

# 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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- Open Science DB Editor** 2017 - 2018  
Nonprofit organization providing summaries of federally-funded research to the public
- Engage Board of Directors** 2015 -  
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-)
- Graduate Research Assistant** 2014 -  
University of Washington, School of Oceanography
- 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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**Dean McManus Excellence in Teaching Award, Nomination** 2016

University of Washington, School of Oceanography

**Earth Educators' Rendezvous Travel Stipends** 2016

Earth Educators' Rendezvous Workshop Attendee Stipend  
 IGERT Program on Ocean Change Workshop Travel Stipend

**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:**

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., 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., 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.

## **Service and Outreach**

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### **Scientist of the Month**

The Evergreen School 2017, 19

### **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  
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

Personal Science Blog ([www.RobinMcLachlan.com](http://www.RobinMcLachlan.com)) 2016 -

**Miscellaneous**

Writer for Letters to a Pre-Scientist

2018 -

Twitter Manager, UW School of Oceanography

2018 -