

Education

2015 **Ph.D. Marine Science, Biological Sciences**

Virginia Institute of Marine Science (VIMS), College of William and Mary, Gloucester Point, VA

Dissertation Title: *Linking structure and function of microbial communities responsible for sedimentary nitrogen processes in North Carolina estuaries*

Major Advisor: Dr. Bongkeun Song

2007 **B.S. Biology**, Marine and Environmental Biology (*Magna Cum Laude*)

Monmouth University (MU), West Long Branch, NJ

2007 **A.A. Education**, Brookdale Community College, Lincroft, NJ

Professional Appointments

Jan 2018 – present

Teaching Instructor, Rutgers University, Dept of Biochemistry and

Microbiology

Nov 2015 – Dec 2017

Postdoctoral Fellow, US EPA, Office of Research and Development

June 2015 – Sept 2015

Postdoctoral Fellow, VIMS, Molecular Microbial Ecology Lab

Jan 2013 – May 2015

Research Assistant, VIMS, Molecular Microbial Ecology Lab

Sept 2010 – Jan 2011

Visiting Research Student Collaborator, Princeton University, Dept of

Geosciences

Aug 2008 – Dec 2012

Research Assistant, UNC Wilmington, Molecular Microbial Ecology Lab

Jan 2007 - Aug 2008

Research Associate, Monmouth University, Urban Coast Institute

June 2006 – Aug 2006

Endangered & Nongame Species Intern, NJ Division of Fish & Wildlife

Teaching Experience

Jan 2018 – present

General Microbiology, Analytical Microbiology, Rutgers University

Aug 2017 – Dec 2017

General Microbiology, University of West Florida, Adjunct Instructor

July 2011, 2012

Introduction to Molecular Biology, UNC Wilmington Marine Quest
(marine science camp; 3-4 day course; 2 sessions/summer)

Fall 2011 – Spring 2012

Principles of Biology: Cells, UNC Wilmington, Graduate Teaching Assistant

Fall 2008 – Spring 2009

Microbiology of Human Diseases, UNC Wilmington, Graduate Teaching

Assistant

Research Interests

- Molecular Microbial Ecology and Bioinformatics
- Ecology of Microorganisms Involved in Global Nutrient Cycling
- Biogeochemical Cycling (Nitrogen, Carbon, Sulfur, Greenhouse Gases)
- Microbial Indicators of Watershed and Ecosystem Health
- Environmental Science and Marine Biology

Publications

Peer Review

- Lisa JA**, A Jayakumar, BB Ward, and B Song (2017) *nirS*-type denitrifying bacterial assemblages respond to environmental conditions of a shallow estuary. *Environmental Microbiology Reports* 6: 766-778.
- Lisa JA**, B Song, CR Tobias, DH Hines (2015 Invited Feature) Genetic and biogeochemical investigation of sedimentary nitrogen cycling communities responding to tidal and seasonal dynamics in Cape Fear River Estuary. *Estuarine, Coastal, and Shelf Science* 167: A313-A323.
- Hines D, **JA Lisa**, B Song, CR Tobias, SR Borrett (2015) Estimating the effects of seawater intrusion on an estuarine nitrogen cycle by comparative network analysis. *Marine Ecology Progress Series* 524: 137-154.
- Song B, **JA Lisa**, CR Tobias (2014) Linking DNRA community structure and activity in a shallow lagoonal estuarine system. *Frontiers in Microbiology* 5: 1-10.
- Lisa JA**, B Song, CR Tobias, KA Duernberger (2014) Impacts of freshwater flushing on anammox community structure and activities in the New River Estuary, USA. *Aquatic Microbial Ecology* 72: 17-31.
- Hines D, **JA Lisa**, B Song, CR Tobias, SR Borrett (2012) A network model shows the importance of coupled processes in the microbial N cycle in the Cape Fear River Estuary. *Estuarine Coastal and Shelf Science* 106: 45-57.
- Witty M, J Nickles, **J Lisa**, J Tiedemann (2008) Ecology, DNA and the future of Microbial Source Tracking. *Water, Air and Soil Pollution* 201: 219-232.

Technical Reports (3 out of 6)

- Tiedemann J, M Witty, **J Lisa** (2007) Deal Lake Watershed Microbial Source Tracking Study.
- Tiedemann J, M Witty, **J Lisa** (2007) Whale Pond Brook Subwatershed Biological Assessment.
- Tiedemann J, M Witty, **J Lisa** (2007) Silver Bay Ecosystem Restoration Microbial Source Tracking Study.

Invited Seminars

- Spring 2017 *Genetic and biogeochemical investigation of sedimentary N cycling communities in estuarine ecosystems* University of West Florida
- Fall 2016 *How to Survive Grad School* Gulf Estuarine Research Society of the Coastal and Estuarine Research Federation
- Fall 2015 *Linking structure and function of microbial communities: Genetic and biogeochemical investigation of sedimentary N cycling communities in estuarine ecosystems* Marine Biological Laboratory
- Summer 2015 *Linking the Structure & Function of Nitrogen Cycling Microbial Communities in The New River Estuary* US EPA Gulf Ecology Division

Presentations at Scientific Meetings

- Lisa JA**, TL Lenney, BD Blackwell1, JA Nestlerode (2017) Effects of Hypoxia on Sedimentary Nitrogen Cycling in the Pensacola Bay Estuary. American Society for Microbiology, Poster Presentation.
- Lisa JA**, A Jayakumar, BB Ward, B Song (2015) Distribution of denitrifying communities in response to environmental factors as revealed through *nirS* gene microarray analysis. International Conference on Nitrification, Oral Presentation.
- Lisa JA**, CR Tobias, KA Duernberger and B Song (2013) Tidal influences on microbial communities responsible for sedimentary nitrogen cycling in the Cape Fear River Estuary, USA. Coastal and Estuarine Research Federation, Oral Presentation.
- Lisa JA**, CR Tobias, KA Duernberger and B Song (2013) Tidal influences on microbial communities responsible for sedimentary nitrogen cycling in the Cape Fear River Estuary, USA. Association of the Sciences of Limnology and Oceanography, Oral Presentation.

- Lisa JA**, A Jayakumar, CR Tobias, B Song and BB Ward (2012) Microarray and ¹⁵N isotope analyses of denitrifying communities in New River Estuary, USA. International Society for Microbial Ecology, Poster Presentation.
- Lisa JA**, CR Tobias, KA Duernberger, B Song (2011) Linking structure and function of anammox bacterial communities in a temperate eutrophic estuary. Coastal and Estuarine Research Federation, Oral Presentation.
- Lisa JA**, MD Hirsch, CR Tobias, KA Duernberger and B Song (2010) Comparing spatial and temporal dynamics of anammox and denitrifying communities at Cape Fear River Estuary and New River Estuary, North Carolina. American Geophysical Union, Poster Presentation
- Lisa JA**, CR Tobias, KA Duernberger and B Song (2010) Linking Spatial and Temporal Variations of N₂ Production to Anammox and Denitrifying Community Dynamics in the New River Estuary. International Society for Microbial Ecology, Poster Presentation.
- Lisa JA**, CR Tobias, KA Duernberger and B Song (2010) Spatial and Temporal Patterns of Microbial Nitrogen Removal Potential (Anammox and Denitrification) in New River Estuary. Benthic Ecology/South Eastern Estuarine Research Society, Poster Presentation
- Lisa JA**, and B Song (2009) Molecular Detection of Anaerobic Ammonium Oxidizing (ANAMMOX) Bacteria in Agricultural Soil and Animal Manure Storage. American Society for Microbiology, Poster Presentation.

Service to Profession

Journal Review

FEMS Microbiology Ecology, Limnology and Oceanography, Applied Microbiology and Biotechnology, Environmental Science and Pollution Research, Deep Sea Research II

Professional Organizations

2010 - present	American Society for Microbiology
2008 - present	Coastal and Estuarine Research Federation, Member
2008 - present	International Society for Microbial Ecology, Member
2006 - present	Surfrider Foundation, Member
2012 - 2015	VIMS Professional Development Committee, Member
2007 - 2008	Sustainability Advisory Council, Monmouth University, Founder