

Jacqueline McSweeney

Department of Marine and Coastal Science
Rutgers, The State University of New Jersey

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EDUCATION:

Ph.D. candidate, Graduate School of Oceanography, Rutgers University, 2011- present

BS, Chemistry, Loyola Marymount University, 2007 – 2011

BA, Spanish, Loyola Marymount University, 2007 – 2011

ACADEMIC DISTINCTIONS:

- National Science Foundation Graduate Research Fellowship Program Recipient, 2012
- National Science Foundation Graduate Research Fellowship Program Honorable Mention, 2011
- Presidential Scholar, 2007 – 2011, Loyola Marymount University
- Kilp Alumni Scholar, 2007 – 2011, Loyola Marymount University
- Rose Hill Foundation Scholar, 2008 – 2010, Loyola Marymount University
- Jesuit Summer Institute Fellow, 2009, Loyola Marymount University
- Dean's Scholar, 2010 – 2011, Loyola Marymount University
- Cahn Honors Scholar, 2010 – 2011, Loyola Marymount University
- McIntyre Fellow, 2009, Loyola Marymount University

PROFESSIONAL ACTIVITIES:

- Chair, *Gordon Research Seminar on Coastal Ocean Modeling*, June 2015
- Discussion Leader, *Gordon Research Conference on Coastal Ocean Modeling*, June 2015
- Cofounder, *Gathering of Rutgers Earth, Environmental and Natural Sciences (GREENS)*, 2013-2015
- Seminar Coordinator, *Department of Marine and Coastal Sciences*, Rutgers, 2014-2015
- Vice President, *Oceanography Graduate Student Association* at Rutgers, 2012 - 2014

RELEVANT RESEARCH EXPERIENCE:

- **Research Assistant in Physical Oceanography**
 - Rutgers University Institute of Marine and Coastal Sciences, 2011 - present
 - Sediment Transport and Dynamics of Delaware Estuary: modeling and observations
 - Advisers: Bob Chant and John Wilkin
- **Friday Harbor Laboratory Estuarine & Coastal Fluid Dynamics summer course**
 - University of Washington, 2012
 - Analysis of the Thermal Budget in Fisherman Bay (located on Lopez Island, WA)
 - Advisers: Rocky Geyer and Parker MacCready
- **Research in Ocean Sciences (RIOS) REU internship**
 - Rutgers University, 2010; funded by NSF
 - Profiling and Modeling Optics, Sediment and Phytoplankton in the Delaware Bay
 - Adviser: John Wilkin
 - Award recipient for poster presentation

▪ **Organic Chemistry Research Position**

- Loyola Marymount University, 2008 - 2011
- Synthesis of Indole Derivatives; Synthesis and molecular modeling of G-Quadruplexes
- Adviser: Jeremy McCallum
- Seaver Research Grant recipient, 2009

PUBLICATIONS:

McSweeney, J. M., Chant, R. J. and Sommerfield, C. K. (2015), Lateral variability of sediment transport in the Delaware Estuary. *J. Geophys. Res. Oceans*. Accepted Author Manuscript.
doi:10.1002/2015JC010974

McCallum, J. E. B., Huston, G., **McSweeney, J. M.**, Rucker, B., 2010. Synthesis of Lipophilic N9-Benzylguanidine Derivatives. *Synlett*, 19, 2871–2874.

RELEVANT WORK AND TEACHING EXPERIENCE:

- *Teaching Assistant* for Dynamics of Marine Ecosystems at Rutgers, 9/12 – 12/12
- *LMU Research Ambassador*, 2/10 – 5/11
- *Teaching Assistant* for General Physics I and Electricity & Magnetism at LMU, 8/10 – 5/11
- *Teaching Assistant* for Organic Chemistry and General Physics I at LMU, 8/09 – 5/10
- *Chemistry stockroom assistant* at LMU, 9/07 – 5/08

CONFERENCE PRESENTATIONS:

- 1. Modeling 3-Dimensional Sediment Transport Processes in Delaware Estuary**
February 2016, *Ocean Sciences Conference* in New Orleans, LA
- 2. Lateral Sediment Dynamics in Delaware Estuary**
October 2014, *Physics of Estuaries and Coastal Seas (PECS) Conference* in Porto de Galinhas, Brazil
- 3. Sediment Dynamics in the Delaware Estuary's Turbidity Maximum**
November 2013, *Coastal and Estuarine Research Federation (CERF) Conference* in San Diego, CA

POSTER PRESENTATIONS:

- 1. Modeling Lateral Sediment Transport Processes in Delaware Estuary**
November 2015, *Coastal and Estuarine Research Federation (CERF)* in Portland, OR
- 2. Modeling Sediment Transport in Delaware Estuary**
June 2015, *Gordon Research Conference on Coastal Ocean Modeling* in Biddeford, ME
- 3. Biogeochemical Responses to Sediment and Light Dynamics in Delaware Estuary**
February 2014, *Ocean Sciences Conference* in Honolulu, HI
- 4. Sediment Transport in Delaware's Estuarine Turbidity Maximum**
June 2013, *Gordon Research Conference and Seminar on Coastal Ocean Circulation* in Biddeford, ME
- 5. Sediment Dynamics in Delaware Estuary**
February 2013, *Delaware Estuary Science and Environmental Summit* in Cape May, NJ
- 6. Sediment Processes in the Delaware's Estuarine Turbidity Maximum**
August 2012, *Physics of Estuaries and Coastal Seas (PECS) Symposium* in New York City, NY

- 7. Profiling and Modeling Optics, Sediment and Phytoplankton in the Delaware Bay**
February 2011, *American Society of Limnology and Oceanography (ASLO) Conference* in San Juan, Puerto Rico
- 8. G-Quartet Formation from Lipophilic Guanine Derivatives**
August 2010, *American Chemical Society (ACS) National Conference* in Boston, MA
- 9. Characterization of G- Quadruplex Structures by NMR and Molecular Modeling**
April 2010, *LMU Undergraduate Research Symposium* at LMU
- 10. Characterization of G- Quadruplex Structures by NMR and Molecular Modeling**
April 2010, *ACS Undergraduate Biochemistry and Chemistry Regional Conference* at Chapman University
- 11. Investigation into the Photosensitized Oxidation of Indole Derivatives**
November 2008, *Southern California Conference for Undergraduate Research (SCCUR)* at Cal Poly Pomona

INVITED SEMINARS:

- 1. Exploring the Muddy Oceans**
October 2015, Kean University
- 2. Lateral Variability of Sediment Transport in Delaware Estuary**
April 2015, Rutgers University
- 3. Profiling and Modeling Optics, Sediment and Phytoplankton in the Delaware Bay**
September 2010, Loyola Marymount University (LMU)

FIELD EXPERIENCE:

- **Dye experiments:**
 - Chukchi Sea: 15 days, Sept 2014, Norseman II
 - Delaware River: 3 days, Aug 2014, R/V Arabella
- **Tidal surveys:**
 - Cattle Pass in Puget Sound, WA: July 2012, R/V Centennial
 - Fisherman Bay in Puget Sound, WA: June 2012, Aucklet
 - Delaware Estuary: 2010-2011, R/V Arabella
- **Mooring deployments:**
 - Fisherman Bay in Puget Sound, WA: June 2012
 - Delaware Estuary: 2010-2011
- **Sediment Coring:**
 - Delaware Estuary: 2010-2011

SERVICE:

- Peer reviewer for: *Journal of Geophysical Research (JGR) – Oceans*, *Journal of Physical Oceanography (JPO)*, *Continental Shelf Research (CSR)*
- Shore Bowl Volunteer: 2012-2016
- Rutgers Day Volunteer: Density tank demonstrations, 2012-2016
- Science Fair/Research Symposium judge: various, 2011-2016
- GradFund Conference Panelist: Rutgers University, January 2014