MARGARET MORRIS

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EDUCATION

UCSD - Scripps Institution of Oceanography, La Jolla, CA *Summer 2017 - Present*
PhD in Earth Science - Geophysics focus

Brandeis University, Waltham, MA *Fall 2013 - Spring 2017*
B. S. in Physics and Mathematics
Summa Cum Laude; Highest honors in Physics, Honors in Math

AWARDS AND HONORS

Katzin Fellowship *Fall 2019 - Summer 2021*
UCSD Regents Fellowship *Fall 2017 - Summer 2018*
Division of Science Prize for Outstanding Reserach Accomplishment, Brandeis *Spring 2017*
Phi Beta Kappa Society *Spring 2017*
Summer MRSEC Undergraduate Research Fellowship *Summer 2016*
National Merit Scholarship *Fall 2013 - Spring 2017*

RESEARCH EXPERIENCE

Acoustic Remote Sensing; Archaeology, UCSD - SIO, La Jolla, CA *February 2018 - Present*
Research interests in improving geophysical marine acoustic methods to improve remote sensing of near-shore buried and submerged archaeological sites, and using such methods to study societal adaptations to climate change through prehistory. Advisers: Dr. Isabel Rivera-Collazo and Dr. John Hildebrand

Atmospheric Remote Sensing, UCSD - SIO, La Jolla, CA *July 2017 - December 2017*
Graduate Research Rotation: Contributed to python software simulating the effects of atmospheric moisture on GPS signals to assess the ability of airborne radio occultation measurements to improve numerical weather forecasts. PI: Prof. Jennifer Haase.

Soft Matter Physics, Brandeis University, Waltham, MA *October 2015 - May 2017*
Undergraduate Thesis Research: Soft matter experiment in the Brandeis Materials Research Science and Engineering Center (MRSEC) studying the structural properties of shape changing flagella through mechanical bending using optical tweezers. Adviser: Prof. Zvonimir Dogic.

Condensed Matter Physics, Brigham Young University, Provo, UT *May 2015 - August 2015*
Visiting Scholar, REU Research: Condensed matter experiment to measure electron spin coherence times in silicon carbide to determine the effectiveness of SiC for potential quantum computing applications using ODMR and spin echo techniques. PI: Prof. John Colton

Radio Astronomy, Brandeis University, Waltham, MA *August 2014 - May 2015*
Undergraduate Research: Radio astronomy research looking for evidence of new star formation in radio galaxy 3C219 using AIPS and IRAF to examine spectra. PI: Prof. David Roberts.

Astrophysics, Vanderbilt University, Nashville, TN *May 2014 - August 2014*
Visiting Scholar, REU Research: Astronomy research aiming to determine how to use LSST to study the late stages of the evolution of sun-like stars using Python simulations. PI: Prof. Keivan Stassun; Mentor: Dr. Rudolfo Montez

TEACHING EXPERIENCE

University of California, San Diego, La Jolla, CA

Teaching Assistant: Introduction to Geophysics	*Winter 2019, Fall 2020*
Teaching Assistant: The Solid and Fluid Earth	*Winter 2018*
Tutor: Rosa Parks Tutoring Program (elementary school)	*Fall 2017 - Present*

Brandeis University, Waltham, MA

Undergraduate TA: Introductory Physics Lab (Mechanics, EM)	*Spring 2015 - Spring 2017*
Undergraduate TA: Introductory Physics for Non-Physics Majors	*Fall 2016 - Spring 2017*

PUBLICATIONS

M. J. Murphy, J. S. Haase, R. Padullés, S-H. Chen, **M. A. Morris**. "The Potential for Discriminating Microphysical Processes in Numerical Weather Forecasts Using Airborne Polarimetric Radio Occultations" Remote Sensing 11(19), 2268 - Published 28 September 2019

G. Vejar, R. Montez Jr., **M. Morris**, K. G. Stassun. "Planetary Nebulae and How to Find Them: Color Identification in Big Broadband Surveys" The Astrophysical Journal 879(1), 38 - Published 02 July 2019

E. Memet, F Hilitski, **M. A. Morris**, W. J. Schwenger, Z. Dogic, L. Mahadevan. "Microtubules soften due to cross-sectional flattening" eLife 2018; 7:e34695 - Published 01 June 2018

J. S. Embley, J. S. Colton, K. G. Miller, **M. A. Morris**, M. Meehan, S. L. Crossen, B. D. Weaver, E. R. Glaser, and S. G. Carter. "Electron spin coherence of silicon vacancies in proton-irradiated 4H-SiC" Phys. Rev. B 95, 045206 - Published 17 January 2017

CONFERENCE PARTICIPATION

M. A. Morris, P. Krysl, I. Rivera-Collazo, J. A. Hildebrand (2021, April) "Modeling the Acoustic Signatures of Lithic Artifacts" Poster presented at the Society for American Archaeology 86th Annual Meeting, Virtual

M. A. Morris (2019, December) "Near-Surface Sonar Detection of Submerged Archaeological Lithics" iPoster presented at the American Geophysical Union Fall Meeting 2019, San Francisco, CA

M. A. Morris (2017, January) "Elastic Buckling of Rigid Bio-polymers" Talk presented at the 2016 Harvard Conference for Undergraduate Women in Physics

M. A. Morris (2016, October) "Elastic Buckling of Rigid Bio-polymers" Invited student talk presented at the 2016 Women in the Physical Sciences Conference at the University of Nebraska, Lincoln

M. A. Morris (2015, October) "Temperature Dependence of Electron Spin Coherence in 4H-SiC" Talk presented at the 2015 American Physical Society New England Section Regional Meeting at Dartmouth College

M. A. Morris (2015, January) "Exploring the Late Evolutionary Stages of Sun-like Stars with LSST" Poster presented at the 225th Annual Meeting of the American Astronomical Society, Seattle, WA

TECHNICAL STRENGTHS

Modeling and Analysis	MATLAB, Python, LabVIEW, Agisoft Metashape Familiarity with Solidworks, ArcGIS, Julia
Software & Tools	MS Office, Latex
Additional Skills	Scientific Diving, ROV Pilot, Small Scale Photogrammetry