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# Lauren Neitzke Adamo

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## EDUCATION

- 2016 Ph.D.**                      **Rutgers University**, Graduate School of New Brunswick, NJ  
Geology/ Paleooceanography, (Advisor: Dr. James D. Wright)  
Dissertation Title: Evaluating Surface and Deep-Water Changes Over Eirik Drift During the Late Pleistocene: Implications from Geochemical and Sedimentological Proxies
- 2006 M.S.**                      **Rutgers University**, Graduate School of New Brunswick, NJ  
Paleooceanography (Advisor: Dr. James D. Wright)  
Thesis: Late Pleistocene Sedimentation on Eirik Drift: Implications for North Atlantic Deep Water Variability
- 2004 B.S. with honors**        **Rutgers University**, Rutgers College, New Brunswick, NJ  
Major: Geological Sciences with high honors  
Senior Honors Thesis: Abrupt Climate Changes in Thermohaline Circulation during the last Glacial Cycle

## PROFESSIONAL EXPERIENCE

- Director of the Rutgers Geology Museum**, Rutgers University (July 2016- Present)  
**Associate Director** (September 2009 – June 2016)  
Develop, plan and oversee all museum operations and outreach programs as well as manage public relations within the University and community.
- Assistant Teaching Professor**, Rutgers University (July 2016- Present)  
**Lecturer** (September 2008- June 2016)  
Responsible for teaching several 100 or 200 level hybrid, online, and traditional lecture based classes per year for the Department of Earth and Planetary Sciences.

## PUBLICATIONS

**Neitzke-Adamo, L.**, A.J. Blandford, J. Criscione, E. Gordor, and R.K. Olsson, 2018. The Rutgers Geology Museum: America's first geology museum and the last 200 years of geoscience education. *Museums at the Forefront of the History and Philosophy of Geology: History Made, History in the Making, Geological Society of America Special Edition Paper*, (2018).

Evans, H.F, Channell, J.E.T., Stoner, J.S., Hillaire-Marcel, C., Wright, J.D., **Neitzke, L.C.**, and G.S. Mountain, 2007. Paleointensity-assisted chronostratigraphy of detrital layers on the Eirik Drift (North Atlantic) since marine isotope stage 11. *Geochemistry, Geophysics and Geosystems*, Volume 8.

## PRODUCTS

**Neitzke Adamo, L.**, Criscione, J., Sarkar, R., and McAuliffe, C., "Mineral Matching", American Geosciences Institute, 2020 Earth Science Week Calendar- January 2021, Published in collaboration with the Geological Society of America.

**Neitzke-Adamo, L.**, Introduction. *Science Comics: Rocks and Minerals*. By Andy Hirsh. First Second Books. New York: Macmillan Imprint, (October 2020).

**Neitzke Adamo, L.**, "Glaciers, Drones, and 3D Printers, Oh My!" PolarTREC, 20 September 2019, <https://www.polartrac.com/resources/lesson/glaciers-drones-and-3d-printers-oh-my>.

**Neitzke Adamo, L.**, “Exploring 3D Geology”, PolarTREC, 20 September 2019, <https://www.polartrec.com/resources/lesson/exploring-3d-geology>. (Also published in the American Geosciences Institute, 2019 Earth Science Week Calendar)

**Neitzke-Adamo, L.**, “Sliding Glaciers.” PolarTREC, 10 August 2018 - 28 August 2018 [www.polartrec.com/expeditions/sliding-glaciers](http://www.polartrec.com/expeditions/sliding-glaciers).

## ABSTRACTS

Williams, R., **Neitzke Adamo, L.** and Boyd, M., Analyzing Coastal Geomorphology at the Rutgers University Marine Field Station with Remote Sensing Technology. Abstract 15-1, 2021 Northeast Geological Society of America Annual Meeting.

Spector, A., **Neitzke Adamo, L.**, Miller, K.G., Rowan, C.M., and Browning, J.V., Use Of Drone Technology and 3D Visualization Software for Virtual Field Trip Creation: Pebble Bluff Outcrop in the Newark Basin, New Jersey. Abstract 4-4, 2021 Northeast Geological Society of America Annual Meeting.

Irizarry-Barreto, P., Sarkar, R., and **Neitzke Adamo, L.**, Virtual Geology: Exploring the Rocking Geology of your Neighborhood! Abstract ED023-04, 2020 Fall Meeting American Geophysical Union, AGU Annual Meeting.

Schmelz, W., Rowan, C.M., **Neitzke Adamo, L.**, Spector, A., and Miller, K., Using low-cost Arduino based GNSS boards to collect centimeter accurate topography from drone orthophotography. Abstract H013-0007, 2020 Fall Meeting American Geophysical Union, AGU Annual Meeting.

Sarkar, R., **Neitzke Adamo, L.**, and Wright, J.D., A Tale of Two Drifts: A High-Resolution Study of North Atlantic Deepwater Using Marine Proxies at Eirik and Gardar Drifts. Abstract PP022-0001, 2020 Fall Meeting American Geophysical Union, AGU Annual Meeting.

Sarkar, R., Criscione, J., **Neitzke Adamo, L.**, and Irizarry, P., Virtual Merit Badge Program for Scouting Groups at the Rutgers University Geology Museum. Abstract ED023-08, 2020 Fall Meeting American Geophysical Union, AGU Annual Meeting.

Spector, A., **Neitzke Adamo, L.**, Miller, K., Browning, J.V., and Rowan, C., Drone Technology and 3d Visualization Software to Recreate In-Field Experiences in the Newark Basin. Paper No. 261-10, Geological Society of America, GSA 2020 Annual Meeting.

Sarkar, R., **Neitzke Adamo, L.**, Criscione, J., and Irizarry-Barreto, P., Integrating 3d Printing and Geosciences to Visitor Experiences at the Rutgers University Geology Museum. Paper No. 65-7, Geological Society of America, GSA 2020 Annual Meeting.

Kawalec, J., and **Neitzke Adamo, L.**, Exploration Of Structure From Motion Programs And Their Application To Improving Student Learning In Geoscience Classrooms. Paper No. 8-14, Geological Society of America, GSA 2020 Annual Meeting.

**Neitzke Adamo, L.**, Criscione, J., Irizarry-Barreto, P., Pagenkopf, L., and Hayden, D., Utilizing Photogrammetry and 3d Printers to Create Inclusive Natural History Tours and Activities for the Visually Impaired at the Rutgers Geology Museum. Paper No. 27-7, Geological Society of America, Joint 69th Annual Southeastern / 55th Annual Northeastern Section Meeting. (Meeting cancelled due to Covid-19)

Sarkar, R., **Neitzke Adamo, L.**, Irizarry-Barreto, P., and Criscione, J., Making Science Cool: A Look into the RUGM's Summer Stem Program. Paper No. 19-3, Geological Society of America, Joint 69th Annual Southeastern / 55th Annual Northeastern Section Meeting. (Meeting cancelled due to Covid-19)

Williams, R. G., **Neitzke Adamo, L.**, and Sarkar, R., 2020. Radiocarbon Dating and Climatic Events: Analyzing Deep-Sea Sediment from the Gardar Drift. Paper No. 35-17, Geological Society of America, Joint 69th Annual Southeastern / 55th Annual Northeastern Section Meeting. (Meeting cancelled due to Covid-19)

Spector, A., **Neitzke Adamo, L.**, and Miller, K. G., 2020. Drone Technology, Structure from Motion, and Lime Visualization Software to Map Sedimentary Exposures in the Newark Basin. Paper No. 72-4, Geological Society of America, Joint 69th Annual Southeastern / 55th Annual Northeastern Section Meeting. (Meeting cancelled due to Covid-19)

**Neitzke Adamo, L.**, Zoet, L. K., Iverson, N. R. and Woodard, J., 2019. Using UAVs, Structure from Motion, and 3D printers in education and outreach: An example from the Swiss Alps. Session 72, Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Gross, J. and **Neitzke Adamo, L.**, 2019. Mars through motions: Exploring Mars through the eyes of a rover by applying innovative learning techniques to undergraduate teaching in planetary sciences. Session 155, Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Amitai, W., **Neitzke Adamo, L.**, Irizarry-Barreto, P. and Criscione, J., 2019. Applications for adaptations: Exploring animal adaptations through a mobile application at the Rutgers Geology Museum. Session 190, Booth 128. Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Bellino, L. and **Neitzke Adamo, L.**, 2019. Engaging scavenger hunt to explore the JOIDES Resolution: In Search of Earth's Secrets exhibit. Session 155, Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Criscione, J., **Neitzke Adamo, L.** and Irizarry-Barreto, P., 2019. Using patch programs to engage new audiences at the Rutgers Geology Museum. Session 190, Booth 125. Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Sarkar, R., **Neitzke Adamo, L.** and Wright, J. D., 2019. A high-resolution study of the last deglaciation at Eirik and Gardar Drifts: Evidence of changing water masses from planktonic foraminiferal faunal analysis and geochemical proxies. Session 36, Booth 184. Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Sherman, E. and **Neitzke Adamo, L.**, 2019. Changing oceans and changing climates: Examining deep-water circulation changes on Gardar Drift. Session 36, Booth 185. Geological Society of America, GSA 2019 Phoenix Annual Meeting.

Hu, E., **Neitzke Adamo, L.**, Wright, J. and Mortlock, R. A., 2018. A chronology of the climatic changes in the North Atlantic Ocean established from sedimentologic and isotopic records from southern Gardar Drift. Abstract ED13E-1781, 2018 Fall Meeting American Geophysical Union, AGU, Washington D. C. Annual Meeting.

Irizarry, P., **Neitzke Adamo, L.** and Setera, J., 2018. Science on the Move: Partnerships between Industry, Academia and K-12 schools to improve STEM Education using a mobile lab. Abstract ED53B-06, 2018 Fall Meeting American Geophysical Union, AGU, Washington D.C. Annual Meeting.

Setera, J., **Neitzke Adamo, L.** and Irizarry, P., 2018. Benefits of Conducting Outreach at the Rutgers Geology Museum: A Graduate Student's Perspective. Abstract ED51E-0622, 2018 Fall Meeting American Geophysical Union, AGU, Washington D. C. Annual Meeting.

Criscione, J., **Neitzke Adamo, L.** and Irizarry-Barreto, P., 2018. Crafting for science education. Session 252, Booth 112. Geological Society of America, GSA 2018 Indianapolis Annual Meeting, Vol. 50, No. 6.

Kozachek, C., **Neitzke Adamo, L.**, Irizarry-Barreto, P. and Criscione, J., 2018. Exploring the Ice Age period at the Rutgers Geology Museum: An informal learning experience. Geological Society of America, GSA 2018 Indianapolis Annual Meeting, Vol. 50, No. 6, Paper 229-2.

**Neitzke Adamo, L.**, Huffman, L. and Rousseau, T., 2018. Frozen in time: A hands-on ice core, pollen, and climate change lesson plan for middle school, high school, and introductory college classes. Geological Society of America, GSA 2018 Indianapolis Annual Meeting, Vol. 50, No. 6, Paper 229-1.

Sarkar, R., **Neitzke Adamo, L.** and Wright, J., 2018. A high-resolution study of the Eirik Drift across the last deglaciation using planktonic and benthic foraminiferal proxies. Session 111, Booth 238. Geological Society of America, GSA 2018 Indianapolis Annual Meeting, Vol. 50, No. 6.

**Neitzke Adamo, Lauren**, 2017. Magma, Mounds, and Milkshakes: Exploring Concepts in Viscosity and Volcanic Eruptions, Geological Society of America, GSA 2017 Annual Meeting, Paper 33-8.

Patricia Irizarry-Barrato, and **Lauren Neitzke-Adamo**, 2017. Changing perceptions: How to engage diverse communities in Geosciences, Geological Society of America, GSA 2017 Annual Meeting, Paper 17-8.

Sakar, Ria, **Lauren Neitzke-Adamo**, and James D. Wright, 2017. Variations in Planktonic Foraminifera Assemblages Across the Last Deglaciation: A High-Resolution Examination of a North Atlantic Deep-Sea Sediment Core, Geological Society of America, GSA 2017 Annual Meeting, Paper 378-9.

Sotomayor, Sebastian, **Lauren Neitzke-Adamo**, James D. Wright, and Thomas M. Cronin, 2017. Examining faunal changes in deep-sea ostracods in glacial and interglacial regimes: Implications for variations in North Component Water flow across Eirik Drift, North American Micropaleontology Society, 2017 Annual Meeting.

Sakar, Ria, **Lauren Neitzke-Adamo**, and James D. Wright, 2017. Evaluating Deep Water Variations in the North Atlantic Ocean Using Planktonic Species Counts and Benthic Faunal Assemblages, North American Micropaleontology Society, 2017 Annual Meeting.

Bailey, R, and **L. Neitzke-Adamo**, 2016. Introduction to Mapping and Geocaching: A Primer to Visual Literacy and Spatial Comprehension in an Informal Educational Setting, Geological Society of America, GSA 2016 Annual Meeting, Paper 66-2.

**Neitzke-Adamo, L.**, A.J. Blandford, Ericka Gordor, and Richard K. Olsson. 2016. The Rutgers Geology Museum and its role in the evolution of the 19th and 20th century geoscience college classroom, Geological Society of America, GSA 2016 Annual Meeting, Paper 41-3.

Bitting, Kelsey S., **Lauren C. Neitzke**, Jackie Halaw, Marth Oliver Withjack, Julie Monet, James D. Wright, and Carl Swisher III, Inquiry-Based Learning in Geoscience Classrooms: Interactive Activities and Demonstrations *Geological Society of America, GSA 2009 Portland Annual Meeting*, Vol. 41, No. 7, Paper 29-5.

**Neitzke, L.C.**, T. Rousseau, and D. Gavin, 2008. Drilling into Science: A Hands-on Cooperative Learning Oil Exploration Activity designed for Middle School and High School Students *Geological Society of America, GSA 2007 Denver Annual Meeting*, Vol. 40, No. 6, Paper 309-1.

**Neitzke, L.C.**, J.D. Wright, and S.S. Henderson 2008. Tracking Variations in North Atlantic Deep Water Flow on Eirik Drift. *Geophysical Research Abstracts, EGU General Assembly 2008*, Vol. 10, EGU2008-A-00829.

**Neitzke, L.C.** and J.D. Wright, 2007. Variations in Deep-Water Circulation on Eirik Drift from the Last Glacial Maximum to early Holocene. *Geological Society of America, GSA 2007 Denver Annual Meeting*, Vol. 39, No. 6, Paper 114-20.

**Neitzke, L.C.** and J.D. Wright, 2006. The Imprint of NADW on the Eirik Drift during the Younger Dryas. *Eos, Transactions, American Geophysical Union, AGU 2006 Fall Meeting Supplement*, Vol. 87, No. 52, Paper PP23C-1766.

**Neitzke, L.C.**, Wright, J.D., Mountain, G.S., and P.L. Manley, 2005. Straddling the Eirik Drift: Implications for the History of Lower NADW. *Eos, Transactions, American Geophysical Union, AGU 2005 Fall Meeting Supplement*, Vol. 86, No. 52, Paper PP21C-1587.

## RECENT GRANT FUNDING

### *2021 Rutgers University Global Environmental Change Grant*

- Co-investigator on \$14,000 grant titled “Dangerous while asleep: landslide and lava flows hazards of the dormant Barva volcano”.

### *2020 Rutgers University Office of the Provost Innovations in Teaching and Education Pilot Grant Award*

- Received \$10,000 to fund project titled “Utilization of Virtual and Augmented Reality to Innovate and Diversify Earth and Planetary Science (EPS) Education

### *2019 Institute of Earth, Ocean, and Atmospheric Sciences Seed Grant Recipient*

- Received ~\$9,600 to fund project titled “Creating Innovative and Inclusive Earth and Environmental Classrooms Through the Integration of Unmanned Aerial Vehicles and Geodetic Research Methodologies.”

## COMMITTEES, MENTORING, AND OTHER TEACHING

### *NASA*

- Panelist to assist in reviewing education and outreach based proposals.

### *American Museum of Natural History, New York City*

- Helped planned curricula, prepare materials, and taught lessons for the Lang Science Program (summer 2019) and professional development workshop for teachers on climate change in collaboration with the US Science Support Program (February 2020).

### *National Science Foundation*

- Panelist to assist in reviewing geoscience-based proposals submitted to the “Improving Undergraduate STEM Education” and “Graduate Research Fellowships” program

### *Geological Society of America’s Education Committee*

- K-12 Representative- July 2017 to June 2021
- Vice Chair of Committee- September 2017 to October 2018
- Chair of Committee- October 2018 to June 2020

### *Association of Women Geologists*

- Selection committee for Outstanding Educator Award- 2017 to present
- Chair of Outstanding Educator Award Selection Committee- 2019 to present

### *National Association of Geoscience Teachers, Geoscience Education Research Division*

- Board position within the Geoscience Education Research Division as the Media Director from 2019 to 2021. Member of the Scholarship committee from 2021 to present.

### *Aresty Undergraduate Research Program Mentor, Rutgers University*

- Faculty Advisor from 2017 to present- Mentored 12 students in geochemistry, paleoceanography, climate change, and geoscience education research internships.

### *Cultural Heritage and Preservation Studies (CHAPS) Public History Internship, Rutgers University*

- Faculty Advisor from 2017 to present- Mentored 3 students while they completed research projects focused on museum curation, cultural and historic preservation, etc.

### *Rutgers University Honors College Program*

- Faculty Advisor from 2018 to present- Mentored 3 students on authentic research projects to help complete requirements for honors program.

**COURSES TAUGHT**

*Seminar in Quaternary Studies, Drone Logistics and Field Planning-* 16:460:620; 1 credit- Seminar to discuss and learn the planning, execution, and processing of data collected by Unmanned Aerial Vehicles, or drones, for use in geologic remote sensing field studies.

*Talk Science to Me-* 01:090:295; 3 credits (Interdisciplinary Honors Seminar)- From writing papers and proposals, to giving talks, creating lectures, or composing tweets, it is imperative for scientists to learn how to effectively communicate to a wide range of audiences in order to be successful. This course is designed to help students gain the ability, knowledge, and tools to have the confidence to be able to discuss complex scientific topics clearly and concisely to a wide range of audiences.

*Planet Earth/Introduction to Geology-* 460:100/101; 3-4 credits (Lecture and Lab)- This course is designed to give a broad, basic understanding of the planet on which we reside.

*Dinosaurs,* 460:206, 3 credits (Lecture and Online Course)- Dinosaurs is a survey of dinosaurian evolution and diversity. This class explores the history of discovery and collection, reconstructs anatomy, behavior, physiology and habitats from the fossil record, and examines the origins, evolutionary radiation, and extinction of dinosaurs.

*Earthquakes and Volcanoes,* 460:201, 3 credits (Lecture and Online Course)- This class covers the basic information about earthquakes, volcanic eruptions, and ways these natural processes affect human civilization.

**CERTIFICATIONS**

*Federal Aviation Administration*

- Certified Remote Pilot for Small Unmanned Aircraft Systems, Part 107 License