

# Robin L. McLachlan

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## Education

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- Graduate Certificate in Climate Science** 2018  
University of Washington, Program on Climate Change  
Capstone: Teaching Climate Science Using a Local Phenomenon - Harmful Algal Blooms
- PhD(c) in Oceanography (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 Oceanography (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

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- Curriculum Committee Graduate Student Representative** 2019 - 2020  
University of Washington, College of the Environment
- Open Science DB Editor** 2017 - 2018  
Nonprofit organization providing summaries of federally-funded research to the public
- Engage Board of Directors** 2015 - 2020  
Speaker series and seminar promoting good science communication.  
Instructor (2015-2016), Advisory Instructor (2016-2017), Vice Manager (2016-2017), Manager (2017-2018), Future of *Engage* Committee (2018-)
- Geology Intern** 2011 - 2014  
South Carolina Geological Survey

## Teaching

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- Graduate Instructor**
- FHL 333: Science Writing for Diverse Audiences 2019  
CENV 500: Communicating Science to the Public Effectively 2015 - 2016  
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

### **Graduate Advisory Instructor**

CENV 500: Communicating Science to the Public Effectively 2016 - 2017  
 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 - 2014  
 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**

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**Successful Crowdfunding Campaign** 2019

\$2.1k, Experiment: Crowdfunding Platform for Scientific Research

**Dean McManus Excellence in Teaching Award, Nomination** 2016

University of Washington, School of Oceanography

**NSF Graduate Research Fellowship** 2015 - 2020

\$102k stipend, tuition and fees coverage

**NSF IGERT Program on Ocean Change Fellowship** 2014 - 2017

\$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 - 2014

College of Charleston

**Undergraduate Scholarships** 2010 - 2014

Palmetto Fellows Scholarship

Presidential Scholarship

## **Professional Skills and Development**

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### **Ship- and field-based scientific research:**

45+ days tidal channels, Brazil 2015 - 2017

10+ days Elwha River Delta, Washington 2014 - 2017

30+ days tidal Mekong River, Vietnam 2014 - 2015

60+ days coastal plain, South Carolina 2013 - 2014

10 days carbonate beaches, Bahamas 2013  
 10 days continental shelf, Florida/Georgia 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

**Certified Advanced Scuba Diver**

**Publications**

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- McLachlan, R.L.**, Ogston, A.S., Asp, N.E., Fricke, A.T., Nittrouer, C., Sequence morphodynamics in a back-barrier tidal channel. (in prep)
- McLachlan, R.L.**, Effectively incorporating writing skills into undergraduate science curriculum. (in prep)
- 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)
- 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>
- Schettini, C.A., Asp, N.E., Gomes, V.J., Ogston, A.S., **Banner, R.L.**, Nittrouer, C.A., Fernandes, M.E., Gardunho, D.C., Souza, D.F., Silva, D.N. and Truccolo, E.C., 2016. Circulation and fine sediment dynamics in Amazon mangrove forests, *Physics of Estuaries and Coastal Seas Conference*.

**Presentations (Lead Presenter Only)**

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- 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

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| <b>Senior Thesis Adviser</b>  | 2018 - 2019 |
| 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 |             |
| <b>Laboratory Mentor</b>  | 2015 - 2019 |
| Students: Julia Wallace, Jenny Renee, Morgan Mackaay  |             |
| Trained and mentored students in laboratory skills, data management, and collaborative research         |             |

## Service and Outreach

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| <b>Science-Communication Workshop Leader</b>                         |              |
| 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 |
| <b>Speaker-Series Facilitator</b>                                    |              |
| UW Science Now Speaker Series at Town Hall Seattle                   | 2016, 17     |
| IGERT Program on Ocean Change Winter Seminar                         | 2015         |
| <b>Invited Speaker/Panelist</b>                                      |              |
| 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
<b>K-12 Curriculum Development and Implementation</b>	
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
<b>Reviewer</b>	
Proposals to the University of Washington Scholarship of Teaching and Learning Symposium	2018
Journal of Continental Shelf Research	2016 -
<b>Science Writer</b>	
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
Personal Science Blog ( <a href="http://www.RobinMcLachlan.com">www.RobinMcLachlan.com</a> )	2016 -
<b>Miscellaneous</b>	
Skype A Scientist LIVE	2019
Skype A Scientist	2019
Writer for Letters to a Pre-Scientist	2018
Twitter Manager, UW School of Oceanography	2018 -