B., Moysey, S., Brame, S., Coulson, A., Wagner, J., Lee, C., Schlautman, M., and Carbajales-Dale, P., 2016. GEOPATHS: Building an affective pathway to the geosciences through experiential learning opportunities for non-geoscience majors. Clemson Hydrogeology Symposium Poster Session, Clemson, SC (March 2016).
80. Lazar, K.B., Polyak, L., Dipre, G., 2014. Reexamination of the creation of Cassidulina neoteretis (Foraminifera) and its use as a Pleistocene biostratigraphic marker in the western Arctic Ocean. School of Earth Science 2014 Poster Session (December 2014).
81. Lazar, K.B. and Polyak, L., 2014. Quaternary sea-ice regime change in the western Arctic Ocean based on benthic foraminifers. In: Geological Society of America, Abstracts with Programs, Annual Meeting, Vancouver, BC, Canada (October 2014).
82. Polyak, L., Best, K.M., Cronin, 2013. Evolution of glaciations and sea ice in the western Arctic in the Early to Middle Pleistocene. In: Proceedings of the "Past Gateways" First International Conference and Workshop, St. Petersburg, Russia (May 2013).

83. Best, K.M., Polyak, L., Crawford, K.A., 2012. Extinct foraminifera of the western Arctic Ocean: Correlation to the global deep-sea extinction of the mid-Pleistocene Transition. In: Geological Society of America, Abstracts with Programs, Annual Meeting, Charlotte, NC (November 2012).
84. Best. K.M., Polyak, L., Crawford, K.A., and Gray, R.E., 2011. A long record of foraminifera helps resolve Quaternary western Arctic stratigraphy. In: Geological Society of America, Abstracts with Programs, Annual Meeting, Minneapolis, MN (October 2011).
85. Best, K.M., Mallinson, D.J., and Culver, S.J., 2011. Quaternary Geologic Evolution of the Croatan Beach Ridge Complex, Bogue Sound, and Bogue Banks, Carteret County, NC. In: Geological Society of America, Abstracts with Programs, Southeast Regional Meeting, Wilmington, NC (March 2011).
86. Best, K.M., Polyak, L., Crawford, K.A., and Gray, R.E., 2011. Calcareous foraminifers in Northwind Ridge sediments offer a new perspective on Quaternary paleoenvironments in the western Arctic Ocean. In: Arctic Workshop Abstract Volume, Annual Meeting, Montreal, Quebec, Canada (March 2011).
87. Polyak, L.V., Best, K.M., Gray, R., Haley, B.A., Council, E.A., and Ortiz, J., 2011. A Paleo Perspective on the Role of Pacific Water in the Arctic Ocean System. In: American Geophysical Union Abstracts, Annual Meeting, San Francisco, CA (December 2011).
88. Polyak, L., Crawford, K.A., Gray, R.E., Best, K.M., + 5 others, 2010. Extended Quaternary Record of Sea-Ice Conditions and Glaciation of the Western Arctic Ocean. In: American Geophysical Union Abstracts, Annual Meeting, San Francisco, CA (December 2010).
89. Best, K.M., Mallinson, D.J., and Culver, S.J., 2009. Geologic Evolution of Pleistocene and Holocene Coastal Features, Carteret County, North Carolina. In: Geological Society of America, Abstracts with Programs, Southeast Regional Meeting, St. Petersburg, FL (March 2009).
90. Best, K.M. and Clarke, J., 2006. A New Eocene Species of Coraciiformes from the Green River Formation. In: North Carolina State University Undergraduate Research Symposium, 15th Annual Abstracts with Programs, Raleigh, NC (April 2006).
91. Best, K.M. and Clarke, J., 2005. Evidence for a Possible New Species of Eocene Coraciiformes and its Significance to Early Avian Divergence. In: North Carolina State University Undergraduate Research Symposium, 14th Annual Abstracts with Programs, Raleigh, NC (April 2005).

INVITED PRESENTATIONS

1. Lazar, K.B., Carraway, E., and Whitmire, S., 2023. Microplastics: Interdisciplinary Work with a Dash of MacGyver. **Invited Seminar**, Environmental Engineering & Earth Sciences Seminar, Clemson University (December 2023).
2. Lazar, K.B. and Voigt, M.K., 2023. Applied and Interdisciplinary STEM Education Research: Perspectives from Two American Researchers. **Invited Seminar**, MATRIC, University of Agder, Norway (May 2023).
3. Lazar, K.B., 2022. Communicating Complex Science. **Invited Speaker**, Science Communication Webinar for the Health Physics Society, Virtual (November 2022).
4. Lazar, K.B., 2022. Supporting Student Exploration through Traditional and Virtual Field Trips. **Invited Presentation**. Geological Society of America Abstracts with Programs, GSA Connects 2022, Denver, CO (October 2022).
5. Lazar, K.B., 2021. The World Needs More Geoscience: Recruiting the Next Generation of Geoscientists. **Invited Seminar**, Department of Geology, University of Georgia (September 2021).

SPONSORED RESEARCH

- "NSF EPSCoR RII-BEC: Bridging Collaboration Across South Carolina Academic Institutions to Support Underserved Community Needs (BASIC Needs)", National Science Foundation, PI, $999,999, ($300,000), (2022-2026).
- "Climate Resilient Sustainable Food Production: Controlled Environment Hydroponic Agriculture with Novel Wastewater Treatment & Reuse", National Science Foundation, Senior Personnel, $1,500,000, ($187,500), (2022-2026).
- "PROMISE: Postdoctoral Research Opportunities and Mentoring for Inclusive STEM Education", National Science Foundation, Co-PI, $1,249,729, (187,459), (2023-2026).
- "Collaborative Research: Practices and Research on Student Pathways in Education from Community College and Transfer Students to STEM (PROSPECT S-STEM)", National Science Foundation, Co-PI, $358,915, (35,915), (2022-2026).

- "Building Interdisciplinary STEM Education Research through Equity and Problem-Based Learning", UTFORSK [Norwegian funding agency, partnered with University of Agder], PI, $342,265, ($160,887 to Clemson, PI credit = $80,444), (2022-2025).
- "Collaborative Research: REU Site: Resilience and Adaptation to Coastal Change Across Virtual Communities (C2-Virtual-C)", National Science Foundation, Principal Investigator, $134,829, ($15,519 to Clemson, PI Credit = $15,519), (2020-2021).
- "IUSE: EHR: Assessing Virtual Reality Field Experiences for Enhanced Learning in the Geosciences", National Science Foundation through East Carolina subcontract, Clemson subcontract Principal Investigator, $599,950, ($357,331 to Clemson, PI Credit = $142,932), (2018-2024).
- "Supplement- GP-EXTRA: Building an affective pathway to the geosciences through experiential learning opportunities for non-geoscience majors", National Science Foundation, Principal Investigator, $599,139, ($149,785), (2015-2021).
- "IUSE: EHR: Enabling Field Experiences in Introductory Geoscience Classes through Virtual Reality", National Science Foundation, Principal Investigator, $249,995, ($99,998), (2015-2019).

OTHER SPONSORED ACTIVITY

- "Networking the Future of SCEEES: Understanding Professional Networks to Support Inclusion and Professional Development", SCEEES Tiger Grant, PI, $18,300, (2024).
- "CU-MRI: Rapid Measurement of Microplastic Particles Across Environmental Systems with Laser Directed Infrared Imaging", Clemson University Major Research Instrumentation, Co-PI, $236,518, ($49,669), (2022-2023).
- Global Learning Seed Grant, Clemson Office of Global Engagement, $4444, (2018-2019).

GRADUATE STUDENT ADVISING

Doctoral Graduates

- Boyd, E. (PhD, Engineering and Science Education, August 2023), "A mixed methods analysis of undergraduate science recruitment factors: Identifying opportunities and challenges", (Advisor & Chair).
- Gleasman, G. (PhD, Environmental Engineering and Earth Science, August 2023), "High-Energy Storm Events and Their Impacts on Carbon Storage in Tidal Wetlands of South Carolina", (Advisor & Chair).
- Johnson, S. (PhD, Engineering and Science Education, Fall 2019), "Cognitive Processes in Undergraduate Anatomy and Physiology Courses", (Committee Member).
- Sellers, V. (PhD, Engineering and Science Education, Spring 2020), "Assessing Affective Perceptions of Virtual and Traditional Geology Field Experiences", (Committee Member).
- Alnahit, A. (PhD, Civil Engineering, July 2020), "Quantifying the Role of Climate and Watershed Characteristics on Surface Water Quality in Southeast Atlantic region of the US", (Committee Member).
- Sullivan, T. (PhD, Engineering and Science Education), Mathematics Identity in Coordinated Calculus Classrooms, 2024 (Committee Member).

Master's Graduates

- Bowman, C. (MS, Hydrogeology), "Measurement of Microplastics in a Freshwater Micro-Watershed", August 2023 (Advisor & Chair).
- Topping, L. (MS, Hydrogeology), Quantifying Heterogeneity Along a Hillslope using X-Ray Fluorescence, Seismic Refractions, and Structure from Motion, May 2023 (Committee Member).
- Hurler, K. (MS, Geological Sciences – University of South Carolina, Fall 2020). "Investigating a Framework for the Effective Use of Virtual Reality in Introductory Geoscience Classrooms", (Committee Member).
- Corradino, J. (MS, Hydrogeology), "The Neogene catchment history of Bell River through U-Pb detrital zircon geochronology and Nd isotopes of Saglek basin sediments", August 2020, (Committee Member).

Current Graduate Advising

- Conner, S. (PhD, Engineering and Science Education), "Connecting risk, water hazard interest, and career motivations: An interdisciplinary approach", May 2025 (Advisor & Chair).
- Paz, S. (PhD, Environmental Engineering and Earth Science), "Advancing technology and education to promote wastewater reuse in agriculture: Developing biosensors for pathogen monitoring in

hydroponics and assessing the impact of interdisciplinary and international collaboration on STEM students involved in sustainability research", May 2026 (**Co-Chair**).
- Fallon, J. (PhD, Engineering and Science Education), Dissertation TBD, May 2026 (**Advisor & Chair**).
- Lapkoff, M. (PhD, Engineering and Science Education), Dissertation TBD, May 2027 (**Advisor & Chair**).
- Barker-Edwards, T. (MS Hydrogeology), Thesis TBD, May 2026 (**Advisor & Chair**).
- Mercer, J. (MS Environmental Engineering), Thesis TBD, May 2026 **(Co-Chair)**.
- Belk, C. (PhD, Engineering and Science Education), Spatial Reasoning, 2025 (Committee Member).
- Bolick, M. (PhD, Engineering and Science Education), Dissertation TBD, 2026 (Committee Member).
- Cooper, D. (PhD, Engineering and Science Education), Dissertation TBD, 2026 (Committee Member).
- Kroeger, E. (PhD, Environmental Engineering and Earth Science), Dissertation TBD, December 2024 (Committee Member).
- Marsh, A. (PhD, Engineering and Science Education), Dissertation TBD, 2025 (Committee Member).
- Otterbeck, S. (PhD, Engineering and Science Education), Dissertation TBD, 2025 (Committee Member).

TEACHING

Courses Taught

- ESED 3100, Interdisciplinary STEM Education Research, F23.
- ESED 3300, STEM Leadership and Mentoring, F24.
- ESED 8200, Teaching Undergraduate Engineering, F23, F24.
- ESED 8210, Teaching Undergraduate Science, S19, S20, S21, S22, S23, S24.
- ESED 8310 (was ESED 8500 in F22), STEM Communication for Broader Impact, F22, F24.
- ESED 8610, Practicum in Engineering and Science Education, F21.
- GEOL 1010, Physical Geology, F19, S20, S21, F21, S22.
- GEOL 2700, Experiences in Sustainable Development: Water, S23, F23, S24.
- GEOL 4110, Science Documentaries (Creative Inquiry), F18, S19, F19, S20, F20, S21.
- GEOL 4110, Sustainability at the Interface of Human and Natural Systems, Su19.
- GEOL 4500, Coastal Geology, F20.
- GEOL 8500/8501, Advanced Coastal Geology, F20.

New Course Development

- Sustainability at the Interface of Human and Natural Systems (GEOL 4110), adapted for use as GEOL 3800.
- Coastal Geology (taught as GEOL 4500), Advanced Coastal Geology (taught as GEOL 8500/8501)
- STEM Communication for Broader Impact (ESED 8310)
- Science Documentaries (Creative Inquiry, GEOL 4110)
- Aided in the development of Interdisciplinary STEM Education Research (ESED 3100) with Dr. Matthew Voigt and graduate student Margaret Ann Bolick.
- Aided in the development of STEM Leadership and Mentoring (ESED 3300) with graduate student Makayla Headley.

PROFESSIONAL ACTIVITIES

- Geological Society of America, Secretary/Treasurer, Marine and Coastal Geosciences Division (2022-present).
- Geological Society of America, Past Chair, Geoscience Education Division (2021-2022). Previously served as Second Vice Chair (2018), First Vice Chair (2019), and Chair (2020).
- Southeastern Section, Geological Society of America, Member, Student Support Committee (2018-present).
- Workshop Co-Convenor, Geological Society of America National Conference, Virtual Reality in Geoscience Education, GSA Connects 2023 (2023).
- Session Co-Chair, Recent Advances and New Voices in Marine and Coastal Geoscience, Geological Society of America, GSA Connects 2023.
- Session Co-Chair, Recent Advances and New Voices in Marine and Coastal Geoscience, Geological Society of America, GSA Connects 2024.

- Session Chair, Distance Learning, Geological Society of America, Annual Meeting (2020).
- Session Chair, Supporting and Advancing Geoscience Education, Geological Society of America, Annual Meeting (2020).
- Session Co-Chair, Geoscience Education Research, Geological Society of America, Southeastern Section Meeting (2021).
- Panel Discussion Chair, Exploring the Earth in AR/VR. In: UofSC Virtual Teaching Conference 2020, Columbia, SC (March 2020).
- Workshop Co-Convenor, Earth Educators' Rendezvous Annual Conference, Teaching with Augmented and Virtual Reality (57 registered participants).

UNIVERSITY AND PUBLIC SERVICE

Committees *(Group according to department, college, university.)*

- University
  - Senator, CECAS Rep. to Faculty Senate (2024-present)
  - Member, CECAS Rep. to Graduate Curriculum Committee (2022-2024)
- College
  - Member, ESED Rep. to CECAS Council on Global Engagement (2020-present)
  - Member, ESED Rep. to CECAS Curriculum Committee (2021-present);
  - Fill-in Representative, CECAS Council on Global Engagement (2018 - 2020)
  - Proxy Representative, Curriculum Committee (Fall 2019)
  - Member, Hiring Committee for CECAS Global Engagement Manager (2021)
  - Member, By-laws Committee (2019)
- Department
  - Chair, ESED Curriculum Committee *(split from Graduate Affairs Committee* Fall 2021; 2021 – present)
  - Member, EEES Inclusive Excellence *ad hoc* Committee (2020-present)
  - Member, EEES Curriculum Committee, Geology representative (2024-present)
  - Member, ESED Chair Search Committee (2023-2024)
  - Member, ESED Awards Committee (2019-2022)
  - Member, ESED Graduate Affairs Committee (2020-2021)
  - Member, ESED Faculty Search Committee (2019-2020)
  - Member, ESED Hiring Committee for Administrative Assistant (2021)
  - Member, *ad hoc* Committee on Readiness Portfolio Review for Student DC
  - Member, *ad hoc* Committee on Readiness Portfolio Review for Student AM
  - Member, *ad hoc* Committee on Readiness Portfolio Review for Student MB
  - Member, *ad hoc* Committee on Readiness Portfolio Review for Student MH

Other Service

- Reviewer, *Journal of Engineering Education* (2019, 2021).
- Reviewer, National Science Foundation (2018, 2021, 2022, 2023).
- Reviewer, *Journal of Geoscience Education* (2023, 2024).
- Reviewer, *Journal of Women and Minorities in Science and Engineering* (2024).
- Reviewer, Geological Society of America book submission (2024).
- Reviewer, Clemson Internal Competition Submission (2021).
- Reviewer, Outstanding Earth Science Teaching Award, South Carolina (2021).
- Reviewer, National Association of Geoscience Teaching Early Career Researcher Award (year redacted).
- Volunteer, ReCONNECT, outreach event for K-12 teachers and South Carolina Sea Grant (2022).
- On to the Future Mentor, Geological Society of America Annual Meeting (2021).
- Judge, Chemistry Research Symposium, Dept. of Chemistry (2021).
- Session Co-leader: CCW Graphic Comm, Snelsire, Sawyer, & Robinson Clemson Career Workshop (Summer 2020).
- Geology Booth Leader, CECAS Recess (August 2019).
- Judge, Summer REU/Undergraduate Research Symposium Poster Competition (July 2019).

MISCELLANEOUS

- On to the Future Mentorship Two-Day Training, Geological Society of America, 2024.
- RISE (Respectful Inclusive Scientific Events) Liaison, Geological Society of America, 2024-present.
- CAREER Academy, 2020 and 2021 cohort.
- Alan Alda Science Communication Workshop, 2022, attendee.
- Quantitative Methods Scholar Workshops, 2021-2022 attendee (~25 hrs).
- Global Learning Conference, November 2019, attendee.
- Clemson Teaching Symposium, December 2019, presenter and attendee.

Updated on 9.23.2024.