

John Blake Clark

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EDUCATION

Doctor of Philosophy, Marine Estuary Environmental Science

Horn Point Laboratory, University of Maryland Center for Environmental Science,
Cambridge, MD September 2014 – Present

Advisor: Professor Raleigh Hood

Bachelor of Science, Aquatic Biology

University of California at Santa Barbara, Santa Barbara, CA
September 2008 - September 2012.

Advisor: Professor Craig Carlson

EXPERIENCE

Graduate Research Assistant, University of Maryland Center for Environmental Science,
Horn Point Laboratory. Cambridge, MD

July 2014 – Present

Cellar Supervisor. Cottonwood Creek Winery, Bronco Wine Company. Madera, CA

July 2013 – June 2014

Field and Laboratory Technician, Carlson Lab, Marine Science Institute, University of
California, Santa Barbara, Santa Barbara, CA.

April-June 2013, March-October 2011.

SKILLS

- Data preparation and processing, including spatial and temporal statistical analysis
- Applied mathematics
- Coupled physical-biogeochemical sediment-water column model development
- Mathematical model discretization
- Computer programming using MATLAB, FORTRAN, R, Bash shell, and MPI parallel applications
- Experience at sea conducting experiments and performing sterile water collection/ filtration
- Laboratory analysis for optical water quality parameters including *chl a* and dissolved organic matter absorbance/ fluorescence

RESEARCH

FK160115-ProteOMZ research cruise, R/V Falkor Hawaii-Tahiti
January – February 2016, Santoro Lab, UMCES

Tidal wetlands as sources and sinks of carbon in a changing world: Remote Sensing, Measurements & Modeling of Wetland-Ocean-Atmosphere Interactions
September 2014- Present

CLIVAR Repeat Hydrography research cruise, P2 Hawaii – San Diego, CA
May 2013 – June 2013, Carlson Lab, UC Santa Barbara

Santa Barbara Channel SBDOM11 research cruise, Santa Barbara Channel, CA
May 2011, Carlson Lab, UC Santa Barbara

PUBLICATIONS

- 2017 **J. Blake Clark**, Wen Long, Raleigh R. Hood. *Estuarine sediment dissolved organic matter dynamics in an enhanced sediment flux model*. JGR-Biogeosciences
- J. Blake Clark**, Wen Long Patrick, J. Neale, Raleigh R. Hood. *Wind driven dissolved organic matter dynamics in a Chesapeake Bay tidal marsh-estuary system*. Estuaries and Coasts
- Jeremy M. Testa, **J. Blake Clark**, William C. Dennison, et al., *Ecological forecasting and the science of hypoxia in Chesapeake Bay*. BioScience

PRESENTATIONS

- 2017 *Modeling organic carbon at the wetland estuary interface – A small model with large insights*. Invited Seminar. Smithsonian Environmental Research Center, Edgewater, MD. December 14th, 2017
- Advances in biogeochemical modeling: Linking Wetlands and Estuaries*. Invited Seminar. City College of New York, New York, NY. November 17, 2017
- Modeling of photodegradation and biogeochemical cycling in a wetland-estuary system*. Oral. CERF Biennial Conference, Providence, RI November 5-9, 2017
- Progress and challenges in up-scaling carbon modeling to a regionally significant wetland-estuary system*. 5 minute invited lightning talk. Ocean Carbon and Biogeochemistry Workshop, Woods Hole, MA. June 23-26, 2017
- Insights gained from a wetland-estuary dissolved organic matter modeling system*. Poster. Ocean Carbon and Biogeochemistry Workshop, Woods Hole, MA. June 23-26, 2017

Modeling of estuarine sediment organic matter remineralization with a dissolved organic matter intermediate state variable. Oral. Aquatic Sciences Meeting, Honolulu, HI, Feb. 26 - Mar. 3, 2017

2016 *Mass conservative modeling of dissolved organic matter photochemistry and biogeochemical cycling.* Poster. Ocean Carbon and Biogeochemistry Workshop, Woods Hole, MA. July 26-29, 2016

Modeling the marsh-estuary organic carbon cycle in the Rhode River, MD. Oral. Chesapeake Modeling Symposium, Williamsburg, VA. June 1-2, 2016

Atmospheric forcing and marsh dissolved organic matter fluxes: modeling and observations from a Chesapeake Bay tidal marsh-estuary ecosystem, Poster. Ocean Sciences Meeting, New Orleans, LA. Feb 21-26, 2016

2015 *Three-dimensional modeling of a Chesapeake Bay tidal marsh Ecosystem,* Oral Finite Volume Community Ocean Model (FVCOM) User workshop Bedford Institute of Oceanography, Halifax, NS, CAN. Oct 21, 2015

Three-dimensional modeling of a Chesapeake Bay tidal marsh Ecosystem, Poster Community Surface Dynamic Modeling Systems (CSDMS) Annual Meeting National Center for Atmospheric Research, Boulder, CO. May 26-29, 2015

TEACHING EXPERIENCE

2017 *Dissolved organic matter in the coastal ocean*
Invited Lecture, Biogeochemistry Undergraduate course
Washington College, Chestertown, MD

Washington College, Chestertown, MD, Mar 21, 2017
Oceanography, Guest Lecture,
Saints Peter and Paul High School, Easton, MD, Jan 26, 2017

2015 *Modeling and Fieldwork,* Guest Lecture
Fieldwork method Undergraduate course
Washington College, Chestertown, MD, Nov 6, 2015

GRANTS and AWARDS

2016 Izaak Walton League Scholarship

ASLO Aquatic Sciences Meeting 2017 Student Travel award

2015 Horn Point Laboratory Graduate Student Research Fellowship

University of Maryland Graduate School Dean's Fellowship

Horn Point Laboratory Student Travel Grant

AFFILIATIONS

- Member, Community Surface Dynamics Modeling System
- Member, Society of Wetland Scientists
- Member, American Geophysical Union
- Member, Izaak Walton League of America
- Member, American Society for Limnology and Oceanography

APPOINTMENTS

- University System of Maryland Student Council Member, 2016 - Present
- University of Maryland Center for Environmental Science Graduate Student Council Chair, 2016 – Present
- Graduate Student Officer, 2016- Present
- Ian Morris Scholar in Residence Chair, 2015-2016
- Student tour guide / student outreach, 2015-present