EMA LINNEA PARKER

⚲ UTIG student Profile ✉ emaparker@utexas.edu

📍 Institute for Geophysics, Jackson School of Geosciences, The University of Texas at Austin, Austin, TX, USA

EDUCATION

Ph.D, Geophysics *Expected graduation date: June 2028*
The 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 Naval Oceanographic Office, 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 AND WORK EXPERIENCE

Doctoral Research - Institute for Geophysics at The University of Texas at Austin *August 2023-Present*
Focus on utilizing active and passive marine electromagnetic (EM) methods in conjunction with other physical datasets to investigate lithosphere-biosphere dynamics and their potential implications for the New Blue Economy. Background in hydrographic sciences and mathematics, with a keen interest in enhancing UTIG's marine EM capabilities.

Plume Hunter & AUV Pilot Trainee - internship for Ocean Floor Geophysics *September 2024-November 2024*
One-month subcontract for an offshore survey with Fukada Salvage and Marine Works Co., Ltd to investigate SMS deposits. Responsibilities included preparing, installing, and maintaining geochemistry sensors; assisting with mobilization and demobilization of AUV; participating in vessel and equipment integration, testing, and calibration; aiding in survey planning and pre/post-dive operations; and conducting data QC/QA and reporting.

Hydrography Graduate Assistantship - Deep Sea Exploration Lab at *August 2021-August 2023*
Managed data during offshore research cruises, developed standard operating procedures for research cruise planning, and aided in aquaculture surveys for NOAA. Participated in missions with ASVs, conducted vessel configuration surveys for NOAA's Okeanos Explorer, and assisted in deploying navy hurricane gliders in the Gulf of Mexico.

Hydrography Graduate Assistantship - GNSS + Bathymetry lab *January 2022-July 2022*
Worked on comparing kinematic positioning solutions of survey-grade proprietary equipment with open-source multiband GNSS receivers and IMUs. Collected IMU + GNSS data for MBES surveys on USM's WAM-V in the Pearl River area, and conducted in-office data processing using Python, GrafNav, Rinex Tools, and MATLAB.

Computational Biology Directed Research - U of U Mathematics Department *January 2020-May 2020*
Part of a team that modeled the transition of melanomas from radial to vertical growth phases using ordinary and partial differential equations. Developed a numerical analysis program in MATLAB utilizing cellular-automaton methodology for spatial analysis.

Cardiac Stem-Cell Undergraduate Researcher- CVRTI *June 2016-July 2018*
Initially focused on cardiac stem-cell culture, transitioned to image analysis and computational projects. Conducted sample preparation for data collection, trained in the use of confocal microscopes and nanofabrication procedures.

TEACHING EXPERIENCE

TA for Geosciences - University of Texas at Austin   *August 2023-May 2024*
Currently serving as a Teaching Assistant for introductory Geosciences courses designed for non-majors. Emphasizing critical thinking skills over rote memorization.

Mathematics Academic Coach - Wasatch Academy   *September 2020-June 2021*
Provided content tutoring and executive skill training to high school students preparing for college-level courses. Contributed to enhancing virtual classroom environments during the Covid-19 Pandemic.

Tutor for Business Mathematics - University of Utah   *December 2017-December 2019*
Offered private tutoring services to business, marketing, entrepreneurship, and finance majors, guiding them through college algebra and statistics courses.

SELECTED TECHNICAL SKILLS

Software skills: QPS, EIVA NaviSuite, HYPACK, CARIS, MATLAB, POSPAC MMS, Python, and Sonardyne Ranger2
Hardware skillss: Land Surveying, Tide gauge installation, Trailering, SLA and FDM printing, and basic machining.

VESSEL EXPERIANCE

AUV mapping of SMS deposits near Okinawa, Japan - Shin Ryu Maru   *September 25 - October 25, 2024*
Sonardyne Calibration Survey - R/V Atlantis   *January 02 - 07, 2024*
Summer Capstone Field Survey - R/V LeMoyne   *June 18 - 26, 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*
Vessel configuration survey - NOAA Okeanus Explorer   *January 10- 12, 2022*

SELECTED HONORS

BlueSky Fellow (monthly stipend & tuition waiver)   *August 2024-Present*
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)   *January 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

American Geophysical Union (AGU)   *Since July 2024*
Society of Exploration Geophysicists (SEG)   *Since October 2023*
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*