

Camille Pagniello

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Education

- PhD, expected 09/09/2021 **Oceanography with Certificate of Engineering Leadership and Micro-MBA**
Scripps Institution of Oceanography (SIO), University of California San Diego (UCSD)
Advisor: J.S. Jaffe, Jaffe Laboratory for Underwater Imaging
Thesis Title: Fish. Camera. Acoustics.: Using multi-element passive acoustics and optical imaging to study sound-producing fish in the southern California kelp forest
Cumulative GPA: 3.97/4.00
- MSc, 2016 **Oceanography – Applied Ocean Sciences (AOS)**
Scripps Institution of Oceanography, University of California San Diego
Cumulative GPA: 4.00/4.00
- BSc Honours Co-op, 2015 **Marine Biology & Physics, minors in Math & Ocean Sciences**
Dalhousie University
Advisor: C.T. Taggart, Department of Oceanography
Thesis Title: Spatial and temporal variation in water mass characteristics and the normalized zooplankton biomass size spectrum in the Northumberland Strait
Dalhousie Integrated Science Program (DISP), 1st year program
Advisor: D. Pronk, Department of Mathematics and Statistics
Project Title: Determining invariant measures for fractals in R^2 using magnitude function
Cumulative GPA: 4.08/4.30
First Class Honours, Dean's List (2010-2015)
- S-250, 2013 **Oceans and Climate**
Sea Education Association (SEA) Semester, Boston University
Advisor: A. Meyer
Project Title: The impacts of ocean acidification on the geographic distribution, species composition and species diversity of thecosome pteropods
Cumulative GPA: 3.95/4.00

Research Experience

- MAC3 Postdoctoral Fellowship** starting Sep. '21
Stanford University
Advisors: Barbara Block, Hopkins Marine Station and Leif Thomas, Earth System Science
Project Title: Marine top predators as sentinels of climate change at ecologically important scales
- California Sea Grant Graduate Student Trainee** Jun. '16 – present
Scripps Institution of Oceanography (SIO)
Advisors: J.S. Jaffe, Marine Physical Laboratory
Project Title: Using passive acoustics and optical imaging for assessing fish dynamics in Southern California kelp forests
- Regents Fellow** Jun. '15 – '16
Scripps Institution of Oceanography
Advisors: A. Širović, G.L. D'Spain and J. Hildebrand, Marine Physical Laboratory
Project Title: Bryde's whale behavioral metrics in the Southern California Bight from acoustic array tracking
- Summer Student Fellow (SSF)** May – Aug. '13
Woods Hole Oceanographic Institution (WHOI)
Advisors: A. Lavery, Applied Ocean Physics & Engineering and G. Lawson, Biology
Project Title: Identifying the nature of a strong pervasive acoustic scattering in the northeast Pacific

**Natural Sciences and Engineering Research Council of Canada (NSERC)
Undergraduate Student Research Award (USRA) Scholar***

Jan. – May ‘13

Memorial University of Newfoundland (MUN)

Advisor: E. Miller, Department of Biology

Project Titles: Geographic variation of the calls of *Gallinago gallinago* and *Gallinago delicata*; Variation in the vocal tracts of various strigiform specimens

Science Co-op Research Assistant & NSERC USRA Scholar*

May ‘12 – Sep. ‘15

Department of Oceanography, Dalhousie University

Advisor: C.T. Taggart, Fisheries Oceanography Laboratory

Project Title: Spatial and temporal variation in water mass characteristics and the normalized zooplankton biomass size spectrum in the Northumberland Strait

Burgess McKittrick Scholar & NSERC CREATE Research Assistant*

May – Sep. ‘11

Department of Physics & Atmospheric Sciences, Dalhousie University

Advisor: T. Duck, Atmospheric-Optics Laboratory

Project Title: Receiver field of view characterization of the CANDAC Rayleigh-Mie-Raman Lidar

Peer Reviewed Publications

Students I have mentored are underlined.

In Preparation:

10. **Pagniello, CMLS**, Sederat, M, Butler, J, & Parnell, E. Kelp forest mapping using a low-cost “fish finder.”
9. Sherwood, A, & **Pagniello, CMLS**. Spatial patterns of fish biodiversity derived from photographic images in a kelp forest edge habitat.
8. **Pagniello, CMLS**, & D’Spain, GL. The FishSense: a generalized power-law detection algorithm for fish sounds.
7. **Pagniello, CMLS**, Butler, J, D’Spain, GL, Jaffe, J, Parnell, E, & Širović, A. Spatial variability in a low-frequency fish chorus in the Southern California kelp forests. for *Ecography*.
6. **Pagniello, CMLS**. An experimental approach for reducing error in passive acoustic localizations of individual marine animals using in situ sound playbacks in complex shallow-water environments. for *Methods in Ecology and Evolution*.

Published:

5. **Pagniello, CMLS**, Butler, J, Rosen, A, Sherwood, A, Roberts, P, Parnell, PE, Jaffe, JS, & Širović, A. An optical imaging system to capture images in low-light aquatic habitats using only ambient light. to *Oceanography*.
4. Butler, J, **Pagniello, CMLS**, Jaffe, JS, Parnell, PE, & Širović, A. (2021). Diel and seasonal variability in kelp forest soundscapes off the Southern California coast. *Frontiers in Marine Science*. 8: 357.
3. **Pagniello, CMLS**, 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, LM, Demko, AM, Diner, RE, Giddings, A, Koester, I, **Pagniello, CMLS**, Paulsen, M-L, Ramirez-Valdez, A, Schwenck, SM, Yen, NK, Zill, ME, & Franks, PJS. (2016). Biological Impacts of 2013-2015 Warm-Water Anomalies in the Northeast Pacific: Winners, Losers and the Future. *Oceanography*, 29(2), 273–285.
1. Palmer, PI, ..., **Pagniello, CMLS**, ..., & Young, JC. (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.

Conference Proceedings

2. Schiebel, H, Gleiber, M, Moore, T, & **Pagniello, C**. (2018). 2018 Ocean Sciences Meeting Student and Early Career Activities Successes and Thoughts Moving Forward. *Limnology and Oceanography Bulletin*, 27(3), 96-99.
1. **Pagniello, CMLS**, 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.

* Canadian equivalent to National Science Foundation (NSF) Research Experiences for Undergraduates (REU)

Conference Presentations

17. **Pagniello, C***, Butler, J, Sherwood, A, Rosen, A, Roberts, P, 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 (international, oral, PhD work: Thesis).
16. **Pagniello, C***, & D'Spain, GL. (2019). Localization and tracking of fish sounds with a 4-element underwater passive acoustic array. 178th Meeting of the Acoustical Society of America (international, oral, PhD work: Thesis).
15. **Pagniello, CMLS***, D'Spain GL, Jaffe, JS, & Hildebrand, JA. (2019) Quantitative metrics of performance for different localization algorithms. OCEANS '19 MTS/IEEE Marseille, France (international, poster, PhD work: Thesis).
14. D'Spain, GL*, **Pagniello, C**, & Rowell, T. (2018) Some comments on acoustic sensing at a single point in space. 176th Meeting of the Acoustical Society of America (international, invited talk, PhD work: Thesis).
13. **Pagniello, CM***, Butler, J, D'Spain, GL, Jaffe, J, Parnell, E, & Širović, A. (2018). Searching for the FishOASIS: Using passive acoustics and optical imaging to identify a chorusing species of fish. 176th Meeting of the Acoustical Society of America (international, oral, PhD work: Thesis).
12. Butler, J*, **Pagniello, CM**, 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 (international, oral, PhD work: Thesis).
11. **Pagniello, CM***, 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 (international, poster, PhD work: Thesis).
10. **Pagniello, CM***, Butler, J, D'Spain, GL, Jaffe, J, Parnell, E, & Širović, A. (2017). Soundscape fishing: spatial variability in a low-frequency fish chorus in the southern California kelp forest. 174th Meeting of the Acoustical Society of America (international, oral, PhD work: Thesis).
9. **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. 4th Annual Scripps Student Symposium (institutional, oral, PhD work: Thesis).
8. Cavole, LM*, Demko, AM, Diner, RE, Giddings, A, Koester, I, **Pagniello, CMLS**, Paulsen, M-L, Ramirez-Valdez, A, Schwenck, SM, Yen, NK, Zill, ME, & Franks, PJS. (2017). Biological Impacts of 2013-2015 Warm-Water Anomalies in the Northeast Pacific: Winners, Losers and the Future. Eastern Pacific Ocean Conference 2017 (international, oral, PhD work)
7. **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. Fourth International Conference on the Effects of Noise on Aquatic Life (international, poster and speed talk, PhD work).
6. D'Spain, GL*, & **Pagniello, C**. (2015). Some aspects of signal and array processing with small aperture underwater acoustic arrays. 170th Meeting of the Acoustical Society of America (international, invited talk, PhD work).
5. **Pagniello, C***. (2015). Biomass size spectrum analysis in the Northumberland Strait. 29th Annual Cameron Conference for Biology and Marine Biology Honours Student Research (institutional, poster, BSc work: Thesis)
4. **Pagniello, C***. (2013). The impacts of ocean acidification on the geographic distribution, species composition and species diversity of thecosome pteropods. SEA Semester Student Research Symposium (institutional, poster, BSc work: Study Abroad).
3. **Pagniello, C***. (2013). Identifying the nature of a strong pervasive acoustic scattering layer in the northeast Pacific. Woods Hole Oceanographic Institution (WHOI) Summer Student Fellow (SSF) Research Symposium (institutional, oral, BSc work: Co-op).
2. **Pagniello, C***, Doyle, S, Nott, G, Perro, C, & Duck, TJ. (2011). Receiver field of view characterization of the CANDAC Rayleigh-Mie-Raman Lidar. NSERC CREATE 2011 Summer School in Arctic Atmospheric Science (national, poster, BSc work: NSERC CREATE).
1. **Pagniello, C***, & Keith, J. (2011). Determining invariant measures for fractals in R^2 using magnitude functions. Dalhousie Integrated Science Program (DISP) Research Symposium (institutional, oral & poster, BSc work: DISP).

Invited Seminars, Presentations and Panels

Seminars:

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| Bigelow Laboratory for Ocean Sciences | '21 |
| Department of Oceanography , Dalhousie University | '21 |
| Applied Ocean Sciences Seminar Series, Scripps Institution of Oceanography | '18, '19, '20 |

Panels:

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| Applying to Graduate School Workshop | '21 |
| Association for the Sciences of Limnology and Oceanography (ASLO) | |
| Rising Stars in Oceanography | '21 |
| AltaSea at the Port of Los Angeles | |
| Pathways to Graduate Studies in Marine Science and Oceanography | '20 |
| Marine Science Laboratory Alliance Center Of Excellence , Mote Marine Laboratory | |
| Changes in Science | '19 |
| SIO/UCSD Half Century Retrospective Symposium, Scripps Institution of Oceanography | |
| Impact of Philanthropy on Student Education and Research at SIO | '19, '20 |
| Student Fellowship Brunch, Scripps Institution of Oceanography | |
| MPA Monitoring Tools by Land and Sea | '18 |
| California Marine Protected Area Technology Workshop, Scripps Institution of Oceanography | |

Presentations & Posters:

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| <i>Quantitative metrics of performance for different localization algorithms</i> (poster) | '20 |
| Director's Council, Scripps Institution of Oceanography | |
| <i>Sights and sounds of the Southern California kelp forest</i> (oral) | '19 |
| Student Fellowship Brunch, Scripps Institution of Oceanography | |
| <i>A Fish Optical and Acoustic Sensor Identification System (FishOASIS)</i> (poster) | '19 |
| Director's Council, Scripps Institution of Oceanography | |
| <i>Passive Acoustic Monitoring of Marine Protected Areas</i> (oral) | '18 |
| California Marine Protected Area Technology Workshop, Scripps Institution of Oceanography | |

Academic Awards and Distinctions

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| 2021 | Ada Lovelace Fellowship , Open Source Hardware Association | |
| 2020 | Summer Graduate Teaching Scholar , University of California San Diego | \$ 1,200 |
| 2019 | Deep Submergence Science Committee (DeSSC) New Users Program Travel Award , University-National Oceanographic Laboratory System (UNOLS) | \$ 800 |
| 2019 | Graduate Student Excellence Travel Award , Scripps Institution of Oceanography | \$ 1020 |
| 2018 | Graduate Student Excellence Travel Award , Scripps Institution of Oceanography | \$ 615 |
| <i>declined</i> 2018 | UC Ships Funds Program , Kelp SSPAACE: Kelp Sponge Sargassum Acoustic Abalone Cyborg Expedition | \$ 78,000 |
| 2018 | Graduate Student Association Travel Grant , University of California San Diego | \$ 500 |
| 2018 | SIO Graduate Gordon Scholar , Gordon Engineering Leadership Center at UCSD | |
| 2018 | UC Ships Funds Program , Kelp APE: Kelp Acoustic Propagation Experiment | \$ 26,000 |
| 2018 | Graduate Student Excellence Travel Award , Scripps Institution of Oceanography | \$ 945 |
| 2018 | Graduate Student Association Travel Grant , University of California San Diego | \$ 500 |
| 2018 | ASA Student Transportation Subsidy , 174 th Meeting of the Acoustical Society of America | \$ 200 |
| <i>declined</i> 2017 | ASA Student Council Travel Award , 174 th Meeting of the Acoustical Society of America | \$ 250 |
| 2017 | ASA Student Transportation Subsidy , 174 th Meeting of the Acoustical Society of America | \$ 280 |

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| 2017 | Best Student Talk - Nearshore , 4 th Annual Scripps Student Symposium | \$ 200 |
| 2016 | Graduate Student Excellence Travel Award , Scripps Institution of Oceanography | \$ 530 |
| 2016 | Graduate Student Association Travel Grant , University of California San Diego | \$ 500 |
| 2016 | Travel Award , 2016 Effects of Noise on Aquatic Life Conference | \$ 1840 |
| 2015 | First Class Honours , Dalhousie University | |
| 2011 | U.S. Hydro 2011 Conference Student Outreach Program Travel Award , The Hydrographic Society of America (THSOA) | |
| 2011 | Golden Key International Honour Society , Dalhousie University | |
| 2010 – 2015 | Dean's List , Dalhousie University | |

Scholarships and Fellowships

Current:

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| starting 2021 | MAC3 Postdoctoral Fellowship, Stanford University | \$ 91,802 |
| 2019 – present | Fleet Admiral Chester W. Nimitz Fellowship, SIO | |

Past:

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| <i>declined</i> 2021 | Knauss Fellowship Finalist, NOAA Sea Grant | \$ 84,000 |
| 2019 | H. William Menard Memorial Fellowship, SIO | |
| 2018 | Greeneridge Sciences Fellowship in Underwater Acoustics, SIO | |
| 2017 | Art Proceeds - SIO Graduate Fellowship, SIO | |
| 2016 – 2018 | California Sea Grant Graduate Student Trainee | |
| 2016 – 2019 | Postgraduate Scholarship – Doctoral, NSERC | \$ 63,000 [†] |
| <i>declined</i> 2016 | Alexander Graham Bell Canada Graduate Scholarship - PhD, NSERC | \$ 105,000 |
| 2015 | Regents Fellowship, University of California San Diego | \$ 30,000 |
| <i>declined</i> 2015 | Izaak Walton Killam Predoctoral Scholarship, Dalhousie University | \$ 20,000 |
| <i>declined</i> 2015 | NSERC Canada Graduate Scholarship – Master's Program, Dalhousie | \$ 17,500 |
| <i>declined</i> 2015 | Nova Scotia Research and Innovation Graduate Scholarship, Dalhousie | \$ 10,000 |
| 2015 | LA Dewolfe Memorial Scholarship, Dalhousie University | \$ 750 |
| 2015 | Vemco Scholarship in Marine Biology, Dalhousie University | \$ 2,500 |
| 2014 | Remotely Operated Vehicle (ROV) Scholarship, Marine Technology Society (MTS) & Marine Advanced Technology Education (MATE) | \$ 5,000 |
| 2013 | Clowes Presidential Scholarship, SEA Semester | \$ 7,500 |
| 2013 | SEA Semester Scholarship, SEA Semester | \$ 3,000 |
| 2013 | Summer Student Fellowship, Woods Hole Oceanographic Institution | \$ 6,240 |
| <i>declined</i> 2013, 2014, 2015 | NSERC USRA, Dalhousie University | \$ 5,625 |
| 2012, 2013, 2014 | In-Course Scholarship, Dalhousie University | \$ 1,000 |
| 2012, <i>declined</i> 2013 | NSERC USRA, MUN | \$ 5,625 |
| 2012 | Charles Bussmann Undergraduate Scholarship, MTS | \$ 2,500 |
| 2012 | Burgess McKittrick Prize in Physics, Dalhousie University | \$ 500 |
| 2011 | Student Scholarship for Undergraduate Students, MTS | \$ 2,000 |
| 2011 | Undergraduate Internship, NSERC CREATE Training Program in Arctic Atmospheric Science | \$ 3,600 |
| 2011 | Burgess McKittrick Studentship in Physics, Dalhousie University | \$ 3,600 |
| 2011 | J.G. MacGregor Scholarship in Physics, Dalhousie University | \$ 100 |
| 2010 | Entrance Scholarship, Dalhousie University | \$ 3,500 |

Teaching

Appointments:

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| Instructor of Record , Introduction to Biological Oceanography University of California San Diego | Aug. – Sep. '20, '21 |
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[†] Canadian equivalent to NSF Graduate Research Fellowships Program (GRFP)

Curriculum Vitae

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| Teaching Assistant , Experiences in Oceanic and Atmospheric Sciences University of California San Diego | Sep. – Dec. ‘19 – ‘20 |
| Guest Lecturer , Perspectives on Ocean Science University of California San Diego | Jan. ‘19 |
| Teaching Assistant , Wave Physics I – Ocean Acoustics University of California San Diego | Jan. – Mar. ‘17 – ‘19 |
| Teaching Assistant , Physiology of Marine Animals I & II Dalhousie University | Sep. ‘14 – Apr. ‘15 |
| Teaching Assistant , Principles of Biology I & II Dalhousie University | Sep. ‘14 – Apr. ‘15 |
| <i>Pedagogical Training Courses at University California San Diego:</i> | |
| Introduction to Course Design , Engaged Teaching and Learning Commons | Apr. ‘20 |
| Introduction to College Teaching , Engaged Teaching and Learning Commons | Sep. – Dec. ‘19 |

Mentoring

MSc Mentor

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| Mohammad Sederat , MSc Marine Biology Scripps Institution of Oceanography Research Topic: Kelp forest mapping using a low-cost, commercial “fish finder.” Current Position: PhD Student in Oceanography, Scripps Institution of Oceanography | May ‘18 – present |
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Direct Reports

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| Adithya Balaji , MS Electrical and Computer Engineering, UC San Diego Data Analysis/Processing Assistant, Marine Bioacoustics Laboratory Research: Detection and classification of fish sounds using machine learning Current Position: Machine Learning Engineer at Cisco | Sep. – Dec. ‘17 |
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Marine Physical Laboratory Summer Undergraduate Internship Program

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| Helen Cai , Applied Mathematics, Yale University Project Title: What’s That Fish? Monitoring & identification of fish in the La Jolla Kelp Forest using machine learning techniques Current Position: Fulbright English Teaching Assistant (ETA) in Estonia | May – Aug. ‘18 |
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| Kian Bagheri , Environmental Engineering, San Diego State University (SDSU) Project Title: What’s That Fish? Monitoring & identification of fish in the La Jolla Kelp Forest using field sampling and image processing techniques Current Position: PhD Student in Engineering Science and Applied Mechanics, SDSU & UC San Diego | May – Dec. ‘18 |
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| Annette Brennan , Marine Biology, University of California Santa Cruz Project Title: Chorusing Fish in the La Jolla Kelp Forest: 2015 – Present Current Position: JD Candidate in Environmental Law, UC Davis | Jun. – Sep. ‘17 |
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| Annie Rosen , Civil & Environmental Engineering, University of California Berkeley Project Title: Fish, Camera, Action: Guess Who? in the La Jolla Kelp Forest Current Position: PhD Student in Civil and Environmental Engineering, Stanford University | May – Aug. ‘17 |
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| Nicolas Jeffress , Mechanic Engineering, Rice University Project Title: Detecting Life: A power and amplitude threshold detector for fish calls in the Gulf of Mexico Current Position: PhD Student in Marine Science & Conservation, Duke University | May – Aug. ‘17 |
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Other Volunteers

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| Clare Walker , Data Strategist at Quadrature Research Topic: Embedded machine learning to detect fish in low-light, dynamic environments Current Position: Data Strategist at Quadrature | Mar. ‘21 – present |
| Eamon Patamasing , BS Electrical Engineering, University of California San Diego | Nov. ‘18 – Jun. ‘19 |

Research Topic: Tools to facilitate fish species identification from optical imaging
 Current Position: MS Student in Electronic Circuits and Systems, UC San Diego

Chad Mackie, BS Bioengineering, University of California San Diego Nov. '18 – May '19
 Research Topic: Detecting fish sounds using machine learning
 Current Position: Administrative Assistant at UC San Diego - Housing • Dining • Hospitality

Gabriel Mink, BS Ecology, Behavior and Evolution, University of California San Diego Oct. '18 – May '19
 Research: Synchronization algorithm for passive acoustic and optical image data
 Current Position: Data Scientist, Thermo Fisher Scientific

Sarah Reynolds, BS Marine Biology, University of California San Diego Sep. '18 – Feb. '20
 Research Topic: Temporal patterns in fish presence from optical imaging
 Current Position: Education Scheduling Student Worker, Birch Aquarium at UC San Diego

Addison Sherwood, BSc Marine Science, Jacksonville University Sep. '17 – Feb. '20
 Research: Spatial patterns of fish biodiversity derived from images in a kelp forest edge habitat

NSF Geo-Futures Mentorship Program at Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Conference

Sofia Ferreira, BSc Marine Science and Data Science, University of Hawaii at Hilo Oct. '20

Kelly Wong, AS in Biochem, Chemistry & Physics, AA in English, Monterey Peninsula College Oct. '20

Peer Mentor

Allison Ho, PhD Oceanography, Scripps Institution of Oceanography Sep. '18 – Sep. '19

Kia Ramarui, PhD Marine Estuarine Environmental Sciences, University of Maryland Feb. '18 – Sep. '18

Kelley McBride, PhD Oceanography, Scripps Institution of Oceanography Sep. '17 – Sep. '18

Power of NeuroGaming (PONG) Summer Internship Program

Tony Rummani (Designer), **Kanan Moran** (Tester), **Elizabeth Sweeten** (Artist), Jun. – Aug. '20

Josh Vu (Programmer) and **Joshua Gagliano** (Project Manager)

Game Concept: [Journey to the Kelp Forest](#) - 2D side-scroller that navigates the protagonist Plainfin Midshipman across different environments just outside of La Jolla Cove (<https://bit.ly/3qp6g4V>)

California Cooperative Oceanic Fisheries Investigations (CalCOFI) Spring Break Hackathon at UC San Diego

Tae Kun Kim, BS Data Science, **Nitya Agarwal**, BS Computer Engineering, **Erica Song**, Mar. '21

BS Biochemistry and **Pedro Oliveira**, BS Electrical Engineering

[Data Visualization Tool](#): Temporal Changes in Larval Fish Abundance using [ArcGIS Online](#)

Synergistic Activities

Journal Reviewer:

Animal Biotelemetry

Conference Organization:

2020 Ocean Sciences Meeting (OSM), Session Chair for “New technologies and methods in fisheries science” '19 – '20

2020 Ocean Sciences Meeting (OSM), Organizer for Non-Academic Career Panels '18 – '20

178th Acoustical Society of America, Local Organizing Committee '19

2020 Ocean Sciences Meeting, Session Reviewer for Marine Ecology & Biodiversity and Ocean Observatories, Instrumentation & Sensing Technologies '18 – '20

Scripps Student Symposium, Website Designer and On-Site Coordinator '18

2018 Ocean Sciences Meeting, Session Reviewer for Marine Ecosystems and Ocean Observatories, Instrumentation & Sensing Technologies '15 – '18

2018 Ocean Sciences Meeting (OSM), Organizer for Non-Academic Career Panels '16 – '18

OCEANS '14 MTS/IEEE, Marine Environmental Observation Prediction and Response Network (MEOPAR) Student Activities and Booth Coordinator '14

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| OCEANS '15 MTS/IEEE , Local Organizing Committee and Student Activities Chair | '13 – '15 |
| MATE ROV Competition , Ocean Career Expo Coordinator | '13 |
| East Coast Leaders Conference at Dalhousie , Professional Program Committee | '12 – '13 |
| OCEANS '12 MTS/IEEE , Student Co-Chair for Acoustic Telemetry and Communication | '12 |
| OCEANS '12 MTS/IEEE , Student Co-Chair for Synthetic Aperture (active and passive) | '12 |
| <i>Student and Early Career Representative for Professional Societies:</i> | |
| Marine Technology Society , Vice Chair, Early Career Ocean Professionals Section | '20 – present |
| 2020 Ocean Sciences Meeting , The Oceanography Society (TOS) Student Rep | '18 – '20 |
| Acoustical Society of America , Animal Bioacoustics Substitute Student Rep | '17 |
| 2018 Ocean Sciences Meeting , The Oceanography Society (TOS) Student Rep | '16 – '18 |
| Marine Technology Society , Student Liaison to the Board and HQ Staff | '14 |
| Marine Technology Society , Student Rep to the Council | '12 – '14 |
| Marine Technology Society , At-Large Student Representative | '11 |
| <i>Academic Service at Scripps Institution of Oceanography (SIO):</i> | |
| SIO Advancing Faculty Diversity Faculty Hiring - Student Search Committee , Member | '21 |
| UCSD Summer Graduate Teaching Scholar Program , Alumni Rep | '21 |
| Unlearning Racism in Geoscience (URGE) , POD Co-Leader | '21 |
| SIO Biological Oceanography Faculty Hiring - Student Search Committee , Member | '20 |
| SIO/ECE Signal Processing Faculty Hiring - Student Search Committee , Chair | '19 |
| SIO Graduate Student Council , AOS Curricular Group Student Rep | '18 – '19 |
| SIO Educational Policy Committee , Student Rep | '18 – '20 |
| SIO Peer Mentor Leadership Committee , Chair and AOS Student Rep | '18 – '19 |
| SIO International Student Orientation , Lead Organizer and Coordinator | '18 – '20 |
| SIO Academic External Review Student Committee , Chair | '17 |
| SIO Ocean Acoustics Faculty Hiring - Student Search Committee , Chair | '17 |
| SIO Applied Ocean Sciences Weekly Seminar , Lead Organizer | '16 |
| SIO Teaching Award Student Review Committee , AOS Student Rep | '16 |
| SIO Graduate Student Council , Founder & Senior Co-Chair | '16 – '18 |
| Scripps Committee for Humanity and Public Service (CHiPS) , Volunteer | '15 – present |
| <i>Academic Service at Dalhousie University:</i> | |
| Golden Key International Honour Society – Dalhousie University , Co-President | '14 – '15 |
| Dalhousie University Scuba Diving Club , Executive Advisor | '12 – '15 |
| Dalhousie Orientation Week Organizing Committee , Faculty Orientation Manager | '12 – '13 |
| Dal Action – Habitat for Humanity , Volunteer | '12 |
| Dalhousie University MTS Student Section , Founder & President | '11 – '15 |
| Dalhousie Association of Marine Biology Students , Sports Rep | '11 – '13 |
| Dalhousie University Scuba Diving Club , Vice President | '11 – '12 |
| Marine Biology Fun Days at Dalhousie University , Tour Guide | '11 |
| Physics Fun & Discovery Days at Dalhousie University , Demonstrator | '11 |
| <i>Community Engagement:</i> | |
| Ocean Discovery Institute , Mentor | '21 |
| Girls in STEAM Conference at The Preuss School UCSD , Mentor | '19 |
| Walter Munk Foundation for the Oceans , Volunteer Coordinator | '19 – present |
| Garibaldi National Ocean Science Bowl (NOSB) , Science Judge | '16 – '20 |
| <i>MATE ROV Competition Participation:</i> | |
| MUN Eastern Edge ROV Team , Strategic Advisor | '13 |
| Dalhousie University Privateers ROV Team , Mechanical Engineer | '12 |
| <i>Workshop Participation:</i> | |
| Global Young Scientists Summit | '21 |

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| 2020 Ocean Sciences Meeting (OSM) , Online Footprint & Science Communication | ‘20 |
| 2020 OSM , Proposal Writing: Navigating Federal Opportunities and Language | ‘20 |
| 2020 OSM , Scientific Publishing: From First Time Submitters to Improving Writing Skills | ‘20 |
| 2018 Ocean Sciences Meeting (OSM) , Getting Started with Data Management | ‘18 |
| 2018 OSM , Grant Writing for Students and Early Career Professionals | ‘18 |
| 2018 OSM , Science Communication Workshop by Brian Palermo | ‘18 |
| US Hydro 2011 Conference , Student Outreach Program | ‘11 |

Society Membership:

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| Acoustical Society of America , Student Member | ‘17 – present |
| The Oceanography Society , Student Member | ‘15 – present |
| Dalhousie Oceanography Undergraduate Society | ‘13 – ‘15 |
| IEEE & IEEE Oceanic Engineering Society , Student Member | ‘11 – present |
| The Hydrographic Society of America , Student Member | ‘11 – ‘13 |
| Marine Technology Society , Student Member (‘10 – ‘20), Early Career Member (‘21 – present) | ‘10 – present |
| Dalhousie Association of Marine Biology Students | ‘10 – ‘15 |

Skills and Certifications*Computer Skills:*

Languages: MATLAB (expert), R (intermediate), Python (beginner), HTML (intermediate), Bash (expert)

Operating Systems: Windows, Mac, UNIX

Software: Adobe Lightroom, ArcGIS, MS Office, Raven, Praat, LabView, Surfer, Maple, Minitab, Ocean Data View, JavaOcean Atlas

Field and Laboratory Skills:

- Deployment of CTD rosette sampler, MOCNESS, Neuston net, Meter net, Reeve net, VPR, acoustic mooring, towed passive acoustic array, DIFAR sonobuoys and HARPs from ships
- Deployment of passive acoustic and optical imaging systems via scuba diving
- Small-boat operations
- J-frame, A-frame and hydrowinch operations
- Identification of California kelp forest fishes

Language Skills:

Fluent: French, English

Diving Certifications:

- Divers Alert Network (DAN) Diving First Aid for Professional Divers (2018)
- American Academy of Underwater Sciences (AAUS) Scientific Diver (60 ft), SIO (2017)
- NAUI Rescue Diver (2017), Nitrox Diver (2017)
- PADI Open Water Diver (2008), Advanced Open Water Diver (2011)

Motorboat Certifications:

- Motorboat Operator Training Course, SIO (2018)
- California Boater Card (2018)

Research Cruises

| Dates | Research Vessel | Cruise | Location | Role | Days |
|-----------------|-----------------|--|------------------|----------|------|
| May 21-22, 2013 | R/V Tioga | Acidification of the Coastal Ocean: Are deep waters of the Gulf of Maine already corrosive to pteropods? | Provincetown, MA | Deckhand | 2 |

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|--------------------------------|--------------------------|---|----------------------------------|--|----|
| July 23, 2013 | R/V Tioga | Summer Student Fellows Ocean Sampling Cruise | Woods Hole, MA | Deckhand | 1 |
| August 21-25, 2013 | MV Fundy Cruiser | MARI 3626: Field Studies of Marine Mammals | Bay of Fundy, NS | Research Student | 5 |
| November 5 – December 20, 2013 | SSV Robert C. Seamans | SEA Semester: Oceans and Climate (S-250) | San Diego, CA to Papeete, Tahiti | Junior Watch Officer, Junior Lab Officer, Assistant Engineer & Assistant Steward | 45 |
| October 17, 2015 | R/V Robert Gordon Sproul | SIO 280: Biological Oceanography | San Diego, CA | Deckhand | 1 |
| August 17, 2016 | R/V Robert Gordon Sproul | Acoustic Mooring Deployment | San Diego, CA | Deckhand | 1 |
| September 30 – October 2, 2016 | R/V Sally Ride | California Cooperative Oceanic Fisheries Investigations (CalCOFI) Science Verification Cruise | San Diego, CA | Marine Mammal Observer & Acoustician | 3 |
| March 3 – 8, 2017 | R/V Sally Ride | Mooring and Acoustic Science Verification Cruise | San Diego, CA | Marine Mammal Observer & Acoustician | 5 |
| August 2, 2018 | R/V Robert Gordon Sproul | Kelp Acoustic Propagation Experiment (APE) | San Diego, CA | Chief Scientist | 1 |
| September 1, 2018 | R/V Robert Gordon Sproul | Kelp Acoustic Propagation Experiment (APE) | San Diego, CA | Chief Scientist | 1 |
| April 1 – 10, 2019 | R/V Walton Smith | Biological Soundscape Observation Reef Test | St John's, US Virgin Islands | Researcher & Diver | 10 |
| January 13 – 21, 2020 | R/V Sally Ride | Scripps Novel Undersea Geological and Geophysical Learning Expedition (SNUGGLE) | San Diego, CA | Research Student | 9 |

Total: 84 days

Media Coverage

“Scripps Student Spotlight: Camille Pagniello”

Scripps Institution of Oceanography, December 21, 2020

<https://scripps.ucsd.edu/news/scripps-student-spotlight-camille-pagniello>

“Student Profile”

UCSD Graduate Division, January 20, 2020

<https://grad.ucsd.edu/student-life/student-spotlights/sio/camille-pagniello.html>

“The Sound of (Fish) Music”

oceanbites, September 20, 2019

<https://oceanbites.org/the-sound-of-fish-music/>

“Research Highlight: Monitoring Ocean Health Using Fish Sounds”

Scripps Institution of Oceanography, December 17, 2018

<https://scripps.ucsd.edu/news/research-highlight-monitoring-ocean-health-using-fish-sounds>

“Could fish sounds help scientists monitor ocean health?”

California Sea Grant, December 17, 2018

<https://caseagrant.ucsd.edu/news/could-fish-sounds-help-scientists-monitor-ocean-health>

“Combining underwater photography and passive acoustics to monitor fish”

Acoustical Society of America Press Room, November 5, 2018

<https://acoustics.org/1pab4-combining-underwater-photography-and-passive-acoustics-to-monitor-fish-camille-pagniello/>

“Listening to Fish: How Sound May Help Us Identify and Study Life Underwater”

Environmental Monitor, April 5, 2018

<http://www.fondriest.com/news/listening-fish-sound-may-help-us-identify-study-life-underwater.htm>

“Listening for Fish Conversations in the Kelp Forest”

Birch Aquarium Blog, March 7, 2018

<https://aquarium.ucsd.edu/blog/listening-fish-conversations-kelp-forest/>

“What Sounds Does a Fish Make? Scripps Scientist Wants to Know”

KPBS, March 7, 2018

<http://www.kpbs.org/news/2018/mar/07/what-sound-does-fish-make-scripps-scientist-wants-/>

“Feeling the heat”

Nature Climate Change Research Highlights, July 27, 2016

<https://www.nature.com/articles/nclimate3099>

“Opportunities for Students Abound at the Marine Technology Society”

Oceans Advance, November 26, 2012

<http://www.oceansadvance.net/feature-stories/opportunities-students-abound-marine-technology-society>

“An Interview with 2011 Scholarship Recipient Camille Pagniello”

MTS Currents, December/January 2012

<https://www.mtsociety.org/images/MTS/publications/Dec-Jan%20Currents%20final.pdf>

“Camille Pagniello talks about second year: A day in the life”

Dalhousie University

https://www.dal.ca/academics/programs/undergraduate/marinebio/a_day_in_the_life/current_students/camille-pagniello--2nd-year.html

Other Relevant Work Experience

Assistant Aquarium Technician, Thomas McCulloch Museum at Dalhousie University Jan. – Apr. ‘15