Curriculum Vitae

Erica Marie Staehling

February 23, 2023

General Information

University address: Center for the Advancement of Teaching
Florida State University
Tallahassee, Florida 32306-1310
E-mail: estaehling@fsu.edu

Professional Preparation

2016 M.S., Florida State University, Tallahassee, FL. Major: Curriculum and Instruction. Physics Education. Supervisor: Sherry A. Southerland. *Coursework included 18 graduate credit hours in physics.*

2015 Ph.D., Princeton University, Princeton, NJ. Major: Atmospheric and Oceanic Sciences. Supervisor: Isaac M. Held.

2009 M.A., Princeton University, Princeton, New Jersey. Major: Atmospheric and Oceanic Sciences. Supervisor: Isaac M. Held & Geoffrey K. Vallis.

2007 B.S., Bucknell University, Lewisburg, Pennsylvania. Major: Physics and Mathematics. Minor: Classical Greek. Graduated *summa cum laude*.

Professional Credential(s)

2022-present Inclusive STEM Teaching Project (ISTP) Facilitator Training, University of Michigan.

2022-present UTeach Observation Protocol (UTOP) Professional Education, The University of Texas at Austin.

2015–present Graduate Teaching Status (GTS), The Graduate School, Florida State University.

2014–present Clinical Educator Training (CET) Trainer Certification, Florida Department of Education.

2013–present Clinical Educator Training (CET), Florida Department of Education.

Professional Experience

2023–present	Specialized Faculty (Instructional Specialist I), Office of the Provost and VP for Academic Affairs, Florida State University. Associate Director of the Center for the Advancement of Teaching.
2020–2022	Specialized Faculty (Teaching III), Biological Sciences, Florida State University. Associate Director of the Office of STEM Teaching Activities.
2015–2020	Specialized Faculty (Teaching II), Biological Sciences, Florida State University. Associate Director of the Office of STEM Teaching Activities.
2013–2015	Specialized Faculty (Teaching I), Biological Sciences, Florida State University. Associate Director of the Office of Science Teaching Activities.
2010–2013	Assistant In, Biological Science, Florida State University. Director of Science on the Move, Co-Director of the Young Scholars Program.
2008–2010	Graduate Research Assistant, Program in Atmospheric and Oceanic Sciences, Princeton University, Princeton, NJ.
2005–2007	Teaching Assistant, Department of Physics & Astronomy, Bucknell University, Lewisburg, PA.
2004–2007	Teaching Assistant, Department of Mathematics, Bucknell University.
2005–2006	Research Assistant, Department of Terrestrial Magnetism, Carnegie Institution of Washington, Washington, DC.
2004–2005	Staff Member, SpaceLink and TerraLink, Maryland Science Center, Baltimore, MD.

Honors, Awards, and Prizes

Travel Fellowship Award, Climate Informatics Workshop (2016).
The W. Norwood Lowry Prize for Physics, Bucknell University (2007).
President's Award for Distinguished Academic Achievement, Bucknell University (2007).
Mortar Board service honor society member (2006).
Phi Beta Kappa honor society member (2006).
President's Award for Distinguished Academic Achievement, Bucknell University (2006).
Sigma Pi Sigma physics honor society member (2006).
Pi Mu Epsilon math honor society member (2005).
President's Award for Distinguished Academic Achievement, Bucknell University (2005).
Alpha Lambda Delta honor society member (2004).
President's Award for Distinguished Academic Achievement, Bucknell University (2004).

Fellowship(s)

National Defense Science and Engineering Graduate Fellowship, Department of Defense (2009-2010). Total award $93,000.

Centennial Fellowship, Princeton University (2007–2010). Total award $12,000.

American Meteorological Society Graduate Fellowship, National Science Foundation (2007–2008). Total award $22,000.

The Charles F. Stickney Scholarship, Bucknell University (2003–2007). Total award $107,200.

Johns Hopkins University Applied Physics Laboratory Merit Scholarship (2003–2007). Total award $40,000.

Teaching

Courses Taught

Learning Assistant (LA) Seminar (SLS3717)
Reflective Science Teaching (ISC5098)
Accomplished Practices in Science Teaching (ISC5525)
Advanced Portfolio Design (ISC5525)
Ethics, School Law, and Management of Science Classrooms (ISC5944)
Full-Time Teaching Internship (ISC5945)
Half-Time Teaching Internship (ISC5946)
Portfolio Review (ISC8938)
Applications of Structural Biology (BSC5936)
Broader Impacts through STEM Teaching (BSC5936)
Inquiry in the Classroom (BSC5936)
Remote STEM Pedagogy (BSC5936)

New Course Development

Research Methods Seminar, Young Scholars Program (2022)
Open Access Research Seminar, Young Scholars Program (2020)
Modern Physics, Young Scholars Program (2018)
Accomplished Practices in Science Teaching (2014)

Research and Original Creative Work

Publications

Refereed Journal Articles

Staehling, E. M., Hiester, H. R., & Shoplock, B. M. (2023, submitted). Using Connected Learning Principles to Foster Authentic STEM Research Experiences Remotely.

McGuire, G. P., Luna, C. V., Staehling, E. M., & Stroupe, M. E. (2022). From COVID-19 to the central dogma: Investigating the SARS-CoV-2 spike protein. *American Biology Teacher, 84*(7), 410-414. doi:10.1525/abt.2022.84.7.410

Truchelut, R., Klotzbach, P., Staehling, E., Wood, K., Halperin, D., Schreck, C., & Blake, E. (2022). Earlier onset of North Atlantic hurricane season with warming oceans. *Nature Communications*, *13*(1), 1-8. doi:10.1038/s41467-022-31821-3

Loehle, C., & Staehling, E. M. (2020). Hurricane Trend Detection. *Natural Hazards*, *104*(2), 1345–1357. doi:10.1007/s11069-020-04219-x

Truchelut, R. E., & Staehling, E. M. (2017). An energetic perspective on United States tropical cyclone landfall droughts. *Geophysical Research Letters*, *44*(23), 12013-12019. doi:10.1002/2017GL076071

Staehling, E. M., & Truchelut, R. E. (2016). Diagnosing United States hurricane landfall risk: An alternative to count-based methodologies. *Geophysical Research Letters*, *43*(16), 8798-8805. doi:10.1002/2016GL070117

Staehling, E. M. (2015). Clearing the Air: Using probeware and online simulations to understand the greenhouse effect. *The Science Teacher*, *82*, 50-56. doi:10.2505/4/tst15_082_09_50

Nonrefereed Reports

Staehling, E. M. (2022). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, College STEM Teaching Program.

Staehling, E. M. (2021). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, College STEM Teaching Program.

Hiester, H. R., & Staehling, E. M. (2020). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, Science on the Move.

Staehling, E. M. (2020). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, Masters in STEM Teaching Program.

Staehling, E. M. (2019). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, Masters in STEM Teaching Program.

Callahan, T. K., & Staehling, E. M. (2019). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, Science on the Move.

Staehling, E. M., & Granger, D. E. (2019). *Quality Enhancement Review: Program Action Plan*. Florida State University, Office of STEM Teaching Activities, Masters in STEM Teaching Program.

Callahan, T. K., & Staehling, E. M. (2018). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, Science on the Move.

Staehling, E. M. (2018). *Institutional Effectiveness Report*. Florida State University, Office of STEM Teaching Activities, Masters in STEM Teaching Program.

Staehling, E. M., & Granger, D. E. (2017). *Quality Enhancement Review: Self Study Report*. Florida State University, Office of STEM Teaching Activities, Masters in STEM Teaching Program.

Callahan, T. K., & Staehling, E. M. (2017). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M. (2017). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Staehling, E. M., & Clay, A. (2017). *Undergraduate Office Worker Manual*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M., & Dentzau, K. (2017). *Young Scholars Program Counselor Manual*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Callahan, T. K., & Staehling, E. M. (2016). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M. (2016). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Callahan, T. K., & Staehling, E. M. (2015). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M. (2015). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Callahan, T. K., & Staehling, E. M. (2014). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M. (2014). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Staehling, E. M. (2014). *Institutional Program Evaluation Plan*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Activities.

Staehling, E. M. (2013). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M. (2013). *Institutional Effectiveness Report*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Staehling, E. M., & Pfeiffer, R. (2013). *Florida Department of Education Accountability Matrix: Florida Educator Accomplished Practices, Professional Education Competencies, and Skills for Teacher Certification*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Staehling, E. M. (2013). *Institutional Program Evaluation Plan*. Florida State University, Office of Science Teaching Activities, Masters in Science Teaching Program.

Staehling, E. M. (2013). *Science on the Move Program Manual*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M., & King, L. (2012). *Motion, Forces, and Energy: Physical Science Workbook for Elementary School Teachers*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Staehling, E. M. (2012). *Science on the Move Program Self Study*. Florida State University, Office of Science Teaching Activities, Science on the Move.

Presentations

Refereed Presentations at Conferences

Truchelut, R. E., & Staehling, E. M. (presented 2021, May). *On the Potential Extension of the Official Atlantic Hurricane Season*. Presentation at 34th Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, Virtual due to COVID-19. (International)

Truchelut, R. E., & Staehling, E. M. (presented 2018, April). *An Energetic Perspective on United States Tropical Cyclone Variability*. Presentation at 33rd Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, Ponte Vedra, Florida. (International)

Staehling, E. M. (presented 2018, April). *The Influence of African Easterly Waves on Tropical Cyclone Activity in a TC-permitting Global Atmospheric Model*. Presentation at 33rd Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, Ponte Vedra, Florida. (International)

Staehling, E. M., & Truchelut, R. E. (presented 2016, September). *Quantifying Tropical Cyclone Risk Using Poisson Modeling*. Poster presentation at 6th International Workshop on Climate Informatics, National Center for Atmospheric Research, Boulder, CO. (International)

Truchelut, R. E., & Staehling, E. M. (presented 2016, April). *Diagnosing Topical Cyclone Risk through the Development of a Landfall Index for the North Atlantic Basin*. Presentation at 32nd Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, San Juan, Puerto Rico. (International)

Staehling, E. M., Held, I. M., & Vallis, G. K. (presented 2009, June). *Sensitivity to the Vertical and Meridional Structure of the Meridional Temperature Gradient in a Three-Level Quasigeostrophic Turbulence Model*. Presentation at 17th Conference on Atmospheric and Oceanic Fluid Dynamics, American Meteorological Society, Stowe, VT. (International)

Staehling, E. M., & Cho, James Y.-K. (presented 2006, December). *MHD Turbulence in the Upper Atmosphere of Hot Extrasolar Giant Planets*. Poster presentation at AGU Fall Meeting, American Geophysical Union, San Francisco, CA. (International)

Staehling, E. M., & Cho, James Y.-K. (presented 2005, December). *MHD Shallow-Water Turbulence on the Sphere*. Poster presentation at AGU Fall Meeting, American Geophysical Union, San Francisco, CA. (International)

Staehling, E. M., & Cho, James Y.-K. (presented 2005, November). *MHD Shallow-Water Turbulence on the Sphere*. Presentation at 58th Annual Meeting of the Division of Fluid Dynamics, American Physical Society, Chicago, IL. (International)

Refereed Presentations at Symposia

Karcher, S. M., & Staehling, E. M. (presented 2021, September). Investigating the effect of a collaborative model for 2- and 4-year institutions to increase the number, diversity, and knowledge of 2-year STEM faculty. In *4th annual DIRECTO Symposium (cancelled due to COVID-19)*. Poster presentation at the meeting of Florida State University's Diversity & Inclusion in Research & Teaching Organization, Tallahassee, FL. (Local)

Karcher, S. M., Jones, A., & Staehling, E. M. (presented 2020, September). Promoting Diversity in 2-year STEM Faculty: A Regional Change Model. In *3rd annual DIRECTO Symposium*. Poster presentation at the meeting of Florida State University's Diversity & Inclusion in Research & Teaching Organization, Tallahassee, FL. (Local)

Nonrefereed Presentations at Symposia

Moseley, S. N., Santa Ana, J. K., Staehling, E. M., & Hart, R. E. (presented 2015, July). Effect of Latitudinal Domain on African Easterly Wave Frequency and Variability. In *Young Scholars Program Research Symposium*. Poster presentation at the meeting of the Office of Science Teaching Activities Young Scholars Program, Tallahassee, FL. (Local)

Invited Workshops

Staehling, E. M., & Hiester, H. R. (2016, October 28). *Addressing Student Misconceptions in Weather and Climate*. A one-day teacher professional development workshop delivered at Marion County Public Schools, Ocala, FL. (Local)

Granger, D. E., Bevis, T. H., & Staehling, E. M. (2011, August 1-3). *Curriculum Topic Study.* A three-day teacher professional development workshop for the Leon County School District, Tallahassee, FL. (Local)

Staehling, E. M., & King, L. E. (2011, June 6-16). *Motion, Forces, and Energy Physical Science Workshop*. A two-week teacher professional development workshop delivered at Seminole County Public Schools, Sanford, FL. (Local)

Staehling, E. M., & Bevis, T. H. (2011, January 12). *Electric Circuits*. A one-day *Great Explorations in Math and Science* (GEMS) teacher professional development workshop for Roberts Elementary School, Tallahassee, FL. (Local)

King, L., & Staehling, E. M. (2010, October 26). *Lesson Study*. A one-day teacher professional development workshop for Riversprings Middle School, Crawfordville, FL. (Local)

Granger, D. E., Bevis, T. H., & Staehling, E. M. (2010, October 20-21). *Space Science*. A two-day *Great Explorations in Math and Science* (GEMS) teacher professional development workshop for the Leon County School District, Tallahassee, FL. (Local)

Invited Lectures and Readings of Original Work

Staehling, E. M. (2019, October). *Innovative STEM Teaching Practices*. Delivered at Florida State University, PIE Chemistry Luncheon Seminar Series. (Local)

Staehling, E. M. (2019, September). *Importance of Metacognition*. Delivered at Florida State University, BSC 2010 Biological Science I. (Local)

Staehling, E. M. (2014, December). *The Influence of African Easterly Waves on Atlantic Tropical Cyclone Activity*. Delivered at Princeton University, NOAA Geophysical Fluid Dynamics Laboratory, Princeton, NJ. (Local)

Staehling, E. M. (each Spring and Fall semesters of 2014, 2013, 2012, 2011). *Technology in the Classroom*. Delivered at Florida State University, SMT 4301 Classroom Interactions, FSU-Teach. (Local)

Staehling, E. M. (2011, September). *Outreach Resources and Physical Science Demonstrations*. Delivered at Florida State University, SCE 4310 Teaching Science in the Elementary School, College of Education. (Local)

Contracts and Grants

Contracts and Grants Funded (self)

Staehling, E. M., & Jones, A. (May 2021–Apr 2023). *Aspire Alliance Florida Regional Collaborative Implementation Grant*. Funded by NSF Aspire Alliance. Total award $129,997.

Staehling, E. M., & Jones, A. (Sep 2019–Aug 2020). *Florida Regional Collaborative Planning Grant*. Funded by NSF Aspire Alliance. Total award $7,700.

Contracts and Grants Funded (Broader Impacts consulting)

Wing, A. (March 2022 – February 2027). *CAREER: Convective aggregation and the hydrological cycle, cloud feedbacks, and climate sensitivity.* NSF # 2140419. Total award $644,561.

Yaghoobian, N. (March 2021 – February 2026). *CAREER: Multiscale Firebrand Transport in the Turbulent Boundary Layer for Fire Science Advancement*. NSF # 2043103. Total award $392,088.

Fan, W. (September 2020 – August 2023). *Collaborative Research: Investigating the role of dynamic strain fields in earthquake triggering processes by simulating full wavefield with 3D seismic velocity structures.* NSF # 2022441. Total award $320,800.

Stroupe, M. E. (August 2020 – July 2023). *MRI: Acquisition of a room-temperature transmission electron microscope for FSU*. NSF # 2017869. Total award $347,692.

Chung, H. (June 2020 – June 2023). *Excellence in Research: Designing biodegradable bottlebrush polymers based on their structure-property relationships for strong tissue adhesion and drug delivery.* NSF # 2000092. Total award $663,457.

Stroupe, M. E. (July 2019 – June 2023). *Control of Sulfite Reductase Activity via Structural Flexibility and a Push-Pull Mechanism for Electron Transfer*. NSF # 1856502. Total

award $800,000.

Mohammadigoushki, H. (May 2020 – April 2025). CAREER: Kinetics and Microstructural Origin of Shear Banding in Wormlike Micellar Fluids. NSF # 1942150. Total award $397,875.

Stroupe, M. E. (July 2019 –June 2022). *Structural analysis of the siroheme biosynthetic enzyme CysG, a central player in sulfur metabolism*. NSF # 1904612. Total award $390,000.

Mookherjee, M. (August 2018 – June 2019). *Early Career: Acquisition of a Raman Spectrometer for a Mineral Physics research laboratory*. NSF #1638752. Total award $216,187.

Yang, W. (May 2012 – April 2016). *Achieving Long Timescale Sampling in Biomolecular Simulations.* NSF Award # 1158284. Total award $633,041.

Doctoral Dissertation

Staehling, E. M. (2015). *The Influence of African Easterly Waves on Atlantic Tropical Cyclone Activity*. Princeton University.

Popular Press Publications

Truchelut, R. E., & Staehling, E. M. (2018). *With increasing storms, Atlantic hurricane season needs to expand and begin on May 15*. The Washington Post.

Staehling, E. M., & Truchelut, R. E. (2017). *With Harvey and Irma, America's luckiest streak of low hurricane activity is over*. The Washington Post.

Institutional Training

2020	RAMP Grants Training, Sponsored Research, Florida State University (FSU)
2020	Engage Learners with Online Activities, Office of Distance Learning (ODL), FSU
2020	Make Materials Work for All Leaners with Universal Design, ODL, FSU
2020	Providing Academic Accommodations to Students, Office of Accessibility Services, FSU
2017	Faculty Search Committee Training, Office of Human Resources, FSU
2017	Slate Training for Graduate Representatives, Graduate Admissions, FSU
2017	Canvas Orientation, ODL, FSU
2016	First Aid and CPR, Environmental Health & Safety, FSU
2016	Vulnerable Persons Act Training, FSU
2016	Education Advisory Board Campus Connect Upgrade, FSU
2015	Education Advisory Board Student Success Platform, FSU
2015	Criminal History Check Process, FSU

2014 Grad Search Tool Training, Graduate Admissions, FSU
2014 Admissions for Departments, Graduate Admissions. FSU
2014 Department Specific Requirements Workshop, Graduate Admissions, FSU
2013 Student Records 201 Training, FSU
2013 Student Central Advisor Center Training, FSU
2013 Student Central 101, FSU
2013 Student Records 101, FSU

Service

Reviewer, Geophysical Research Letters (2020-present)
Judge, Many Local School Science Fairs and Regional Science Fair (2010-present).
Member, Professional Educators Advisory Committee (2013–2018).
Member, Capital Regional Science and Engineering Fair Executive Committee (2010–2014).