

CURRICULUM VITAE

Siddhartha Mitra, Ph.D.

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EDUCATION

- 1997 Ph.D. Marine Science
*School of Marine Science/Virginia Institute of Marine Science
College of William and Mary*
- 1990 M.S. Chemistry and Environmental Science
New Jersey Institute of Technology
- 1988 B.S. Mechanical Engineering.
Lehigh University

PROFESSIONAL EXPERIENCE

- 2023 Associate Dean, Academic Affairs, Virginia Institute of Marine Science (VIMS),
Gloucester Point, VA
- 2015-2023 Director, Integrated Coastal Sciences Ph.D. Program, East Carolina University,
Greenville, NC
- 2020-2022 Interim Chair, Department of Coastal Studies
- 2019 Full Professor, Department of Geological Sciences, East Carolina University,
Greenville, NC.
- Aug 2012 Associate Professor, Department of Geological Sciences, East Carolina
University, Greenville, NC.
- Aug 2007 Assistant Professor, Department of Geological Sciences, East Carolina
University, Greenville, NC.
- 2003-2007 Assistant Professor, Department of Geological Sciences and Environmental
Studies, Binghamton University, Binghamton, NY.
- 2001-2003 Mendenhall Fellow, United States Geological Survey (USGS), Menlo Park, CA.
- 2000-2003 Senior Research Scientist (adjunct position): Tulane University, New Orleans,
LA.
- 1997-2000 Post-Doctoral Research Associate: Tulane University, New Orleans, LA.
- 1991-1997 Graduate Research Assistant: Virginia Institute of Marine Science, School of
Marine Science, Gloucester Point, VA.
- 1990-1991 Environmental Contaminants Specialist: U.S. Fish and Wildlife Service,
Pleasantville, NJ.

LEADERSHIP TRAINING

- 2021 Leadership Development Academy, East Carolina University.
- 2019 Leadership Institute, American Chemical Society (ACS).
- 2015 Civic Engagement Leadership in the Liberal Arts and Sciences.

ADMINISTRATIVE POSITION DESCRIPTIONS

July 2023

Associate Dean of Academic Affairs, VIMS, Gloucester Point, VA

- Provides stewardship for VIMS' education mission, oversees administration of the School of Marine Science graduate program, serves as a contact dean for William & Mary's undergraduate marine science minor, and coordinates VIMS activities in support of the university accreditation process.

2015 - 2023

Director, Integrated Coastal Sciences (ICS) Ph.D. Program

- Foster the care and successful matriculation of all ICS (formerly titled Coastal Resources Management) Ph.D. students towards completion of their degree,
- Coordinate curriculum modifications in response to student assessment,
- Serve as liaison between ECU's various departments, colleges, graduate school, and any other such agencies with which the ICS graduate program is associated,
- Program review, program assessment, curriculum development, student assessment, and keeping track of ICS graduate faculty rank/status,
- Oversee the standing ICS committees (the Admissions Committee, the Core Competency Examination Committee, and the Curriculum Committee and other ad hoc committees) as needed,
- Draft and update the annual ICS Student Handbook.

2020 – 2022

Interim Chair, Department of Coastal Studies

- Represent the dean to other units and departments within the university, and other external agencies, organizations, and institutions.
- Mentor and/or facilitated the professional development of all faculty in terms of teaching effectiveness, scholarship and other scholarly activities, and service to the department, program, university, community, and profession,
- Strategic planning, administering, and managing the affairs of the department in accordance with this code and the policies and procedures determined by the university, program, and department,
- Guide the development and oversight of academic programs, determined faculty teaching assignments (in coordination with the ICS Program), and overseeing faculty advising duties,
- Maintain personnel files,
- Developed criteria for and evaluating faculty annual performance in teaching, research, and service in accordance with the guidelines established in Unit Code,
- Coordinate faculty hires and personnel-related actions in conjunction with Personnel Committee chair.

2020 – 2022

Chair, Eastern North Carolina American Chemical Society

- Presided at monthly meetings of the Executive Committee
- Carried into effect the decisions and recommendations of that Committee

- Presided at business meetings of the Section
- Appointed all committee chairs and members except as stated elsewhere in these bylaws
- Carried out the duties required by the Constitution and Bylaws of the ACS

2015– Present

ECU Student Chapter Advisor, The Coastal Society (TCS)

Advise and mentor student TCS members and officers to carry out duties required by national TCS.

DIVERSITY AND INCLUSION INITIATIVES

Director, Going Coastal Seminar Series; featuring emerging and distinguished scholars in coastal sciences.

Eastern North Carolina American Chemical Society Seminar Series on Black, Indigenous, People of Color (BIPOC) Chemists

Develop Modules on use of Digital Learning to Promote Awareness of Underrepresented Mathematicians and Scientists

RESEARCH FOCUS

Use of organic molecules to understand how natural and anthropogenic processes have affected organic carbon and contaminant cycles.

RESEARCH METRICS

Past 5 years: \$3M in external funding total (~\$424K as lead PI and ~\$2.6M as coPI), 21 publications (6 senior or lead authored and 15 co-authored), Google Scholar H-Index: 25 as of November 2021.

REVIEWED PUBLICATIONS (*graduate advisees; **undergraduate advisees)

1. Garrison, C.E., Roozbehi, S., **Mitra, S.**, Corbett, D.R., Field, E.K. 2022. Coastal microbial communities disrupted during the 2018 Hurricane Season in Outer Banks, North Carolina. <https://www.frontiersin.org/articles/10.3389/fmicb.2022.816573/full>.
2. Goranov, A.I., Wozniak, A.S., Bostick, K.W., Zimmerman, A.R., **Mitra, S.**, Hatcher, P. 2022. Microbial labilization and diversification of pyrogenic dissolved organic matter. *Biogeosciences*, 19:1491-1514.
3. Zhang, X., Xu, Y., Xiao, W., Zhao, M., Wang, Z., Wang, Z., Xu, L., Luo, M., Li, X., Fang, J., Fang, Y., Wang, Y., Oguri, K., Wenzhofer, F., Rowden, A., **Mitra, S.**, Glud, R.N. 2022. The hadal zone is an important and heterogeneous sink of black carbon in the ocean. *Commun Earth Environ* 3, 25. <https://doi.org/10.1038/s43247-022-00351-7>
4. Bunch, T. E., LeCompte, M.A., Adedeji, V.A., Wittke, J. H., Burleigh, D.T., Hermes, R.E., Mooney, C., Batchelor, D., Wolbach, W.S., Kathan, J., Kletetschka, G., Patterson, M.C. L., Swindel, E.C., Witwer, T., Howard, G.A., **Mitra, S.** et al. 2021. A Tunguska sized airburst destroyed Tall el-Hammam a Middle Bronze Age city in the Jordan Valley near the Dead Sea. *Sci Rep* 11, 18632. <https://doi.org/10.1038/s41598-021-97778-3>
Featured on Final Jeopardy:

5. Bostick, K.W., Zimmerman, A.R., Goranov, A.I., **Mitra, S.**, Hatcher, P.G., Wozniak, A.S. 2021. Biolability of Fresh and Photodegraded Pyrogenic Dissolved Organic Matter From Laboratory-Prepared Chars. *Journal of Geophysical Research: Biogeosciences*. <https://doi.org/10.1029/2020JG005981>.
6. Goranov, A.I., Wozniak, A.S., Bostick, K.W., Zimmerman, A.R., **Mitra, S.**, Hatcher, P.G. 2020. Photochemistry after fire: Structural transformations of pyrogenic dissolved organic matter elucidated by advanced analytical techniques. *Geochimica et Cosmochimica Acta*, 290: 271-292. <https://doi.org/10.1016/j.gca.2020.08.030>.
7. Wozniak, A.S., Goranov, A.I., **Mitra, S.**, Bostick, K.W., Zimmerman, A.R., Schlesinger, D.R., Myneni, S., Hatcher, P.G. 2020. Molecular heterogeneity in pyrogenic dissolved organic matter from a thermal series of oak and grass chars. *Organic Geochemistry*, 148: 104065. <https://doi.org/10.1016/j.orggeochem.2020.1040>.
8. Bostick, K.W., Zimmerman, A.R., Goranov, A.I., **Mitra, S.**, Hatcher, P.G., Wozniak, A.S. 2020. Photolability of pyrogenic dissolved organic matter from a thermal series of laboratory-prepared chars. *Science of the Total Environment*, 724. [10.1016/j.scitotenv.2020.138198](https://doi.org/10.1016/j.scitotenv.2020.138198).
9. Bostick, K.W., Zimmerman, A.R., Goranov, A., **Mitra, S.**, Hatcher, P.G., Wozniak, A.S. Biolability of Fresh and Photodegraded Pyrogenic Dissolved Organic Matter from Laboratory-Prepared Chars. 2020. *Earth and Space Science Open Archive*.
10. Moore, C.R., Brooks, M.J., Goodyear, A.C., Ferguson, T.A., Perrotti, A.G., **Mitra, S.**, Listekki, A.M.**, King, B.C.**, Mallinson, D., and 9 others. 2019. Sediment Cores from White Pond, South Carolina, contain a Platinum Anomaly, Pyrogenic Carbon Peak, and Coprophilous Spore Decline at 12.8 ka. *Nature Scientific Reports*, 15121, doi:10.1038/s41598-019-51552-8.
11. Mulligan, R.P., Mallinson, D.J., Clunies, G. J., Rey, A., Culver, S.J., Zaremba, N., Leorri, E., **Mitra, S.** 2019. Estuarine responses to long-term changes in inlets, morphology and sea-level rise. *Journal of Geophysical Research Oceans*, <https://doi.org/10.1029/2018JC014732>.
12. Degan, J., Hicks, M., **Mitra, S.**, Webb, P., & Lichtenwalner, C. S. 2019. *Dynamic Air-Sea Interactions*. OOI Data Labs Collection.
13. Collier, D.N., Robinson, A., **Mitra, S.** et al. 2019. Tapping Out: Influence of Organoleptic and Perceived Health Risks on Bottled Versus Municipal Tap Water Consumption Among Obese, Low Socioeconomic Status Pediatric Patients. *Exposure and Health*. <https://doi.org/10.1007/s12403-019-00302-2>.
14. Mazow, L., **Mitra, S.**, Kimmel, D., Grieve, S. 2018. Extraction and Analysis of Total Lipids in Late Iron Age Bathshaped basins from the Levant as a Means of Assessing Vessel Function. *Journal of Archeological Science Reports*, 22: 193-201. <https://doi.org/10.1016/j.jasrep.2018.09.015>.
15. **Mitra, S.**, Benfield, B.* 2018. Ibuprofen Sorption to Coastal Plain Soils. *Journal of Water, Air, and Soil Pollution*, 229: 295-307.
16. Bostick, K.W., Zimmerman, A.R., Hatcher, P., **Mitra, S.**, and A.S. Wozniak. Production, Composition, and Detection of Pyrogenic Dissolved Organic Matter from Various Biochars and Environmentally-aged Charcoals. 2018. *Frontiers in Earth Science: Biogeoscience*, v6. DOI: 10.3389/feart.2018.00043.

17. Leorri, E., Zimmerman, A., **Mitra, S.**, Christian, R., Fatela, F., Mallinson, D. 2018. Refractory organic matter in coastal salt marshes – effect on C sequestration calculations. *Science of the Total Environment*, 633:391-398. DOI:10.1016/j.scitotenv.2018.03.120.
18. Wolbach, W., Ballard, J., Mayewski, P.I., Adedeji, V., Bunch, T., Firestones, R., French, T., Howard, G., Israde-Alcantara, I., Johnson, J., Kimbel, D., Kinzie, C., Kubatov, A., Kletetschka, G., LeCompte, M., Mahaney, W., Melott, A., **Mitra, S.**, Maiorana-Boutillier**, A., and 8 others. 2018a. Extraordinary biomass-burning episode and impact winter triggered by the Younger Dryas cosmic impact ~12,800 years ago; Part 1: Ice cores and glaciers. *The Journal of Geology*, 126: 165-184. DOI: 10.1086/695703.
19. Wolbach, W., Ballard, J., Mayewski, P.I., Adedeji, V., Bunch, T., Firestones, R., French, T., Howard, G., Israde-Alcantara, I., Johnson, J., Kimbel, D., Kinzie, C., Kubatov, A., Kletetschka, G., LeCompte, M., Mahaney, W., Melott, A., **Mitra, S.**, Maiorana-Boutillier**, A., and 8 others. 2018b. Extraordinary biomass-burning episode and impact winter triggered by the Younger Dryas cosmic impact ~12,800 years ago; Part 2: Lake, marine, and terrestrial sediments. *The Journal of Geology*, 126: 185-205. DOI: 10.1086/695704.
20. Mallinson, D., Culver, S., Leorri, E., **Mitra, S.**, Mulligan, R., Riggs, S. 2018. *Barrier island and estuary co-evolution in response to Holocene climate and sea-level change: Pamlico Sound and the Outer Banks Barrier Islands, North Carolina, USA*. Chapter 3, pp.91-120. Barrier Island Dynamics, edited by Laura J. Moore, Brad Murray, Springer.
21. **Mitra, S.**, Osburn, C.L., Wozniak, A.S. 2017. A preliminary assessment of fossil fuel and terrigenous influences to rainwater organic matter in summertime in the northern Gulf of Mexico. *Aquatic Geochemistry*, DOI: 10.1007/s10498-017-9319-5.
22. Zimmerman, A.R., **Mitra, S.** 2017. Trial by Fire: On the terminology and methods used in pyrogenic organic matter research. *Frontiers in Environmental Sciences*. v5. DOI: 10.3389/feart.2017.00095.
23. Zaremba, N., Mallinson, D., Leorri, E., Culver, S., Riggs, S., Mulligan, R., Horsman, E., **Mitra, S.** 2016. Controls on the stratigraphic framework and paleoenvironmental change within a Holocene estuarine system: Pamlico Sound, North Carolina, USA. *Marine Geology*, 379: 109-123. DOI: 10.1016/j.margeo.2016.04.012.
24. Mazow, L.B., **Mitra, S.**, Grieve, S.G., Carman, S.L.*, Herrmann, V.R. 2016. Extraction and Analysis of Total Lipids in Reference Materials and from Soil Particles in a Bath-shaped Vessel from Zincirli, Ancient Sam'al, Turkey. *Journal of Archaeological Science*, 8: 63-69.
25. **Mitra, S.**, Zimmerman, A.R., Hunsinger, G.B., Woerner, W**. 2014. *Black carbon in large river systems*. Chapter 9, pp. 200 – 234, IN: Biogeochemical Dynamics at Large River-Coastal Interfaces: Linkages with Global Climate Change, edited by: Bianchi, T.S., Allison, M.A., and Cai, W.J. Cambridge Press, New York, NY.
26. Kniskern, T.A., **Mitra, S.**, Orpin, A., Harris, C.K., Walsh, J.P., Corbett, D.R. 2014. Characterization of a flood-associated deposit on the Waipaoa River shelf using radioisotopes and terrigenous organic matter abundance and composition. DOI:10.1016/j.csr.2014.04.012.
27. Xu, K., Corbett, D.R., Walsh, J.P., Young, D., Briggs, K.B., Cartwright, G.M., Friedrichs, C.T., Harris, C.K., Mickey, R.C., **Mitra, S.** 2014. Seabed Erodibility Variations on the Louisiana Continental Shelf Before and After the 2011 Mississippi

- River Flood. *Estuarine Coastal and Shelf Science*. 149: 283-293.
DOI:10.1016/j.ecss.2014.09.002.
28. Del Rosario, K.L.*, **Mitra, S.**, Humphrey, C., O'Driscoll, M.A. 2014a. Detection of Pharmaceuticals and other Personal Care Products in Groundwater Beneath and Adjacent to Onsite Wastewater Treatment Systems in a Coastal Plain Shallow Aquifer. *Science of the Total Environment*. 487: 216-223. DOI: 10.1016/j.scitotenv.2014.03.135.
 29. Del Rosario, K.L.*, Humphrey, C.P., **Mitra, S.**, O'Driscoll, M. 2014b. Nitrogen and carbon dynamics beneath on-site wastewater treatment systems in Pitt County, North Carolina. *Water Science and Technology*, 69: 663-671. DOI: 10.2166/wst.2013.765.
 30. **Mitra, S.** 2014. Box 12-01: Why the contents of our medicine cabinets are turning up in our waterways. IN: An Introduction to Human-Environment Geography: Local Dynamics and Global Processes, edited by: Moseley, W.G., Perramond, E., Hapke, H.M., and Laris, P. Wiley-Blackwell Press.
 31. Leorri, E., **Mitra, S.**, Irabien, M. J., Zimmerman, A, Blake, W, Cearreta, A. 2014. A 700 year record of combustion-derived pollution in northern Spain: Tools to identify the Holocene/Anthropocene transition in coastal environments. *Science of the Total Environment*. 470: 240-247. DOI: 10.1016/j.scitotenv.2013.09.064.
 32. **Mitra, S.**, Wozniak, A.S., Miller, R., Hatcher, P.G., Buonassissi, C., Brown, M. 2013. Multiproxy probing of rainwater dissolved organic matter (DOM) composition in coastal storms as a function of trajectory. *Marine Chemistry*, 154: 67-76. DOI: 10.1016/j.marchem.2013.05.013.
 33. **Mitra, S.**, Kimmel, D.G., Snyder, J.***, Scalise, K.*, McGlaughon, B.D., Roman, M., Jahn, G.L., Pierson, J.J., Brandt, S.B., Montoya, J.P., Campbell, P.L., Rosenbauer, R.J., Lorenson, T.D., Wong, F.D. 2012. Macondo-1 well oil-derived polycyclic aromatic hydrocarbons in mesozooplankton from the northern Gulf of Mexico. *Geophysical Research Letters*, VOL. 39, L01605. DOI:10.1029/2011GL049505. **FEATURED IN SCIENCE DAILY (March 20, 2012).**
 34. Hopwood, M, **Mitra, S.** Feeding Households: A Multiproxy Method for Analysis of Food Preparation in the Halaf Period, at Fıstıklı Höyük, Turkey. 2012. pp. 217 – 243 in New Perspectives in Household Archaeology, edited by Bradley J. Parker and Catherine P. Foster. Winona Lake, IL: Eisenbrauns Press.
 35. Li, X., Bianchi, T.S., Allison, M.A., Chapman, P., **Mitra, S.**, Zhang, Z., Yang, G., Yu, Z. 2012. Composition, abundance, and age of total organic carbon in surface sediments from the inner shelf of the East China Sea. *Marine Chemistry*, 145-147: 37-52, DOI: 10.1016/j.marchem.2012.10.001.
 36. Hunsinger, G.B.*, **Mitra, S.**, Findlay, S.E.G., Fischer, D. 2012. Riparian-influenced particulate organic material distributions along the freshwater-tidal Hudson River, New York. *Limnology and Oceanography*, 57: 1303-1316, DOI: 10.4319/lo.2012.57.5.1303.
 37. **Mitra S.**, Volety, A.K., and Bartel, J***. 2011. Trace Organic Contaminants (PAHS, PCBs, and pesticides) in Oysters *Crassostrea virginica*, from the Caloosahatchee Estuary and Estero Bay, SW Florida. Chapter 10, pp. 207-220. Pesticides (ISBN 978-953-307-531-0).
 38. Allison, M.A., Dellapenna, T.M., Gordon, E.S., **Mitra, S.**, and Petsch, S.T. 2010. Impact of Hurricane Katrina (2005) on deltaic evolution and shelf organic carbon cycling. *Geophysical Research Letters*, DOI:10.1029/2010GL044547.

39. Hunsinger, G. B.*, **Mitra, S.**, Findlay, S.E.G., Fischer, D. 2010. Wetland-driven shifts in suspended particulate organic matter composition of the Hudson River estuary, New York. *Limnology and Oceanography*. 55: 1653-1667, DOI: 10.4319/lo.2010.55.4.1653.
40. **Mitra, S.**, Lalicata, J.J.***, Allison, M. A., Dellapenna, T.M. 2009. The Effects of Hurricanes Katrina and Rita on Seabed Polycyclic Aromatic Hydrocarbon Dynamics in the Gulf of Mexico. *Marine Pollution Bulletin*. 58: 851-857, DOI: 10.1016/j.marpolbul.2009.01.016.
41. **Mitra, S.**, Zimmerman, A.R., Hunsinger, G.B.*, Willard, D., and Dunn, J.C.* 2009. A Holocene record of climate-driven shifts in coastal carbon sequestration, *Geophysical Research Letters*, 36, L05704, DOI:10.1029/2008GL036875.
42. Hunsinger, G.B.*, **Mitra, S.**, Warrick, J.A., Alexander, C.R. 2008. Oceanic Loading of Wildfire-Derived Organic Compounds from a Small Mountainous River. *Journal of Geophysical Research – Biogeosciences*. VOL. 113, G02007, DOI: 10.1029/2007JG000476.
43. Hammes, K., Schmidt, M.W.I., Currie, L.A. (Ret.), Ball, W.P., Fukudome, M., Nguyen, T.H., Louchouart, P., Houel, S., Gustafsson, O., Elmquist, M., Cornelissen, G., Smernik, R.J., Skjemstad, J.O., Masiello, C.A., Song, J., Peng, P., **Mitra, S.**, Dunn, J.C.*, et al (28 other coauthors). 2007. Comparison of quantification methods to measure fire-derived (black/elemental) carbon in soils and sediments using reference materials from soil, water, sediment and the atmosphere. *Global Biogeochemical Cycles*. VOL. 21, GB3016, DOI:10.1029/2006GB002914.
44. Landrum, P.F., Robinson, S.D., Gossiaux, D.C., You, J., Lydy, M., **Mitra, S.**, TenHulscher, T.E.M. 2007. Predicting Bioavailability for Sediment-Associated Organic Contaminants for *Diporeia* spp. and oligochaetes. *Environmental Science and Technology*. 41: 6442-6447.
45. Rice, S.L***, **Mitra, S.** 2007. Microwave-Assisted Solvent Extraction of Solid Matrices and Subsequent Detection of Pharmaceuticals and Personal Care Products (PPCPs) Using Gas Chromatography-Mass Spectrometry. *Analytica Chimica Acta*. 589: 125-132.
46. Kukkonen, J.V.K., **Mitra, S.**, Landrum, P.F., Gossiaux, D.C., Gunnarsson, J., Weston, D.L. 2005. The Contrasting Roles of Plant-derived Carbon Versus Black Carbon on Hydrophobic Organic Contaminant Availability to *Diporeia* spp. and *Lumbriculus variegatus*. *Environmental Toxicology & Chemistry*. 24: 877-885.
47. Kukkonen, J.V.K., Landrum, P.F., **Mitra, S.**, Gossiaux, D.C., Gunnarsson, J., Weston, D.L. 2004. The Role of Desorption for Describing the Bioavailability of Select PAH and PCB Congeners for Seven Laboratory Spiked Sediments. *Environmental Toxicology & Chemistry*. 23: 1842-1851.
48. Kukkonen, J.V.K., Landrum, P.F., **Mitra, S.**, Gossiaux, D.C., Gunnarsson, J., Weston, D.L. 2003. Sediment Characteristics Affecting the Desorption Kinetics of Select PAH and PCB Congeners for Seven Laboratory Spiked Sediments. *Environmental Science & Technology*. 37: 4656-4663.
49. **Mitra, S.** and Bianchi, T.S. 2003. A Preliminary Assessment of Polycyclic Aromatic Hydrocarbon (PAH) Distributions in the Lower Mississippi River and Gulf of Mexico. *Marine Chemistry*. 82: 273-288.

50. Boyd, G.R., Reemtsma, H., Grimm, D.A., **Mitra, S.** 2003. Pharmaceuticals and Personal Care Products (PPCPs) in Surface and Treated Waters of Louisiana, USA and Ontario, Canada. *Science of the Total Environment*. 311: 135-149.
51. **Mitra, S.**, Bianchi, T.S., McKee, B.A., Sutula, M.A. 2002. Sources and Seasonal Discharge of Fossil Fuel-derived Fluvial Black Carbon from the Mississippi River: Implications for the Global Carbon Cycle. *Environmental Science & Technology*. 36: 2296-2302.
52. Bianchi, T.S., **Mitra, S.**, McKee, B.A. 2002. Sources of Terrestrially-derived Organic Carbon in Lower Mississippi River Sediments: Implications for Differential Sedimentation and Transport at the Coastal Margin. *Marine Chemistry*. 77: 211-223
53. **Mitra, S.**, Klerks, P., Bianchi, T.S., Means, J., and Carman, K. 2000a. Effects of Estuarine Organic Matter Biogeochemistry on the Bioaccumulation of PAHs by Two Epibenthic Species. *Estuaries*. 23: 864-876.
54. **Mitra, S.**, Bianchi, T. S., Guo, L., and Santschi, P. H. 2000b. Terrestrially-derived Dissolved Organic Matter in the Chesapeake Bay and the Middle Atlantic Bight. *Geochimica et Cosmochimica Acta*. 64: 3547-3557.
55. **Mitra, S.** and Dickhut, R. M. 1999. Three Phase Modeling of Polycyclic Aromatic Hydrocarbon Association with Pore Water Dissolved Organic Carbon. *Environmental Toxicology & Chemistry*. 18: 1144-1148.
56. **Mitra, S.**, Dellapenna, T. M., Dickhut., R. M. 1999a. Polycyclic Aromatic Hydrocarbon Distribution within Lower Hudson River Estuarine Sediments: Physical Mixing vs. Sediment Geochemistry. *Estuarine Coastal & Shelf Science*. 49: 311-326.
57. **Mitra, S.**, Dickhut, R. M., Kuehl, S. A., Kimbrough, K. L. 1999b. Polycyclic Aromatic Hydrocarbon (PAH) Source, Sediment Deposition Patterns, and Particle Geochemistry as Factors Influencing PAH Distribution Coefficients in Sediments of the Elizabeth River, VA, USA. *Marine Chemistry*. 66: 113-127.
58. Schaffner, L. C. Dickhut, R. M., **Mitra, S.**, Lay, P., Brower-Riel, C. 1997. Effects of Physical Chemistry and Bioturbation by Estuarine Macrofauna on the Transport and Fate of Hydrophobic Organic Contaminants in the Benthos. *Environmental Science & Technology*. 31: 3120-3125.

REPORTS

1. Robbins, L.L., Wanninkhof, R., Barbero, L., Hu, X., **Mitra, S.**, Yvon-Lewis, S., Cai, W.J., Huang, W.J., and Ryerson, T. 2014. Air-Sea Exchange. pp. 17-23 in: Report of The U.S. Gulf of Mexico Carbon Cycle Synthesis Workshop edited by Benway, H. M., Coble, P. G.), Ocean Carbon and Biogeochemistry Program and North American Carbon Program.
2. Cousineau, L.M.* and **Mitra, S.** 2008. Pharmaceutical and Personal Care Product Contamination in Surface Waters: A Case Study of the Upper Susquehanna River, Implications for North Carolina's Raw Drinking Water in the Face of Future Global Warming, and Considerations for Policy Implementation. *Proceedings of the Symposium on Safe and Sustainable Drinking Water in Developing and Developed Countries: Where Science Meets Policy*.

3. Mitra, S. 2005. Riverine Discharge of Black Carbon and Its Role in the Global Carbon Cycle. USGS Mendenhall Project Summary
<http://geology.usgs.gov/postdoc/summaries/mitra.html>.
4. Mitra, S. 2002. Fluvial Discharge of Black Carbon and Its Role in the Global Carbon Cycle. USGS Soundwaves - <http://soundwaves.usgs.gov/2002/01/fieldwork.html>.

**MANUSCRIPTS SUBMITTED OR DRAFTED IN PREPARATION FOR SUBMISSION
 (*graduate advisees; **undergraduate advisees)**

1. Moore, A.M.; Kennett, J.P.; Napier, W.M.; Bunch, T.E.; Weaver, J.C.; LeCompte, M.A.; Adedeji, A.V.; Kletetschka, G.; Hermes, R.E.; Wittke, J.H.; Raznik, J.J., Langworthy, K., Gaultois, M.W., Moore, C.R., **Mitra, S.**, Maiorana-Boutilier, Abigail*; Wolbach, W.S., Witwer, T., West, A. Comprehensive evidence that humans, plants, and animals were catastrophically affected by a cos-mic airburst at Abu Hureyra, Syria ~12,800 years ago. 2023. *Geosciences*, In Review, 13, x. <https://doi.org/10.3390/xxxxx>.
2. Wheatley, R.M.*, **Mitra, S.**, Wozniak, A.W., Dellapenna, T.M., van Hengstum, P.J. Exchangeable Dissolved Organic Carbon (EDOC) in Hurricane Harvey (2017) and Hurricane Florence (2018) Rainwater. In revision to be resubmitted.
3. **Mitra, S.**, Minnehan, J. J.*, Leorri, E., Mallinson, D., Culver, S., Mulligan, R., Zimmerman, A., Lane, C.S., Marlon, J. Corbett, D.R.C. Centennial-scale fire variability in the southeastern North America during the middle to late Holocene. In preparation for submission to *J. Quat Res*.
4. **Mitra, S.**, Boutilier, A.M.***, West, A., Norwood, M., Louchouart, P., Bischoff, J., Kennett, J., Silva, S. Compositional characteristics of pyrogenic and non-pyrogenic organic matter associated with the Younger Dryas Black Mats. In preparation for submission to *Geochimica et Cosmochimica Acta*.
5. **Mitra, S.**, Peralta, A., Zimmerman, A., Lane, C, Wozniak, A, Hatcher, P., Stucky, A., Bledsoe, R., Vogel, T., Garrison, C., Brooks, C., Law, S. Implications of biochar addition on plant-microbial interactions and soil respiration. In preparation for *Biogeochemistry*.
6. **Mitra, S.**, Phillips, S.C.W*, Zimmerman, A, Wozniak, A, Bostick, K, Hatcher, P. The Polycyclic Aromatic Hydrocarbon Composition of Pyrogenic Dissolved Organic Matter in Oak and Grass Biochars and their leachates Synthesized at Systematically Increasing Temperatures. In preparation for *Organic Geochemistry*.
7. **Mitra, S.**, Zimmerman, A.R., Curtis, W.S., Hunsinger, G.B., Corbett, D.R., Willard, D.A. The Role of Mid-Atlantic Climate on Post-Colonial Settlement Black Carbon in the Chesapeake Bay Sedimentary Record. In preparation for submission to *Organic Geochemistry*.
8. **Mitra, S.**, Zimmerman, A.R., Goodbred, S.G., Rogers, K., Hunsinger, G.B, Woerner, W**. Abundance and Sources of Organic Matter in Sediments of Inner Shelf of the Bay of Bengal. In preparation for *Geochimica et Cosmochimica Acta*.

9. **Mitra, S.**, Kimmel, D., Swarzenski, P.C., Leonard, L., Lorenson, T., Rosenbauer, R.J. Baseline Measurements of Bulk Organic Carbon and Hydrocarbon Abundance and Composition in Water and Mesozooplankton from Coastal North Carolina (2010-2011). In preparation for submission to *Estuaries and Coasts*.

EXTERNAL PROPOSALS, GRANTS, AND CONTRACTS (Funded or Pending)

1. **Mitra, S.**, Schrenk, M. 2023. *Are Microplastics a Primer for Sedimentary Organic Matter Diagenesis?* Petroleum Research Fund, New Directions - \$125,000/24 mos, Pending.
2. Tullio, S., **Mitra, S.** 2021. *PCS Phosphate Effluent Monitoring and Water Quality in the Pamlico River Estuary, NC*, 2019. CZR Incorporated - \$164,725/12 mos.
3. Moysey, S., Peralta, A., **Mitra, S.**, Paynter, S., Bowler, M. 2021. *NRT-HDR: Finding Signal in the Noise to Enable Science-Based Community Response to Change in Coastal Region*. NSF - National Research Traineeship - \$1,999,736/60 mos.
4. Tullio, S., **Mitra, S.** 2020. *PCS Phosphate Effluent Monitoring and Water Quality in the Pamlico River Estuary, NC*, 2019. CZR Incorporated - \$164,725/12 mos.
5. **Mitra, S.** 2020. *Collaborative Research: Evaluating Climate Change and Kill Mechanisms Associated with the End-Cretaceous Mass Extinction: A Model-Data Comparison Approach*, NSF-Frontiers Research in Earth Sciences - \$312,249/36 mos.
6. Reyes, E., **Mitra, S.** 2019. *PCS Phosphate Effluent Monitoring and Water Quality in the Pamlico River Estuary, NC*, 2019. CZR Incorporated - \$164,725/12 mos.
7. **Mitra, S.**, Field., E., Corbett., D.R. 2018. *2018 Hurricane Season: RAPID: Hurricane Florence-Associated Microbial Influx and Priming of Carbon in the Gulf Stream*. NSF – Chemical Oceanography - \$101,532/12 mos.
8. Reyes, E., **Mitra, S.**, 2018. *NCPC Tract Water Quality Monitoring, 2018*. CZR Incorporated - \$137,750/12 mos.
9. Humphrey, C., **Mitra, S.** 2017. *Pharmaceutical and Personal Care Product Detection in Package Treatment Plant Effluent and Groundwater Beneath Large Onsite Wastewater Systems*. NC Department of Environmental Quality - \$14,000/12 mos.
10. Reyes, E., **Mitra, S.**, 2016. *NCPC Tract Water Quality Monitoring, 2016*. CZR Incorporated - \$137,750/12 mos.
11. Reyes, E., **Mitra, S.**, 2015. *NCPC Tract Water Quality Monitoring, 2015*. CZR Incorporated - \$137,750/12 mos.
12. Corbett, D.R., Walsh, J.P., **Mitra, S.**, Muglia, M. Woods Hole Oceanographic Institution. 3/2016. Science Verification Cruise aboard R/V *Neil Armstrong*. 10 days ship time, equivalent in-kind to ~\$500,000.
13. **Mitra, S.**, *Collaborative Research: Dissolved pyrogenic organic matter dynamics in the environment*. NSF – Geobiology and Low Temperature Geochemistry – \$130,821/36 mos. With PIs Andrew Zimmerman (UF), Andrew Wozniak (UDel), and P. Hatcher (ODU). \$479,635 Total (1/1/15 – 12/31/17).
14. Kimmel, D., **Mitra, S.**, 2014. *NCPC Tract Water Quality Monitoring, 2014*. CZR Incorporated - \$137,750/12 mos.

15. Kimmel, D., **Mitra, S.** 2013. *NCPC Tract Water Quality Monitoring 2013*. CZR Incorporated - \$137,751/12 mos.
16. Kimmel, D, **Mitra, S.** 2012. *NCPC Tract Water Quality Monitoring 2012*. CZR Incorporated - \$124,407/12 mos.
17. Culver, S., Leorri, E., **Mitra, S.**, Corbett, D.R., Mallinson, D., Walsh, J., Curtis, S. *Initiating a New Collaboration between East Carolina University and Universiti Malaysia Terengganu: Post-Glacial Variations in the East Asian Monsoon*. NSF – OISE, \$50,000 (1/12 – 6/13).
18. Walsh, J.P., Corbett, D.R., **Mitra, S.** *RAPID: Collaborative Research: Signature of the 2011 Flooding on the Mississippi Subaqueous Delta*. NSF – Marine Geology and Geophysics, \$58,498/12 mos (7/11 – 6/12).
19. Mallinson, D., **Mitra, S.**, Mulligan, R., Leorri, E., Culver, S. *A Multidisciplinary Investigation of Coastal System Response to Sea-Level Rise, Climate Dynamics, and Geomorphic Change*. NSF - Marine Geology and Geophysics, \$399,922/36 mos (9/11 – 8/14).
20. Kimmel, D., **Mitra, S.** 2011. *Hydrocarbon signatures in coastal NC water and mesozooplankton tissue*. NC Sea Grant. \$4,953/4 mos (4/11 – 8/11).
21. O’Driscoll, M, Humphrey, C., **Mitra, S.** 2010. *Onsite wastewater treatment adjacent to a nutrient-sensitive estuary*. Centers for Disease Control and Prevention, \$67,316/12 mos.
22. **Mitra, S.** 2010. *RAPID: MRI - Acquisition of an Accelerated Solvent Extractor (ASE) to Rapidly Extract Petroleum Hydrocarbons from Atmospheric Samples in the Field During the 2010 Hurricane Season*, NSF – Ocean Sciences, \$54,780/12 mos.
23. **Mitra, S.** 2010. *RAPID: Marine-to-Land Fluxes of Dissolved and Particulate Carbon Derived from the Deepwater Horizon Surface Slick During the 2010 Hurricane Season*, NSF – Chemical Oceanography, \$43,497/12 mos.
24. **Mitra, S.** 2010. *Coastal North Carolina Baseline Hydrocarbon Distributions Related to the Deepwater Horizon Oil Spill*. Subcontract from UNC-Wilmington. \$1,992/2.5 mos.
25. **Mitra, S. (PI)**, Spruill, R. (co-PI). 2009. *An Evaluation of the Occurrence and Compositional Distribution of Pharmaceuticals and Personal Care Products in the Tar River, Greenville, North Carolina*. Greenville Utilities Commission. \$11,982/12 mos.
26. **Mitra, S. (PI)**. 2009. *Analysis of Peat Samples for Black Carbon*. Queen Mary, University of London. \$3,240/12 mos.
27. **Mitra, S.** 2007. *Oyster Monitoring Network for the Caloosahatchee Estuary*. Subcontract from Florida Gulf Coast University. \$55,000/36 mos.
28. **Mitra, S. (PI)**. 2006 (completed August 2007). *Refractory Organic Matter in Sediments Isolated from The Bay of Bengal*. NSF – Chemical Oceanography, Small Grant for Exploratory Research, \$6,925/12 mos.
29. **Mitra, S. (PI)**. 2005. *Summer 2005 Hurricane Induced Mississippi River Flux Versus Hurricane Induced Sediment-Resuspension Flux of PAHs into the Gulf of Mexico*. NSF Chemical, Bioengineering, Environmental, and Transport Systems, Small Grant for Exploratory Research, \$2,470/12 mos.
30. **Mitra, S. (PI)**, Tammariello, S. (co-PI), Graney, J.(co-PI), McGee, D.(co-PI). 2005. *Novel Proteomics-Based Indicators of Natural Water Pollution*. Binghamton University Research Foundation Interdisciplinary Collaboration Grant, \$10,000/12 mos.

31. **Mitra, S.** 2004. McGraw-Hill Publications Gift In Kind Donation of CPS Educational System for Classroom Incorporation in Introductory Oceanography, \$2,000.
32. **Mitra, S.** (PI). 2004. *Black Carbon Chemistry of the Ganges-Brahmaputra Fluvial System*. American Chemical Society, PRF Type G - \$35,000/24 mos.
33. **Mitra, S.** (PI). 2004. *Pharmaceutical-Derived Pollutant Loading and Bioaccumulation to Benthic Organisms of the Great Lakes*. NY Great Lakes Protection Fund Application for Small Grants 2003 - \$9,656/12 mos.
34. **Mitra, S.** (PI). 2001. *The Riverine Discharge of Black Carbon and Its Role in the Global Carbon Cycle*. USGS. Mendenhall Fellowship Program - \$ 31,600/24 mos.
35. McKee, B. (PI), Powell, R. (co-PI), **Mitra, S.** (co-PI), Booth, G. (co-PI), Miller, R. (co-PI). 2000. *The Fate of Particle-Reactive Contaminants in Shallow Coastal Environments*. USEPA. Experimental Programs to Sponsor Competitive Research (EPSCOR) Program - \$279,484/24 mos.
36. Boyd, G. (PI), **Mitra, S.** (co-PI), and Grimm, D. (co-PI). 2000. *Simultaneous Extraction and Detection of Several Target Pharmaceuticals and Personal Care Products (PPCPs) in Coastal Areas of Southern Louisiana*. Tulane/Xavier Universities – Center for Bioenvironmental Research - \$20,112/6mos.
37. McKee, B. (PI), Bianchi, T. S. (co-PI), **Mitra, S.** (co-PI). 1999. *Evaluating the Effects of Seasonal Sediment Storage, Diagenesis, and Remobilization on the Fate of Sediment Contaminants in the Lower Mississippi River*. Department of Defense. Mississippi River Integrated Research (MiRiR) Program - \$538,310/18 mos.

ECU Internal Proposals and Awards

1. **Mitra, S.** 2017. HCAS Research Initiation Award, one-time allotment of \$5000.
2. **Mitra, S.** 2014. Course Buyout (\$5,500) for *Air Pollution and Global Warming*, ECU Honors College. Declined, due to new administrative responsibilities as CRM Director.
3. DeWitt, J.C., Hvastkovs, E., McCoy, K., **Mitra, S.**, Montz, B., Selim, M. 2013. Pharmaceutical and Personal Care Product Contaminants in Fresh Water. East-West Collaboration Award, \$10,000/12 mos.
4. DeWitt, J.C., Hvastkovs, E., McCoy, K., **Mitra, S.**, Montz, B., Selim, M. 2013. Pharmaceutical and Personal Care Product Contaminants in Fresh Water. East-West Collaboration Award, \$23,000/6 mos.
5. **Mitra, S.** 2009. Coastal Maritime Council at East Carolina University. Travel Funds to Collect Preliminary Data on the Event-Driven Sediment Discharge from the Waipaoa River, New Zealand, \$3,000 / 6 mos.

TEACHING

CRM 7006 – Seminar in Coastal Issues (1 credit; 50 min x 1 session per week)

(PhD Level; approximate class size = 6 students)

Taught: Spring and Fall Semesters 2015, 2016, 2017, 2018.

Exposes Coastal Resources Management PhD students to the fundamentals of PhD level oral presentations, critical review, proposal writing, and addressing “wicked” coastal problems using an interdisciplinary approach.

GEOL 1550 – Introductory Oceanography (4 credits; 1h 50 min lecture x 2 sessions per week)
(undergraduate level; approximate class size = 95-100 students)

Taught: Spring Semesters 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2020; Fall 2010, 2011, 2014, 2016.

Introductory survey of geological, biological, chemical, and physical characteristics of the ocean environment. The goals for this course are to communicate the basics of the subject of oceanography, and to understanding how the earth-atmosphere-ocean system functions. There are real-world problems associated with oceanography that we are all dealing with presently: coastline management (including hurricane damage), the occurrence and prediction of earthquakes and volcanic hazards, ozone destruction, ocean pollution (including tanker spills), climate change. It is the instructor's hope that after taking this course, you have a better understanding of all of these issues relevant to the ocean.

GEOL 1700 – Environmental Geology (4 credits; 1h 50 min lecture x 2 sessions per week)
(undergraduate level; approximate class size = 95 – 100 students)

Taught: Spring 2009, 2011, and Fall 2009

Provides a background of the geological concepts and processes that help us evaluate problems associated with human interactions with the physical environment. We cover the geological processes active at the earth's surface, natural resources, natural hazards, and problems associated with human interactions with the environment. Topics include air, soil, and water pollution, waste disposal, energy resources, global warming, and acid rain.

GEOL 2000- Quantitative Methods in the Geological Sciences (3 credits; 50 min lecture x 3 sessions per week)

(undergraduate level; approximate class size = 15 – 20 students)

Taught: Fall 2013, Fall 2017, Fall 2018, Fall 2020, Fall 2021.

Educates departmental majors in the basic quantitative skills required in the geological sciences. We cover everything from significant figures and unit conversions to algebraic manipulations and calculations based on conservation of mass.

GEOL 3209 – Environmental Forensics (3 credits; 3 h lecture/lab session x 1 session per week)
(undergraduate level; approximate class size = 10 students)

Taught: Spring 2013.

Students develop basic skills necessary to obtain historical information about environmental spills, obtain basic lab skills in environmental organic chemistry, and learn practical skills related to determining the spatial extent of pollution.

GEOL 6900 – Preparation of Geological Manuscripts (3 credits; 1h 15 min lectures x 2 sessions per week)

(graduate level; approximate class size = 12 students)

Taught: Spring 2013, Spring 2016, Spring 2018, Spring 2023.

Prepare graduate students to communicate scientific data in a meaningful way, including written and oral. The course is designed to prepare graduate students for thesis research, writing, and presentation.

GEOL 7930 – Biogeochemistry (4 credits; 1h 50 min lecture x 2 sessions per week)

(graduate level; approximate class size = 10-20 students)

Taught: Spring 2010, Spring 2014, Spring 2017, Spring 2021.

Reviews the basic inorganic and organic chemistry of biologically significant elements including carbon (inorganic and organic), nutrients, and metals in soils, sediments, rivers, the oceans, and atmosphere. Topics include weathering, organic molecules in the environment, acid-base chemistry, biological redox processes, nutrient cycling, trace gas fluxes, bio-active metals, the use of isotopic tracers, and mathematical models.

MENTORING

Principal Advisees at East Carolina University (listed in reverse chronological order):

Graduate students

1. Michael Zigah (Master of Science in Geological Sciences) – *Climatic Signals in Sediment Cores of Lake Bosumtwi, Africa.*
2. Daniel Reed (Master of Science in Chemistry) – *Polycyclic aromatic hydrocarbons (PAH) Contamination Variability in the Lower Tar River N.C. From a Legacy Hazardous Waste Site as a Function of Hydrological Conditions.*
3. Rachel Wheatley (Ph.D. Integrated Coastal Sciences) – *Soot Size and Composition Associated with the Cretaceous-Paleogene (K-Pg) Impact.*
4. Katie Ferris (Master of Science in Chemistry-Graduated Summer 2022) – *Increased dissolved lignin in coastal NC waters as an indicator of the 2018 Hurricane Season.*
5. Ariana Donini Rivera (Master of Science in Geological Sciences- Graduated Summer 2022) – *Increased particulate lignin in coastal NC and Gulf Stream waters as indicator of 2018 Hurricane Season)*
6. Taylor Miller (Master of Science in Geological Sciences – Withdrew from Program June 2019). *Enhanced dissolved lignin in coastal NC and Gulf Stream waters as indicator of 2018 Hurricane Season.*
7. Rachel Wheatley (Master of Science in Geological Sciences – Graduated Summer 2021). *Exchangeable dissolved organic carbon in rainwater.*
8. Beau Benfield (Master of Science in Geological Sciences – Graduated May 2017). *Ibuprofen Sorption in Coastal Plain Soils.*
9. Stephanie Caroline Webb (Master of Science in Chemistry – Graduated December 2017). *Extraction and Analysis of Polycyclic Aromatic Hydrocarbons (PAHs) and Oxygenated PAHs (OPAHs) in Solid Biochar and Its Leachates.*
10. Jeffrey Minnehan (Master of Science in Geological Sciences – Graduated July 2014). *Using organic markers to investigate Holocene evolution of the North Carolina barrier island estuarine system.*
11. Sophia Carman (Master of Science in Anthropology – Graduated May 2016). *Organic Residue Analysis As An Approach to Critically Evaluate Conservation Techniques in Maritime Studies.*
12. Kim Scalise (Master of Science in Geological Sciences – Graduated July 2013). *Marine-to-Land Transfer of Carbon Associated With the Deepwater Horizon Incident.*

13. Katie Supler (Master of Science in Environmental Health Sciences – Graduated July 2013). *Factors affecting transport of selected pharmaceutical and personal care products in shallow coastal plain groundwater systems.*
14. Nidhi Patel (Master of Science in Geological Sciences – Graduated December 2011). Thesis topic: *Climate and Carbon Sequestration in the Late Holocene.*

Undergraduate students

1. Claudia Harrington-Department of Geological Sciences, ECU, Size continuum of Black Carbon Associated with the Cretaceous-Paleogene Impact.
2. Spencer Mullett – Department of Engineering, ECU, Method Development for Isolation of δD and $\delta^{18}O$ in Albemarle-Pamlico Sound and Gulf Stream waters.
3. Philip Estes – Department of Engineering, Washington College, Method Development for Isolation of the Porcine Growth Hormone Ractopamine in Natural Waters.
4. Ann Marie Lindley – Department of Geological Sciences – Dissolved organic carbon and nitrogen in coastal NC and Gulf Stream as indicators of the 2018 Hurricane Season. →Recipient: NASA Space Grant STEM Undergraduate Research Award.
5. Bailey King – Department of Biology, Department of Chemistry – Isolating PPCPs in School Septic Tanks and Drainfields in Eastern North Carolina. Fall 2017.
6. Ashlyn Listecki – Department of Biology, Department of Chemistry - Identifying a Signal of Biomass Burning in the Holocene Sedimentary Record of White Pond, South Carolina. Fall 2017.
7. Abigail Boutilier – Department of Chemistry – *Identifying hydrocarbon signature associated with Younger Dryas Impact Black Mats.* Spring 2017 – Spring 2012. Presently an M.D. Candidate at the Brody School of Medicine, Fall 2018.
→Recipient: NASA Space Grant Undergraduate Research Award, 2014
→Recipient: Undergraduate Research and Creativity Award, 2012.
→Recipient: George T. Bartholomew Undergraduate Research Grant, 2012.
8. Brittany Case – Department of Environmental Health Sciences – *Liquid-liquid extraction of PPCPs from Packaged Treatment Plants.* Spring 2017.
9. Caitlin Chartier – Department of Anthropology – *Obtaining the organic residue of beer in ancient ceramics.* Spring 2017.
10. Casey Gilleland – Department of Geological Sciences – *Isolating polycyclic and oxygenated polycyclic aromatic hydrocarbons in a controlled burn site, coastal North Carolina USA.* Fall 2017 - Spring 2017.
11. Jessica Snyder - Department of Biology – *Sedimentary polycyclic aromatic hydrocarbons associated with the 2011 Mississippi/Atchafalaya River diversions and Deepwater Horizon Oil Spill Derived polycyclic aromatic hydrocarbons in Gulf of Mexico zooplankton.* Presently pursuing a MS at the College of Charleston on academic fellowship. Spring 2010 – Spring 2012.
→Recipient: Undergraduate Research and Creativity Award, 2010.
12. Katherine Ferri – Department of Health Education and Promotion – *Water Quality in Neuse River Headwater Streams.* Spring 2009.
13. Meghan Lell - Department of Biology - Polycyclic aromatic hydrocarbons in coastal North Carolina zooplankton. Spring 2009.

14. Josh Bartel – Deparement of Biology - *Trace Organic Contamination in Caloosahatchee Estuary Oysters*.
 →Recipient: Undergraduate Research and Creativity Award, 2009.
15. Caitlin Bell - *Triclosan and Antibiotic Resistance in Eastern North Carolina Aquatic Ecosystems*.
 →Recipient: Institute for Coastal Science and Policy Undergraduate Research Award, 2009.

Committee Memberships:

East Carolina University:

David Sybert	M.S. Candidate – Department of Geological Sciences, East Carolina University (Graduated 2019).
Alex Hammerstrom	M.S. Candidate - Department of Geological Sciences, East Carolina University (Graduated 2019).
Tyler Anderson	M.S. Candidate – Department of Geological Sciences, East Carolina University (Graduated 2019).
Natasha Biarietta	M.S. Candidate – Department of Geological Sciences, East Carolina University (Graduated 2019).
Brett Pertunen	M.S. Candidate – Department of Geological Sciences, East Carolina University (Graduated 2018).
Sydni Law	Ph.D. Candidate – Department of Biology, East Carolina University (Graduated 2017).
Suelen De Mor	Ph.D. Candidate, Department of Biology, East Carolina University (Graduated December 2017).
Sarah W. Kenney	Ph.D. Candidate, Department of Maritime Studies, East Carolina University (Graduated May 2018).
Ian Davison	MS Candidate, Department of Biology, East Carolina University (Graduated December 2015).
Ally Middleton	B.S. Candidate, Department of Biology, East Carolina University (Graduated May 2014).
David Young	M.S. Candidate, Department of Geological Sciences, East Carolina University (Graduated Summer 2014).
Joey Kiker	M.S. Candidate, Department of Geological Sciences (Graduated July 2012).
Keaton Henry	M.S. Candidate, Department of Geological Sciences, East Carolina University (Graduated December 2012).
Heather Blumenfeld	M.S. Candidate, Department of Biology, East Carolina University (Graduated May 2011).
John Deloatch	M.S. Candidate, Department of Geological Sciences, East Carolina University (Graduated May 2009).
Emily Wright	M.S. Candidate, Department of Geography, East Carolina University (Graduated May 2010).

AWARDS / HONORS

2001 USGS Mendenhall Fellowship.
1997 Matthew Fontaine Maury Award for the Outstanding Student in Physical Sciences.
1995 Hudson River Foundation - Graduate Fellowship.
1993 Outstanding Student Paper Award - Virginia Water Pollution Control Association.

INVITED PRESENTATIONS

1. *Unregulated and merging contaminants in North Carolina Waters: Focus on PPCPs & PFAS*. Sierra Club, Cypress Chapter, January 2021.
2. *The Anthropocene*. Panelist for ECU-wide film critique and review. Fall 2020.
3. *The identification and quantification of polycyclic aromatic hydrocarbons (PAHs) and oxygenated PAHs (OPAHs) in biochar and its leachate*. SouthEastern Regional Meeting of the American Chemical Society (SERMACS). Charlotte, NC, November 2017.
4. *Pharmaceuticals and Personal Care Products in North Carolina Waters*. Graduate Level Water Resources Management Class, Duke University, November 2017.
5. *Pharmaceuticals and Personal Care Products as Emerging Pollutants in Coastal Waters*. Science on the Sound lecture series, Coastal Studies Institute, University of North Carolina, January 2017.
6. *The Color Palette of Carbon; Why Black is At the Center*, Atlantic Estuarine Research Society, Wanchese, NC, March 2015 (Keynote Speaker and Panelist).
7. *Factors Affecting PPCP Fate and Transport in Wastewater, with Onsite and WWTP Considerations*, NC Onsite Wastewater Conference, Raleigh, NC, October 2014 (Keynote Speaker).
8. *Applications of Organic Geochemistry to Tempestology and Paleotempestology*, NC State University, Raleigh, NC. October 2013.
9. *Organic Matter Applications to Environmental & Paleoenvironmental Reconstructions in the Coastal Environment*, Skidaway Institute of Oceanography, Savannah, GA. March 2013.
10. *Applications of Organic Chemistry To Tempestology*, Desert Research Institute, Reno, NV. January 2013.
11. *Applications of Organic Chemistry To Tempestology*, Texas A&M University at Galveston, Galveston, TX. October 2012
12. *Tracking Organic Molecules Across Telescoping Timescales*. Old Dominion University. Norfolk, VA. March 2012.
13. *Optimizing Undergraduate Education in the Geosciences*. Coastal and Estuarine Research Federation, Daytona Beach, FL, November 2010.
14. *Organic Geochemistry in Coastal Systems: Modern and Paleo Applications*. UNC Institute of Marine Sciences, Beaufort, NC, September 2010.
15. *Using Gas-Chromatography Coupled with Mass Spectrometry (GC/MS) to Establish the Fingerprint of the Deepwater Horizon Oil Release*. Triangle Chromatography Discussion Group, Raleigh, NC, April 2011.
16. *Macondo-1 Well Oil-Derived Polycyclic Aromatic Hydrocarbons in Mesozooplankton from the Northern Gulf of Mexico*. 11th International Estuarine Biogeochemistry Symposium, Atlantic Beach, NC, April 2011.
17. *Climate-Driven Carbon Sequestration*. Department of Geological Sciences, UNC Chapel Hill, March 2011.

18. *Should We Treat Chemophobia With Medication?* Two Year College Chemistry Consortium (2YC3) Banquet Speaker, November 2010.
19. *Lessons From the Gulf: the role of the coastal scientist when disaster strikes.* Atlantic Estuarine Research Society - Keynote Panel Speaker, Kitty Hawk, NC. November 2010.
20. *Organic Matter Fate and Transport in the Inner Shelf of the Bay of Bengal.* DUNCOC. November 2009.
21. *Refractory Carbon in Coastal Environments,* Department of Oceanography, Texas A&M University, November 2009.
22. *Using a Mass-Balance Approach to Understand Sources, Transportation, and Sinks of Pharmaceuticals and Personal Care Products in the Environment,* Department of Environmental and Molecular Toxicology, NC State, November 2009.
23. *Using Organic Molecules to Study The Relationship Between Climate and Carbon Sequestration,* Department of Chemistry, UNC-Wilmington, October 2009.
24. *Lazy, Good-for-Something Carbon Molecules.* Department of Geography, East Carolina University, September 2009.
25. *Environmental Applications of Organic Geochemical Research at Modern and Geological Time Scales.* US Geological Survey, Raleigh, February 2009.
26. *Refractory Carbon in the Chesapeake Bay and Bay of Bengal.* Department of Soil Sciences, North Carolina State University, February 2009.
27. *Lazy, Good-for-Something Carbon Molecules.* Department of Geology and Geography, West Virginia University, November 2008.
28. *Lazy, Good-for-Something Carbon Molecules.* Department of Physical Sciences, Virginia Institute of Marine Science, College of William and Mary, October 2008.
29. *Organic Markers in Coastal Research.* Department of Geological Sciences, East Carolina University, March 2007.
30. *Organic Chemicals and You, Not So Perfect Together.* Departmental of Environmental Science, Roger Williams University, February 2007 (unable to attend due to inclement weather).
31. *Advice for New Faculty.* All Campus Presentation to Minorities and Women in Science, Technology, Engineering, and Mathematics, University of Rhode Island, February 2007.
32. *Refractory Organic Matter Discharge in Selected Coastal Systems Globally.* Graduate School of Oceanography, University of Rhode Island, February 2007.
33. *Discharge of Carbon in Three Coastal Systems.* Department of Geological Sciences, State University of New York at Buffalo, April 2005.
34. *Riverine Discharge of Black Carbon from the US.* Geological Society of America National Meeting, Seattle, WA, November 2003.
35. *Black Carbon Discharge from Three Coastal Systems in the US.* Department of Geology, California State University (Hayward Campus), Hayward, CA, January 2003.
36. *Fluvial Discharge, Loading, and Sources of Black Carbon and PAHs Discharged from the Mississippi River.* Department of Geological Sciences and Environmental Studies, Binghamton University, Binghamton, NY, March 2002.
37. *Fluvial Discharge, Loading, and Sources of Black Carbon Discharged from the Mississippi River.* Center for Accelerator Mass Spectrometry, Lawrence Livermore National Labs, Livermore, CA, January 2002.
38. *Sources and Transport of Aromatic Hydrocarbons Discharged from the Mississippi River*

- to the Gulf of Mexico*. Argonne National Labs, Argonne, IL, July 2001.
39. *Fluvial Discharge, Loading, and Sources of Black Carbon Discharged from the Mississippi River*. Marine Science Research Institute, University of Texas at Austin, Port Aransas, TX, April 2001.
 40. *Black Carbon Discharge from the Mississippi River*. Department of Geological Sciences, University of Florida, Gainesville, FL, March, 2001.
 41. *Organic Matter Composition and Contaminant Bioavailability to Two Benthic Invertebrates*.
 42. Louisiana Universities Marine Science Consortium (LUMCON), Cocodrie, LA, September 1999.
 43. *Organic Matter Composition and Contaminant Bioavailability to Two Benthic Invertebrates*.
 44. Department of Civil & Env. Engineering. University of Cincinnati, Cincinnati, OH, July 1999.
 45. *The Effects of Sediment Deposition and Mixing on Organic Contaminant Geochemistry*. Chesapeake Biological Laboratory, University of Maryland, Solomons, MD, May 1999.
 46. *Sediment Organic Matter Composition and Contaminant Bioavailability to Two Benthic Invertebrates*. NASA Space Research Center at Stennis, MS, April 1999.

INVITED GUEST LECTURES WITHIN ECU

- *Organic Contaminants in the Environment*. GEOL 7920 (Advanced Groundwater Hydrology)
- *Causes and Effects of Coastal Pollution*. COAS 4025 (Society and the Sea Seminar), October 2014.
- *Why the Contents of Our Medicine Cabinets Are Ending Up In Our Waterways*. GEOL 5150 (The Geological Component of Environmental Science), ECU Department of Geological Sciences, February 2012.
- *Carbon Sequestration*. GEOL 3800 (Earth's Climate: A Geological Perspective), ECU Department of Geological Sciences, February 2012.
- *Natural Organic Matter: Production, Preservation, and Characterization in the Marine Environment*. GEOL 5350 (Marine Geology), ECU Department of Geological Sciences, November 2011.
- *Organic Geochemistry: The Study of Organic Chemicals in the Environment*. GEOL 5450 (Aqueous Geochemistry), ECU Department of Geological Sciences, November 2011.
- *Organic Markers in Quaternary Climatology*. GEOL 6350 (Quaternary Climates and Global Change), ECU Department of Geological Sciences, December 2009.
- *Preservation of Organic Molecules: Implications for the Origin of Life*. BIOL 4800/6992 (Astrobiology: The Planetary Context of Life), October 2009.
- *Pharmaceuticals and Personal Care Products in Natural Waters*. GEOL 5150 (The Geological Component of Environmental Science), ECU Department of Geological Sciences, September 2009.
- *Paleoclimatology and the Carbon Cycle*. GEOG 3230 (Global Climates), ECU Department of Geography, April 2009.

CONTRIBUTED PRESENTATIONS AT MEETINGS

(*graduate advisees; **undergraduate advisees)

1. Goranov, A., Wozniak, A., Zimmerman, A., Bostick, K., **Mitra, S.**, Hatcher, P. 2019. Photochemistry After Fire: Application of Ultrahigh Resolution Mass Spectrometry and Two-dimensional NMR for the study of Pyrogenic Dissolved Organic Matter. American Geophysical Union Meeting, San Francisco, C.A., 2019.
2. Wheatley, R.M.*, **Mitra, S.**, van Hengstum, P.J., Dellapenna, T.J., Corbett, D.R. 2019. Quantifying Exchangeable Dissolved Organic Carbon Deposited by Hurricane Rainwater. Geological Society of America, Southeast Regional Meeting, Charleston, S.C., March 2019.
3. Lindley, A-M.**, Miller, T.*, **Mitra, S.**, Corbett, D.R., Field, E., Muglia, M., Mannino, A. 2019. Hurricane Season and Its Influences to the Albemarle-Pamlico Estuarine System (APES) and Continental Margin – Part 1 (Total Suspended Solids, Bulk Dissolved Organic Carbon, and Total Dissolved Nitrogen), Geological Society of America, Southeast Regional Meeting, Charleston, S.C., March 2019.
4. Miller, T.*, Lindley, A-M.**, **Mitra, S.**, Corbett, D.R., Field, E., Muglia, M., Mannino, A. 2019. 2018 Hurricane Season and Its Influences to the Albemarle-Pamlico Estuarine System (APES) and Continental Margin – Part 2 (Geochemical Tracers), Geological Society of America, Southeast Regional Meeting, Charleston, S.C., March 2019.
5. Listecky, A.**, King, B.**, **Mitra, S.**, Mallinson, D., Moore, C., Lane, C., Duernberger, K. 2018. Historical profiles of organic and soot carbon in White Pond, South Carolina. Poster presentation at the Southeast Regional Biogeochemistry Society Meeting, Tallahassee, FL.
6. King, B. **, Listecky, A. **, **Mitra, S.**, Humphrey, C.P., Iverson, G. 2018. Pharmaceuticals and personal care products in the effluent of septic tanks and in groundwater beneath septic drainfields in eastern North Carolina. Poster presentation at the Southeast Regional Biogeochemistry Society Meeting, Tallahassee, FL.
7. **Mitra, S.**, Webb, S.C.*, Wozniak, A., Zimmerman, A., Bostick, K., Hatcher, P. The Identification and Quantification of Oxygenated Polycyclic Aromatic Hydrocarbons in Dissolved Pyrogenic Carbon (Biochar Leachate). AGU Fall 2017 Meeting, New Orleans, LA.
8. **Mitra, S.**, Benfield, B.* Sorption of Ibuprofen to Coastal Plain Soils. Geological Society of America 2017 Meeting, Seattle, WA.
9. **Mitra, S.** Assessing Potential Threats and Providing a Framework for Better Management of Emerging Environmental Contaminants in Coastal North Carolina. Albemarle-Pamlico Ecosystem Symposium, Raleigh, NC, November 2017.
10. Wozniak, A.S., Hatcher, P., **Mitra, S.**, Bostick, K.W. and A.R. Zimmerman. The molecular characteristics of pyrogenic organic materials and their aqueous leachates. American Geophysical Union Fall Meeting 2016. San Francisco, CA, Dec. 12-16, 2016.
11. Bostick, K.W., A.R. Zimmerman, Hatcher, P., **Mitra, S.**, and A.S. Wozniak. Production and Composition of Dissolved Black Carbon from Various Biochars and Environmentally-aged Charcoals. American Geophysical Union Fall Meeting 2016. San Francisco, CA, Dec. 12-16, 2016.

12. Bostick, K., Zimmerman, A.R. Hatcher, P., **Mitra, S.** and A.S., Wozniak. Production, composition and stability of dissolved black carbon. Geological Society of America Southeastern Section - 65th Annual Meeting (31 March–1 April 2016), Columbia, SC.
13. Boutilier, A. *, **Mitra, S.** Organic Composition of Younger Dryas Black Mat, SE GSA, March 2016.
14. Webb, S.C. *, **Mitra, S.** Zimmerman, A., Wozniak, A., Hatcher, P. The Identification and Quantification of Oxygenated Polycyclic Aromatic Hydrocarbons in Dissolved Black Carbon from Biochar, SE GSA, March 2016.
15. Benfield, B. *, **Mitra, S.** Transport of Ibuprofen through Coastal Plain Soils Using Laboratory Soil Column Experiments, SE GSA, March 2016.
16. Zimmerman, A., Kasozi, G.N., Silliman, B.R., **Mitra, S.** 2016. Degradation of oil-derived organic compounds (PAHs and Alkanes) in marsh sediments, with and without treatments of biochar and a chemical oxidant, following the Deepwater Horizon oil spill, Barataria Bay, Louisiana. North Florida Marine Science Symposium, January 28th- 29th, 2016, Cedar Key, FL.
17. Carman, S. *, Mazow, L., **Mitra, S.**, Grieve, S. *The Effect of Conservation Techniques on Organic Residues in Archaeological Ceramics*, American School of Oriental Research Conference, San Diego, CA, November 2014.
18. Boutilier, A. **, **Mitra, S.** *Carbon abundance and isotopic signature of Younger Dryas Black Mat*, State of North Carolina Undergraduate Research and Creativity Symposium, Raleigh, NC, October 2014.
19. Leorri, E., Mallinson, D., Culver, S., **Mitra, S.**, Mulligan, R., Riggs, S., Lauback, C., Minnehan, J. *, Zaremba, N., Moran, K. Coastal Hydrodynamics and Natural Geological Evolution (CHaNGE) Part 1: Geological indicators of rapid climate change in estuarine systems during the Holocene. Geological Society of America, 2013 November, Denver, CO.
20. Mallinson, D., Culver, S., Leorri, E., **Mitra, S.**, Mulligan, R., Riggs, S., Zaremba, N., Lauback, C., Minnehan, J.J. *, Moran, K.L. Coastal hydrodynamics and natural geological evolution (CHaNGE) Part 2: Processes and drivers of large-scale coastal reorganization. Geological Society of America, 2013 November, Denver, CO.
21. **Mitra, S.**, Wozniak, A., Miller, R., Hatcher, P., Druffel, E., Scalise, K. * Marine-to-land atmospheric transport of organic matter in coastal areas. Presented at the American Society of Limnology and Oceanography National Meeting, 2013 February, New Orleans, LA.
22. Mallinson, D, Culver, S., Leorri, E., **Mitra, S.**, Mulligan, R., Riggs, S., Clunies, G., Lauback, C., Minnehan, J.J. *, Moran, K., *Large-scale coastal behavior of a barrier fronted coastline in response to Holocene sea-level rise and storm impacts*. Presented at the Geological Society of America National Meeting, 2012 November, Charlotte, NC.
23. Lauback, C., Culver, S., Leorri, E., Mallinson, D., **Mitra, S.**, Minnehan, J.J. *, Mulligan, R. *Isotopic evidence for episodic marine water incursions into Pamlico Sound, NC during the Holocene*. Presented at the Geological Society of America National Meeting, 2012 November, Charlotte, NC.
24. Young, D., Walsh, J.P., Corbett, D.R., **Mitra, S.**, Snyder, J.S. **, Anderson, E. 2011. *Mississippi River Flood Deposition on the Louisiana Continental Shelf*. Presented at the Geological Society of America National Meeting, 2012 November, Charlotte, NC.

25. Minnehan, J.J. *, **Mitra, S.**, Scalise, K. *, Mallinson, D., Leorri, E., Culver, S., Lauback, C. *Using sediment organic matter geochemistry to interpret barrier island integrity in the Late Holocene.* Presented at the Geological Society of America National Meeting, 2012 November, Charlotte, NC.
26. Scalise, K. *, **Mitra, S.** Atmospheric Distributions of Polycyclic Aromatic Hydrocarbons (PAHs) in coastal Gulf of Mexico Associated with the R/V Deepwater Horizon oil spill, coastal Gulf of Mexico, United States. Presented at the Geological Society of America National Meeting, 2012 November, Charlotte, NC.
27. T.A. Kniskern, C.K. Harris, **S. Mitra**, A. Orpin. Flood Deposition on the Waipaoa Shelf, New Zealand. Presented at Ocean Sciences, 2012 February, Salt Lake City, UT.
28. **Mitra, S.**, Zimmerman, A.R., Hunsinger, G.B. *, Corbett, D.R., Willard, D.A., Curtis, S. *Multi-decadal Black Carbon Variations Reveal Anthropogenic Influences on Fire in the Post-Colonial Chesapeake Bay Watershed.* Presented at the AGU Fall 2011 Meeting, San Francisco, CA.
29. Scalise, K., **Mitra, S.** *Marine-to-Land Transport of Oil-Derived Polycyclic Aromatic Hydrocarbons (PAHs) from the 2010 Deepwater Horizon Oil Release, Gulf of Mexico.* Presented at the 11th Annual International Estuarine Biogeochemistry Meeting, Atlantic Beach, NC.
30. Patel, N.*, **Mitra, S.**, Zimmerman, A.R., Corbett, D.R. *Correlation between sedimentary black carbon abundance at a coastal North Carolina site and regional drought.* Presented at the 2010 NE/SE GSA Meeting, Baltimore, MD.
31. **Mitra, S.**, Zimmerman, A.R., Corbett, D.R., Willard, D., Hunsinger, G.B.* *Post-European Settlement Black Carbon Burial and Carbon Sequestration in a Chesapeake Bay Sediment Core.* 2010. Presented at the 2010 NE/SE GSA Meeting, Baltimore, MD.
32. **Mitra, S.**, Zimmerman, A.R., Corbett, D.R., Willard, D., Hunsinger, G.B.* *Post-European Settlement Black Carbon Burial and Carbon Sequestration in a Chesapeake Bay Sediment Core.* 2010. Presented at the 2010 Ocean Sciences Meeting, Portland, OR.
33. **Mitra, S.**, Zimmerman, A.R., Hunsinger, G.B.*, Willard, D. 2008. *Climate-Related Variations in Black Carbon Accumulation in Chesapeake Bay Holocene Sediments.* Presented at the Fall American Geophysical Union Meeting, San Francisco, CA.
34. **Mitra, S.**, Cousineau, L.M.* 2008. *Pharmaceutical and personal care product chemical concentrations and loading in relation to water discharge in the Upper Susquehanna River: Implications for Drinking Water in North Carolina.* Presented at the Sustainable and Safe Drinking Water in Developing and Developed Countries, UNC-Chapel Hill, NC.
35. **Mitra, S.**, Cousineau, L.M.* 2008. *Comparing pharmaceutical and personal care product concentrations and loading with river hydrology in the Upper Susquehanna River.* Presented at the North Carolina Water Resources Research Institute Meeting, Raleigh, NC.
36. **Mitra, S.**, Zimmerman, A. 2008. *The Importance of Refractory Black Carbon in Coastal Systems. Poster Presentation.* Presented at the Terrestrial and Coastal Carbon Fluxes and Exchanges in the Gulf of Mexico Workshop, St. Petersburg, FL.
37. Zimmerman, A., **Mitra, S.** 2008. *Hydrogen-pyrolysis/biomarker analysis of organic matter composition in Ganges-Brahmaputra Delta sediments.* Poster Presentation. Presented at the 2008 Ocean Sciences, Orlando, FL.

38. **Mitra, S.**, Zimmerman, A., Woerner, W.**, Hunsinger, G.*, Dunn, J.C.*, Goodbred, S., Sarkar, S.K. 2008. Refractory Black Carbon in the Chesapeake Bay and the Lower Ganges-Brahmaputra System. Platform Presentation. Presented at the 2008 Ocean Sciences, Orlando, FL.
39. **Mitra, S.**, Zimmerman, A., Dunn, J.C.*, Hunsinger, G.*. 2007. *Evidence of Increased Fires in*
40. *Pre-Industrial Revolution Chesapeake Bay Sediments: A Possible Link To Late Holocene Climate*. Platform Presentation. Presented at the Duke-University of North Carolina Ocean's Consortium Annual Meeting, Beaufort, NC.
41. **Mitra, S.**, Zimmerman, A., Dunn, J.C.*, Hunsinger, G.*. 2007. *Evidence of fires in pre-Industrial Revolution Chesapeake Bay sediments*. Platform Presentation. Presented at the 19th Biennial Estuarine Research Federation Conference, Providence, RI.
42. Hunsinger, G.* , **Mitra, S.** 2007. *Hydrodynamic Effects on Particulate PAH Exchange in Tivoli Bays, Hudson River Estuary, NY*. Poster Presentation. Presented at the 19th Biennial Estuarine Research Federation Conference, Providence, RI.
43. Zimmerman, A., **Mitra, S.** 2007. *Lipid biomarkers in the Ganges-Brahmaputra and Bay of Bengal sediments*. Poster Presentation. Presented at the 234th American Chemical Society National Meeting, Boston, MA.
44. **Mitra, S.**, Woerner, W.** , Zimmerman, A., Hunsinger, G.* , Goodbred, S. 2007. *Refractory Organic Matter in the Ganges-Brahmaputra River complex*. Platform Presentation. Presented at the 234th American Chemical Society National Meeting, Boston, MA.
45. Cousineau, L.M.* , **Mitra, S.**, Graney, J. 2007. *Sewage-derived organic compounds as indicators of wastewater treatment plant discharge into the Upper Susquehanna River*. Presented at the 13th Annual North Atlantic Chapter of the Society of Environmental Toxicology and Chemistry Meeting, Roger Williams University, Bristol, RI.
46. **Mitra, S.** 2006. *Historical Advancements In the Science of Bioavailability*. Platform Presentation. Presented at the 27th Annual Society of Environmental Toxicology and Chemistry Meeting, Montreal, Quebec.
47. **Mitra, S.** 2006. *Deciphering the Geochemistry of Refractory Carbon in Watershed Studies*. Platform Presentation. Presented at the 34th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY.
48. Hunsinger, G.* , **Mitra, S.**, Warrick, J.A., Alexander, C.R. 2006. *Effects of Wildfire on Deposition and Distribution of Plant Biomarkers and Pyrolyzed Carbon in the Eastern Santa Barbara Channel*. Platform Presentation. Presented at the 34th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY.
49. Cousineau, L.* , Rice, S.** , Natel, H.* , **Mitra, S.**, Graney, J. 2006. *Sewage Derived Organic Compounds, Trace Metals, and Nutrients, as Indicators of Wastewater Treatment Plant Discharge into the Upper Susquehanna River*. Poster Presentation. Presented at the 34th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY.
50. Hunsinger, G.* , **Mitra, S.**, Warrick, J., Takesue, R., Alexander, C. 2006. *Composition of Pyrolyzed Carbon, Non-pyrolyzed carbon, and Metals in the Eastern Santa Barbara Channel*. Poster Presentation. Presented at the EPA National Graduate Fellows Meeting, Washington, DC.

51. Hunsinger, G.*, **Mitra, S.**, Warrick, J., Takesue, R., Alexander, C. 2006. *Composition of Pyrolyzed Carbon, Non-pyrolyzed carbon, and Metals in the Eastern Santa Barbara Channel*. Poster Presentation. Presented at the 13th Ocean Sciences Meeting, Honolulu, HI.
52. Dunn, J.C.*, **Mitra, S.** 2005. *Historical Emissions and Deposition of Black Carbon and Polycyclic Aromatic Hydrocarbons to the Chesapeake Bay Watershed*. Poster Presentation. Presented at the 18th Biennial Estuarine Research Federation Conference, Norfolk, VA.
53. Rice, S. L.***, **Mitra, S.** 2005. *Pharmaceutical-derived Contamination of Natural Waters*. Platform Presentation. Presented at the Broome County Environmental Management Council monthly meeting, Vestal, NY.
54. Rice, S. L.***, **Mitra, S.** 2005. *Testing for PPCP Contaminants in Lake Erie - A Study of the Water Composition Offshore of Dunkirk, NY*. Platform Presentation. Presented at the 15th Annual Great Lakes Research Consortium Student/Faculty Conference, Syracuse, NY.
55. **Mitra, S.**, Masiello, C.A., Leithold, E.L. Blair, N.E., Harden, J.W., Skjemstad, J. 2004. *Black Carbon in Reference Materials and Sediments From Three Archetypal US Coastal Systems*. Poster Presentation. Presented at the Organic Geochemistry Gordon Conference. Holderness Academy, Plymouth, NH.
56. **Mitra, S.** *Application of a Black Carbon Isolation Technique to Sediments from Three Archetypal US Coastal Systems*. 2004. Platform Presentation. Presented at the 8th International Estuarine Biogeochemistry Symposium, Solomons, MD.
57. Kukkonen, J.V. K., **Mitra, S.**, Landrum, P.F., Gossiaux, D.C., Gunnarsson, J., Weston, D. 2003. *The Contrasting Roles of Plant-derived Carbon Versus Black Carbon on Hydrophobic Organic Contaminant Availability to Diporeia spp. and Lumbriculus variegatus*. Platform Presentation. Presented at the 2003 Society of Toxicology and Chemistry National Meeting, Austin, TX.
58. **Mitra, S.**, Bianchi, T. S., McKee, B. A., Sutula, M.A. 2001. *The Riverine Discharge of Black Carbon into Coastal Sediments of the Gulf of Mexico*. Platform Presentation. Presented at the 11th Annual Goldschmidt Conference at Hot Springs, VA.
59. McKee, B. A., Bianchi, T. S., Cable, P. H., **Mitra, S.**, Sutula, M. 1999. *The Effects of Seasonal Storage, Diagenesis, and Remobilization on the Fate of Terrestrial Materials in the Lower Mississippi River*. Poster Presentation. Presented at the Chemical Oceanography Gordon Conference. Kimball Union Academy, Meriden, NH.
60. **Mitra, S.**, Bianchi, T. S., Guo, L., and Santschi, P. 1999. *Sources and Transport of Terrestrially-derived Dissolved Organic Matter in the Chesapeake Bay and the Middle Atlantic Bight*. Platform Presentation. Presented at the American Society of Limnology and Oceanography Meeting at Santa Fe, NM.

PROFESSIONAL AFFILIATIONS

American Geophysical Union, American Chemical Society, Coastal & Estuarine Research Federation.

RESEARCH CRUISE EXPERIENCE

2022 R/V *Hugh Sharp*, Western North Atlantic Ocean.

2019 R/V *Blackbeard*, Pamlico Sound to Gulf Stream Transect.
 2018 R/V *Blackbeard*, Pamlico Sound to Gulf Stream Transect.
 2016 R/V *Neil Armstrong*, US Continental shelf break, coastal North Carolina.
 2011 R/V *Cape Hatteras*, Gulf of Mexico.
 2011 R/V *Cape Fear*, Chief Scientist, Gulf Stream, Coastal North Carolina.
 2010 R/V *Cape Fear*, Chief Scientist, Gulf Stream, Coastal North Carolina.
 2010 R/V *Roger Revelle*, Poverty Bay, New Zealand.
 2002 R/V *Point Sur*, Monterey Bay, Point Conception, CA.
 2001 R/V *Gilbert*, Gulf of Mexico, Mississippi River, Atchafalaya River, LA.
 2001 R/V *Hook and Bull*, Gulf of Mexico, Mississippi River, LA.
 1999 R/V *Pelican*, Gulf of Mexico, Mississippi River, Atchafalaya River, LA.
 1996 R/V *Orrust*, Chief Scientist, Hudson River, NY.
 1995 R/V *Bay Eagle*, Elizabeth River, VA.
 1993 R/V *Bay Eagle*, Chesapeake Bay, VA.

SERVICE

SCHOLARLY SERVICE (WITHIN ECU)

2022

- Search Committee, Dean of Graduate School

2020-2021

- ECU College of Engineering and Technology – Outstanding Graduate Student Researcher Award Selection Committee
- Mary Ferebee Coastal and Marine Scholarship Award Selection Committee
- ECU Wide Task force on Expanding MS in Data Science
- GEOL Departmental Assessment Coordinator - Graduate level assessment
- ECU Graduate Council Executive Committee
- ECU Wide Task Force on Graduate Marketing and Recruiting (Fall Recruiting Event Sub-Committee & Advertising Direction Subcommittee)
- ECU Graduate Council – Executive Committee
- ECU Graduate Council – Member at Large
- ECU Graduate Council – Holistic Review Practices Subgroup
- Graduate Program Director’s Committee Subgroup on Professional Development

2019-2020

- Geography, Planning & Environment – ECU Member for APR
- ECU Wide Task force on Expanding MS in Data Science
- GEOL Dept Open House

- GEOL Departmental assessment coordinator - graduate level assessment

2018-2019

- ECU-wide – Graduate Faculty Mentor Award Selection Committee
- Department of Coastal Studies, Integrated Coastal Programs: Cluster Hire Search Committees (n=4): Applied Ecologist, Integrative Modeler, Coastal Engineer, Coastal Processes Department of Geological Sciences Scholarship Awards Committee
- ECU-wide Graduate Program Director’s Task Force for Strategic Graduate Enrollment Growth
- ECU-wide Graduate Program Director’s Task Force to Revise and Update Graduate Faculty Criteria
- GEOL Departmental assessment coordinator - graduate level assessment

2017-2018

- ECU-wide Graduate Program Director’s Task Force to Revise and Update Graduate Faculty Criteria
- GEOL Departmental assessment coordinator - graduate level assessment

2016-2017

- Thomas Harriot College of Arts and Sciences (HCAS) Distinguished Professor in Natural Sciences Selection Committee
- GEOL Departmental assessment coordinator - graduate level assessment

2015-2016

- GEOL Departmental assessment coordinator - graduate level assessment

2014 - 2015

- ECU Undergraduate Research and Creativity Awards Committee
- HCAS Assessment Review Committee
- GEOL Unit Code Revision Committee
- GEOL Departmental assessment coordinator - graduate level assessment

2013 – 2014

- ECU Undergraduate Research and Creativity Awards Committee
- HCAS Assessment Review Committee
- GEOL Departmental assessment coordinator - graduate level assessment
- GEOL Departmental - Peer teaching evaluator
- GEOL Departmental Representative - Coastal Maritime Council

2012 – 2013

- ECU Undergraduate Research and Creativity Awards Committee
- HCAS Assessment Review Committee
- GEOL Departmental assessment coordinator - graduate level assessment
- GEOL Departmental - Peer teaching evaluator
- GEOL Departmental Representative on Search Committee to elect new director of the Coastal Water Resources Center
- GEOL Departmental Representative - Coastal Maritime Council

2011-2012

- ECU Undergraduate Research and Creativity Awards Committee
- GEOL Departmental Representative - Coastal Maritime Council
- GEOL Departmental Seminar Coordinator

2010-2011

- ECU Undergraduate Research and Creativity Awards Committee
- GEOL Departmental Seminar Coordinator

2009 – 2010

- ECU Undergraduate Research and Creativity Awards Committee
- GEOL Departmental Seminar Coordinator
- GEOL Departmental Open House Representative at HCAS Open House

2008 – 2009

- ECU Undergraduate Research and Creativity Awards Committee
- HCAS International Programs Advisory Committee
- GEOL Departmental Seminar Coordinator

ECU Outreach

- HCAS – FaculTEA presentation – “Why the Contents of Our Medicine Cabinets are Turning Up in Our Waterways” – October 2009
- ECU GEOL Dept – North Carolina Center for Inquiry Based Learning Teacher Training Fellow to Jones Elementary School

SCHOLARLY SERVICE (EXTERNAL TO ECU)

2020 – 2023

- Executive Board, Sound Rivers (non-profit organization dedicated to the health of the Neuse and Tar Rivers)
- Plastics in the Environment Research Interest Group Leader – NC Center for Human Health and the Environment

2018 – 2019

- William A. Niering Coastal Educator Award Selection Committee, Coastal and Estuarine Research Federation
- Albemarle-Pamlico National Estuarine Partnership (APNEP) Water Monitoring and Assessment Team
- APNEP- Science and Technical Advisory Committee (STAC)

2017 - 2018

- Albemarle-Pamlico National Estuarine Partnership (APNEP) Water Monitoring and Assessment Team

2016 - 2017

- Albemarle-Pamlico National Estuarine Partnership (APNEP) Water Monitoring and Assessment Team

2013 - 2015

Associate Editor, Estuaries and Coasts

Committees and Workgroups

- APNEP- Science and Technical Advisory Committee (STAC)
- APNEP-Contaminants Workgroup

2013 – 2014

- Gulf of Mexico Air Sea Flux Synthesis Workgroup

2012-2013

- International Estuarine Biogeochemistry Symposium – 2013 Meeting Steering Committee

Manuscript Reviewer for the Following Journals

Analytica Chimica Acta, Applied Geochemistry, Biogeochemistry, Chemosphere, Continental Shelf Research, Deep Sea Research – Vol. II, Environment International, Environmental Pollution, Environmental Research, Environmental Science and Technology, Environmental Toxicology and Chemistry, Geochimica et Cosmochimica Acta, Global Biogeochemical Cycles, Global and Planetary Change, Journal of Chromatography (B), Limnology and Oceanography, Limnology and Oceanography (Methods), Marine Chemistry, Nature Geoscience, Organic Geochemistry, Proceedings of the National Academy of Sciences USA, Science of the Total Environment.

National Meeting Activities

- *Using Paleo and Modern Observations to Improve Understanding of Climate Projections, Environmental Change, and Biomass Burning*. Platform and Poster Session Co-Chair. 2011 American Geophysical Union Fall Meeting, San Francisco, CA.
- Student Presentation Judge. 2011. Coastal and Estuarine Research Federation Meeting, Daytona Beach, FL.
- Volunteer, Student Career Reception, Coastal and Estuarine Research Federation Meeting. 2011. Daytona Beach, FL.
- *The Biogeochemical Cycling of Natural Organic Matter in the Coastal Zone*. Platform session co-chair. 2007 American Chemical Society Meeting, Boston, MA.
- *Bioavailability Then and Now – A Special Session Honoring Peter Landrum*. Platform session co-chair. 2006 Society of Environmental Toxicology and Chemistry Meeting, Montreal, Quebec, Canada.
- *Bioavailability*. Platform session co-chair. 2001 Society of Environmental Toxicology and Chemistry Meeting, Baltimore, MD.
- *Environmental Fluxes*. Platform session co-chair. 2000 Society of Environmental Toxicology and Chemistry Meeting, Nashville, TN.
- *Trace elements*. Platform session chair. 1999 Estuarine Research Federation Meeting, New Orleans, LA.

Proposal Review Panelist

Gulf of Mexico Research Institute

National Science Foundation – Coupled Natural-Human Cycles Program and Postdoctoral Research Fellowship Program in Ocean Sciences.

Ad Hoc Proposal Reviewer

American Chemical Society; Hudson River Foundation; National Science Foundation – Chemical Oceanography, Geobiology and Low Temperature Geochemistry, and Marine Geology & Geophysics.

Public Outreach and Educational Initiatives

- Uber Judge, Blue Heron Bowl, Feb 2020, CSI, East Carolina University, Wanchese, NC.
- Uber Judge, Blue Heron Bowl, March 2012, East Carolina University, Greenville, NC.
- Oil spill impacts to Gulf of Mexico Ecosystem Findings Featured (March 20, 2012)
 - 1) *International Business Times* -
<http://www.ibtimes.com/articles/317651/20120321/deepwater-horizon-oil-spill-food-chain-ocean.htm>
 - 2) *Science Daily* -
<http://www.sciencedaily.com/releases/2012/03/120320142100.htm>
 - 3) The Voice of Russia
- Invited to provide expertise to US Congressional representatives on 2010 oil spill and coastal hazards
- National Geographic Website – Featured Video on NSF RAPID Funded Research -
<http://video.nationalgeographic.com/video/player/news/environment-news/nsf-oil-hurricanes-mitra-vin.html>

- News Interview on Gulf Oil Spill - Channel 9 Greenville - <http://www2.wnct.com/news/2010/jun/08/ecu-profs-research-gulf-spill-hydro-carbon-fingerp-ar-214070/>
- Talk of the Town TV Interview on Gulf Oil Spill (June 10th, 2010) (DVD in Tenure and Promotion File)
- Channel 12 news (June 13, 2010) – Oil spill in the Gulf of Mexico
- Go Science Café – Expert Panel on Gulf Oil Spill (June 14th, 2010)
- Television Interview about spill following Go Science Café on June 14th <http://www2.wnct.com/>
- The Daily Reflector – June 15th, 2010 (<http://www.reflector.com/news/panel-oil-spills-effects-nc-unclear-38403>)
- East Carolinian – June 16th, 2010(<http://www.theeastcarolinian.com/news/ecu-aids-with-research-of-the-bp-oil-calamity-1.1492488>)
- ECU Department of Geological Sciences – Jones Elementary School – Host and Coordinator of 100- 1st Graders on a Field Trip to Department of Geological Sciences
- ECU Department of Geological Sciences – Co-author 2009 Alumni Survey
- HCAS – Global Preparedness Workshop – Fall 2008
- ECU - Open House - Departmental Representative - Spring 2009
- HCAS - Open House - Departmental Representative - Fall 2008
- HCAS – Open House - Departmental Representative - Spring 2008
- Interviewed by Discovery Channel News, March 2009 for recent publication on climate and carbon sequestration (<http://dsc.discovery.com/news/2009/02/25/wildfire-drought-warming.html>).
- Radio Interview, *Pharmaceutical and Personal Care Products in North Carolina Coastal Waters*, Public Radio East, 88.1. May 31, 2008.
- Newspaper Article Interview, *Contents of Bathroom Cabinets Impacting Marine Life*, Outer Banks Sentinel, May 21, 2008.
- Departmental Representative for Geological Sciences at the North Carolina State Science Teacher's Annual Convention, Greensboro, North Carolina, November 14-16, 2007.
- Departmental Representative for Geological Sciences at the Thomas Harriot College of Arts and Sciences Open House, East Carolina University, November 10, 2007.