

# Jessica C. Garwood

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**Contact Information**  
Scripps Institution of Oceanography  
University of California, San Diego  
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**Education**

<b>PhD, Oceanography</b> <i>Scripps Institution of Oceanography, USA</i>	2013 - present
<b>Master of Science, Oceanography</b> <i>Dalhousie University, Canada</i>	2013
<b>Bachelor of Science, Marine Biology &amp; Oceanography</b> First Class Honours <i>Dalhousie University, Canada</i>	2011

**Awards**

**Scripps Institution of Oceanography**  
Alexander Graham Bell Canada Graduate Scholarship (3 years)  
Fager Award

**Dalhousie University**

Canada Governor General's Academic Medal - Gold  
Alexander Graham Bell Canada Graduate Scholarship (1 year)  
NSERC Undergraduate Summer Research Grant (3 summers)  
Chancellor's Scholarship, Dalhousie University (4 years)  
Provincial Millennium Excellence Award (4 years)  
Dean's list (4 years)  
Hugh P. Bell Scholarship  
Vemco Scholarship  
David Durward Memorial Prize  
Shao Hua and Wen Hsiang Yoh Prize in Biology

**Other**

United World College of the Adriatic (full scholarship)  
Canada Governor General's Academic Medal - Bronze

**Publications**

**Garwood, J.C.**, Hill, P.S., MacIntyre, H.L., and Law, B.A. 2015 Grain sizes retained by diatom biofilms during erosion on tidal flats linked to bed sediment texture. *Continental Shelf Research* (104): 37 - 44.

**Carrière-Garwood, J.** 2014. Seasonal variation and biological effects on mudflat erodibility in the Minas Basin, Bay of Fundy. Master's Thesis, Dalhousie University, Halifax, Canada.

**Garwood, J.C.**, Hill, P.S., and Law, B.A. 2013. Biofilms and size sorting of fine sediment during erosion in intertidal sands. *Estuaries and Coasts* (36): 1024 - 1036.

## Conferences

**Garwood, J.C.**, Franks, P.J.S., Naughton, P., Roberts, P.L.D., Lucas, A., Jaffe, J.S. 2018. A ratchet to shore: transport of quasi-Lagrangian plankton mimics by nonlinear internal waves. *Ocean Sciences Meeting, oral presentation.*

**Garwood, J.C.**, Franks, P.J.S., Naughton, P., Roberts, P.L.D., Lucas, A., Jaffe, J.S. 2017. A ratchet to shore: transport of quasi-Lagrangian plankton mimics by nonlinear internal waves. *Scripps Student Symposium, oral presentation.*

**Garwood, J.C.**, Musgrave, R.C., Franks, P.J.S. 2016. Modeling plankton aggregation and transport by nonlinear internal waves propagating onshore. *Ocean Sciences Meeting, poster presentation.*

Jaffe, J.S., Laxton, B., **Garwood, J.C.**, Franks, P.J.S., Roberts, P.L. 2016. A micro-fluidic treadmill for observing suspended plankton in the lab. *Ocean Sciences Meeting, poster presentation.*

Law, B.A., Milligan, T.G., Hill, P.S., **Garwood, J.C.**, Zions, V. 2016. Temporal and spatial changes in grain size on a macro-tidal channel-flat complex: Results from Kingsport, Nova Scotia, Bay of Fundy. *Ocean Sciences Meeting, oral presentation.*

**Garwood, J.C.**, Devitt, K., Cox, R., and Hill, P.S. 2014. Comparison of biofilm effects on sediment erosion at two intertidal sites with distinct surface sediment grain size. *Ocean Sciences Meeting, poster presentation.*

**Garwood, J.C.**, and Hill, P.S. 2013. Seasonal and biofilm effects on sediment erosion and sorting in an intertidal mudflat in the Bay of Fundy, Canada. *Conference of the Coastal & Estuarine Research Federation, poster presentation.*

Law, B.A., Hill, P.S., Milligan, T.G., Wiberg, P.L., **Garwood, J.C.**, Zions, V. 2013. Temporal and spatial change in grain size and erodibility on a macro-tidal channel-flat complex in Kingsport, N.S., Canada, versus a mesa-tidal channel-flat complex in Willapa Bay, Washington, USA. *Conference of the Coastal & Estuarine Research Federation, oral presentation.*

**Garwood, J.C.**, Kienast, S.S., and Hill, P.S. 2012. Evidence of dust deposition in a core from the Eastern Equatorial Pacific on glacial-interglacial timescales. *AGU Fall Meeting, oral presentation.*

**Garwood, J.C.**, Kienast, S.S., and Hill, P.S. 2012. Evidence of dust deposition in a core from the Eastern Equatorial Pacific on glacial-interglacial timescales. *Conference of Dalhousie Oceanography Graduate Students, oral presentation.*

**Garwood, J.C.**, and Hill, P.S. 2012. Biofilms and size sorting of intertidal sediment during erosion. *Ocean Sciences Meeting, oral presentation.*

**Garwood, J.C.**, and Hill, P.S. 2011. Effects of biofilms on sediment sortability. *Conference of Dalhousie Oceanography Graduate Students, oral presentation.*

**Garwood, J.C.**, and Hill, P.S. 2011. Effects of biofilms on sediment sortability. *Cameron Conference, Dalhousie University, poster presentation.*

Professional Experience	<b>Diversity Advisory Committee</b> <i>Student representative, Scripps Institution of Oceanography</i>	Fall 2017 - present
	<b>Outreach with Ocean Discovery Institute</b> <i>Developed two programming-based, year-long research projects for low income, middle school students:</i> <i>Analysis of waves generated in a tank</i> <i>Classification of microorganisms imaged in the ocean</i>	Fall 2017 - Spring 2018 Fall 2016 - Spring 2017
	<b>Guest lecturer</b> <i>SIO 90: Perspectives on Ocean Sciences</i> <i>SIO 285: Physical-Biological Interactions</i>	March 2018 May 2017
	<b>Scripps Student Symposium Organizer</b>	Spring - Fall 2017
	<b>Instructor: Introduction to R for Oceanographers</b> <i>Course co-developed with Eiren Jacobson</i>	Spring 2015
	<b>R Tutorial</b> <i>Weekly tutorial sessions offered to colleagues</i>	Fall 2014, 2015; Winter 2015
	<b>Seminar Series Organizer</b> <i>Ecology Seminars, Scripps Institution of Oceanography</i> <i>Oceanography Seminars, Dalhousie University</i>	Fall 2014 - Spring 2015 Spring 2011 - Spring 2012
	<b>Teaching Assistant</b> <i>Introduction to Biological Oceanography, UCSD</i> <i>The Last Billion Years, Dalhousie University</i> <i>The Blue Planet, Dalhousie University</i>	Winter 2017 Fall 2012 Fall 2011 - Spring 2012
	<b>Mentoring</b>	
	<b>Shailja Gangrade</b> <i>Scripps Undergraduate Research Fellow</i> Shailja compiled CTD data to assess light and oxygen conditions of relevance to invertebrate larval visual systems. Provided programming mentorship and co-advised with Lillian McCormick, under the supervision of Lisa Levin.	Summer 2018
Additional Skills	<b>Rachel Cox</b> <i>Dalhousie Undergraduate Honours Research Project</i> Rachel investigated the effects of benthic fauna on sediment resuspension. Provided input on research project, experimental design, and data interpretation, advised by Paul S. Hill.	Summer 2012 - Spring 2013
	<b>Karen Devitt</b> <i>Dalhousie Undergraduate Honours Research Project</i> Karen's project focused on lab-based experiments investigating sediment retention by benthic biofilms. Provided input on research project and experimental design, advised by Paul S. Hill.	Fall 2011 - Summer 2012
	<b>Programming</b> Proficient: Matlab, R, T <sub>E</sub> X Familiar: Python Experience adapting and running MITgcm simulations	
	<b>Languages</b> Fluent: French, English Conversational: Italian	
	<b>Field work</b> Tidal flats, coastal, from small boats and research vessels	