

Robin L. McLachlan

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Education

Graduate Certificate in Climate Science	2018
University of Washington, Program on Climate Change	
Capstone: Teaching Climate Science Using Local Phenomena: Harmful Algal Blooms	
PhD(c) in Marine Geology and Geophysics	2017
University of Washington, School of Oceanography	
Proposal: Fine-grained sediment transport and morphologic development in tide-dominated channels	
Advisor: Andrea Ogston	
Master of Science in Marine Geology and Geophysics	2016
University of Washington, School of Oceanography	
Thesis: Implications of tidally varying bed stress and intermittent estuarine stratification on fine-sediment dynamics through the Mekong's tidal river to estuarine reach	
Advisor: Andrea Ogston	
Bachelor of Science in Geology	2014
Thesis: Evolution of beach morphology following renourishment of Folly Beach	
College of Charleston, Honors College	

Employment and Positions

Curriculum Committee Graduate Student Representative	2019 - 20
University of Washington, College of the Environment	
Open Science DB Editor	2017 - 18
Nonprofit organization summarizing federally funded research for public use	
Engage Board of Directors	2015 - 20
Speaker series and seminar promoting good science communication.	
Instructor (2015-16), Advisory Instructor (2016-17), Vice Manager (2016-17), Manager (2017-18), Future of <i>Engage</i> Committee (2018-19), Advisory Director (2019-20)	
Geology Intern	2011 - 14
South Carolina Geological Survey	

Teaching

Pre-Doctoral Instructor	
FHL 333: Science Writing for Diverse Audiences	2019
CENV 500: Communicating Science to the Public Effectively	2015 - 16
University of Washington, College of the Environment	
Duties: develop curriculum, lead classroom sessions, coordinate guest speakers, facilitate student speaker series at Town Hall, develop and manage program website	
Advisory Instructor	

CENV 500: Communicating Science to the Public Effectively 2016 - 17
 University of Washington, College of the Environment
 Duties: advise and assist instructor in curriculum development and
 classroom sessions, coordinate guest speakers

Graduate Teaching Assistant

OCEAN 452: Marine GIS 2018
 OCEAN 320: Coastal Oceanography 2016
 OCEAN 230: Rivers and Beaches 2016
 University of Washington, School of Oceanography
 Duties: develop learning objectives and curriculum, develop and lead
 lab activities, facilitate group discussions and projects, assess learners,
 lead fieldtrips, lead classroom sessions

Undergraduate Teaching Assistant

2011 - 14
 GEOL 101L/103L: Intro Geology Lab, GEOL 257: Marine Geology Lab
 College of Charleston, Geology Department
 Duties: assist instructor in classroom sessions, assess learners

Fellowships, Scholarships, and Awards

Funding for Education Research

Open Access publication (\$3.3k), Alyn Duxbury Endowment Fund 2019
 Project evaluation (\$2.1k), Experiment: Crowdfunding Platform 2019

Dean McManus Excellence in Teaching Award, Nomination

2016
 University of Washington, School of Oceanography

NSF Graduate Research Fellowship

2015 - 20
 \$102k stipend, tuition and fees coverage

NSF IGERT Program on Ocean Change Fellowship

2014 - 17
 \$60k stipend, tuition coverage

Departmental Honors and Outstanding Student

2014
 College of Charleston, Geology Department

The Hydrographic Society of America Awards

2013
 Student Scholarship
 U.S Hydro 1st Place Poster Award
 Student Outreach Program Travel Stipend

Highly Distinguished Category for Faculty Honors

2011 - 14
 College of Charleston

Undergraduate Scholarships

2010 - 14
 Palmetto Fellows Scholarship
 Presidential Scholarship

Professional Skills and Development

Ship- and field-based scientific research:

>200 days ranging from large ships to small boats, specializing in acoustic
 surveys, seabed sampling, and fixed-instrument deployment and retrieval. 2013-

Professional development:

ComSciCon-PNW Communicating Science Workshop 2019
 Genomics Salon Science Communication Workshop: Writing Stream 2017

UW Program on Climate Change Summer Institute	2017
Preparing for an Academic Career in the Geosciences, On the Cutting Edge	2016
Data Exchange and Modeling Workshop for Mekong Research Project	2015
IGERT Program on Ocean Change Planning Retreat	2015

Software tools and languages: MATLAB, ArcGIS, CARIS HIPS

Training and Certifications:

First Aid with CPR	2016, 18
Radiation Safety	2014
Advanced Scuba Diver	2013

Publications

- McLachlan, R.L.**, Ogston, A.S., Asp, N.E., Fricke, A.T., Nittrouer, C., Schettini, C.A., Sequence morphodynamics in a back-barrier tidal channel. *Sedimentology*. (in review)
- McLachlan, R.L.**, Constructively aligning writing skills with scientific content in university-level curricula. *The Journal of Research in Science Teaching*. (in review)
- McLachlan, R.L.**, Ogston, A.S., Asp, N.E., Fricke, A.T., Nittrouer, C., Gomes, V.J.C., Impacts of tidal-channel connectivity on transport asymmetry and sediment exchange with mangrove forests. *Estuarine, Coastal and Shelf Science*. (in review after minor revisions)
- Schettini, C.A., Asp, N.E., Ogston, A.S., **McLachlan, R.L.**, Fernandes, M., Nittrouer, C.A., Truccolo, E., Gardunho, D., Circulation and fine-sediment transport and deposition in the Amazon macrotidal mangrove coast. *Earth Surface Processes and Landforms*. (in review after minor revisions)
- Ogston, A.S., Allison, M.A., **McLachlan, R.L.**, Nowacki, D.J., Stephens, J.D., 2017. How tidal processes impact the transfer of sediment from source to sink: Mekong River collaborative studies. *The Oceanographic Society*. <https://doi.org/10.5670/oceanog.2017.311>
- McLachlan, R.L.**, Ogston, A.S., Allison, M.A., 2017. Implications of tidally varying bed stress and intermittent estuarine stratification on fine-sediment dynamics through the Mekong's tidal river to estuarine reach. *Continental Shelf Research*. <https://doi.org/10.1016/j.csr.2017.07.014>
- Stephens, J.D., Allison, M.A., Di Leonardo, D.R., Weathers III, H.D., Ogston, A.S., **McLachlan, R.L.**, Xing, F., Meselhe, E.A., 2017. Sand dynamics in the Mekong River channel and export to the coastal ocean. *Continental Shelf Research*. <https://doi.org/10.1016/j.csr.2017.08.004>

Presentations (Lead Presenter Only)

- McLachlan, R.L.**, Ogston, A.S., Asp, N.E., Fricke, A.T., Drainage-channel geometry: A tool to interpret mesoscale morphodynamics of muddy mangrove channels, Gordon Research Conference and Seminar on Coastal Ocean Dynamics, June 2019, Manchester, NH.
- McLachlan, R.L.**, River deltas: In the Anthropocene and on the edge of extinction, Friday Harbor Labs Spring Seminar, May 2019, Friday Harbor, WA.
- McLachlan, R.L.**, Ogston, A.S., Asp, N.E., Fricke, A.T., Gomes, V.J.C., Nittrouer, C., The Impacts of Channel Connectivity on Tidally-Driven Sediment Transport and Accumulation in a Mangrove Forest, AGU Annual Meeting, December 2018, Washington, DC.
- McLachlan, R.L.**, Ogston, A.S., Nittrouer, C., Asp, N.E., Fricke, A.T., Gomes, V.J.C, Impacts of tidal channel connectivity on modern sediment flux and morphologic evolution within mangrove forests: an Amazonian case study, Ocean Sciences Meeting, February 2018, Portland, OR.
- McLachlan, R.L.**, Ogston, A.S., Asp, N.E., Fricke, A.T., Gomes, V.J.C, Controls of tidal channel connectivity on sediment flux into Amazonian mangrove forests, GSA Annual Meeting, October 2017, Seattle, WA.
- McLachlan, R.L.**, Bonnin, E., Carini, R., Chen, W., *Engage*: Training a new generation of science

communicators, Science Talk NW Meeting, January 2017, Portland, OR.

McLachlan, R.L., Ogston, A.S., Allison, M.A., Hilmo, R.S., Implications of tidally varying bed stress and intermittent estuarine stratification on fine-sediment dynamics through the Mekong's tidal river to estuarine reach, AGU Annual Meeting, December 2016, San Francisco, CA.

McLachlan, R.L., Sediment dynamics in the Mekong's tidal river to estuarine reach, UW Marine Geology and Geophysics Seminar, November 2016, Seattle, WA.

Banner, R.L., Ogston, A.S., Nowacki, D.J., Controls on hydrodynamics, suspended-sediment concentration, and sediment flux in the tidal river to estuarine reach of the Mekong River, Vietnam, Ocean Sciences Meeting, February 2016, New Orleans, LA.

Banner, R.L., Climate change in coastal Vietnam, Town Hall's University of Washington Science Now Speaker Series, April 2015, Seattle, WA.

Banner, R.L., Nusbaum, R.L., Mapping eruption facies from cinder cones and associated flows using LiDAR, SW Utah, Geologic Society of America Southeaster Section Meeting, April 2014, Blacksburg, VA.

Banner, R.L., Sautter, L.R., Shoreline change and sediment dynamics after renourishment of Folly Beach, SC, South Carolina Marine Educator's Association Meeting, November 2013, Charleston, SC.

Banner, R.L., Sautter, L.R., An exploration into crustal subsidence recorded on the San Juan Seamount, U.S. Hydro Meeting, March 2013, New Orleans, LA.

Academic Mentor

Senior Thesis Adviser 2018 - 19

Student: Myranda Dang

Thesis: Dispersal of Fine Material from the Snohomish River into Possession Sound in Winter

Trained and mentored student in experimental design, data collection, data analysis, and thesis writing

Laboratory Mentor 2015 - 19

Students: Julia Wallace, Jenny Renee, Morgan Mackaay

Trained and mentored students in laboratory skills, data management, and collaborative research

Service and Outreach

Science-Communication Workshop Leader

APS Conferences for Undergraduate Women in Physics 2019

Graduate Climate Conference 2018

The People's Science Workshop and Write-a-Thon 2018

Women in Genome Sciences 2018

Institute of Translational Health Sciences Career Development Series 2017

Clean Energy Institute Fellow's Onboard Day 2016, 17, 18

Speaker-Series Facilitator

UW Science Now Speaker Series at Town Hall Seattle 2016, 17

IGERT Program on Ocean Change Winter Seminar 2015

Invited Speaker/Panelist

Marine Technology Society, University of Washington Student Chapter 2018

Science Communication Student Panel for College of the Environment 2018

Advisory Board, University of Washington

Scientist of the Month, The Evergreen School	2017, 19
Ingraham High School Marine Science Class	2017
Friday Harbor Labs Marine Sedimentary Processes Research Apprenticeship	2016, 18
Ready! Set! Transfer! Academy at South Seattle College Speaker Series	2016
K-12 Curriculum Development and Implementation	
Algal Blooms and Climate Change (4 classes), Jane Addams Middle School	2018
Marine Oxygen and Fish Kills (5 classes), Jane Addams Middle School	2017
Ocean Temperature (5 classes), Jane Addams Middle School	2016
Reviewer	
Proposals to the University of Washington Scholarship of Teaching and Learning Symposium	2018
Journal of Continental Shelf Research	2016 -
Science Writer	
Puget Sound Institute - Currents Magazine	2018
Lateral Magazine - Physical Science Section	2018
American Geophysical Union's Blogosphere - The Field, GeoEdTrek	2017
Journal of Stories in Science	2017
Miscellaneous	
Skype A Scientist LIVE	2019
Skype A Scientist	2019
Writer for Letters to a Pre-Scientist	2018
Twitter Manager, University of Washington School of Oceanography	2018 -