Jessica C. Garwood

Contact Information

Scripps Institution of Oceanography University of California, San Diego

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Education

PhD, Oceanography

2013 - present

Scripps Institution of Oceanography, USA

Master of Science, Oceanography

2013

Dalhousie University, Canada

Bachelor of Science, Marine Biology & Oceanography

2011

First Class Honours

Dalhousie University, Canada

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.

Carriere-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.

 $Conference\ of\ the\ Coastal\ \ \mathcal{E}\ Estuarine\ Research\ Federation,\ poster\ presentation.$

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 **Diversity Advisory Committee**

Student representative, Scripps Institution of Oceanography

Fall 2017 - present

Outreach with Ocean Discovery Institute

Developed two programming-based, year-long research projects for low income, middle school students:

Analysis of waves generated in a tank

Fall 2017 - Spring 2018

Classification of microorganisms imaged in the ocean

Fall 2016 - Spring 2017

Guest lecturer

SIO 90: Perspectives on Ocean Sciences
SIO 285: Physical-Biological Interactions
March 2018
May 2017

Scripps Student Symposium Organizer

Spring - Fall 2017

Instructor: Introduction to R for Oceanographers

Course co-developed with Eiren Jacobson

Spring 2015

R Tutorial

Weekly tutorial sessions offered to colleagues

Fall 2014, 2015; Winter 2015

Seminar Series Organizer

Ecology Seminars, Scripps Institution of Oceanography Fall 2014 - Spring 2015 Oceanography Seminars, Dalhousie University Spring 2011 - Spring 2012

Teaching Assistant

Introduction to Biological Oceanography, UCSD
The Last Billion Years, Dalhousie University

Winter 2017
Fall 2012

The Blue Planet, Dalhousie University Fall 2011 - Spring 2012

Mentoring

Shailja Gangrade

Scripps Undergraduate Research Fellow

Summer 2018

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.

Rachel Cox

Dalhousie Undergraduate Honours Research Project Summer 2012 - Spring 2013 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.

Karen Devitt

Dalhousie Undergraduate Honours Research Projectl

Fall 2011 - Summer 2012

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.

Additional Skills Programming

Proficient: Matlab, R, T_EX

Can use and navigate: Python, HTML, Fortran Experience adapting and running MITgcm simulations

Languages

Fluent: French, English Conversational: Italian

Field work

Tidal flats, coastal, from small boats and research vessels