EMA LINNEA PARKER

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EDUCATION

P.h.D, Geosciences   Expected graduation date: *June 2027*
University of Texas in Austin, TX

Masters of Science, Hydrographic Sciences   *July 2023*
The University of Southern Mississippi, Stennis Space Center, MS

Bachelors of Science, Mathematics   *July 2020*
The University of Utah, Salt Lake City, UT

PROFESSIONAL CERTIFICATIONS

FIG/IHO/ICA Category-A Hydrographer Certification   *July 2023*
The University of Southern Mississippi, Stennis Space Center, MS

TRAINING CERTIFICATES

CARIS BaseEditor   *July 2023*
EIVA NaviSuite   *May 2023*
QPS Qinsy   *January 2023*
HYPACK 2022   *August 2022*
CARIS HIPS and SIPS Professional 11.4   *February 2022*

RESEARCH & WORK EXPERIENCE

Doctoral Research - OCEEMLab   *August 2023 - Present*

My research focuses on employing active marine electromagnetic (EM) methods to study lithosphere-biosphere dynamics and, by extension, potential implications those mechanisms may have for the New Blue Economy. My background in hydrographic sciences and mathematics provided a breadth of technical knowledge on the most current marine surveying practices and a desire to solve complex marine problems. I also have a key interest in expanding UTIG's marine EM capabilities. As a part of the OCEEMlab, I will assist in developing innovative marine controlled source (CSEM) to produce high-resolution Earth models.

Hydrography Graduate Assistantship - Deep Sea Exploration Lab   *August 2021- August 2023*

I worked on data management during offshore research cruises. I helped author primary standard operating procedures for research cruise planning, mobilization, and demobilization for USM's C-worker 5 and associated LARs, with the intention of executing aquaculture surveys for NOAA. Some of my previous tasks included participating in missions with USM's ASV Eagle Ray to search for a vessel lost to German U-boats in the gulf, conducting vessel configuration surveys for NOAA's Okeanos Explorer, and providing assistance in deploying navy hurricane gliders in the Gulf of Mexico.

Hydrography Graduate Assistantship - GNSS + Bathymetry lab (GpB)   *January 2022- July 2022*

My Lab worked on comparing kinematic positioning solutions of survey-grade proprietary equipment with open-source multiband GNSS receivers and IMUs.   I assisted in field operations when we collected IMU +GNSS data for MBES surveys on USM's WAM-V in the Pearl River area. This included Launch and recovery operations as well as troubleshooting and line planning using HYPACK 2022.   I also helped with the in-office data processing aspect of this work which mainly dealt with processing methods for SBET & Heave files using Python, GrafNav, Rinex Tools, and MATLAB.

Computational Biology Directed Research - U of U Mathematics Department   *January 2020 - May 2020*

As part of a team, I modeled the transition of melanomas from radial to vertical growth phases mainly using ordinary and partial differential equations. I also wrote a companion numerical analysis program in MATLAB which utilized cellular-automaton methodology to analyze the spatial results.

Cardiac Stem-Cell Undergraduate Researcher - CVRTI   *June 2016 - July 2018*

My work was initially focused on cardiac stem-cell culture directly but later morphed into image analysis and other computational projects. I also did some sample prep for data collection and was trained to use confocal microscopes and nanofabrication procedures.

TEACHING EXPERIENCE

TA for Geosciences - University of Texas at Austin   *August 2023-Present*

Right now, I TA for introductory courses in Geosciences for non-majors. In my sections I stress the importance of learning a way of thinking rather than memorization.

Academic Coach - Wasatch Academy   *September 2020 - June 2021*

This position was virtual. This position consisted of both content tutoring and executive skill training for high school students preparing for the rigor of college courses. I mainly taught mathematics (such as AP calc, precalc, algebra I&II, and geometry) but I also gained experience assisting in a variety of other subjects and provided assistance in improving virtual classroom environments during the Covid-19 Pandemic.

Tutor for Business Mathematics - University of Utah   *December 2017 - December 2019*

I worked as a private tutor for a handful of business, marketing, entrepreneurship, and finance majors as they progressed through their required undergraduate mathematics courses such as college algebra and statistics.

SELECTED TECHNICAL SKILLS

Software skills: QPS, EIVA NaviSuite, HYPACK, CARIS Hips & Sips, MATLAB, POSPAC MMS, Caris Base Editor, Python, & Arduino.

Hardware skills: Land Surveying, Tide gauge installation, Trailering, SLA and FDM printing, & basic machining.

FIELD & CRUISES

Summer Capstone Field Survey R/V LeMoyne	*June 18 - 24, 2023*
AUV Enginnering Cruise R/V Point Sur	*November 02 - 06, 2022*
CO2 Monitoring Buoy R/V Pelican	*October 11 - 12, 2022*
IMTA project R/V Point Sur	*August 22 - 26, 2022*
Slocum glider launch R/V Acadiana	*August 02 - 03, 2022*
Search for Norlindo Cruise R/V Point Sur	*January 25 - February 6, 2022*
NOAA Okeanus Explorer vessel configuration survey	*January 10- 12, 2022*

SELECTED HONORS

- **Graduate School Assistantship Award** (monthly stipend & tuition waiver)   *August 2021-August 2023*
- **Mathematics of Cancer Directed Research Award** ($500 Scholarship)   *January 2020*
- **Gothe Discover Germany through Science Award** (all-expense-paid trip to Germany)   *May 2015*
- **A consortium of Ocean Leadership Award with emphasis on Marine Geosciences**($1500)   *May 2014*
- **SpaceX Excellence in Engineering Award** ($2000 and tour of SpaceX)   *May 2014*
- **European Organization for Nuclear Research Award** (all-expense-paid trip to CERN)   *May 2013*

AFFILIATIONS

- The Hydrographic Society of America (THOSA)   *Since June 2022*
- Society for Underwater Technology in the U.S. (SUT-US)   *Since May 2022*
- MATLAB Usability Study Participant   *Since March 2022*
- Association for Women in Mathematics (AWM) Membership   *Since August 2019*
- The American Association for the Advancement of Science (AAAS) Membership   *Since May 2014*