

# *Lindsey M. Kraatz*

## Curriculum Vitae

### ***Contact Information***

Work address: Virginia Institute of Marine Science  
College of William & Mary  
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### ***Education***

2005-Present Ph.D. Candidate, Virginia Institute of Marine Science, College of William & Mary,  
Gloucester Point, VA (Graduation anticipated August 2011)

Department of Physical Science

Major Advisors: Carl T. Friedrichs, Jesse McNinch

Dissertation Title: Deposition, erosion and biological reworking within the York River estuary:  
An acoustic investigation of bio-physio-geological parameters influencing seabed  
erodibility in a tidally energetic, fine-grained environment

Dissertation Committee: Courtney Harris, Steve Kuehl, Linda Schaffner, and Art Trembanis

2003-2005 University of North Carolina Wilmington, Wilmington, NC

Department of Geography and Geology

(transferred to VIMS August 2003)

2003 B.S., Eckerd College

Department of Marine Science

Major Advisors: Gregg Brooks and Bob Morton

Honors Thesis Title: Historical Shoreline Change of Honeymoon and Caladesi Islands, West-  
Central Florida

### ***Current Research***

Using remote sensing techniques to analyze bedform morphology on various spatial and temporal scales in physically and biologically dominated coastal and estuarine environments.

***Teaching Experience***  
***Actively Taught***

2009- Present	VIMS/York High School, Virginia NSF “VIMS PERFECT” GK-12 Fellow	Gloucester Point, VA
Spring 2009	VIMS Rivers: Processes and Management (MSCI 550) Teaching Assistant	Gloucester Point, VA
Fall 2008	College of William & Mary Introduction to Geology (GEO 160) Teaching Assistant	Williamsburg, VA
Spring 2008	VIMS Coastal and Estuarine Processes Research (MSCI 502L) Teaching Assistant	Gloucester Point, VA
2004-2005	UNCW NSF GK-12 Fellow	Wilmington, NC
Spring 2002	Eckerd College Earth Structure (MS 306) Teaching Assistant	St. Petersburg, FL

***Guest Lectures***

2008	VIMS “Coastal Geology and the VA Eastern Shore”, VIMS 2008 REU Program	Gloucester Point, VA
2005	UNCW “Historical Aerial Photo Rectification and Image Analysis, Introduction to GIS (GGY 328)	Wilmington, NC
2004	USF “Caladesi Island: Past, Present, and Future”, Introduction to Environmental Studies (EVR 2001L)	Tampa, FL

***Professional Experience***

2005- 2009	VIMS Research Assistant	Gloucester Point, VA
2003-2004	UNCW Research Assistant	Wilmington, NC
2001-2003	USGS/Center for Coastal & Watershed Studies Research and GIS Intern for the National Coastal Assessment Project	St.Petersburg, FL

## *Scientific Publications*

### *Conference Proceedings*

- Kraatz, L.M., Skarke, A.D., Trembanis, A.C., and Friedrichs, C.T. in prep. Approaches for Quantifying Seabed Morphology – Techniques for Utilizing Rotary Sonar Systems.
- Halls, J. and Kraatz, L.M. 2006. A spatio-temporal assessment of back-barrier salt marsh change: a comparison of multidecade aerial photography and spatial landscape indices. International Society of Photogrammetry and Remote Sensing's Mid-Term Symposium "Remote Sensing: From Pixels to Processes" Abstracts and Papers with Programs, May 8-11, Enschede, Netherlands.
- Halls, J. and Kraatz, L.M. 2006. Estimating error and uncertainty in change detection analyses of historical aerial photographs. 7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, July 5-7, Lisbon, Portugal.

### *Conference Abstracts*

- Kraatz, L.M., Holloman, E.L., Geisz, H.N., 2010. An Analysis of Middle and High School Students' Perception of Scientists: Does Exposure Influence Students' Perception of Science? 2010 Ocean Sciences Abstract with Programs, Feb. 22-26, Portland, OR.
- Kraatz, L.M., McNinch, J.E., Friedrichs, C.T., and Trembanis, A.C., 2008. Geomorphic changes of fine-grained sedimentary furrow: insight into sediment transport and deposition in the York River estuary. 2008 Ocean Sciences Abstract with Programs, March 2-7, Orlando, Florida, 2-7
- Petrone, C.J., Brodie, K.L., Foxgrover, A.C., Jones, D.O.B., Kraatz, L.M., Lake, S.J., Relles, N.J., Rodriguez-Calderon, C., Shen, T., Spier, C.R., Sturdivant, S.K., and Patterson, M.R., 2008. Lessons from Project SeaCamel: Integrating Science Education and Ocean Observing Systems (OOS) Technology. 2008 Ocean Sciences Abstract with Programs, March 2-7, Orlando, Florida.
- Halls, J.N. and Kraatz, L.M., 2006. Sensitivity Analysis of Historical Aerial Photography: A Case Study of Barrier Island Marshes. International Environmental Modelling and Software Abstract with Programs. July 9-13, Burlington, Vt.

## *Presentations*

- Kraatz, L.M., 2010. Draw a Scientist: A Perspective of Science and Scientists from Local Youth. DPS Seminar Series.
- Kraatz, L. M.; Friedrichs, C.T., Trembanis, A., Dickhudt, P., 2009. Rotary Sonar Analysis of Fine Grained Sediment Deposition and Bed Erodibility in the York River Sub-Estuary, VA. CERF Conference.
- Kraatz, L.M., 2008. Geomorphic changes of fine-grained sedimentary furrows: insight into sediment transport and deposition in the York River estuary. DPS Seminar Series.
- Kraatz, L.M., 2007. The sound of mud: plans for acoustic seabed surveying in the York River. DPS Seminar Series
- Kraatz, L. M.; Halls, J. N.; Leonard, L. A., 2005. An assessment of back-barrier salt marshes in southeastern North Carolina using Geographical Information Systems. ERF Conference.
- Kraatz, L.M., Reimer, B., Halls, J.N., and Leonard, L.A. 2005 Historical Analysis of Marsh Area Distribution in Southeastern North Carolina. AAG Conference.

### ***Honors, Prizes, and Awards***

2006	Best Paper Award ~ International Society of Photogrammetry and Remote Sensing Symposium
2005	Fulbright Finalist for the United Kingdom
2004	Victor A. Zullo Award for Outstanding Graduate Research
2004	National Chancellor's List
2003	UNCW Research Assistant Scholarship
2003	Eckerd College Lifetime Achievement Award / Outstanding Student Award
2003	Inducted into Sigma Xi
2000 –2003	Eckerd College Dean's Lists
2000	MG James Ursano Scholarship
1999-2003	Army Aviation Association of America Scholar
1999-2003	Eckerd College Scholarship
1999-2003	Eckerd College Special Talent Scholarship
1999-2003	National Dean's List
1999	National English Merit Award

### ***Grants***

2010	VIMS Dean Travel Grant
2010	VIMS 2010 Graduate Dean's Equipment Grant, \$922
2009	Coastal and Estuarine Student Travel Grant
2009	William & Mary Graduate Research Travel Grant
2008	VIMS Dean Travel Grant
2006	VIMS Dean Travel Grant
2005	UNCW Earth Sciences Student Research Grant

### ***Committees***

2010-Present	Assoc. Dean of Academic Studies Selection Committee (alternate Student Rep), VIMS
2009- Present	Department of Physical Science Faculty Committee (Student Rep), VIMS
2009-Present	VIMS Diving Control Board Representative (Student Rep), VIMS
2008- 2010	VIMS Awards Committee Representative, VIMS
2008-2009	Seminar Series Representative, VIMS
2008-2009	VIMS Web Redesign Committee (Student Rep)
2007-2008	Faculty University Priorities Committee, College of William & Mary
2006- Present	VIMS Graduate Student Association (President and Vice President), VIMS
2006- Present	Green Team, VIMS
2006-2008	Graduate Council (President), College of William & Mary
2005- Present	Honor Council (Vice Chair), VIMS/College of William & Mary
2003-2005	UNCW Graduate Student Association, UNCW
2002-2003	Campus Master Plan Committee (Student Rep), Eckerd College
2001-2003	Environmental Affairs Committee (Student Rep), Eckerd College
1999-2003	Earth Society (Treasurer), Eckerd College
1999-2003	Student Government (ECOS) – Academic Affairs and Constitution, Regulations, and By-laws Committee, Eckerd College

### ***Students Mentored***

- 2010 Co-mentor (with Carl Friedrichs and Grace Cartwright) to Rachel Corrigan, high school student at the Chesapeake Bay Governors School Glens Campus, working on her senior research project.
- 2009 Co-mentor (with Carl Friedrichs and Grace Cartwright) to Benjamin Lewis, undergraduate student in the College of William and Mary Geology Department

### ***Outreach and Volunteering***

- 2010 VIMS Booth ~ Hampton Bay Days, VIMS
- 2007- Present VIMS Booth ~ Gloucester County Daffodil Festival, VIMS
- 2006-Present VIMS Marine Science Day, VIMS
- 2006-Present, Virginia Blue Crab Bowl Volunteer, VIMS
- 2004-2005 Science Olympiad Coach, New Hanover County Middle Schools, NC
- 2003-2005 New Hanover County, NC Science Fairs Judge, UNCW
- 2003-2005 Science Olympiad Judge, UNCW

### ***Media Coverage***

- 2010 WM Press Release, "VIMS grad students help kids expand perception of scientists". 15 October
- 2010 NSF News From the Field "Grad students help kids expand perception of scientists". 13 October
- 2010 VIMS Press Release "VIMS grad students help kids expand perception of scientists". 13 October
- 2010 VIMS Press Release "Public-private partnership could transform seafloor imaging". 21 April
- 2009 VIMS Press Release "VIMS begins long-term partnership with local schools". 10 September

### ***Professional Memberships***

Coastal and Estuarine Research Federation (CERF), student member, 2004 - Present

The American Geophysical Union, student member, 2004-present

Geological Society of America (GSA), student member, 2004 - 2008

Association of American Geographers (AAG), student member, 2004 - 2006

American Academy of Underwater Sciences (AAUS), student member, 2004 -Present

Sigma Xi, student member, 2003-Present

Omicron Delta Kappa, 2001-Present

### ***Certifications***

U.S. Coast Guard Boating Skills and Seamanship Certification

CPR and First Aid Certification

Marine First Aid Certification

AAUS Research Scientific Diver Certification

Radioisotope Certification

Digital x-radiograph Certification

GEOTEK Core Logger Certification

## *References*

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