

Patty Standing

(she/her) PhD Candidate and National Science Foundation Graduate Research Fellow
University of Texas, Jackson School of Geosciences, Institute for Geophysics

AREAS OF INTEREST

Micropaleontology (foraminifera) · Paleooceanography · Climate-Ocean System Processes

EDUCATION

Jackson School of Geosciences, University of Texas Austin (UT) (expected) May 2025

Ph.D. in Geological Sciences · Overall GPA: 3.8

Jackson School of Geosciences, UT May 2020

B.S. in Geological Sciences (geophysics track) · Overall GPA: 3.2, Major-specific GPA: 3.7

Defense Language Institute, Foreign Language Center Nov 2015

A.A. in Persian-Afghan · Overall GPA: 3.7

RELEVANT EXPERIENCE

Graduate Student Fellow, UT Institute for Geophysics (UTIG) Aug 2020-present

- Dissertation title: Planktic and Benthic Foraminifera as Proxies for Paleooceanographic Change During the Eocene-Oligocene Transition
- Supervised by Dr. Chris Lowery and Dr. Rowan Martindale
- Micropaleontological (foraminifera) and geochemical analysis in support of paleooceanographic Ph.D. dissertation

Undergraduate Research Assistant (URA), UTIG May 2020-Aug 2020

- Editing of bathymetry data using Caris software
- Helped develop training plan for new undergraduate workers
- Supported NSF-funded Global Multi-Resolution Topography in support of Seabed 2030 Project for the UN Decade of Ocean Science for Sustainable Development

Undergraduate Research Assistant, UTIG Aug 2018-Aug 2020

- Foraminiferal analysis for Holocene sea level study offshore Galveston Bay
- High-resolution seismic data collection and gravity coring
- Supports Bureau of Ocean Energy Management's sand allocation strategy for future shoreline rejuvenation

Undergraduate Research Assistant, UT Geochron Lab Jun 2018-May 2020

- Mineral separation for Ur/Pb geochronology collaboration w/another URA, analysis of provenance for paleodrainage patterns of Central Texas sandstones

SIGINT Geospatial Analysis, US Air Force (USAF) Jun-Dec 2011

- Liaison between Signal Intelligence support unit and force protection detachment
- Developed pattern-of-life analysis on high-priority force protection targets
- Briefed task forces on enemy threats and coordinated operations to neutralize force protection targets using a multi-intelligence discipline approach

PUBLICATIONS

11. **Standing P.**, Lowery, C., Burstein, J., Swartz, J., Goff, J., Gulick, S.P.S. (2024) Foraminiferal Analysis of Holocene Sea Level Rise within Trinity River Incised Valley, Offshore Galveston Bay, Texas. *Marine Geology*. <https://doi.org/10.31223/X5XG91>

10. Flecker, R., Ducassou, E., Williams, T., and the **Expedition 401 Scientists** (2024) Expedition 401 Preliminary Report: Mediterranean–Atlantic Gateway Exchange. *Proceedings of the International Ocean Discovery Program*. <https://doi.org/10.14379/iodp.pr.401.2024>
9. Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lam, A.R., Lowery, C.M., McIntyre, A., Reece, J.S., Test, C.R., Routledge, C.M., **Standing, P.**, Sylvan, J.B., Thompson, M., Villa, A., Wang, Y., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1560, South Atlantic Transect. *Proceedings of the International Ocean Discovery Program*. http://publications.iodp.org/proceedings/390_393/205/390393_205.html
8. Wang, Y., Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lam, A.R., Lowery, C.M., McIntyre, A., Reece, J.S., Test, C.R., Routledge, C.M., **Standing, P.**, Sylvan, J.B., Thompson, M., Villa, A., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1556, South Atlantic Transect. *Proceedings of the International Ocean Discovery Program*. http://publications.iodp.org/proceedings/390_393/206/390393_206.html
7. Villa, A., Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lam, A.R., Lowery, C.M., McIntyre, A., Reece, J.S., Test, C.R., Routledge, C.M., **Standing, P.**, Sylvan, J.B., Thompson, M., Wang, Y., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1558, South Atlantic Transect. *Proceedings of the International Ocean Discovery Program*. http://publications.iodp.org/proceedings/390_393/203/390393_203.html
6. Lowery, C.M., Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lam, A.R., McIntyre, A., Reece, J.S., Test, C.R., Routledge, C.M., **Standing, P.**, Sylvan, J.B., Thompson, M., Villa, A., Wang, Y., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1557, South Atlantic Transect. *Proceedings of the International Ocean Discovery Program*. http://publications.iodp.org/proceedings/390_393/201/390393_201.html
5. Routledge, C.M., Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lam, A.R., Lowery, C.M., McIntyre, A., Reece, J.S., Test, C.R., **Standing, P.**, Sylvan, J.B., Thompson, M., Villa, A., Wang, Y., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1561, South Atlantic Transect. *Proceedings of the International Ocean Discovery Program*. http://publications.iodp.org/proceedings/390_393/207/390393_207.html
4. Test C.R., Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lam, A.R., Lowery, C.M., McIntyre, A., Reece, J.S., Routledge, C.M., **Standing, P.**, Sylvan, J.B., Thompson, M., Villa, A., Wang, Y., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1559, South Atlantic Transect. *Proceedings of the International Ocean Discovery Program*. http://publications.iodp.org/proceedings/390_393/204/390393_204.html
3. Lam, A.R., Amadori, C., Borrelli, C., Christeson, G., Estes, E., Guertin, L., Hertzberg, J., Kaplan, M.R., Koorapati, R.K., Lowery, C.M., McIntyre, A., Reece, J.S., Test, C.R., Routledge, C.M., **Standing, P.**, Sylvan, J.B., Thompson, M., Villa, A., Wang, Y., Wee, S.Y., Williams, T., Yeon, J., Teagle, D.A.H., Coggon, R.M., and the Expedition 390/393 Scientists. (2024) Data report: X-ray fluorescence scanning of sediment cores, IODP Expedition 390/393 Site U1583, South Atlantic Transect. *Proceedings of the*

International Ocean Discovery Program.
http://publications.iodp.org/proceedings/390_393/202/390393_202.html

2. Lowery, C., Perez Cruz, L., Urrutia Fucugauchi, J., Wei, J., Austin, J., **Standring, P.** (2024) Seismic Stratigraphy of Contourite Drift Deposits Associated with the Loop Current on the Eastern Campeche Bank, Gulf of Mexico. *Paleoceanography and Paleoclimatology*. <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023PA004701>
1. Burstein J., Goff, J., Gulick, S.P.S., Lowery, C., **Standring, P.**, Swartz, J. (2022) Tracking Barrier Island Response to Holocene Sea-Level Rise: High Resolution of Estuarine Sediments in Trinity River Paleovalley. *Marine Geology*, 106951, <https://doi.org/10.1016/j.margeo.2022.106951>.

AWARDS AND GRANTS

<u>UTIG Fellowship</u> , Institute for Geophysics, UT	Spring 2024
<u>Veteran Scholarship</u> , Harold & Muriel Berkman Charitable Foundation, \$1,000	Spring 2024
<u>Endowed Presidential Scholarship</u> , University of Texas at Austin, \$3,500	Fall 2023
<u>Cushman Travel Grant</u> , Cushman Foundation for Foraminiferal Research, \$1,305	Fall 2023
<u>Analytical Research Funds</u> , Jackson School of Geosciences, \$3,240	Summer 2023
<u>Student Research Grant</u> , Geological Society of America, \$2,200	Spring 2023
<u>William V. Sliter Award</u> , Cushman Foundation for Foraminiferal Research, \$2,565	Spring 2023
<u>Travel Grant for ECORD Summer School</u> , US Science Support Program, \$3,500	Spring 2023
<u>Veteran's Memorial Scholarship</u> , RMAG Foundation, \$6,000	Spring 2023
<u>Tilly Edinger Travel Grant</u> , Time Scavengers, \$230	Fall 2021
<u>Arthur J. Boucot Student Research Award</u> , Paleontological Society, \$1,200	Spring 2021
<u>National Science Foundation Graduate Research Fellowship</u> , \$138,000	Spring 2020
<u>Jean Perkins Combat Veteran Scholarship</u> , 3x \$5,000	Fall 2017, 2018, 2019
<u>AAPG Military Veteran Scholarship</u> , \$2,000	Summer 2019
<u>Martin B. Lagoe Micropaleontology Fellowship</u> , \$11,929	Fall 2018

MILITARY AWARDS AND MEDALS

<u>Joint Service Achievement Medal</u> (USAF)	Aug 2014-Mar 2015
Co-created 80-hour introductory language course for intelligence analysts and instructed 3 students in the basics of the language to prepare them for future language courses to expand mission capabilities.	
<u>Col. Alva B. Lasswell Award and Joint Service Achievement Medal</u> (USAF)	Apr 2007-2014
In recognition of mid-career military accomplishments in language analysis while serving as a Cryptologic Language Analyst and Noncommissioned Officer-in-Charge and displaying mastery in assigned languages and technical experience during a 7-year U.S. Air Force career.	
<u>Air Force Commendation Medal</u> (USAF)	Jun-Dec 2011
Awarded for service during deployment to Coalition airfield.	
<u>Air Force Achievement Medals x3</u> (USAF)	Apr 2007-Jan 2010
Awarded three separate medals for support to multiple Coalition Forces operations against insurgent threats to airfields, and additional collaboration with Southwest Asia Narcotics team supporting multiple successful operations against high value counternarcotics targets.	

CONFERENCE POSTERS AND PRESENTATIONS

14. **Standring, P.**, Ketcham, R., Kearns, L., Borrelli, C., Lowery, C., Martindale, R., & Exp 390/393 Scientists. (2023) Micro-Computed Tomography Scanning of Foraminifera as Indicators of Calcite Compensation Depth Change in the Western South Atlantic During the Eocene-Oligocene Transition. Geological Society of America, Abstracts with Programs, Pittsburgh, Pennsylvania, USA.

13. **Standring, P.**, Lowery, C., Kearns, L., Martindale, R. (2023) Palaeoceanographic Changes and Ecological Impacts on Foraminifera during Eocene-Oligocene Transition in the Gulf of Mexico. International Symposium on Foraminifera (FORAMS), 2023, Perugia, Italy.
12. Lowery, C., **Standring, P.**, Borrelli, C., Routledge, C., Villa, A., McIntyre, A., Exp 390/393 Science Party. (2023) Eocene Evolution of Surface Circulation and Export Production in the Western South Atlantic. International Symposium on Foraminifera (FORAMS), 2023, Perugia, Italy.
11. Lowery, C., Perez Cruz, L., Urrutia Fucugauchi, J., **Standring, P.**, Austin, J., Wei, J., Davis, M. (2022) Insights into Cenozoic Current Flow in the Gulf of Mexico from New Seismic Lines from the Campeche Bank. Geological Society of America, Abstracts with Programs, Denver, Colorado, USA.
10. **Standring, P.**, Lowery, C., Martindale, R. (2022) Deep-Water Circulation in the Gulf of Mexico during the Eocene-Oligocene Transition. International Conference on Paleooceanography 14, Bergen, Norway.
9. Pearce, L., Larson, R., **Standring, P.** (2022) Student Veterans Research Network. Student Veterans of America National Conference 2022, Orlando, Florida, USA.
8. **Standring, P.**, Lowery, C., Martindale, R. (2021) Deep-Water Circulation in the Southern Gulf of Mexico at the Eocene-Oligocene Transition. AGU Fall Meeting 2021, New Orleans, Louisiana, USA.
7. **Standring, P.**, Lowery, C., Burstein, J., Swartz, J., Goff, J., Gulick, S.P.S. (2021). Foraminiferal Analysis of Holocene Sea Level Rise within Trinity River Incised Paleo-Valley, Offshore Galveston Bay, Texas. Geological Society of America Annual Meeting 2021, Portland, Oregon, USA.
6. Burstein, J., Goff, J., Gulick, S.P.S., Lowery, C., Swartz, J., **Standring, P.** (2020). Tracking Barrier Island Response to Early Holocene Sea-level Rise: High Resolution Study of Estuarine Sediments in the Trinity River Paleovalley. AGU Fall Meeting EP008.
5. Ditges T., **Standring, P.**, Stockli, D. (2020). Detrital Zircon U-PbData for Pennsylvanian Sandstones from the Eastern Shelf of the Permian Basin –Insights into Syn-Collisional Ouachita Sediment Provenance and Sediment Routing Systems. GSA-SC Section Meeting 343556.
4. Swartz, J.M., Goff, J., **Standring, P.**, and Lowery, C.M. (2019) Coastal river morphodynamic response to sea-level rise recorded in offshore stratigraphy: A new look at the Trinity incised valley. AGU Fall Meeting EP21D-2228.
3. Lowery, C.M., **Standring, P.**, Swartz, J., Goff, J., Gulick, S.P.S., Reece, R., Bretting, N. (2019). Sediment coring to ground-truth seismic and test sand resource potential in the Trinity Rivery paleovalley offshore Galveston, TX. BOEM Sand Resource Working Group Annual Meeting.
2. **Standring, P.**, Lowery, C.M., Gulick, S.P.S., Swartz, J., and Goff, J. (2019). Holocene Sea Level Rise and Paleo-Environmental Change within Trinity River paleo-valley offshore Galveston Bay, Gulf of Mexico. Geological Society of America *Abstracts with Programs*.
1. **Standring, P.**, Davis, M.B., Gulick, S.P.S., Lowery, C.M., Goff, J., Duncan, D., and Sastrup, S. (2018). The University of Texas Institute for Geophysics Marine Geology and Geophysics Field Course. AGU Fall Meeting ED51-H-0725.

FIELD EXPERIENCE

Expedition 401, Sedimentologist, International Ocean Discovery Program	Dec 2023-Feb 2024
Field assistant aboard B/O <i>Justo Sierra</i> seismic and multibeam cruise, UTIG and Universidad Nacional Autónoma de México, Gulf of Mexico	Jul 2022
SDG313 Climate Change Causes, Consequences, and Solutions, One Ocean Expedition, University of Bergen, Caribbean Sea	Nov-Dec 2021
Field assistant aboard R/V <i>Manta</i> seismic and coring cruise, UTIG, Gulf of Mexico	Jul 2019
GEO 660A Field Camp, Jackson School of Geosciences	Summer 2019
Field assistant aboard R/V <i>Trinity</i> seismic cruise, UTIG, Gulf of Mexico	Aug 2018
Marine Geology and Geophysics Field Course, UTIG	Summer 2018

WORKSHOPS, SHORT COURSES, AND SUMMER SCHOOLS

IODP Planktic Foraminiferal Taxonomy Workshop, University of Massachusetts Amherst 19-23 Aug 2024
 Positive Mental Health in the Geosciences Workshop, GSA, Pittsburgh, Pennsylvania, USA 19 Oct 2023
 IODP Workshop on Developing Strategies for the Scientific Investigation of Sediment Drifts on
 Campeche Bank, Gulf of Mexico, Mexico City, Mexico 16-18 Aug 2023
 ECORD Summer School on Downhole Logging, University of Leicester, UK 23-28 Jul 2023
 IODP IMMAGE & Expedition 401 Pre-Cruise Workshop, University of Bristol, UK 11-13 Jul 2023

MILITARY EXPERIENCE

Language Analyst, Office of South Asia, USAF Jan 2012-Oct 2015
 Led joint military team in high-priority mission, providing language translation and analysis, language training, and analytic software testing.

Language Analyst, Expeditionary Force Protection Mission, USAF Jun 2009-Jun 2011
 Managed multi-member shift in language analysis and time-sensitive threat reporting, including pattern-of-life analysis on force protection targets.

Language Analyst, Consolidated Remote Operations Facility, USAF Apr 2007-Jun 2011
 Identified foreign language intelligence and manipulated direction finding software to provide militant locations to tactical-level customers.

OUTREACH AND SERVICE

Organized Annual Geoscience Art Exhibit, Jackson School of Geosciences Fall 2024
 Student Representative, GSA Marine and Coastal Geoscience Division (MCGD) Fall 2021-2023
 Organized Annual Geoscience Art Exhibit (Co-Founder), Jackson School of Geosciences Aug 2023
 Paleoclimate Cool Activities Outreach, Hot Science Cool Talks Event, UT Austin Spring 2023
 Graduate Student Panel, Undergraduate Research Journal, UT Austin Spring 2023
 Coordinated Student Spotlight and Publications for MCGD Biannual Newsletter Fall 2022, Spring 2023
 Convener, "Advances and New Voices in Marine and Coastal Geoscience" (T145), GSA 2022 Fall 2022
 Marine and Coastal Geoscience Division Exhibit Booth, GSA Connects 2022 Fall 2022
 NSF Graduate Research Fellowship Program peer mentor Fall 2021, 2022
 SVRN Graduate Workshop panelist Summer 2022
 Time Scavengers Meet the Scientist Blog Post Spring 2022
 Time Scavengers Byte of Life Post for SVRN Summer 2021
 Co-Organizer Student Veterans Research Network (www.svrn.org) Summer 2021
 UT Girl Day, Jackson School of Geosciences Booth Spring 2020
 GeoFORCE Program Mentor, Jackson School of Geosciences Summer 2019, 2020
 Austin Public Library, page duties and customer service Jan 2016-Jun 2016
 Brunswick National Park interpretive volunteer, National Park Service Apr-Sep 2015

MEDIA

[Tales from the Deep with Dr. Laura Guertin](#), StoryCorps
[Cultivating Positive Mental Health in the Geosciences](#), *Science, y'all!*, Jackson School of Geosciences
[Member Spotlight](#), Outcrop Newsletter, Rocky Mountain Association of Geologists
[Student Member Spotlight](#), Marine & Coastal Geoscience Div Newsletter, Geological Society of America
[Meet the Scientist](#), Time Scavengers

PROFESSIONAL AFFILIATIONS

Student Veteran Research Network (SVRN co-organizer)	American Geophysical Union
Geological Society of America (GSA)	Cushman Foundation for Foraminiferal Research
UT Student Veteran Association	Association for Women Geoscientists
	Graduate Women in Science