# Camille Pagniello

Department of Ocean and Resources Engineering, University of Hawai'i at Mānoa cpagniel@hawaii.edu | (858) 284-9251 | https://pagniello-lab.github.io

#### **FACULTY APPOINTMENTS**

University of Hawai'i at Mānoa, School of Ocean and Earth Science and Technology (SOEST), Honolulu, Hawai'i

Assistant Professor of Oceanographic Engineering, Department of Ocean and Resources Engineering

Assistant Researcher & SOEST Early Career Research Fellow, Hawai'i Institute of Marine Biology

2024 - 2025

#### PROFESSIONAL PREPARATION

Stanford University, Hopkins Marine Station, Pacific Grove, California

Postdoctoral Fellow advised by B. Block, Oceans Department, Stanford Doerr School of Sustainability

2021 - 2023
Research: Marine top predators as sentinels of climate change at ecologically important scales

**Scripps Institution of Oceanography**, University of California San Diego, La Jolla, California *PhD*, Oceanography with Certificate of Engineering Leadership & Micro-MBA

Thesis: "Advancing the study of fish populations in marine protected areas using passive acoustics and optical imaging" advised by J.S. Jaffe, Jaffe Laboratory for Underwater Imaging, Marine Physical Laboratory

MS, Applied Ocean Science and Engineering

2015 - 2016

2015 - 2021

Dalhousie University, Halifax, Nova Scotia, Canada

BSc Honours Co-op, Marine Biology & Physics, minors in Math & Ocean Sciences

2010 - 2015

Thesis: "Spatial and temporal variation in water mass characteristics and the normalized zooplankton biomass size spectrum in Northumberland Strait" advised by C.T. Taggart, Fisheries Oceanography Lab, Department of Oceanography

Sea Education Association (SEA), Boston University, Woods Hole, Massachusetts

Oceans and Climate (S-250), 45 days at sea from San Diego to Tahiti aboard SSV Robert C. Seamans 2013 Thesis: "The impacts of ocean acidification on the geographic distribution, species composition and species diversity of thecosome pteropods" advised by A. Meyer, SEA Education Association

#### **PUBLICATIONS**

Students I have mentored are <u>underlined</u>. \* indicates shared first authorship.

- 11. Andrzejaczek, S, DiGiacomo, A, Mikles, C, Pagniello, C, Reimer, T, & Block, B. (2024). Lunar cycle effects on pelagic predators and fisheries: insights into tuna, billfish, sharks, and rays. Reviews in Fish Biology & Fisheries.
- 10. Ferter, K\*, **Pagniello, C\***, ... (2024). Northernmost electronic tagging of Atlantic bluefin tuna reveals distinct diving behaviors in different oceanographic provinces. *Proceedings of the Royal Society B*, 291: 20241501.
- 9. **Pagniello, C**, Castleton, M, Carlisle, A, Chapple, T, Schallert, R, Fedak, M, & Block, B. (2024). Novel CTD tag establishes shark fins as ocean observing platforms in the Gulf of Alaska. *Scientific Reports*, 14, 13837.
- 8. Oliver, R, ..., **Pagniello, C**, ..., & Zimmerman, N. (2024). Opening a conversation on responsible environmental data science in the age of generative AI. *Environmental Data Science*, 3, e14.
- 7. **Pagniello, C**, Ó Maoiléidigh, N, ..., Drumm, A, O'Neill, R, & Block, B. (2023). Tagging of Atlantic bluefin tuna off Ireland reveals use of distinct oceanographic hotspots. *Progress in Oceanography*, 209, 103135.
- 6. Butler, J & **Pagniello**, C. (2021). Emerging, low-cost ocean observing technologies to democratize access to the ocean. *Oceanography Frontiers in Ocean Observing Supplement*, 34(4), 94-95.
  - Includes a living list of open-source ocean technology (GitHub)
- 5. **Pagniello, C**, Butler, J, <u>Rosen, A</u>, <u>Sherwood, A</u>, ..., Jaffe, J & Širović, A. (2021). An optical imaging system to capture images in low-light aquatic habitats using only ambient light. *Oceanography*, 34(3), 71-77. (GitHub)
  - Included in the Ocean Best Practices System by the Intergovernmental Oceanographic Commission of UNESCO.
- 4. Butler, J, **Pagniello**, C, Jaffe, J, Parnell, P & Širović, A. (2021). Diel and seasonal variability in kelp forest soundscapes off the Southern California coast. *Frontiers in Marine Science*, 8: 357.
- 3. **Pagniello, C**, Cimino, M & Terrill, E. (2019). Mapping fish chorus distributions in Southern California using an autonomous wave glider. *Frontiers in Marine Science*, 6: 526.
- 2. Cavole, L, ..., **Pagniello, C**, ... & Franks, P. (2016). Biological Impacts of 2013-2015 Warm-Water Anomalies in the Northeast Pacific: Winners, Losers and the Future. *Oceanography*, 29(2), 273–285.

- Authors listed alphabetically and contributed equally. Article written as part of Introduction to Biological Oceanography course at SIO. Only student to receive A+. Highlighted in Nature Climate Change.
- 1. Palmer, P, ..., Pagniello, C, ... & Young, J. (2013). Quantifying the impact of BOReal forest fires on Tropospheric oxidants over the Atlantic using Aircraft and Satellites (BORTAS) experiment: design, execution and science overview. *Atmospheric Chemistry and Physics*, 13(13), 6239-6261.

#### Submitted and In Review:

- 2. Pavlov, V, Polly, D, **Pagniello, C**, ..., & Block, B. Phenotypic Variation and the Cost of Locomotion in Cetaceans: A New Framework for Bioenergetic Assessments. submitted to *Nature*.
- 1. Henry, L-A, ..., **Pagniello, C**, ..., & Roberts, J. Mesoscale eddies in the subpolar North Atlantic: their ecological importance and conservation significance. submitted to *Progress in Oceanography*.

#### *In Preparation:*

- 8. **Pagniello, C.** & Jaffe, J. Three-dimensional localization and tracking of individual fish in a complex, shallow-water environment using *in situ* sound playbacks. in prep for *Methods in Ecology and Evolution*. (GitHub)
- 7. <u>Mikles, C</u>, **Pagniello**, C, Boustany, A, Schallert, R, Castleton, M & Block, B. Multiyear observations of Atlantic bluefin tuna reveal fidelity to foraging and spawning grounds. in prep for *Ecological Monographs*.
- 6. <u>Leone, M, Riemersma, D, Witting, J, Block, B & Pagniello, C. Mesoscale eddies influence deep scattering layers in the lee of Hawai'i. in prep for *Deep Sea Research Part I*.</u>
- 5. <u>Anderson, C, McCormick, E, Edmonds, A, ..., Micheli, F, Witting, J, Block, B & **Pagniello, C**. Revisiting the presence of inverted trophic biomass pyramids on a remote Pacific island. in prep for *Coral Reefs*.</u>
- 4. <u>Lalgudi, C, Mettias, M, Witting, J, Block, B & Pagniello, C. A novel machine learning approach to classify the oceanographic landscape of bathymetrically-complex, shallow-water environments: multidimensional dynamic time warping and fuzzy k-medoids clustering. in prep for *Geophysical Research Letters*.</u>
- 3. **Pagniello, C**, <u>Hunting, E</u>, <u>Bennett, M</u>, <u>Clark, J</u>, Witting J, & Block, B. Mesoscale eddies influence the movements of white sharks in the lee of Hawai'i. in prep for *Animal Biotelemetry*.
- 2. **Pagniello, C**, <u>Kaull, J, Kong, R</u> & Butler, J. KaniMoana: An open source, customizable, and low-cost underwater passive acoustic recorder. in prep for *Methods in Ecology and Evolution*. (GitHub)
- 1. **Pagniello, C**, <u>Sederat, M</u>, Butler, J & Parnell, PE. Kelp forest mapping using a low-cost "fish finder." in prep for *Methods in Ecology and Evolution*. (GitHub)

#### Conference Proceedings:

1. **Pagniello, C**, Wiggins, SM, D'Spain, GL, Hildebrand, JA, & Širović, A. (2016). Bryde's whale behavioral metrics in the Southern California Bight from acoustic array tracking. In Proceedings of Meetings on Acoustics, 27, 010014.

#### AWARDS, FELLOWSHIPS & HONORS

| ·   |               |
|---|---------------|
| SOEST Early Career Research Fellowship, University of Hawai'i at Mānoa (\$143,000)                  | 2023          |
| Best Postdoc Talk, Stanford Data for Sustainability Conference                                      | 2023          |
| Knauss Fellowship Finalist, NOAA Sea Grant (\$84,000)   | declined 2021 |
| Ada Lovelace Fellowship, Open Source Hardware Association   | 2021          |
| Fleet Admiral Chester W. Nimitz Fellowship, Scripps Institution of Oceanography (SIO) (\$86,000)    | 2019 - 2021   |
| Greeneridge Sciences Fellowship in Underwater Acoustics, SIO (\$4,400)                              | 2018          |
| SIO Graduate Gordon Scholar, Gordon Engineering Leadership Center at UC San Diego                   | 2018          |
| Bell Graduate Scholarship*, Natural Sciences and Engineering Research Council of Canada (\$105,000) | 2016 - 2019   |
| Best Student Talk - Nearshore, 4 <sup>th</sup> Annual Scripps Student Symposium                     | 2017          |
| Regents Fellowship, University of California San Diego (\$30,000)                                   | 2015          |
| First Class Honours, Dalhousie University   | 2015          |
| Clowes Presidential Scholarship, Sea Education Association (\$10,500)                               | 2013          |
| Summer Student Fellowship, Woods Hole Oceanographic Institution (\$6,240)                           | 2013          |
| NSERC Undergraduate Student Research Award, Dalhousie University (\$5,625)                          | 2014, '15     |
| Remotely Operated Vehicle (ROV) Scholarship, Marine Technology Society (\$5,000)                    | 2014          |

<sup>\*</sup> Canadian equivalent to NSF Graduate Research Fellowships Program (GRFP)

| GRANTS           ¹ led or contributed to conception, design, writing, and/or execution, but unable to serve as PI as a student or postdoe         2024 - 2026           Cosstal Health Collective (\$399,944); PI: A. Kealoha, Co-PI: N. Hawco, E. Nalley, C. Nelson & C. Pagniello         2024           Bristlemouth Pioneer Program         20021           Spotter + Smart Mooring + Bristlemouth DevKit (\$10,800); PI: C. Pagniello         2021           MAC3 Foundation¹         2021           White Sharks as Oceanographers (\$91,802); PIs: B. Block, L. Thomas         60ffice of Naval Research, Task Force Ocean (TFO)²         2019 - 2022           Probing the Environmental Limits to Passive Sonar, PI: G. D'Spain         declined 2019           Kcl SSPAACE: Kelp Sponge Sargassum Acoustic Abalone Cyborg Expedition (6 days at sea, \$78,000); PI: C. Pagniello (lead), M. Sedarat, K. Wilson, A. Cusick, M. Andersen         2018           Kelp SSPAACE: Kelp Sponge Sargassum Acoustic Abalone Cyborg Expedition (6 days at sea, \$78,000); PI: C. Pagniello         2016 - 2018           Kelp Acoustic Propagation Experiment (2 days at sea, \$26,000); PI: C. Pagniello         2016 - 2018           Kelp Acoustic Propagation Experiment (2 days at sea, \$26,000); PI: C. Pagniello         2016 - 2018           Kelp Acoustic Propagation Experiment (2 days at sea, \$26,000); PI: C. Pagniello         2016 - 2018           Kelp Applitures         2016 - 2018           Kelp Applitures         2016 - 2018  | NSERC Undergraduate Student Research Award, Memorial University of Newfoundland (\$5,625) Burgess McKittrick Prize in Physics, Dalhousie University Charles Bussmann Undergraduate Scholarship, Marine Technology Society (\$2,500) Burgess McKittrick Studentship in Physics, Dalhousie University (\$3,600) | 2012, '13<br>2012<br>2011, '12<br>2011 |
|--|---|--|
| UII Strategic Investment Coastal Health Collective (\$399,944); Pl. A. Kealoha, Co-Pl. N. Hawco, E. Nalley, C. Nelson & C. Pagniello Bristlemouth Pioneer Program Spotter + Smart Mooring + Bristlemouth DevKit (\$10,800); Pl. C. Pagniello MAC3 Foundation MAC4 Foundation MAC4 Foundation MAC4 Foundation MAC4 Foundation MAC4 Foundation MAC4 Foundation MAC5 Foundation MAC   | GRANTS  |  |
| Bristlemouth Floneer Program Spotter - Smart Mooring + Bristlemouth DevKit (\$10,800); P.I. C. Pagniello MAC3 Foundation Mite Sharks as Oceanographers (\$91,802); Pls: B. Block, L. Thomas Office of Naval Research, Task Force Ocean (TFO) Probing the Environmental Limits to Passive Sonar; PI: G. D'Spain UC Ships Funds Program, Scripps Institution of Oceanography Kelp SSPAACE: Kelp Sponge Sargassum Acoustic Abalone Cyborg Expedition (6 days at sea, \$78,000); Pls: C. Pagniello (lead), M. Sedarat, K. Wilson, A. Cusick, M. Andersen UC Ships Funds Program, Scripps Institution of Oceanography Kelp APE: Kelp Acoustic Propagation Experiment (2 days at sea, \$26,000); Pl: C. Pagniello California Sea Grant' Solidarnia Sea Grant' Eciphering The Soundscapes Of The Coastal Shelf: Using Passive Acoustics For Assessing Fish Dynamics In Southern California Kelp Forests (\$254,489); Pls: A. Śirović, J. Jaffe, E. Parnell  TEACHING APPOINTMENTS, AWARDS & PEDAGOGICAL TRAINING  Appointments:  University of Howai' tat Mānoa Instructor, Ocean Instrumentation and Technology Sanford University Co-Instructor, Taking the Pulse of the Ocean: Innovative Technologies for the Blue Planet Lecturer, Student Project Coordinator & Mentor, Stanford@SEA  University of California San Diego University of California San Diego University of Record, Introduction to Biological Oceanography Teaching Assistant, Experiences in Oceanic and Atmospheric Sciences Guest Lecturer, Perspectives on Ocean Science Teaching Assistant, Experiences in Ocean Science University Assistant, Physiology of Marine Animals I & II Teaching Assistant, Principles of Biology I & II Teaching Assistant, |   | •                                      |
| Spotter + Smart Mooring + Bristlemouth Devkit (\$10,800); Pl: C. Pagniello   |   |  |
| MAC3 Foundation* White Sharks as Oceanographers (\$91,802); PIs: B. Block, L. Thomas Office of Naval Research, Task Force Ocean (TFO)* Ocean Despire Institution of Oceanography California Sea Grant* Ocean Institution of Oceanography California Sea Grant* Ocean Institution of Oceanography TEACHING APPOINTMENTS, AWARDS & PEDAGOGICAL TRAINING  Appointments: University of Hawai' at Mānoa Instructor, Ocean Instrumentation and Technology Spring '25  Stanford University Co-Instructor, Taking the Pulse of the Ocean: Innovative Technologies for the Blue Planet Lecturer, Student Project Coordinator & Mentor, Stanford@SEA University of California San Diego Instructor of Record, Introduction to Biological Oceanography Co-Instructor of Record, Introduction to Biological Oceanography Teaching Assistant, Experiences in Oceanis and Atmospheric Sciences Ourself Cuest Lecturer, Perspectives on Ocean Science University Teaching Assistant, Wave Physics I – Ocean Acoustics  Dalhousie University Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant Physiology of Marine Animals I & II Teaching Assistant Physiology of Marine Animals I    |   | 2024                                   |
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| Office of Naval Research, Task Force Ocean (TFO)†         2019 - 2022           Probing the Environmental Limits to Passive Sonar, Pl. G. D'Spain         declined 2019           UC Ships Funds Program, Scripps Institution of Oceanography         declined 2019           Kelp SSPAACE: Kelp Sponge Sargassum Acoustic Abalone Cyborg Expedition (6 days at sea, \$78,000);         Problem City Chips Funds Program, Scripps Institution of Oceanography         2018           UC Ships Funds Program, Scripps Institution of Oceanography         2018         2016 - 2018           California Sea Grant†         2016 - 2018         2016 - 2018           Deciphering The Soundscapes Of The Coastal Shelf: Using Passive Acoustics For Assessing Fish Dynamics In Southern California Kelp Forests (\$254,489); Pls: A. Sirović, J. Jaffe, E. Parnell         2016 - 2018           TEACHING APPOINTMENTS, AWARDS & PEDAGOGICAL TRAINING           Appointments:           University of Idwait' at Mānoa         Spring '25           Instructor, Coean Instrumentation and Technology         Spring '25           Stanford University           Co-Instructor, Taking the Pulse of the Ocean: Innovative Technologies for the Blue Planet         Spring '23           Lecturer, Student Project Coordinator & Mentor, Stanford@SEA         Sum' 20, 21           Instructor, Taking the Pulse of the Ocean: Innovative Technologies for the Blue Planet         Sum' 20, 21   |   | 2021                                   |
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| Appointments: University of Hawai'i at Mānoa Instructor, Ocean Instrumentation and Technology Spring '25  Stanford University Co-Instructor, Taking the Pulse of the Ocean: Innovative Technologies for the Blue Planet Spring '23 Lecturer, Student Project Coordinator & Mentor, Stanford@SEA Spring '22 University of California San Diego Instructor of Record, Introduction to Biological Oceanography Sum '20, '21 Teaching Assistant, Experiences in Oceanic and Atmospheric Sciences Fall '19, '20 Guest Lecturer, Perspectives on Ocean Science Winter '19 Teaching Assistant, Wave Physics I - Ocean Acoustics Win '17 - '19 Dalhousie University Teaching Assistant, Physiology of Marine Animals I & II AY '14 - '15 Teaching Assistant, Principles of Biology I & II AY '14 - '15 Teaching Awards: Summer Graduate Teaching Scholar, University of California San Diego (\$1,200) Summer '20 Competitively awarded to 30 graduate students at UCSD (and only 2 at SIO) to design and teach an undergraduate course.  Pedagogical Training Courses through the Engaged Teaching and Learning Commons at UC San Diego: Introduction to College Teaching Introduction to Course Design Apr '20 Participation in Learning Communities: Summer Teaching Community, University of California San Diego Sum '20, '21 Committees: SIO Educational Policy Committee, Student Rep AY '18 - '20  |   |  |
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| Instructor, Ocean Instrumentation and Technology  Stanford University  Co-Instructor, Taking the Pulse of the Ocean: Innovative Technologies for the Blue Planet Spring '23 Lecturer, Student Project Coordinator & Mentor, Stanford@SEA Spring '22  University of California San Diego Instructor of Record, Introduction to Biological Oceanography Sum '20, '21 Teaching Assistant, Experiences in Oceanic and Atmospheric Sciences Guest Lecturer, Perspectives on Ocean Science Winter '19 Teaching Assistant, Wave Physics I – Ocean Acoustics Win '17 - '19  Dalhousie University Teaching Assistant, Physiology of Marine Animals I & II AY '14 - '15 Teaching Assistant, Principles of Biology I & II AY '14 - '15 Teaching Awards:  Summer Graduate Teaching Scholar, University of California San Diego (\$1,200) Competitively awarded to 30 graduate students at UCSD (and only 2 at SIO) to design and teach an undergraduate course.  Pedagogical Training Courses through the Engaged Teaching and Learning Commons at UC San Diego: Introduction to College Teaching Introduction to Course Design Apr '20  Participation in Learning Communities: Summer Teaching Communities: Summer Teaching Community, University of California San Diego Sum '20, '21  Committees: SIO Educational Policy Committee, Student Rep   | Appointments:   |  |
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| Guest Lecturer, Perspectives on Ocean Science Teaching Assistant, Wave Physics I – Ocean Acoustics  **Dalhousie University**  Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Principles of Biology I & II  **Teaching Assistant, Principles of Biology I & II  **Teaching Awards:*  Summer Graduate Teaching Scholar, University of California San Diego (\$1,200)  **Competitively awarded to 30 graduate students at UCSD (and only 2 at SIO) to design and teach an undergraduate course.  **Pedagogical Training Courses through the Engaged Teaching and Learning Commons at UC San Diego:**  Introduction to College Teaching Introduction to Course Design  **Pall '19 Apr '20  **Participation in Learning Communities:**  Summer Teaching Community, University of California San Diego  **Committees:**  Summer Teaching Communitiee, Student Rep  **AY '18 - '20   |   |  |
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| Dalhousie University Teaching Assistant, Physiology of Marine Animals I & II Teaching Assistant, Principles of Biology I & II  Teaching Awards:  Summer Graduate Teaching Scholar, University of California San Diego (\$1,200) Competitively awarded to 30 graduate students at UCSD (and only 2 at SIO) to design and teach an undergraduate course.  Pedagogical Training Courses through the Engaged Teaching and Learning Commons at UC San Diego: Introduction to College Teaching Introduction to Course Design Fall '19 Introduction in Learning Communities: Summer Teaching Community, University of California San Diego Sum '20, '21  Committees: SIO Educational Policy Committee, Student Rep AY '18 - '20   | * •   |  |
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| Introduction to College Teaching Introduction to Course Design  Participation in Learning Communities:  Summer Teaching Community, University of California San Diego  Committees:  SIO Educational Policy Committee, Student Rep  Fall '19 Apr '20  Apr '20  Aur '20, '21   |   |  |
| Introduction to College Teaching Introduction to Course Design  Participation in Learning Communities:  Summer Teaching Community, University of California San Diego  Committees:  SIO Educational Policy Committee, Student Rep  Fall '19 Apr '20  Apr '20  Aur '20, '21   | Pedagogical Training Courses through the Engaged Teaching and Learning Commons at UC San Diego:   |  |
| Participation in Learning Communities:  Summer Teaching Community, University of California San Diego  Committees:  SIO Educational Policy Committee, Student Rep  AY '18 - '20  | Introduction to College Teaching  | Fall '19                               |
| Summer Teaching Community, University of California San Diego  Committees:  SIO Educational Policy Committee, Student Rep  AY '18 - '20  | Participation in Learning Communities:  |  |
| SIO Educational Policy Committee, Student Rep AY '18 - '20   |   | Sum '20, '21                           |
|  | Committees:   |  |
|  |   |  |

## **MENTORING**

| Research Mentor for Graduate Students:  |                    |
|---|--------------------|
| Stanford University   |                    |
| Courtney Anderson, MSc Mechanical Engineering, Stanford University (fish & inverted pyramids) Current Position: Project Engineer, Scripps Institution of Oceanography                               | AY '23 - pres      |
| Catherine Lee Hing, PhD Interdisciplinary Program in Environmental Resources, Stanford University   | AY '23 - pres      |
| Sabrina Daley, PhD Biology, Stanford University (shark behavior, movement & climate change)   | AY '22 - pres      |
| Chloe Mikles, PhD Biology, Stanford University (tuna behavior, movement & genetics)   | AY '21 - pres      |
| Scripps Institution of Oceanography   |                    |
| Océane Boulais, PhD Student in Oceanography, Scripps Institution of Oceanography (bioacoustics)   | AY '24 - pres      |
| Mohammad Sedarat, MSc Marine Biology, Scripps Institution of Oceanography (kelp mapping)<br>Current Position: PhD Student in Oceanography, Scripps Institution of Oceanography                      | AY '18 - '21       |
| Michelle Amor, MAS Marine Biodiversity and Conservation (fish bioacoustics & art)   | Spring '21         |
| Adithya Balaji, MS Electrical and Computer Engineering, UC San Diego (machine learning)<br>Current Position: Machine Learning Engineer at Cisco   | Fall '17           |
| Research Mentor for Undergraduate Students:   |                    |
| Research Experiences Especially for Freshman and Sophomores (REEFS), Stanford University  |                    |
| Mark Leone, Mechanical Engineering, Stanford University (deep scattering layers & eddies)   | Jun '22 - pres     |
| Chinmay Lalgudi, Computer Science, Stanford University (machine learning)   | Summer '22         |
| Erika Hunting, Electrical Engineering, Stanford University (shark behavior & movement) Current Position: Material Science and Interfacial Chemistry Intern at National Renewable Energy Laborates.  | Summer '22 oratory |
| Gordon Engineering Leadership Center Challenge Project, Scripps Institution of Oceanography   |                    |
| Clare Walker, Data Strategist at Quadrature (machine learning) Current Position: Data Strategist at Quadrature  | Spring '21         |
| Eamon Patamasing, Electrical Engineering, UC San Diego (fish identification) Current Position: RFIC Design Engineer at pSemi  | AY '18 - '19       |
| Chad Mackie, Bioengineering, UC San Diego (machine learning) Current Position: Administrative Assistant at UC San Diego - Housing • Dining • Hospitality  | AY '18 - '19       |
| Gabriel Mink, Ecology, Behavior and Evolution, UC San Diego (acoustic detector)<br>Current Position: Data Scientist/Machine Learning Engineer at Albertsons Companies                               | AY '18 - '19       |
| Sarah Reynolds, Marine Biology, UC San Diego (fish identification) Current Position: Events and Partnerships Coordinator at National School Choice Awareness Foundation                             | AY '18 - '19<br>on |
| Addison Sherwood, Marine Science, Jacksonville University (fish identification)   | AY '17 - '20       |
| Marine Physical Laboratory Summer Undergraduate Internship Program, Scripps Institution of Ocea   | nography           |
| Helen Cai, Applied Mathematics, Yale University (machine learning) Current Position: MD Student, Yale University  | Summer '18         |
| Kian Bagheri, Environmental Engineering, San Diego State University (SDSU) (fish identification)<br>Current Position: PhD Student in Engineering Science and Applied Mechanics, SDSU & UC San Diego | Summer '18         |
| Annette Brennan, Marine Biology, UC Santa Cruz (fish bioacoustics) Current Position: Judicial Law Clerk, Alaska Court System  | Summer '17         |
| Annie Rosen, Civil & Environmental Engineering, UC Berkeley (camera system) Current Position: PhD Student in Civil and Environmental Engineering, Stanford University                               | Summer '17         |
| Nicolas Jeffress, Mechanic Engineering, Rice University (acoustic detector) Current Position: PhD Student in Marine Science & Conservation, Duke University   | Summer '17         |
| California Cooperative Oceanic Fisheries Investigations Hackathon (4 students; data visualization)  | Mar '21            |
| BELONGING, ACCESSIBILITY, JUSTICE, EQUITY, DIVERSITY & INCLUSION (BAJI  | E <b>DI</b> )      |
| Leadership and Committee Participation:   | ·                  |
| Stanford Doer School of Sustainability DEI Advisory Council, Postdoctoral Fellow Representative   | AY '22 - '23       |

| SIO Advancing Faculty Diversity Faculty Hiring, Student Search Committee Member Unlearning Racism in Geoscience (URGE), POD Leader at Scripps Institution of Oceanography SIO International Student Orientation, Creator, Lead Organizer and Coordinator   | AY '22 - '23<br>Spring '21<br>AY '20 - '21<br>AY '18 - '20                        |
|--|---|
| BAJEDI Panels, Roundtables & Workshops:  |   |
| Environmental Data Science (EDS) Summit - Harnessing Diversity in EDS, Selected Participant Taking Action for DEI in California's Ocean Sciences Roundtable, Selected Participant Women Leadership in Marine Technology, Engineering, and Science, Invited Moderator Pathways to Graduate Studies in Marine Science and Oceanography, Panelist   | Feb '23<br>Jan '22<br>Sep '21<br>Oct '20  |
| Peer & Classroom Mentor:   |   |
| Mentoring Physical Oceanography Women to Increase Retention (MPOWIR), Participant Científico Latino Graduate Student Mentorship Initiative (GSMI) (1 undergraduate student) Ocean Discovery Institute, Classroom Mentor  NSF Geo-Futures Mentorship Program at SACNAS Conference (2 undergraduate students)  Girls in STEAM Conference at The Preuss School UCSD, Classroom Mentor  SIO Peer Mentor Leadership Committee, Chair and AOS Student Representative | AY '21 - pres<br>AY '21 - '22<br>Spring '21<br>Oct '20<br>Sep '19<br>AY '18 - '19 |
| SIO Peer Mentor (2 PhD students)   | AY '17 - '19  |
| Internship Project Sponsor & Mentor:   |   |
| Power of NeuroGaming (PONG) Summer Internship Program for Neurodiverse Students  T. Rummani (Designer), K. Moran (Tester), E. Sweeten (Artist), J. Vu (Programmer) & J. Gagliano (Program Concept: Journey to the Kelp Forest - 2D side-scroller that navigates the protagonist Plainfin Minacross different environments just outside of La Jolla Cove  |   |
| SEMINARS, PRESENTATIONS, PANELS & WORKSHOP PARTICIPATION   |   |
| Invited Presentations & Seminars:  |   |
| University of Hawai'i at Mānoa, Department of Ocean and Resources Engineering Seminar Series Innovative, Interdisciplinary Tools to Study Marine Animals in Our Changing Ocean   | Apr '24   |
| University of Hawai'i at Mānoa, Marine Biology Graduate Program Seminar Series<br>Innovative, Interdisciplinary Tools to Study Marine Animals in Our Changing Ocean  | Jan '24   |
| Harnessing Data and Tech for Ocean Health and Sustainability Conference<br>Low-cost, open-source, DIY ocean observing technologies to democratize access to the ocean  | Nov '22   |
| Hopkins Marine Station, Stanford University Innovative, Interdisciplinary Tools to Study Marine Animals in Our Changing Ocean  | Nov '22   |
| <b>San Diego MPA Collaborative</b> New passive acoustic and optical imaging tools to study the distribution and behavior of sound-producing fish in marine protected areas   | Jul '21   |
| <b>Bigelow Laboratory for Ocean Sciences</b> , Summer Intern Seminar Series  New passive acoustic and optical imaging tools to study the distribution and behavior of sound-producing fish in marine protected areas   | Jul '21   |
| <b>Dalhousie</b> University, Department of Oceanography Seminar Series Using a passive acoustic-optical imaging system to monitor fish presence and behaviour in marine protected  | Jan '21<br>ed areas   |
| <b>Scripps Institution of Oceanography</b> , Applied Ocean Sciences Seminar Series Searching for the FishOASIS: Using passive acoustics and optical imaging to identify a chorusing species  | Jun '20<br>of fish  |
| Scripps Institution of Oceanography, Student Fellowship Brunch<br>Sights and sounds of the Southern California kelp forest   | Mar '19   |
| California Marine Protected Area Technology Workshop Passive acoustic monitoring of marine protected areas   | May '18   |
| Contributed Conference Presentations:  |   |
| 17. <b>Pagniello, C</b> ,, & Nøttestad, L. (2024). Bluefin tuna tagged off Norway show extensive annual migr site-fidelity and dynamic behaviour in the Atlantic & Mediterranean Sea. 154 <sup>th</sup> American Fisheries Soc   |   |

16. **Pagniello, C**, Ferter, K, ..., & Nøttestad, L. (2024). Atlantic bluefin tuna tagged off Norway show extensive annual migrations, high site-fidelity and dynamic behaviour in the Atlantic & Mediterranean Sea. 74<sup>th</sup> Tuna Conference.

- 15. **Pagniello, C**, Castleton, M, Carlisle, A, Chapple, T, Schallert, R, Fedak, M, & Block, B. (2024). Novel CTD tag establishes shark fins as ocean observing platforms. 8<sup>th</sup> International Bio-Logging Science Symposium.
- 14. **Pagniello, C**, Ó Maoiléidigh, N, Maxwell, H, ..., Stokesbury, M, Drumm, A, O'Neil, R, & Block, B. (2023). Tagging of Atlantic Bluefin Tuna off Ireland Reveals Use of Distinct Oceanographic Hotspots. 73<sup>rd</sup> Tuna Conference.
- 13. **Pagniello, C**, & Block, B. (2023). Sharks as Oceanographers: Measuring Oceanographic Features from a Salmon Shark Instrumented with a CTD Tag. Stanford Doerr School of Sustainability Research Review.
- 12. **Pagniello, C**, & Block, B. (2023). Sharks as Oceanographers: Measuring Oceanographic Features from a Salmon Shark Instrumented with a CTD Tag. Stanford Data for Sustainability Conference.
- 11. **Pagniello, C**, & Jaffe, J. (2022). Passive Acoustic Localization and Tracking of Individual Fish in a Complex Shallow-Water Environment Near the Boundary of a Marine Protected Area. 2022 Ocean Sciences Meeting.
- 10. **Pagniello, C**, Butler, J, ..., Jaffe, J, Parnell, E, & Širović, A. (2020). Using a passive acoustic-optical imaging system to monitor fish presence and behavior in marine protected areas. 2020 Ocean Sciences Meeting.
- 9. **Pagniello, C**, & D'Spain, G. (2019). Localization and tracking of fish sounds with a 4-element underwater passive acoustic array. 178<sup>th</sup> Meeting of the Acoustical Society of America.
- 8. D'Spain, G, **Pagniello, C**, & Rowell, T. (2018) Some comments on acoustic sensing at a single point in space. 176<sup>th</sup> Meeting of the Acoustical Society of America.
- 7. **Pagniello, C**, Butler, J, ..., Parnell, E, & Širović, A. (2018). Searching for the FishOASIS: Using passive acoustics and optical imaging to identify a chorusing species of fish. 176<sup>th</sup> Meeting of the Acoustical Society of America.
- 6. Butler, J, **Pagniello**, C, Parnell, E, Jaffe, J, & Širović, A. (2017). Sights and Sounds of the Kelp Forest: Exploration of Fish Community Dynamics Through Acoustic and Photographic Datasets. 2018 Ocean Sciences Meeting.
- 5. **Pagniello, C**, Butler, J, ..., & Širović, A. (2017). Soundscape fishing: spatial variability in a low-frequency fish chorus in the southern California kelp forest. 174<sup>th</sup> Meeting of the Acoustical Society of America.
- 4. **Pagniello, C**, Butler, J, Rosen, A, Brennan, A, Roberts, P, Jaffe, J, Parnell, E, & Širović, A. (2017). Trials and tribulations of a "fishy" field season. 4<sup>th</sup> Annual Scripps Student Symposium.
- 3. Cavole, L, ..., **Pagniello, C**, ..., & Franks, P. (2017). Biological Impacts of 2013-2015 Warm-Water Anomalies in the Northeast Pacific: Winners, Losers and the Future. Eastern Pacific Ocean Conference 2017.
- 2. D'Spain, G, & **Pagniello, C**. (2015). Some aspects of signal and array processing with small aperture underwater acoustic arrays. 170<sup>th</sup> Meeting of the Acoustical Society of America.
- 1. **Pagniello, C.**, Lawson, G, & Lavery, A. (2013). Identifying the nature of a strong pervasive acoustic scattering layer in the northeast Pacific. Woods Hole Oceanographic Institution Summer Student Fellow Research Symposium.

#### Contributed Conference Posters:

- 8. **Pagniello, C**, ..., & Block, B. (2024). Novel CTD tag establishes shark fins as ocean observing platforms in the Gulf of Alaska. US CLIVAR Optimizing Ocean Observing Networks for Detecting the Coastal Climate Signal Workshop.
- 7. **Pagniello, C**, Castleton, M, Carlisle, A, Chapple, T, ..., Fedak, M, & Block, B. (2024). Novel CTD tag establishes shark fins as ocean observing platforms in the Gulf of Alaska. 154<sup>th</sup> American Fisheries Society Meeting.
- 6. **Pagniello, C**, Castleton, M, Carlisle, A, Chapple, T, ..., Fedak, M, & Block, B. (2024). Novel CTD tag establishes shark fins as ocean observing platforms in the Gulf of Alaska. 8<sup>th</sup> International Bio-Logging Science Symposium.
- 5. Wilson, A, **Pagniello**, C, Greenbaum, J, Auzenne, ..., & Yao, P. (2021). URGE at Scripps Institution of Oceanography Accomplishments, Challenges, and Future Plans. American Geophysical Union Fall Meeting.
- 4. **Pagniello, C**, D'Spain G, Jaffe, J, & Hildebrand, J. (2019) Quantitative metrics of performance for different localization algorithms. OCEANS '19 MTS/IEEE Marseille, France.
- 3. **Pagniello, C**, Butler, J, Rosen, A, Roberts, P, Jaffe, J, Parnell, E, & Širović, A. (2017). A Fish Optical and Acoustic Sensor Identification System (FishOASIS). 2018 Ocean Sciences Meeting.
- 2. **Pagniello, C**, ..., Hildebrand, J, & Širović, A. (2016). Bryde's Whale Behavioral Metrics in the Southern California Bight from Acoustic Array Tracking. Fourth International Conference on the Effects of Noise on Aquatic Life.
- 1. **Pagniello, C**, & Taggart, C. (2015). Biomass size spectrum analysis in the Northumberland Strait. 29<sup>th</sup> Annual Cameron Conference for Biology and Marine Biology Honours Student Research.

#### Academic Panels

AGU and Next Steps for the UN Decade of Ocean Science for Sustainable Development American Geophysical Union Fall Meeting

Dec '21

American Geophysical Union Fall Meeting Changes in Science

May '19

9

| Scripps Institution of Oceanography/UC San Diego Half Century Retrospective Symposium  |  |
|--|--|
| MPA Monitoring Tools by Land and Sea California Marine Protected Area Technology Workshop  | May '18                                    |
| Invited Workshop Participation:  |  |
| US CLIVAR, Optimizing Ocean Observing Networks for Detecting the Coastal Climate Signal Workshop   | Sep '24                                    |
| <b>Ecosystem Services Observation Network (ESON)</b> , Exploring Technologies to Monitor Coastal Ecosystem Health in California  | Feb '22                                    |
| ESON, Ecosystem Unknowns and Societal Monitoring Needs in the California Current   | Jun '21                                    |
| Smart Oceans, an NSF virtual conference on the Future of Oceans  | Oct '20                                    |
| SERVICE  |  |
| Conference Organization:   |  |
| US CLIVAR Optimizing Ocean Observing Networks for Detecting the Coastal Climate Signal Workshop, Discussion Leader for Breakout Sessions   | Sep '24                                    |
| 74 <sup>th</sup> Tuna Conference, Session Moderator for "Session Moderator for "Putting it all together to improve assessment and management"  | May '24                                    |
| <b>2022 Ocean Sciences Meeting (OSM)</b> , Session Chair for "Connecting ocean science, conservation and management needs and solutions through emerging technologies and approaches   | Feb '22                                    |
| 2020 OSM, Session Chair for "New technologies and methods in fisheries science"  | Feb '20                                    |
| 178th Acoustical Society of America, Local Organizing Committee  | Fall '19                                   |
| Scripps Student Symposium, Website Designer and On-Site Coordinator  | Summer '18                                 |
| 2018 & 2020 OSM, Student Representative for The Oceanography Society on Program Committee Organizer of Non-Academic Career Panels as well as Student and Early Career Conference   | AY '16 - '20                               |
| Session Reviewer for Marine Ecology & Biodiversity; Ocean Observatories, Instrumentation & Sensin  |  |
| OCEANS '14 MTS/IEEE, Marine Environmental Observation Prediction and Response Network (MEOPAR) Student Activities and Booth Coordinator  | Fall '14                                   |
| OCEANS '15 MTS/IEEE, Local Organizing Committee and Student Activities Chair   | AY '13 - '15                               |
| MATE ROV Competition, Ocean Career Expo Coordinator  | Summer '13                                 |
| Academic Service at Stanford University:   |  |
| Stanford Doerr School of Sustainability Postdoc Advisory Committee to the Dean, Co-Chair Hopkins Marine Station Faculty Meetings, Postdoc Representative Hopkins Marine Station Weekly Seminar, Lead Organizer                         | AY '22 - '23<br>AY '22 - '23<br>Winter '22 |
| Academic Service at Scripps Institution of Oceanography (SIO):   |  |
| SIO Biological Oceanography Faculty Hiring, Student Search Committee Member SIO Oceans & Atmosphere Section Researcher Hiring, Student Search Committee Chair SIO/ECE Signal Processing Faculty Hiring, Student Search Committee Chair | Oct '20<br>Oct '19<br>May '19              |
| SIO Graduate Student Council, AOS Curricular Group Student Rep   | AY '18 - '19                               |
| SIO Academic External Review, Student Committee Chair  | Nov '17                                    |
| SIO Ocean Acoustics Faculty Hiring, Student Search Committee Chair SIO Applied Ocean Sciences Weekly Seminar, Lead Organizer   | Oct '17<br>AY '16 - '17                    |
| SIO Graduate Student Council, Founder & Senior Co-Chair  | AY '16 - '18                               |
| Student and Early Career Representative for Professional Societies:  |  |
| Acoustical Society of America, Animal Bioacoustics Substitute Student Rep  | Fall '17                                   |
| Marine Technology Society  |  |
| Vice Chair, Early Career Ocean Professionals Section   | AY '20 - '22                               |
| Student Rep to the Council At-Large Student Representative   | AY '12 - '14<br>Fall '11                   |
| Guest Editor:  | 1'411 11                                   |
| DIY Oceanography Section of Oceanography   | Jun '23 - pres                             |
| Journal Reviewer:  | Jun 25 - pres                              |
| OUNTIME INCIDENT.  |  |

Animal Biotelemetry, Conservation Science and Practice, Journal of the Acoustical Society of America, ICES Journal of Marine Science, Lighting Research & Technology, Scientific Data, PLOS One

### SCIENCE COMMUNICATION

| SCIENCE COMMUNICATION  |                    |
|--|--------------------|
| Outreach and Community Engagement:   |                    |
| . 00   | Feb '22            |
| , 6  | Oct '21            |
| <b>.</b>   | AY '18 - '21       |
|  | Jul '20 - '21      |
|  | AY '19 - '21       |
|  | Feb '16, '17       |
|  | AY '15 - '21       |
| Panels:  |                    |
|  | Jan '21            |
| AltaSea at the Port of Los Angeles   |                    |
| 1  | Mar '19, '20       |
| Student Fellowship Brunch, Scripps Institution of Oceanography   |                    |
| Media Coverage:  |                    |
| "Scholars trailblazing Earth, ocean sciences earn early career fellowships", University of Hawai'i News  | Jan '24            |
|  | Dec '20            |
| "The Sound of (Fish) Music", oceanbites  | Sep '19            |
| 7 11   | Dec '18            |
|  | Dec '18            |
| "Combining underwater photography and passive acoustics to monitor fish", Acoustical Society of America "Listening to Fish: How Sound May Help Us Identify and Study Life Underwater", Environmental Monitor |                    |
|  | Mar '18            |
| •  | Mar '18            |
|  | 17141 10           |
| PROFESSIONAL TRAINING, SKILLS, CERTIFICATIONS & FIELDWORK  |                    |
| Training:  |                    |
| 8'   | Feb '20            |
| Online Footprint & Science Communication   |                    |
| Proposal Writing: Navigating Federal Opportunities and Language  |                    |
| Scientific Publishing: From First Time Submitters to Improving Writing Skills  | Feb '18            |
| <b>2018 Ocean Sciences Meeting</b> , Student and Early Career Conference Getting Started with Data Management  | reb 18             |
| Grant Writing for Students and Early Career Professionals  |                    |
| Science Communication Workshop by Brian Palermo  |                    |
| Computer Skills:   |                    |
| Languages: MATLAB (expert), R (expert), Python (intermediate), HTML (intermediate), Bash (expert)  |                    |
| Operating Systems: Windows, Mac, UNIX  |                    |
| Software: Adobe Lightroom, Ocean Data View, Raven, ArcGIS  |                    |
| Language Skills:   |                    |
| Fluent: French, English  |                    |
| Scientific Diving Certifications:  |                    |
|  | ۸ ن ۲۲             |
| Divers Alert Network (DAN) Diving First Aid for Professional Divers<br>American Academy of Underwater Sciences (AAUS) Scientific Diver, SIO (60 ft; over 100 dives)  | Apr '23<br>Aug '17 |
| Small Vessel Operator Certifications:  |                    |
| Motorboat Operator Training Course, Scripps Institution of Oceanography California Boater Card   | Oct '18<br>Oct '18 |
| Research Cruises with Leadership Roles (total: 13 cruises, 122 days):  |                    |
| Lecturer, Student Project Coordinator & Mentor, Stanford@SEA, SSV Robert C. Seamans (37 days)  | May - Jun '22      |
| CTD Operator, Novel Undersea Geological & Geophysical Learning Expedition, R/V Sally Ride (9 days)   | jan 20             |

Researcher & Diver, Biological Soundscape Observation Reef Test, R/V Walton Smith (10 days)
Chief Scientist, Kelp Acoustic Propagation Experiment (2 cruises), R/V Robert Gordon Sproul (2 days)
Marine Mammal Observer & Acoustician, Science Verification (3 cruises), R/V Sally Ride (9 days)

Apr '19 Aug, Sep '18 in '16 & '17