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### RESEARCH INTEREST

To examine transformations and transport of reactive nitrogen in watersheds to coastal ecosystems through advanced measurements and global modeling.

### EDUCATION

2006           **Ph.D. University of Georgia.** Department of Marine Sciences.  
1998           **B.A. University of Virginia.** Department of Environmental Sciences.

### PROFESSIONAL HISTORY AND AWARDS

2005-           **Post-Doctoral Associate.** Rutgers, The State University of New Jersey.  
                  Institute of Marine and Coastal Sciences. New Brunswick, NJ.  
2004-2005      **Teaching Assistant.** University of Georgia.  
                  Department of Marine Sciences. Athens, GA.  
2003-2004      **EPA Fellow.** National Network for Environmental Management Studies.  
                  Environmental Protection Agency. Athens, GA.  
1999-2000      **University of Georgia Fellow.** University of Georgia.  
                  Department of Marine Sciences. Athens, GA.  
1999            **Georgia Sea Grant Coastal Management Intern.** University of Georgia.  
                  Department of Marine Sciences. Athens, GA.  
1998-1999      **Teaching Assistant.** University of Georgia.  
                  Department of Marine Sciences. Athens, GA.  
1997            **NSF-REU Intern.** Marine Biological Laboratory.  
                  Boston University Marine Program. Woods Hole, MA.

### PROFESSIONAL MEMBERSHIPS

American Society of Limnology and Oceanography  
Estuarine Research Federation

### PUBLICATIONS

1. Lee, R. Y., and Seitzinger, S. P. In preparation for *Ecological Applications*. Land-based dissolved inorganic nitrogen export to Large Marine Ecosystems.
2. Lee, R. Y., Feller, I. C., Lovelock, C. E., Fogel, M. L., Montoya, J. P., Wooller, M., and Joye, S. B. In preparation for *Ecology*. Ecosystem role of benthic microbial mats in carbon fixation on oceanic mangrove islands.
3. Lee, R. Y., Joye, S. B., and Meile, C. In preparation for *Marine Ecology Progress Series*. Primary production and respiration rates of microbial mats in an oceanic mangrove ecosystem.

## **PUBLICATIONS (continued)**

4. Joye, S. B., Lee, R. Y., Porubsky, W. P., Wisniewski, R. J., Weston, N. B., Valiela, I., and Van Cappellen, P. In preparation for *Marine Ecology Progress Series*. Environmental controls on denitrification and nitrous oxide production in coastal sediments.
5. Porubsky, W. P., Lee, R. Y., Weston, N. B., and Joye, S. B. In preparation for *Estuaries*. Benthic primary production, sediment-water fluxes, and the fate of nutrients in intertidal sediments.
6. Lee, R. Y., Porubsky, W. P., Feller, I. C., McKee, K. L., and Joye, S. B. Submitted to *Biogeochemistry*. Porewater biogeochemistry and soil metabolism in dwarf red mangrove habitats (Twin Cays, Belize). Porewater biogeochemistry and soil metabolism in dwarf mangrove habitats, Twin Cays, Belize.
7. Lee, R. Y. 2006. Primary production, nitrogen cycling and the ecosystem role of mangrove microbial mats on Twin Cays, Belize. *University of Georgia Dissertation*. 150 pp.
8. Lee, R. Y., and Joye, S. B. 2006. Seasonal patterns of nitrogen fixation and denitrification in oceanic mangrove habitats. *Marine Ecology Progress Series* 307:127-141.
9. Joye, S. B., and Lee, R. Y. 2004. Benthic microbial mats: Important sources of fixed nitrogen and carbon to the Twin Cays, Belize ecosystem. *Atoll Research Bulletin* 528:1-24.
10. Joye, S. B., Porubsky, W. P., Weston, N. B., and Lee, R. Y. 2003. Benthic microalgal production and nutrient dynamics in intertidal sediments. In: Rullkötter J (ed) *BioGeoChemistry of Tidal Flats: Proceedings of a Workshop held at the Hanse Institute of Advanced Study, Delmenhorst, Germany, May 14-17, 2003*. *Forschungszentrum Terramare Berichte* 12:67-70.
11. Moore, W. S., Krest, J., Taylor, G., Roggenstein, E., Joye, S., and Lee, R. 2002. Thermal evidence of water exchange through a coastal aquifer: Implications for nutrient fluxes. *Geophysical Research Letters* 29(14):art 1029.
12. Lee, R., Joye, S. B., Roberts, B. J., and Valiela, I. 1997. Release of N<sub>2</sub> and N<sub>2</sub>O from salt marsh sediments subject to different land-derived N loads. *Biological Bulletin* 193:292-293.

## **PRESENTATIONS**

### **Ocean Sciences Meeting**

2006 Shank, G. C.\*, Lee, R., Zepp, R. G., and Bartels, E. CDOM production by mangrove leaf litter and Sargassum colonies in Florida Keys coastal waters.

### **International Symposium on the Biogeochemistry of Wetlands**

2005 Lee, R.Y.\*, Joye, S. B., and Meile, C. Primary production and respiration rates of microbial mats in an oceanic mangrove ecosystem.

### **American Society of Limnology and Oceanography Annual Meeting**

- 2005 Joye, S. B.\*, Lee, R. Y., Porubsky, W. P., and Weston, N. B. Environmental controls on denitrification in temperate and tropical shallow sediments.
- 2003 Lee, R. Y.\*, and Joye, S. B. The importance of microbial mats in the C and N cycle of mangrove ecosystems.
- 2002 Porubsky, W. P.\*, Weston, N. B., Lee, R. Y., and Joye, S. B. Diel and seasonal patterns of benthic fluxes of nutrients, gases, and dissolved organics from temperate intertidal sediments.
- 2000 Joye, S. B.\*, and Lee, R. Y. Salt water intrusion into shallow coastal aquifers: Impact on sediment nitrogen and phosphorus pools and potential for altering nutrient fluxes.

## **PRESENTATIONS (continued)**

### **American Society of Limnology and Oceanography Annual Meeting (continued)**

1998 Lee, R.\* , Joye, S. B., Roberts, B. J., and Valiela, I. Release of N<sub>2</sub> and N<sub>2</sub>O from salt marsh sediments subject to different land-derived N loads.

### **International Association of Ecology (INTECOL) Wetlands Conference**

2004 Joye, S. B., and Lee, R. Y.\* Microbial mats: dynamic capacitors of carbon and nitrogen flow in mangrove ecosystems.

### **Estuarine Research Federation Meeting**

2005 Joye, S. B.\* , Feller, I. C., and Lee, R. Y. Primary production and nutrient fluxes in mangrove soils and microbial mats.

2003 Wooller, M. J.\* , Fogel, M. L., Cheeseman, J. M., Smallwood, B. J., Jacobson, M., Scharler, U. M., Roberts, Q., Akob, D., Lee, R. Y., Myerchin, G., and Schmitt, J. P. Landscape scale isotopic patterns in plants and animals of Twin Cays, Belize.

2001 Lee, R. Y.\* , Wooller, M. J., Fogel, M. L., and Joye, S. B. Ecosystem controls on nitrogen, carbon and oxygen cycling in temperate and tropical intertidal sediments.

1999 Lee, R. Y.\* , Carini, S. A., and Joye, S. B. Seasonal variability of and nutrient controls on denitrification in freshwater and brackish water sediments.

1997 Lee, R.\* , Joye, S. B., Roberts, B. J., and Valiela, I. Release of N<sub>2</sub> and N<sub>2</sub>O from salt marsh sediments subject to different land-derived N loads.

### **LTER All Scientists Meeting**

2003 Porubsky, W. P.\* , Weston, W. P, Joye, S. B., and Lee, R.Y. Diel and seasonal patterns of benthic fluxes of nutrients, gases and dissolved organics from temperate intertidal sediments of Georgia and South Carolina.

### **Geological Society of America Southeastern Section Annual Meeting**

2000 Hunter, K. S.\* , Lee, R. Y., Boyd, B., Schultz, G., Joye, S. B., and Ruppel, C. Groundwater geochemistry at the island-estuary interface at perturbed and pristine sites on a Georgia Bight barrier island.