

CURRICULUM VITAE

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Applied Ocean Physics & Engineering (AOPE)
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EDUCATION:

- 2017 M.S. Oceanography and Coastal Sciences, minor Applied Statistics, Louisiana State University
 "Plankton communities and marine snow in the northeast Gulf of Mexico as estimated by the Video Plankton Recorder (VPR) during spring 2011."
- 2007 B.S. Biology, Lock Haven University of Pennsylvania
 "Grazing rates of naturally occurring zooplankton communities in the oligohaline waters of the Sassafras River—Chesapeake Bay transition region."
- 2003 High School Diploma, Hatboro-Horsham Senior High School

PROFESSIONAL EXPERIENCE:

Engineering Assistant III, Woods Hole Oceanographic Institution, AOPE Dept., May 2021 - present
Research Assistant II, Woods Hole Oceanographic Institution, AOPE Dept., June 2017 – May 2021
Teaching Assistant, Louisiana State University, Department of Oceanography and Coastal Sciences, 2016
Research Assistant, Louisiana State University, Department of Oceanography and Coastal Sciences, 2011-2015
Oceanographic Research Technician, NOAA c/o Scientific and Environmental Services, 2010-2011
Contractor, Woods Hole Oceanographic Institution, Biology, 2011
Technician, Massachusetts Division of Marine Fisheries c/o Scientific and Environmental Services, 2009
Taxidermist, Marin's Fine Art Taxidermy, 2009-2010
Marine Fisheries Observer, NOAA/NMFS c/o Scientific and Environmental Services, 2008 – 2011
Preserve Steward, Pennypack Ecological Restoration Trust (PERT), 2003 – 2008
Mechanic/Sales, Keswick Cycles, 2007-2008
U.S. Fish and Game Intern, John Heinz National Wildlife Refuge (JHNWR), 2005

TRAINING, CERTIFICATIONS, LICENSES:

- WHOI Data Science Workshop: Data Carpentry for Oceanographers, 2020
- WHOI Data Science Workshop: Python Data Tables Workshop, 2020
- WHOI Data Science Workshop: Regular Expressions Workshop, 2020
- DAN CPR/O2/First Aid for Professionals, recertification 2020
- FAA Commercial Drone Pilot (SUAS), licensed 2020
- WHOI Technical Staff Training Award, 2019
- WHOI Small Boat Operations, certified 2018
- NAUI EANx, certified 2018
- NAUI Drive Suit, certified 2018
- WHOI Scientific Diver, certified 2017

- NAUI SCUBA, certified 2008
- Offshore Cold-Water Survival, certified 2008
- NOAA/NMFS Marine Fisheries Observer, certified 2008
- Eagle Scout, Boy Scouts of America (BSA), 2002
- Annual Security Refresher Training
- Battery Pack Safety Online Training
- Chemical Hygiene Plan Safety Online Training
- Confined Space Entry Online Safety Training
- Controlled Unclassified Information (CUI)
- Covid-19 Safety Guidelines for Onsite Personnel
- Driver Safety – Massachusetts State Police Video Presentation
- Driver Safety Online Training
- Foreign Travel Approval & Reporting – SEAD3
- Forklift Certification Road Test (Practical)
- Forklift Certification Written Exam
- General Safety Awareness Online Training
- Hazardous Materials Online Training for WHOI Shippers (Ground, Air, Ocean)
- Hazardous Waste Generator Online Training
- Insider Threat Annual Refresher Training
- KnowBe4 – Social Engineering Red Flags 2019
- KnowBe4 – Social Engineering Red Flags 2020
- KnowBe4 – Spot the Bad Attachment 2019
- KnowBe4 – Spot the Bad Attachment 2020
- KnowBe4 – Your Role – Internet Security and You 2019
- KnowBe4 – Your Role – Internet Security and You 2020
- KnowBe4 – Security Awareness Training 2022
- Laser Safety Online Training
- Machine Shop Online Safety Training
- Massachusetts Paid Family and Medical Leave [PFML] Notice and Acknowledgement
- Preventing Harassment and Discrimination Gateway

RESEARCH INTERESTS:

Autonomous Underwater Vehicle (AUV) operations, testing, and development; data collection; oceanographic field operations; SCUBA diving; data processing and analysis; eDNA; Evolution; plankton ecology.

PROFESSIONAL ACTIVITIES:

WHOI: Authored daily dispatches for the 2019 Beaufort Gyre Exploration Project.

WHOI: Submits photographs of field work for WHOI public outreach.

Outside WHOI: Reviewer, *Limnology and Oceanography: Methods*, 2020 – present

PUBLICATIONS:

Annette F. Govindarajan Luke McCartin, Allan Adams, Elizabeth Allan, Abhimanyu Belani, Rene Francolini, Justin Fujii, Daniel Gomez-Ibanez, Amy Kukulya, Fredrick Marin, Kaitlyn Tradd, Dana R. Yoerger, Jill M. McDermott, Santiago Herrera. 2022. Improved biodiversity detection using a large-volume environmental DNA sampler with in situ filtration and implications for marine eDNA sampling strategies. *Deep Sea Research Part I: Oceanographic Research Papers*, 2022, 103871, ISSN 0967-0637, <https://doi.org/10.1016/j.dsr.2022.103871>

PRESENTATIONS and COLLOQUE:

ASLO¹ Summer Meeting, Santa Fe, NM, USA, 5-10 June, 2016

"Multivariate analysis on spatial and temporal variation of plankton communities and marine snow in the Gulf of Mexico using high resolution imaging data." (Oral presentation). Marin, F. D., and M. M. Sutor.

6th International Zooplankton Production Symposium (ICES), Bergen, Norway, 9-13 May, 2016

"Multivariate analysis on the spatial and temporal variability of plankton communities in the offshore Gulf of Mexico as estimated by the video plankton recorder (VPR)." (Poster presentation). Marin, F. D., and M. M. Sutor.

ASLO¹ Ocean Sciences Meeting, New Orleans, LA, USA, 21-26 February, 2016

"Multivariate analysis on the spatial and temporal variations in plankton communities in the offshore Gulf of Mexico as estimated by the video plankton recorder (VPR)." (Poster Presentation). Marin, F. D., and M. M. Sutor.

Graduate Student Symposium (GSS), Dauphin Island Sea Lab, AL, USA, 13-15 March, 2015

"A multivariate analysis of planktonic communities in the Gulf of Mexico as measured by the video plankton recorder (VPR)." (Oral Presentation) Marin, F. D., and M. M. Sutor.

Graduate Student Symposium (GSS), Louisiana Universities Marine Consortium, LA, USA, 21-23 February, 2014

"Small-scale distributions of plankton and marine snow as measured by the Video Plankton Recorder (VPR) in the Gulf of Mexico." (Oral Presentation) Marin, F. D., and M. M. Sutor.

ASLO¹ Aquatic Sciences Meeting, New Orleans, LA, USA, 17-22 February, 2013

"Biomass and community composition of plankton relative to physical parameters in the Gulf of Mexico during spring 2011." (Oral Presentation) Marin, F. D., and M. M. Sutor.

EURO-BASIN Workshop: Optical Methods in Plankton Taxonomy, Hamburg, Germany, 10-13 September, 2012

"ZOOVIS-DEEP: A New Shadowgraph Plankton Imaging System." (Oral Presentation) presented on behalf of M. C. Benfield.

ASLO¹ Ocean Sciences Meeting, Salt Lake City, UT, USA, 12-17 February, 2012

5th International Zooplankton Production Symposium, Pucón, Chile, 14-18 March, 2011

"Quantification of Plankton and Marine Snow in the Gulf of Mexico using the Digital-autonomous Video Plankton Recorder (DAVPR)." (Oral Presentation). Marin, F. D., and C. S. Davis.

Commonwealth of Pennsylvania University Biologist Conference (CPUB), Erie, PA, USA, 13-15 April, 2007

"Grazing rates of naturally occurring zooplankton communities in the oligohaline waters of the Sassafra River—Chesapeake Bay transition region." (Oral Presentation). Marin, F. D. *Zooplankton Grazing*, Volume IX ISSN 1555-3760.

¹Association for the Sciences of Limnology and Oceanography (ASLO)

CRUISE PARTICIPATION:

June	2022:	R/V Neil Armstrong	Woods Hole, MA -to- Woods Hole, MA (11 days)
August	2021:	CCGS LOUIS S. ST-LAURENT	Cambridge Bay, CAD -to- Kugluktuk, CAD
March	2021:	R/V CATAPULT	Bermuda -to- Bermuda (thirteen, 1-day trips)
March	2020:	R/V ARMSTRONG	Woods Hole, MA -to- Woods Hole, MA (8-days)

October	2019:	R/V ENDEAVOR	Narragansett, RI -to- Narragansett, RI (3-days)
September	2019:	CCGS LOUIS S. ST-LAURENT	Kugluktuk, CAD -to- Kugluktuk, CAD (26-days)
July	2019:	R/V NOAA ship BIGELOW	Newport, RI -to- Newport, RI (10-days)
November	2018:	R/V TIDEWATER	Gloucester Point, VA -to- Gloucester Point, VA (3-days)
July	2018:	R/V DAWN TREADER	Woods Hole, MA -to- Woods Hole, MA (1-day)
April	2013:	R/V F.G. WALTON SMITH	Morgan City, LA -to- Morgan City, LA (15-days)
June-July	2012:	R/V FALKOR	Newcastle, UK -to- Woods Hole, MA (36-days)
April	2012:	R/V F.G. WALTON SMITH	Gulf Port, MS -to- Gulf Port, MA (11-days)
February	2011:	M/V MEG SKANSI	Port Fourchon, LA -to- Port Fourchon, LA (14-days)
January	2011:	M/V NICK SKANSI	Port Fourchon, LA -to- Port Fourchon, LA (11-days)
October	2011:	R/V F.G. WALTON SMITH	Morgan City, LA -to- Morgan City, LA (14-days)
July	2011:	R/V OCEANUS	Woods Hole, MA -to- Bridgetown, BB (22-days)
May	2011:	R/V OCEANUS	Panama City, FL -to- Galveston, TX (15-days)
March	2011:	M/V ARCTIC	Port Fourchon, LA -to- Port Fourchon, LA (6-days)
February	2010:	R/V NOAA SHIP PICES	Pascagoula, MS -to- Pascagoula, MS (16-days)
October	2010:	R/V F.G. WALTON SMITH	Morgan City, LA -to- Morgan City, LA (11-days)
September	2010:	R/V F.G. WALTON SMITH	Morgan City, LA -to- Morgan City, LA (8-days)
September	2010:	R/V F.G. WALTON SMITH	Morgan City, LA -to- Morgan City, LA (14-days)
August	2010:	M/V AMERICAN DIVER	Morgan City, LA -to- Morgan City, LA (9-days)
August	2010:	M/V AMERICAN DIVER	Morgan City, LA -to- Morgan City, LA (7-days)
July	2010:	M/V AMERICAN DIVER	Morgan City, LA -to- Morgan City, LA (8-days)
July	2010:	M/V OCEAN VERTIAS	Port Fourchon, La -to- Port Fourchon, LA (10-days)

FIELD WORK

September- October, 2017	Army Corps of Engineers Field Research Facility (FRF), Duck, NC
January – February, 2018	Conducted field operations studying sea ice formation in Rimouski, Canada
September – October, 2018	Army Corps of Engineers Field Research Facility (FRF), Duck, NC
November, 2020	Autonomous Underwater Vehicle (AUV) testing, Mashpee, MA
May, 2022	Sound Sweep Source testing, Dodge Pond Acoustic Measurement Facility, CT