

DEEPAK R. MISHRA

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Department of Geography
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EDUCATION

Ph.D. in Natural Resources, University of Nebraska, Lincoln, in Remote Sensing. Research focused on the use of remote sensing and GIS towards developing semi-analytical models for shallow marine bathymetry, and bottom recognition of benthic habitats using high resolution remotely sensed data. Dissertation title: *Multi- and Hyperspectral Remote Sensing of Tropical Marine Benthic Habitats*. July 2006.

Master in Technology (M. Tech) in Civil Engineering, Indian Institute of Technology, Kanpur, India, in Microwave Remote Sensing. Research focused on modelling the variability of soil moisture and associated parameters over Indian subcontinent using passive microwave satellite data. Thesis title: *Retrieval of Land and Ocean Parameters using IRS-P4 MSMR data*. May 2002.

Master in Science (M.Sc) in Earth Sciences, Pondicherry University, India, in Applied Geology. Research focused on analyzing geochemistry of volcanic rocks. Thesis title: *Geochemistry of Yelagiri Syenite, Tamilnadu*. May 2000.

Bachelor of Science (B. Sc) in Geology, Berhampur University, India. May 1998.

TEACHING EXPERIENCE

Instructor: Geospatial Techniques in Landscape Analysis (GEOG 8450), Department of Geography, University of Georgia. Spring 2014 – present (even years)

Instructor: Problems in Remote Sensing of Environment (GEOG 8550), Department of Geography, University of Georgia. Spring 2013 – present (odd years)

Instructor: Field and Lab Methods in Remote Sensing (GEOG 4460/6460), Department of Geography, University of Georgia. Spring 2013 – present

Instructor: Digital Image Analysis (GEOG 4450/6450), Department of Geography, University of Georgia. Spring 2013 – present

Instructor: Remote Sensing of Environment (GEOG 4350+L/6350+L), Department of Geography, University of Georgia. Fall 2012 – present

Instructor: Application of Remote Sensing Technologies in Monitoring Global Climate Change (NASA GCCE: NNL09ZB1005C), Department of Geosciences, Mississippi State University. Summer 2011 – present

Instructor: Advanced Remote Sensing (GR 4343/6343), Department of Geosciences, Mississippi State University. Spring 2010 – Spring 2012

Instructor: Field Techniques in Remote Sensing (GR 8330), Department of Geosciences, Mississippi State University. Spring 2010 – Spring 2012

Instructor: Remote Sensing of the Physical Environment (GR 4333/6333), Department of Geosciences, Mississippi State University. Fall 2009 – Spring 2012

Instructor: Dynamic Earth (EES 1000), Earth & Environmental Sciences, University of New Orleans. Fall 2008 – Spring 2009

Instructor: Geospatial Analysis II (EES 4096/4096G), Earth & Environmental Sciences, University of New Orleans. Spring 2008 – Spring 2009

Instructor: Geospatial Analysis I (EES 4096/4096G), Earth & Environmental Sciences, University of New Orleans. Fall 2007 – Spring 2009

Instructor: 2006 Earth Observation Joint Seminar Series (NRES 896), School of Natural Resources, University of Nebraska. Fall 2006.

Instructor: Introduction to Remote Sensing (Geog 418/818), School of Natural Resources, University of Nebraska. Fall 2006.

Part-time Instructor: Introduction to Remote Sensing (Geog 418/818), School of Natural Resources, University of Nebraska. Fall 2005.

Teaching Assistant: Introduction to Remote Sensing (Geog 418/818), School of Natural Resources, University of Nebraska. Fall 2005.

Teaching Assistant: Digital Image Analysis (Geog 420/820), School of Natural Resources, University of Nebraska. Spring 2004, 2005.

Teaching Assistant, Engineering Geosciences (CE 242), Department of Civil Engineering, Indian Institute of Technology, Kanpur, India. July 2000 – June 2001.

PROFESSIONAL EXPERIENCE

Associate Professor, Department of Geography, University of Georgia-Athens. August 2014 – present

Adjunct Associate Professor, Earth and Environmental Sciences, University of Nebraska-Lincoln. April 2016 – present

Assistant Professor, Department of Geography, University of Georgia-Athens. August 2012 – July 2014

Adjunct Assistant Professor, Department of Geosciences, Mississippi State University. August 2012 – July 2014

Assistant Professor, Department of Geosciences and Geosystems Research Institute, Mississippi State University. August 2009 – July 2012

Researcher, Northern Gulf Institute, Mississippi State University. August 2009 – July 2012

Adjunct Assistant Professor, Biological Sciences, Jackson State University. October 2011 – July 2013

Adjunct Assistant Professor, Earth & Environmental Sciences, University of New Orleans. August 2009 – July 2012

Assistant Professor, Earth & Environmental Sciences and Pontchartrain Institute for Environmental Sciences, University of New Orleans. June 2007 – July 2009

Research Assistant Professor, School of Natural Resources, University of Nebraska. August 2006 - May 2007.

Research Assistant, School of Natural Resources, University of Nebraska. August 2002 - July 2006.

Research Intern, Goddard Space Science Program, NASA. June 2003 - August 2003.

Research Assistant, Department of Civil Engineering, Indian Institute of Technology, Kanpur, India. June 2001 - May 2002

Research Assistant, Department of Earth Sciences, Pondicherry University, India. June 1999 - May 2000.

OTHER AFFILIATIONS

Founding Member and Core Faculty, Georgia Informatics Institute (GII)

Faculty Member, UGA Marine Institute (UGAMI). August 2016 – present

Affiliated Faculty Member, Center for Integrative Conservation Research (CICR), UGA. September 2012 – present

Affiliated Scientist, Flux Tower Working Group, Georgia Coastal Ecosystem (GCE) Long Term Ecological Research (LTER), UGA. January 2013 – present

Affiliated Faculty Member, Latin American & Caribbean Studies Institute (LACSI), UGA. August 2012 – present

Affiliated Faculty Member, Center for Geospatial Research (CGR), UGA. August 2012 – present

EDITED BOOKS

Bio-Optical Modeling and Remote Sensing of Inland Waters. Co-edited with I. Ogashawara and A. A. Gitelson. ELSEVIER (**Forthcoming; Release Date: June, 2017**)

Ecology, Conservation, and Restoration of Chilika Lagoon, India. Co-edited with C. Max Finlayson, G. Rastogi, M. Suar, and A. Pattnaik. SPRINGER (**Forthcoming; Release Date: December, 2017**)

BOOK CHAPTERS

7. Ogashawara, I., **D. R. Mishra**, and A. A. Gitelson (2016). Remote Sensing of Inland Waters: Background and Current State-of-the-Art. In: D. R. Mishra, I. Ogashawara, and A. A. Gitelson (eds.) Bio-Optical Modeling and Remote Sensing of Inland Waters, Elsevier, Waltham, MA (**in press**).
6. Kumar, A., **D. R. Mishra**, and Sk. Md. Equeenuddin (2016). Spatio-temporal dynamics of sediment plume and algal bloom in Chilika Lagoon. In: C. Max Finlayson, G. Rastogi, M. Suar, D. R. Mishra, and A. Pattnaik (eds.) Ecology, Conservation, and Restoration of Chilika Lagoon, India, Springer, Switzerland (**in press**).
5. Mishra D. R., I. Astuti, and S. Mishra (2016). Coastal water algorithms (chlorophyll-1). In: M. Madden and S. Bernardes (eds.) Manual of Remote Sensing, American Society for Photogrammetry and Remote Sensing, 4th Edition, Bethesda, Maryland (**in press**).
4. **Mishra, D. R.**, S. Ghosh, C. Hladik, J. L. O'Connell, and H. J. Cho (2015). Wetland mapping methods and techniques using multi-sensor, multi-resolution remote sensing: Successes and Challenges. In: P. S. Thenkabail (ed.) Remote Sensing Handbook, Vol. III, pp. 191-226, ISBN: 13: 978-1-4822-1972-6, CAT# K22131, CRC Press, Taylor and Francis, Boca Raton, FL.
3. **Mishra, D. R.**, and S. Ghosh (2015). Using moderate resolution satellite sensors for monitoring the biophysical parameters and phenology of tidal wetlands. In: R. Tiner, V. Klemas, and M. Lang (eds.) Remote Sensing of Wetlands: Applications and Advances, pp. 283-314, ISBN: 13: 978-1-4822-3738-2, Taylor and Francis, Boca Raton, FL.
2. Cho, H. J., **D. R. Mishra**, P. Kirui, and J. Wood (2012). Remote sensing of submerged aquatic vegetation. In: Boris Escalante-Ramirez (ed.) Remote Sensing - Applications, ISBN: 978-953-51-0651-7, InTech, Available from: <http://www.intechopen.com/books/remote-sensing-applications/remote-sensing-of-submerged-aquatic-vegetation>.
1. **Mishra, D. R.**, (2009). High-resolution ocean color remote sensing of coral reefs and associated benthic habitats. In: X. Yang (ed.) Remote Sensing and GIS for Coastal Ecosystem Assessment and Management: Principles and Applications, XIV, pp. 171-210, ISBN: 978-3-540-88182-7, Springer-Verlag GMBH, Germany.

PEER-REVIEWED JOURNAL ARTICLES

54. Rotta, L. H. S., **D. R. Mishra**, F. S. Y. Watanabe, T. W. P. Rodrigues, E. Alcântara, and N. N. Imai (2017). Estimating SAV heights by combining hydroacoustic and SPOT-6 data. *Remote Sensing of Environment* (**in preparation**).
52. Rodrigues, T., **D. R. Mishra**, I. S. Astuti, F. S. Y. Watanabe, E. Alcântara, and N. N. Imai (2017). Retrieval of inherent optical properties from oligo-to-mesotrophic inland water

using the quasi-analytical algorithm. *International Journal of Applied Earth Observation and Geoinformation* (**in preparation**)

51. Watanabe, F., T. Rodrigues, N. N. Imai, E. Alcântara, **D. R. Mishra**, C. Barbosa, and D. Jorge (2017). Variability of absorption coefficient in a tropical reservoir and its influence on bio-optical modeling. *International Journal of Remote Sensing* (**in preparation**)
52. Page, B., A. Kumar, and **D. R. Mishra** (2017). A novel cross-satellite based assessment of the spatio-temporal development of a cyanobacterial harmful algal bloom. *Science of the Total Environment* (**in review**)
51. Rodrigues, T., **D. R. Mishra**, E. Alcântara, F. S. Y. Watanabe, L. Rotta, and N. N. Imai (2017). Spatio-temporal variability of total suspended matter in tropical reservoirs with widely differing optical properties. *Science of the Total Environment* (**in review**)
50. O'Connell, J., **D. R. Mishra**, D. Cotten, and M. Alber (2017). Tidal Marsh Inundation Index (TMII): A filter to flag flooded pixels and improve MODIS time-series analysis within tidal marshes. *Remote Sensing of Environment* (**in review**)
49. Astuti, I., **D. R. Mishra**, S. Mishra, and B. Schaeffer (2017). A hybrid approach for deriving inherent optical properties in oligotrophic estuaries. *Estuarine, Coastal and Shelf Science* (**in review**)
48. Hauer, M. E., **D. R. Mishra**, J. S. Pippin, and R. D. Hardy (2017). No landward retreat: Confronting 80 years of relative sea level rise in Louisiana. *Nature Scientific Reports* (**in revision**)
47. **Mishra, D. R.**, S. Ghosh, and J. Cho (2017). BP oil spill. *Encyclopaedia of Natural Hazards* (**in press**)
46. Kumar, A., **D. R. Mishra**, Sk. Md. Equeen, H. J. Cho, and G. Rastogi (2016). Differential impact of anniversary severe cyclones on the water quality of a tropical coastal lagoon. *Estuaries and Coasts*, doi:10.1007/s12237-016-0172-3
45. Ogashawara, I., **D. R. Mishra**, R. Nascimento, E. Alcantara, M. Kampel, and J. L. Stech (2016). Re-parameterization of a quasi-analytical algorithm for colored dissolved organic matter dominant inland waters. *International Journal of Applied Earth Observation and Geoinformation*, 53: 28-145, <http://dx.doi.org/10.1016/j.jag.2016.09.001>
44. Watanabe, F., **D. R. Mishra**, I. Astuti, T. Rodrigues, E. Alcântara, N. N. Imai, C. Barbosa (2016). Parameterization and calibration of a quasi-analytical algorithm for tropical eutrophic waters. *ISPRS Journal of Photogrammetry and Remote Sensing*, 121: 28-47, <http://dx.doi.org/10.1016/j.isprsjprs.2016.08.009>
43. Wang, G., Z. Lee, R. Ma, and **D. R. Mishra** (2016). Retrieving absorption coefficients of multiple phytoplankton pigments from hyperspectral remote sensing reflectance. *Limnology and Oceanography- Methods*, 14(7): 432-447, doi:10.1002/lom3.10102
42. **Mishra, D. R.**, and R. W. Gould, Jr (2016). Preface: Remote sensing in coastal environments. *Remote Sensing*, 8(8), 665, doi:10.3390/rs8080665

41. Rotta, L., **D. R. Mishra**, E. Alcântara, and N. N. Imai (2016). Analyzing the status of submerged aquatic vegetation using novel optical parameters. *International Journal of Remote Sensing*, 37(16), 3786-3810, DOI:10.1080/01431161.2016.1204027
40. Hauer, M. E., J. Evans, and **D. R. Mishra** (2016). Millions projected at risk from sea level rise in the Continental United States. *Nature Climate Change*, 6, 691-695, doi:10.1038/nclimate2961
 * Ranked #4 among the top-5 Nature Climate Paper with more than 9000 reads
 * Ranked #21 in media coverage among all climate science papers published in 2016
39. **Mishra, D. R.**, E. J. D'Sa, and S. Mishra (2016). Preface: Remote sensing of water resources. *Remote Sensing*, 8(2), 115, doi: 10.3390/rs8020115
38. Kumar, A., Sk. Md. Equeen, **D. R. Mishra**, and B. C. Acharya (2016). Remote monitoring of sediment dynamics in a coastal lagoon: Long-term spatio-temporal variability of suspended sediment in Chilika. *Estuarine, Coastal and Shelf Science*, 170(5): 155-172, ISSN 0272-7714, <http://dx.doi.org/10.1016/j.ecss.2016.01.018>
37. Ghosh, S., **D. R. Mishra**, and A. Gitelson (2016). Long-term monitoring of biophysical characteristics of tidal wetlands in the northern Gulf of Mexico — A methodological approach using MODIS. *Remote Sensing of Environment*, 173: 39-58; <http://dx.doi.org/10.1016/j.rse.2015.11.015>
36. Srichandan S., B. Maharana, J. Y. Kim, A. Kumar, **D. R. Mishra**, P. Bhadury, P. Muduli, A. K. Pattnaik, and G. Rastogi (2015). Interannual and cyclone-driven variability in phytoplankton communities of a tropical coastal lagoon. *Marine Pollution Bulletin*, 101(1): 39-52; <http://dx.doi.org/10.1016/j.marpolbul.2015.11.030>
35. Du, X., D. Cao, **D. R. Mishra**, S. Bernardes, T. R. Jordan, and M. Madden (2015). Change detection in coal seam spontaneous combustion areas using ASTER thermal infrared data. *Remote Sensing*, 7: 6576-6610; doi:10.3390/rs70606576
34. Mishra, S., **D. R. Mishra** (2014). A novel remote sensing algorithm to quantify phycocyanin in cyanobacterial algal blooms. *Environmental Research Letters*, 9:114003, doi:10.1088/1748-9326/9/11/114003
33. **Mishra, D. R.**, (2014). Coastal remote sensing. *GIScience and Remote Sensing*, 51(2): 115-119, doi: 10.1080/15481603.2014.895579
32. Cho, H., I. Ogashawara, **D. R. Mishra**, J. White, A. Kameronosky, L. Morris, C. Clarke, A. Simpson, and D. Banisakher (2014). Evaluating Hyperspectral Imager for the Coastal Ocean (HICO) data for seagrass mapping in Indian River Lagoon, FL. *GIScience and Remote Sensing*, 51(2): 120-138, doi: 10.1080/15481603.2014.895577
31. **Mishra, D. R.**, B. A. Schaeffer, and D. Keith (2014). Performance evaluation of Normalized Difference Chlorophyll Index in northern Gulf of Mexico estuaries using the Hyperspectral Imager for the Coastal Ocean. *GIScience and Remote Sensing*, 51(2): 175-198, doi: 10.1080/15481603.2014.895581

30. Mishra S., **D. R. Mishra**, and Z. Lee (2014). Bio-optical inversion in highly turbid and cyanobacteria dominated waters. *IEEE Transactions in Geosciences and Remote Sensing*, 52(1): 375-388; doi: 10.1109/TGRS.2013.2240462
29. Ogashawara, I., **D. R. Mishra**, S. Mishra, M. Pedroso Curtarelli, J. Luiz Stech (2013). A performance review of reflectance based algorithms for predicting phycocyanin concentrations in inland waters. *Remote Sensing*, 5(10): 4774-4798; doi:10.3390/rs5104774
28. **Mishra, D. R.**, and S. Ghosh (2013). Moderate resolution satellite data for mapping salt marshes. *SPIE Newsroom*, doi: 10.1117/2.1201304.004800
27. Mishra S., **D. R. Mishra**, Z. Lee, and C. Tucker (2013). Quantifying cyanobacterial phycocyanin concentration in turbid productive waters: A quasi-analytical approach. *Remote Sensing of Environment*, 133: 141-151, doi: 10.1016/j.rse.2013.02.004
26. Cho J., S. Mishra, and **D. R. Mishra** (2013). Graphical user interface for benthic mapping. *ACEEE International Journal on Information Technology*, 3(1): 23-27, doi: 01.IJIT.3.1.1138
25. Dash P., N. Walker, **D. R. Mishra**, E. D'Sa, and S. Ladner (2012). Atmospheric correction and vicarious calibration of Oceansat-1 Ocean Color Monitor (OCM) data in coastal case 2 waters. *Remote Sensing*, 4(6): 1716-1740, doi: 10:3390/rs4061716
24. Relles, N. J., D. O. B. Jones, and **D. Mishra** (2012). Creating landscape-scale maps of coral reef cover for marine reserve management from high resolution multispectral remote sensing. *GIScience and Remote Sensing*, 49(2): 251-274, doi: <http://dx.doi.org/10.2747/1548-1603.49.2.251>
23. **Mishra, D. R.**, H. J. Cho, S. Ghosh, C. Downs, A. Fox, P. B. T. Merani, P. Kirui, N. Jackson, and S. Mishra (2012). Post-spill state of the marsh: Remote estimation of the ecological impact of the Gulf of Mexico oil spill on Louisiana salt marshes. *Remote Sensing of Environment*, 118: 176-185, doi: 10.1016/j.rse.2011.11.007
22. Mishra, S., **D. R. Mishra** (2012). Normalized Difference Chlorophyll Index: A novel model for remote estimation of chlorophyll-*a* concentration in turbid productive waters. *Remote Sensing of Environment*, 117: 394-406, doi: 10.1016/j.rse.2011.10.016
21. Dash, P., N. Walker, **D. R. Mishra**, C. Hu, J. L. Pinckney, and E. J. D'Sa (2011). Estimation of cyanobacterial pigments in a freshwater lake using OCM satellite data. *Remote Sensing of Environment*, 115: 3409-3423, doi: 10.1016/j.rse.2011.08.004
20. Swain, S., S. Narumalani, and **D. R. Mishra** (2011). Monitoring invasive species: Detecting Purple loosestrife and evaluating biocontrol along the Niobrara River, Nebraska. *GIScience and Remote Sensing*, 48(2): 225-244, doi:10.2747/1548-1603.48.2.225
19. **Mishra, D. R.**, S. Mishra (2010). Plume and bloom: Effect of Mississippi River diversion opening on the spatio-temporal variability of water quality parameters in Lake Pontchartrain. *Geocarto International*, 25(7): 555-568, doi: 10.1080/10106041003763394

18. Mishra, S., **D. R. Mishra**, and W. Schluchter (2009). A novel algorithm for predicting phycoyanin concentrations in cyanobacteria: A proximal hyperspectral remote sensing approach. *Remote Sensing*, 1: 758-775, doi:10.3390/rs1040758
17. Rundquist, D., A. Gitelson, M. Lawson, G. Keydan, B. Leavitt, R. Perk, J. Keck, **D. R. Mishra**, and S. Narumalani (2009). Proximal sensing of coral features: spectral characterization of *Siderastrea siderea*. *GIScience and Remote Sensing*, 46(2): 139-160, doi:10.2747/1548-1603.46.2.139
16. Narumalani, S., **D. R. Mishra**, R. Wilson, P. Reece, and A. Kohler (2009). Detecting and mapping four invasive species along the floodplain of North Platte River, Nebraska. *Weed Technology*, 23:99-107, doi:10.1614/WT-08-007.1
15. Hoffman, J. D., S. Narumalani, **D. R. Mishra**, P. Merani, and R. G. Wilson (2008). Predicting potential occurrence and spread of invasive plant species along the North Platte River, Nebraska. *Invasive Plant Science and Management*, 1:359-367, doi:10.1614/IPSM-07-048.1
14. **Mishra, D. R.**, S. Narumalani, D. Rundquist, M. P. Lawson, and R. Perk (2007). Enhancing the detection and classification of coral reef and associated benthic habitats: A hyperspectral remote sensing approach. *Journal of Geophysical Research*, 112, C08014, doi:10.1029/2006JC003892
13. Narumalani, S., **D. R. Mishra**, J. Burkholder, Paul B. T. Merani, and G. Wilson (2006). A comparative evaluation of ISODATA and spectral angle mapping for the detection of Saltcedar using airborne hyperspectral imagery. *Geocarto International*, 21(2): 59-66.
12. **Mishra, D. R.**, S. Narumalani, D. Rundquist, and M. P. Lawson (2006). Benthic habitat mapping in tropical marine environments using QuickBird imagery. *Photogrammetric Engineering and Remote Sensing*, 72(9): 1037-1048.
11. **Mishra, D. R.**, S. Narumalani, R. Bahl, D. Rundquist, and M. P. Lawson (2006). Predicting the percent cover of corals: An *in-situ* remote sensing approach. *Geophysical Research Letters*, 33, L06603, doi:10.1029/2005GL025056.
10. **Mishra, D. R.**, S. Narumalani, D. Rundquist, and M. P. Lawson (2005). Characterizing the vertical diffuse attenuation coefficient for downwelling irradiance in coastal water: Implications for water penetration by high resolution satellite data. *ISPRS Photogrammetry and Remote Sensing*, 60: 48-64.
9. Narumalani, S., **D. R. Mishra**, M. Karabulut, and M. A. Palecki, (2005). An assessment of vegetation response to different moisture conditions using SPOT-XS data. *International Journal of Geoinformatics*, 1(2): 33-46.
8. Singh, R. P., **D. R. Mishra**, A. K. Sahoo, and S. Dey (2005). Spatial and temporal variability of soil moisture over India using IRS P4 MSMR Data, *International Journal of Remote Sensing*, 26(10): 2241-2247.
7. **Mishra, D. R.**, S. Narumalani, D. Rundquist, and M. Lawson (2005). High resolution ocean color remote sensing of benthic habitats: A case study at the Roatan Island, Honduras. *IEEE Transactions in Geosciences and Remote Sensing*, 43 (7): 1592-1604.

6. **Mishra, D. R.**, S. Narumalani, M. P. Lawson, and D. C. Rundquist (2004). Deriving a bathymetric map using IKONOS multispectral data. *Giscience and Remote Sensing*, 41(4): 301-321.
5. Narumalani, S., **D. R. Mishra**, and R. Rothwell (2004). Change detection and landscape metrics for inferring anthropogenic processes at EFMO, Iowa. *Remote Sensing of Environment*, 91(3): 478-489.
4. Narumalani, S., **D. R. Mishra**, and R. Rothwell (2004). Integrating image interpretation and spatial pattern metrics to detect landscape structural change. *GIS Science & Remote Sensing*, 41(1): 25-44.
3. **Mishra, D. R.**, A. K. Sahoo, and R. P. Singh (2004). Spatial and temporal analysis of soil moisture over India using IRS P4 (MSMR) data. *Indian Journal of Radio and Space Physics*.
2. **Mishra, D. R.**, S. Dey, and R. P. Singh (2004). Emissivity of various geological terrains using IRS P4 MSMR data. *J. Geological Society of India*, 63: 453-457.
1. **Mishra, D. R.**, A. K. Sahoo, R. Kanwar, and R. P. Singh (2002). Estimation of monthly rain rate over Indian Ocean region using MSMR data. *Current Science*, 83 (7): 877-880.

CONFERENCE PRESENTATIONS

(Page numbers refer to peer-reviewed article published in *Proceedings*)

68. Cotten, D. L., S. Bernardes, **D. R. Mishra**, C. Adams, H. Neal, K. Ngo, P. Copenhaver, N. Illango, A. King, G. Grable, and P. Hwang, "A41H-0161: The SPectral Ocean Color (SPOC) Small Satellite Mission: From Payload to Ground Station Development and Everything in Between", poster presentation at the *American Geophysical Union Fall Meeting, San Francisco, CA, December 2016*.
67. Cotten, D. L., S. Bernardes, **D. R. Mishra**, C. Adams, H. Neal, K. Ngo, P. Copenhaver, N. Illango, A. King, G. Grable, and P. Hwang, "ED23B-0828: Enhancing STEM Education through Cubesats: Using Satellite Integration as a Teaching Tool at a Non-Tech School", poster presentation at the *American Geophysical Union Fall Meeting, San Francisco, CA, December 2016*.
66. **Mishra, D R.**, "Solving Coastal Environmental Challenges in the Age of Big Data", paper presentation at the *TropMet, Bhubaneswar, India, December 2016*.
65. Kumar, A., **D. R. Mishra**, Sk. Md. Equeen, H. J. Cho, and G. Rastogi, "Tale of Two Cyclones: Differential Impact of Phailin and Hudhud on Chilika Lagoon", poster presentation at the *TropMet, Bhubaneswar, India, December 2016*.
64. Boddula, V., L. Ramaswamy, R. Pasumarthi, and **D. R. Mishra**, "Data Driven Analysis of Algal Bloom Activity for Effective Water Sustainability", paper presentation at the *IEEE SustainCom, Atlanta, Georgia, October 2016*.

63. Hauer, M., and **D. R. Mishra**, “Adaption Regimes to Sea Level Rise: The Case of Coastal Louisiana”, paper presentation at the *Population Association of America Annual Meeting*, Washington DC, April 2016.
62. **Mishra, D. R.**, “Cyber-Cyano: Linking Big Data Science with Remote Sensing for Effective Monitoring of Water Resources”, paper presentation at the *American Association of Geographers Conference*, San Francisco, California, April 2016
61. Page, B., and **D. R. Mishra**, “A Performance Evaluation of Atmospheric Correction Models for Landsat-8 over Turbid Waters”, paper presentation at the *American Association of Geographers Conference*, San Francisco, California, April 2016
60. Astuti, I., **D. R. Mishra**, and B. S. Wiwoho, “Understanding 20 Years of Suspended Sediment Dynamics in Tropical Reservoirs in a Developing Country”, paper presentation at the *American Association of Geographers Conference*, San Francisco, California, April 2016
59. Kumar, A., **D. R. Mishra**, and Sk. Md. Equeenuddin, “Differential Impact of Anniversary Cyclones on a Coastal Lagoon”, paper presentation at the *American Association of Geographers Conference*, San Francisco, California, April 2016
58. Ghosh, S., J. Tao, and **D. R. Mishra**, “Analyzing MODIS Derived Site-specific Tidal Wetland Phenology using TIMESAT”, paper presentation at the *American Association of Geographers Conference*, San Francisco, California, April 2016
57. Rodrigues, T. W. P., **D. R. Mishra**, E. Alcântara, F. S. Y. Watanabe, and N. N. Imai, “Assessing Bio-optical Models to Estimate Total Suspended Matter in Oligotrophic Tropical Reservoirs”, paper presentation at the *American Association of Geographers Conference*, San Francisco, California, April 2016
56. Hauer, M., J. M. Evans, and **D. R. Mishra**, “Population Projections and Risk of Inundation from SLR for the United States in 2100”, poster presentation at the *Southeast Climate Consortium Fall Meeting*, Athens, Georgia, October 2015.
55. Boddula, V., A. Joshi, L. Ramaswamy and **D. R. Mishra**, "Harnessing Social Media for Environmental Sustainability: A Measurement Study on Harmful Algal Blooms", paper presentation at the 2015 *IEEE International Conference on Collaborative and Internet Computing (IEEE CIC)*, Hangzhou, P. R. China, October 2015.
54. Cao, F., **D. R. Mishra**, J. Schalles, and W. Miller, “Blending two ocean color algorithms to evaluate ultraviolet (UV) optics and photochemistry using the Hyperspectral Imager for the Coastal Ocean (HICO)”, paper presentation at the *International Ocean Color Science Meeting*, San Francisco, California, June 2015.
53. Astuti, I., S. Mishra, B. Schaeffer, and **D. R. Mishra**, “A Quasi Analytical Approach for Deriving Inherent Optical Properties in Florida Estuary Waters”, paper presentation at the *Association of American Geographers Conference*, Chicago, Illinois, April 2015.
52. Wang, L., and **D. R. Mishra**, “Estimating GPP in Georgia Coast Salt Marshes Equipped Based on MODIS product and CO₂ Eddy Covariance”, paper presentation at the *Association of American Geographers Conference*, Chicago, Illinois, April 2015.

51. Page, B., V. Boddula, **D. R. Mishra**, L. Ramaswamy, and S. Bhandarkar “A Cloud Infrastructure for Early Detection of Cyanobacterial Harmful Algal Blooms”, poster presentation at the *Association of American Geographers Conference*, Chicago, Illinois, April 2015.
50. Ogashawara, I., L. Li, J. Stech, and **D. R. Mishra**, “Assessing the variability in the specific absorption coefficient of phytoplankton through water type classification”, poster presentation at the *Association of American Geographers Conference*, Chicago, Illinois, April 2015.
49. Ghosh, G., and **D. R. Mishra**, “A comparative evaluation of established noise correction techniques on MODIS derived salt marsh phenology”, paper presentation at the *Association of American Geographers Conference*, Chicago, Illinois, April 2015.
48. Kumar, A., Sk. Md. Equeen, **D. R. Mishra**, and B. C. Acharya, “Variability of Total Suspended Sediment in Chilika Lake During Phailin using MODIS/TERRA,” paper presentation at *ISPRS Technical Commission VIII*, Remote Sensing Applications and Policies, Hyderabad, India, December 2014
47. Astuti, I., **D. R. Mishra**, S. Mishra, and B. Schaeffer, “Quasi Analytical Approach (QAA) for Deriving Optical Properties in Florida Estuary Waters,” poster presentation at *SEDAAG*, Athens, Georgia, November 2014
46. Ghosh, S., B. Bartelme, I. Astuti, E. Benyshek, D. Haskett, J. He, B. Page, S. Wilde, and **D. R. Mishra**, “Developing a Cyanobacteria Detection Tool for Georgia Inland Waters Using NASA Landsat 8 OLI Data for Water Quality Protection and Restoration,” paper presentation at *SEDAAG*, Athens, Georgia, November 2014
45. Wang, G., Z. Lee, and **D. R. Mishra**, “Retrieving Absorption Coefficient of Specific Pigments from Hyperspectral Remote Sensing Reflectance Measured over Phytoplankton Bloom Waters,” poster presentation at the *Ocean Optics XXII*, Portland, Maine, November 2014.
44. Watanabe, F.S.Y, E. Alcântara, T. W. P. Rodrigues, L. H. S. Rotta, N. N. Imai, **D. R. Mishra**, and C. C. F. Barbosa, “Application of RED-NIR Algorithms and Semi-analytical Models for Estimating Chlorophyll-a in Barra Bonita Reservoir, Tietê River (Brazil),” *Proceedings of the Ocean Optics XXII*, 6pp., Portland, Maine, November 2014.
43. **Mishra, D. R.**, S. Mishra, and S. Narumalani “Hyperspectral Remote Sensing of Cyanobacteria: Successes and Challenges”, *Proceedings of the SPIE Remote Sensing, Multispectral, Hyperspectral, and Ultraspectral Remote Sensing Technology, Techniques and Applications*. Vol 92630J, Beijing, China, November 2014, doi:10.1117/12.2069320.
42. Ogashawara, I., M. Curtarelli, **D. R. Mishra**, E. Alcantara, and J. L. Stech “Development of a Filter for Phycocyanin Bio-optical Estimation”, *Proceedings of the Geoscience and Remote Sensing Symposium (IGARSS)*, 2014 IEEE International , pp.3862-3865. Quebec, Canada, July 2014, doi: 10.1109/IGARSS.2014.6947327.
41. Cho, H. J., and **D. R. Mishra**, “Quantification of Health and Productivity of Salt Marshes using Satellite Data”, paper presentation at the *Coastal Habitat Integrated Mapping and Monitoring Program (CHIMMP) Workshop*, St. Petersburg, Florida April 2014.

40. Ghosh, G., and **D. R. Mishra**, “Phenological Analysis of Salt Marsh Habitats of Northern Gulf of Mexico Using MODIS Data”, paper presentation at the *Association of American Geographers Conference*, Tampa, Florida, April 2014.
39. He, J., S. Ghosh, S. Padgett-Vasquez, N. Chen, J. White, and **D. R. Mishra**, “Remote Estimation of Salt Marsh Biophysical Parameters in the Georgia Coast: Assessing Site Specific Salt Marsh Physiological Health.”, paper presentation at the *Association of American Geographers Conference*, Tampa, Florida, April 2014.
38. White, J., S. Padgett-Vasquez, S. Ghosh, A. Baruch, N. Chen, J. Mote, and **D. R. Mishra**, “Remote Estimation of Salt Marsh Biophysical Parameters in the Georgia Coast: Model Cal/Val using NASA Sensors to Improve Monitoring and Restoration Efforts by the Georgia Department of Natural Resources”, paper presentation at the *Association of American Geographers Conference*, Tampa, Florida, April 2014.
37. Banisakher, D., H. J. Cho, **D. R. Mishra**, and L. Morris, “Benthic Habitat Mapping in the Indian River Lagoon, Florida Using Hyperspectral Imager for the Coastal Ocean”, paper presentation at the *Association of American Geographers Conference*, Tampa, Florida, April 2014.
36. McNeal, K., C. Guthrie, and **D. R. Mishra**, “Sedimentary Biogeochemical Indicators for Assessing the Impacts of the DeepWater Horizon Blowout on Coastal Wetlands”, paper presentation at the *AGU Meeting of Americas*, Cancun, Mexico, May 2013.
35. Ghosh, S., **D. R. Mishra**, and H. J. Cho, “Monitoring the Response and Recovery of the Salt Marsh Biophysical Characteristics after the Deepwater Horizon Oil Spill”, paper presentation at the *Association of American Geographers Conference*, Los Angeles, California, April 2013.
34. Cho, J., **D. R. Mishra**, C. Clarke, and A. Kamerosky, “Hyperspectral Signal Bands to HICO Image Data Bands for Seagrass Mapping”, *Proceedings of the 2013 IEEE WHISPER*, 5th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing. 4pp. Gainesville, Florida, June 2013.
33. Guthrie, C., K. S. McNeal, **D. R. Mishra**, G. A. Blakeney, S. Ghosh, and C. G. Downs, “Temporal Salt Marsh Sediment Response to the Deep Water Horizon BP Oil Spill at Marsh Point, MS”, paper presentation at the *Geological Society of America Annual Meeting*, Paper No. 156-28, Charlotte, North Carolina, November 2012.
32. **Mishra, D. R.**, “Novel Remote Sensing Techniques for Monitoring Estuarine Water Quality”, presentation at the *SEERS Fall meeting*, Jacksonville, Florida, October 2012.
31. **Mishra D.**, H. J. Cho, S. Ghosh, C. Downs, A. Fox, and A. Mckibben, “Impact of the Gulf of Mexico Oil Spill on the Health and Productivity of Louisiana Salt Marshes”, poster presentation at the *COSPAR Scientific Assembly*, Mysore, India, July 2012.
30. Ghosh, S., **D. R. Mishra**, A. Gitelson, D. J. Reed, and C. Downs, “Remote Estimation of Gulf Coast Salt Marsh Biophysical Parameters”, paper presentation at the *Association of American Geographers Conference*, New York City, New York, February 2012.

29. Dash, P., N. Walker, **D. R. Mishra**, C. Hu, J. Pinckney, and E. D'Sa, "Atmospheric Correction, Vicarious Calibration and Development of Algorithms for Quantifying Cyanobacterial Blooms from Oceansat-1 OCM Satellite Data" paper presentation at the *AGU Fall Meeting*, San Francisco, California, December, 2011.
28. Mishra, S., **D. R. Mishra**, C. Tucker, "Quantifying Phycocyanin Concentration in Cyanobacterial Algal Blooms from Remote Sensing Reflectance-A Quasi Analytical Approach" poster presentation at the *AGU Fall Meeting*, San Francisco, California, December, 2011.
27. **Mishra, D. R.**, "Remote Sensing of Coastal Vegetation and Water Resources", presentation at the American Society for Photogrammetry & Remote Sensing (ASPRS) MSU Chapter, Starkville, Mississippi, November 2011.
26. **Mishra, D. R.**, "Impact of Climate Change on Coastal resources of Southeast United States", presentation at the CLIPSE Climate Change 2nd Workshop (NSF Sponsored), Memphis, Tennessee, October 2011.
25. Guthrie, C., K. S. McNeal, H. A. Stauffenberg, A. Blankley, **D. R. Mishra**, "Salt Marsh Sediment Biogeochemical Response to the Deep Water Horizon Oil Spill (Ocean Springs, MS) 2011", paper presentation at the Association of Environmental and Engineering Geologists (AEG) 54th Annual Meeting, Technical Session #13, Anchorage, Alaska, September 2011.
24. Ghosh, S., **D. R. Mishra**, H. J. Cho, P. Kirui, A. Fox, N. Jackson, C. Downs, and P. Merani, "Impact of the Gulf of Mexico Oil Spill on the Health and Productivity of Louisiana Salt Marshes", paper presentation at the *Northern Gulf Institute meeting*, Biloxi, Mississippi, May 2011.
23. Downs, C., S. Ghosh, and **D. R. Mishra**, "Using Proximal Sensing to Monitor the Oil Spill Impact on Wetlands Across Gulf States", poster presentation at the *Northern Gulf Institute meeting*, Biloxi, Mississippi, May 2011.
22. **Mishra D.**, H. J. Cho, S. Ghosh, P. Kirui, A. Fox, N. Jackson, C. Downs, and P. Merani, "Impact of the Gulf of Mexico Oil Spill on the Health and Productivity of Louisiana Salt Marshes: Preliminary Results", paper presentation at the *Association of American Geographers meeting*, Seattle, Washington, April 2011.
21. Dash, P., N. Walker, **D. R. Mishra**, and C. Hu, " Atmospheric Correction, Vicarious Calibration and Development of Algorithms for Quantifying Cyanobacterial Blooms from Oceansat-1 OCM Satellite Data", paper presentation at the *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico, February 2011.
20. Jackson, N., P. Kirui, S. Ghosh, H. J. Cho, and **D. R. Mishra**, "Quantifying the Impact of the Gulf of Mexico Oil Spill on Salt Marshes", poster presentation at the *Bays and Bayous Symposium*, Mobile, Alabama, December 2010.

19. **Mishra D.**, H. J. Cho, “Quantifying the Impact of the Gulf of Mexico Oil Spill on the Health and Productivity of Louisiana Salt Marshes”, poster presentation at the *NSF Oil Spill PI Meeting*, Tampa, Florida, November 2010.
18. Mishra S., **D. R. Mishra**, “A New Novel Normalized Band Difference Index for Mapping Chlorophyll-a in Case-II Productive Waters”, paper presentation at the *American Association of Geographers Conference*, Washington DC, April 2010.
17. Mishra S., **D. R. Mishra**, W. M. Schluchter “Hyperspectral Remote Sensing Techniques in Predicting Phycocyanin Concentrations in Cyanobacteria: A Comprehensive Study”, poster presentation at the *AGU Fall Meeting*, San Francisco, California, December 2009.
16. Mishra S., **D. R. Mishra**, “Effect of the opening of Mississippi river diversions on the spatio-temporal variability of water quality in the Lake Pontchartrain”, poster presentation at the *American Association of Geographers Conference*, Las Vegas, Nevada, March 2009.
15. Mishra S., **D. R. Mishra**, "Effect of Bonnet-Carrie Spillway opening on spatio-temporal variability of water quality parameters in the Lake Pontchartrain", poster presentation at the *9th Biennial Basics of the Basin Symposium*, New Orleans, Louisiana, November 2008.
14. Narumalani S., **D. R. Mishra**, P. Merani, and J. Hoffman, “Mapping and modeling of invasive vegetation along the North Platte River, NE, using remote sensing and GIS”, paper presentation at the *American Association of Geographers Conference*, Boston, Massachusetts, April 2008.
13. Becker, D., **D. R. Mishra**, and D. Rundquist, “Detecting Coastal Marsh Species Using Hyperspectral Remote Sensing”, poster presentation at the *AAG Great Plains-Rocky Mountain Division and the West Lakes Division meeting*, Lincoln, Nebraska, October 2006.
12. **Mishra, D. R.**, S. Narumalani, D. Rundquist, and M. Lawson, “Enhancing the detection and classification of coral reef and associated benthic habitats using AISA Eagle hyperspectral data”, poster presentation at the *AAG Great Plains-Rocky Mountain Division and the West Lakes Division meeting*, Lincoln, Nebraska, October 2006.
11. Wilson, R., **D. R. Mishra**, and S. Narumalani, “Saltcedar survey of the North Platte river”, paper presentation at the *Threats to Nebraska Rivers – Invasive Plants Conference*, Kearney, Nebraska, August 2006.
10. Narumalani, S., **D. R. Mishra**, J. Burkholder, P. Merani, and G. Wilson, “A comparative evaluation of ISODATA and Spectral Angle Mapping for the detection of Saltcedar using airborne hyperspectral imagery”, poster presentation at the *Pecora 16 Conference*, Sioux Falls, South Dakota, October 2005.
9. **Mishra, D. R.**, S. Narumalani, D. Rundquist, and M. Lawson, “Benthic habitat mapping in tropical marine environments using QuickBird imagery: A case study in Roatan Island, Honduras”, paper presentation at the *American Association of Geographers Conference*, Denver, Colorado, April 2005.

8. **Mishra, D. R.**, S. Narumalani, D. Rundquist, and M. Lawson, “Remote sensing of shallow marine environments”, paper presentation at the *NOAA, Coastal Geotools Conference*, Myrtle Beach, South Carolina, March 2005.
7. Narumalani, S. and **D. R. Mishra**, “Remote sensing for saltcedar detection”, presented at the Asian Institute of Technology, Bangkok, Thailand, November 2004.
6. **Mishra, D. R.**, S. Narumalani, and R. Rothwell, “Land Use change analysis at Effigy Mounds Monument, Iowa”, poster presentation at the SNR Annual Colloquium, Lincoln, Nebraska, October 2003.
5. Narumalani, S., R. Rothwell, **D. R. Mishra**, P. Budde, B. Witcher, L. Thomas, and M. DeBacker, “Using GIS in landscape ecology analysis,” presented at the Nebraska GIS Symposium, Lincoln, Nebraska, May 2003.
4. **Mishra, D. R.**, A. Sahoo, R. Kanwar, and R. P. Singh, “Rain rate over Indian sub-continent using MSMR data”, *Proceedings of the Pan Ocean Remote Sensing Conference*, Vol. II, pp. 550 – 554, Bali, Indonesia, September 2002.
3. **Mishra D. R.**, R. Kanwar, A. K. Sahoo, and R. P. Singh, “Effect of wind speed on rain rate over ocean using MSMR and QUICKSCAT Data”, poster presentation at *XII National Space Science Symposium*, Bhopal, India, February 2002.
2. **Mishra D. R.**, S. Dey, R. Kanwar, A. K. Sahoo, and R. P. Singh, “Variability of rain rate over ocean using MSMR Data”, poster presentation at the *ISRS Symposium*, Ahmedabad, India, December 2001.
1. Sahoo, A. K., **D. R. Mishra**, S. Dey, A. K. Shukla, and R. P. Singh, “Emissivity derived from MSMR data as a precursor for future Gujarat earthquakes”, paper presentation at the *ISRS Symposium*, Ahmedabad, India, December 2001.

TECHNICAL REPORTS

12. Wilde, S., and **D. R. Mishra** (2015). Final Report: Implications of eutrophication and climate change in promoting toxic cyanobacterial blooms in agricultural ponds across Georgia, GWRI Grant# 2014GA345B.
11. **Mishra, D. R.**, H. J. Cho, and S. Ghosh (2013). Final Report: RAPID: Quantifying the Impact of the BP Deepwater Horizon Oil Spill on the Health and Productivity of Louisiana Salt Marshes, NSF DEB Grant#1265224.
10. Reed, D., **D. R. Mishra**, and A. Gitelson (2013). Final Report: *A MODIS Based Decision Support Tool for Gulf Coast Salt Marsh Conservation and Restoration*, NASA Grant NNH08ZDA001N-GULF.
9. **Mishra, D. R.**, K. McNeal, A. Mercer, and B. Cooke (2012). Final Report: *Quantifying the Impact of the Gulf of Mexico Oil Spill on the Health and Productivity of Louisiana and Mississippi Salt Marshes*, NGI Phase-1 and NGI Phase-2.
8. **Mishra, D. R.**, D. Maygarden, and H. Egger (2012). Final report: *How Healthy is this Marsh?*

Employing Innovative Remote Sensing Techniques for Assessing Marsh Health in Restoration Projects, Involving High School Students and Teachers. Marine and Coastal Literacy, Louisiana Sea Grant, 27 pp.

7. **Mishra, D.**, P. Das, and S. Mishra (2009). Final report: *Measuring 2005 Land Loss in the Pontchartrain Basin Using High Resolution Color Infrared Aerial Photography at a Scale of 1/12,000: Hurricane Impact.* NOAA, 25 pp.
6. Narumalani, S., **D. R. Mishra** (2006). Final report: *Mapping Saltcedar, Russian olive, and Canada thistle along North Platte River corridor west of Lake McConaughy.* U.S Department of Agriculture, 45 pp.
5. Narumalani, S., **D. R. Mishra**, and C. Smith (2006). Final report: *Nebraska Army National Guard wetland planning level survey for Camp Ashland training site, Greenlief training site, and Mead training site.* Nebraska Military Department, 110 pp.
4. Narumalani, S., **D. R. Mishra**, P. B. T. Merani, and R. Rothwell (2005). Final report: *Nebraska Army National Guard planning level survey for Camp Ashland training site, Greenlief training site, and Mead training site.* Nebraska Military Department, 160 pp.
3. Narumalani, S., **D. R. Mishra**, and R. Rothwell (2004). Final report: *Land Use/Land Cover interpretation and analysis for three national monuments.* National Park Service, Intermountain Region, U.S. Department of the Interior, 93 pp.
2. Narumalani, S., S. Tunnell, G. Willson, J. Burkholder, and **D. R. Mishra** (2004). Final report: *Noxious weeds inventory and mapping at Capulin Volcano national monument, Fort Union national monument, and Lake Meredith national recreation area.* National Park Service, Intermountain Region, U.S. Department of the Interior, 55 pp.
1. **Mishra, D. R.**, (2003). *Processing GPS data from the NASA Experimental Advanced Research Lidar (EAARL).* Goddard Space Science Program report, NASA, code 972, pp. 1-22.

GRANTS ACTIVITY (CURRENT AND PENDING)

38. AVIRIS and Beyond: Developing a quasi-analytical modeling framework for rapid and frequent monitoring of water quality in Chilika Lagoon, (Role: PI, Co-Is: G. Rastogi and R. Samal), **NASA**, \$131,669. 07/15/2017-07/14/2019 (*pending*).
37. ITEST Strategies: Citizen Science in Schools, (Role: Co-I, PI: M. Cozzens, Co-Is: numerous), **NSF**, \$1,186,290. 06/01/2017-05/31/2019 (*pending*).
36. Estimating multi-scale marsh carbon fluxes with GBNERR, (Role: Co-I, PI: W. Wu), **DMR MS**, \$229,751. 07/01/2018-06/30/2020 (*pending*).
35. A tidal and species based MODIS GPP product for estimating marsh blue carbon across the southeastern United States, (Role: PI, Co-Is: J. O'Connell and D. Cotten), **NASA**, \$994,963. 03/01/2017-02/28/2019 (*current*).

32. A multi-sensor approach to enhance the prediction of mangrove biophysical characteristics in Chilika Lagoon and Bhitarkanika Wildlife Sanctuary, Odisha, India, (Role: faculty advisor), **NASA DEVELOP**. 09/12/2016-04/01/2017 (*current*).
31. EAGER: A sensor cloud-based community-centric approach for analyzing and mitigating Urban Heat Hazards, (Role: PI, Co-Is: L. Ramaswamy and A. Grundstein), **NSF**, \$238,399. 09/15/2016-09/14/2018 (*current*).
30. Digital orbital analysis of water resources for Georgia, (Role: PI, Co-Is: numerous), **NASA**, \$467,918. 06/22/2016-06/21/2018 (*current*).
29. GeorgiaSat-1, (Role: PI, Co-Is: numerous), **AFRL**, \$110,000. 01/01/2016-12/31/2017 (*current*).
28. Understanding the trajectory of coastal salt marsh structure, function, and processes in the face of sea level rise: a synthesis from historical imagery, biophysical processes, and hierarchical modeling (Role: Co-I, PI: P. Biber, Co-Is: W. Wu, and G. Carter), **National Academy of Sciences**, \$506,619. 01/01/2016-12/31/2018 (*current*).
26. A novel hybrid approach for mapping belowground productivity and carbon sequestration potential within Georgia salt marshes, (Role: PI, Co-Is: J. O'Connell, M. Alber, and K. Byrd), **GA SeaGrant**, \$212,808. 02/01/2016-01/31/2018 (*current*).
25. Understanding and managing the risk from cyanobacteria toxicity in farm ponds due to land management and climate interactions, (Role: PI, Co-Is: L. Kramer, and S. Wilde), **NIFA/USDA- NNF**, \$36,000. 08/01/2015-07/31/2017 (*current*).
24. CyberSEES: Type 1: Meghdoot: A multi-cloud for enhancing sustainability via effective monitoring of inland waters and coastal wetlands, (Role: Co-I, PI: L. Ramaswamy, Co-I: S. Bhandarkar), **NSF**, \$399,912. 10/01/2014-09/30/2016 (*current*).
23. A MODIS biophysical parameters centered framework for monitoring carbon sequestration potential of Gulf Coast salt marshes, (Role: PI), **NASA**, \$441,413. 09/01/2014 – 12/31/2016 (*current*).
22. Parameterization of a bio-optical model for deriving inherent optical properties in tropical reservoirs in Brazil: Nova Avanhandava and Barra Bonita (São Paulo State), (Role: Co-I, PI: E. Alcântara), **Science without Borders: CNPq/MCTI, Govt. of Brazil**, R\$323,287. 08/11/2013-08/10/2016 (*current*).
21. Utilizing NASA earth observations and proximal remote sensing for mapping spatio-temporal distribution of Hydrilla, (Role: faculty advisor), **NASA DEVELOP**. 05/15/2015-07/31/2016 (*current*).
20. Implications of eutrophication and climate change in promoting toxic cyanobacterial blooms in agricultural ponds across Georgia, (Role: Co-I, PI: S. Wilde), **GWRI**, \$54,320. 08/01/2014-07/31/2015.

19. Developing a cyanobacteria detection tool for Georgia inland waters using NASA Landsat-8 OLI data for water quality protection and restoration, (Role: faculty advisor), **NASA DEVELOP**. 06/15/2014-04/30/2015.
18. Transformational approach to monitoring water quality sustainability of coastal ecosystems from satellite remote sensing, (Role: Co-I, PI: B. Schaeffer), **NRL**. 11/1/2012-12/31/2014.
17. Model to separate water column chlorophyll and benthic vegetation signals from HICO data, (Role: Co-I, PI: H. Cho), **NRL**. 11/1/2012-12/31/2014.
16. Preliminary research and data gathering for resubmission of the NSF-CyberSEES proposal- "CyberSEES: Type 1: Meghdoot: A multi-cloud infrastructure for effective monitoring of inland waters and coastal wetlands sustainability, (Role: Co-I, PI: L. Ramaswamy, Co-I: S. Bhandarkar), **UGA OVPR**, \$10,000. 01/01/2014-05/15/2014.
15. Remote Estimation of Salt Marsh Biophysical Parameters in the Georgia Coast: Model Cal/Val using NASA Sensors to Improve Monitoring and Restoration Efforts by the Georgia Department of Natural Resources, (Role: faculty advisor), **NASA DEVELOP**. 06/15/2013-11/30/2013.
14. Physics-based ocean-color algorithms for water-quality products of coastal and inland waters, (Role: Co-I, PI: Z. Lee), **NASA**, \$194,550. 08/01/2011 - 08/31/2013.
13. RAPID: Quantifying the impact of the Gulf of Mexico oil spill on the health and productivity of Louisiana salt marshes, (Role: PI, Co-I: H. Cho), **NSF**, \$199,703 (MSU Portion: \$129,703). 08/15/2010- 07/31/2013.
12. Strengthening global climate change education through remote sensing application in coastal environment using NASA satellite data and models, (Role: Co-I, PI: H. Cho), **NASA**, \$320,977. 05/15/2010-08/14/2013.
11. A MODIS based decision support tool for Gulf Coast salt marsh conservation and restoration, (Role: PI, Co-Is: D. Reed and A. Gitelson), **NASA**, \$395,439. 02/01/2010-12/31/2012.
10. A regional partnership for climate science literacy in the southeastern United States, (Role: Co-I, PI: K. McNeal, Co-Is: numerous), **NSF**, \$998,998. 10/1/2010- 09/30/2012 .
9. Comprehensive study of the impact of the Deepwater Horizon oil spill on the health and productivity of Gulf Coast salt marshes, (Role: PI, Co-Is: K. McNeal, A. Mercer, and B. Cooke), **NGI Phase-2**, \$193,775. 02/01/2011 - 08/15/2012.
8. How healthy is this marsh? Employing innovative remote sensing techniques for assessing marsh health in restoration projects involving high school students and teachers, (Role: PI, Co-I: D. Maygarden), **Louisiana Sea Grant**, \$149,987. 02/2010-05/2012.
7. Developing a tool for remote detection of cyanobacterial harmful algal bloom in Mississippi waters: A tangible step toward an early warning system, (Role: PI), **Henry Fund-Mississippi State University**, \$10,000. 05/17/2010- 03/03/2012.

6. Field sampling to study the impact of Deepwater Horizon oil spill on the health and productivity of Gulf Coast salt marshes, (Role: PI, Co-Is: K. McNeal, A. Mercer, and B. Cooke), **Gulf of Mexico Research Initiative**, \$80,876. 07/01/2011 - 02/28/2012.
5. Developing a geospatial tool to quantify the effectiveness of the previous and current marsh restoration efforts, (Role: PI), **DNR LA**, \$75,000; 08/01/2009 – 07/31/2012.
4. Comprehensive study of the impact of the deepwater horizon oil spill on the health and productivity of Gulf Coast salt marshes, (Role: Co-I, PI: D. Shaw, Co-Is: numerous), **NGI Phase-1**, \$60,000 (**Total Funding: \$10, 000,000**); 05/01/2010 – 12/31/2010.
3. Measuring 2005 land loss in the Pontchartrain Basin using high resolution color infrared aerial photography at a scale of 1/12,000: Hurricane impact, (Role: PI), **NOAA**, \$89,128; 06/01/2007 – 05/31/2009.
2. Mapping, quantifying, and predicting current and future invasive plant species spread along the North Platte River corridor In Nebraska (Role: Co-I, PI: S. Narumalani), **USDA**, \$45,000; 10/01/2005 – 09/30/2007.
1. Natural resources mapping of Camp Ashland Training Site, Ashland, NE, using high density LIDAR (Role: Co-I, PI: S. Narumalani), **Nebraska Army National Guard**, \$69,000; 01/01/2006 – 12/31/2006.

GRANTS APPLIED (NOT FUNDED)

2016:

69. Using NEX-DCP30 and GRACE data to improve estimates of future agricultural water use in Florida, (Role: Co-I, PI: V. Seidel, Co-Is: numerous), **NASA**, \$500,000. 01/01/2017-12/31/2020.
68. The dual geographies of sea level rise impact: Decoding the current and future impacts of sea level rise on coastal communities and land-locked urban centers, (Role: Co-I, PI: M. Hauer, Co-Is: S. Jones, J. Pippin, and K. Sikes), **NSF**, \$495,304. 01/01/2017-12/31/2020.
67. Strengthening earth, ocean, and atmospheric science GEOINT through a consortium level coastal GEOINT curriculum and research initiative, (Role: Co-I, PI: H. Cho), **NGA**, \$748,559. 10/15/2016-10/14/2021.
66. Net ecosystem carbon balance in wetland ecosystems: Latitudinal patterns to improve MODIS-derived global carbon budgets, (Role: Co-I, PI: J. Fourqurean, Co-Is: numerous), **ILTER NCO**, 10/01/2016-09/01/2018.
65. NRT-IGE: Wicked problems, resilient solutions for coastal impacts of climate change, (Role: Co-I, PI: M. Madden, Co-Is: numerous), **NSF**, \$499,723. 08/01/2016-07/31/2019.
64. Linking satellite and in situ data to validate coastal wetland "blue carbon" fluxes for salt marshes: Upscaling LTER coastal sites to an east coast flux product, (Role: Co-I, PI: R. Chen, Co-Is: numerous), **NASA**, \$1,499,791. 10/01/2016-09/30/2019.

63. INFEWS citizen research and education center, (Role: Co-I, PI: M. Cozzens, Co-Is: numerous), **NSF**, \$1,000,000. 05/01/2016-04/30/2019.
62. Resiliency of natural and restored coastal wetlands and their blue carbon capacity in the Northern Gulf of Mexico impacted by sea-level rise, (Role: Co-I, PI: W. Wu, Co-Is: P. Biber, Y. Ding, A. Gray), **NOAA**, \$1,000,000. 09/01/2016-08/31/2020.
61. EESLR2016 - Modeling the coupled dynamics between coastal eutrophication, seagrass, and hydrodynamics under climate change and land-based nutrient loading scenarios (Role: Co-I, PI: M. Jiang, Co-Is: H. Cho, F. Shi, L. Zheng, J. Beever), **NOAA**, \$900,000. 09/01/2016-08/31/2019.
60. Coastal SEES: Effects of sea-level rise and saline intrusion on sustainability of coastal marshes and potential impacts to human societies through inundation and loss of ecosystem services, (Role: Co-I, PI: P. Biber, Co-Is: numerous), **NSF**, \$1,994,900. 08/01/2016-07/31/2019.

2015:

59. Establishing a Center of Research Excellence in Integrated Ecosystem Management at Bethune-Cookman University (Role: Co-I, PI: M. Reiter, Co-Is: numerous), **NSF**, \$4,988,504. 09/01/2015-08/31/2020.
58. Strengthening geospatial literacy in under-represented minority youth, in Georgia and Florida, (Role: Co-I, PI: R. Rivero, Co-Is: J. Papajorgji, H. Cho), **NASA**, \$480,000. 09/01/2015-08/31/2018.
57. A remote-sensing tool for monitoring living shorelines, coastal wetland resiliency and restoration trajectories in salt marshes (Role: Co-I, PI: M. Alber, Co-Is: J. O'Connell, and K. Byrd), **NOAA**, \$500,023. 01/01/2016-12/31/2019.
56. Implications of oil spill on the carbon sequestration potential of Gulf Coast salt marshes: A long-term study using multi-scale and multi-parameter data-model fusion, (Role: Co-I, PI: W. Wu), **GoMRI**, \$1,695,372. 01/01/2016-12/31/2019.
55. Environmental Impact Assessment of Oil Spills through Integration of Biophysical, Social, and Climatological Data (Role: Co-I, PI: B. Murali, Co-Is: B. Kar, and A. Mercer), **GoMRI**, \$940,294. 01/01/2016-12/31/2019.
54. Enhancing Meghdoot for Analyzing Food Production Disruption Linked to Water Resource Degradation and Cyanobacterial Harmful Algal Blooms (Role: Co-I, PI: L. Ramaswamy, Co-Is: H. Kurtz, and S. Wilde), **NSF**, \$79,853. 06/01/2015-05/31/2016.
53. Eutrophication, climate change, and toxic cyanobacterial blooms: Developing a scale-up tool to identify and assess impaired water quality in southeastern U.S., (Role: Co-I, PI: S. Wilde), **USGS NIWA**, \$448,898. 08/01/2015-07/31/2018.
52. Research academy center for advanced space-based earth sciences, (Role: Co-I, PI: H. Cho, Co-Is: Numerous), **NASA**, \$4,872,156. 09/01/2015-08/31/2020.

51. Modeling feedbacks for maintaining resilience of watershed services across socio-ecological zones in Costa Rica, (Role: Co-I N. Nibbelink, Co-Is: Numerous), **NSF**, \$1,765,258. 08/01/2015-07/31/2019.
50. Utilizing NASA earth observations to enhance agriculture and sustainability in a school-based enterprise (SBE) setting, (Role: Co-faculty advisor with R. Rivero, and J. Papajorgji), **NASA DEVELOP**. 05/15/2015-07/31/2015.
49. Development and implementation of a novel radiative transfer theory for remote detection of cyanobacterial harmful algae in inland waters: A tangible step toward an early warning system, (Role: PI), **NASA**, \$354,940. 04/01/2015-03/31/2017.
48. Modeling and mapping vulnerability of coastal communities to flooding and cyanobacteria blooms in the Charlotte Harbor and Caloosahatchee Estuary, Florida, (Role: Co-I, PI: M. Jiang, Co-Is: H. Cho, and L. Zheng), **NOAA**, \$299,829. 08/01/2015-07/31/2017.
- 2014:**
47. Development of management tools for detection of drought induced harmful algal blooms in eutrophic farm ponds and water supply lakes, (Role: Co-I, PI: E. Kramer, Co-Is: S. Wilde, G. Colson, and A. Milewski), **NASA**, \$1,882,929. 08/01/2014-07/31/2018.
46. Development of a risk assessment model for climate change induced harmful algal blooms and co-occurring pathogenic microbes in eutrophic farm ponds and water supply lake, (Role: Co-I, PI: E. Kramer, Co-Is: numerous), **CDC**, \$50,000. 01/01/2015-12/31/2015.
45. A novel hybrid approach for mapping belowground productivity and carbon sequestration potential within Georgia salt marshes, (Role: PI, Co-Is: M. Alber, J. O'Connell, K. Byrd), **GA SeaGrant**, \$99,996. 01/01/2015-12/31/2017.
44. Developing a geospatial tool for frequent monitoring of biophysical parameters in salt marsh dieback sites across Georgia: A tangible step towards targeted restoration and effective management, (Role: PI, Co-Is: C. Hopkinson and K. Koo), **GA DNR**, \$224,770. 08/01/2014 – 07/31/2016.
43. Monitoring, Quantifying, and Mapping the effects of shoreline armoring on adjacent salt marsh elevations, (Role: Co-I, PI: C. Hopkinson, Co-I: K. Koo), **GA DNR**, \$228,544. 08/01/2014 – 07/31/2016.
42. Rapid change in lake water quality resulting from multiple invasive species: Perceptions and responses to environmental tipping points, (Role: Co-I, PI: A. Covich, Co-Is: M. Madden, J. Gutierrez, and M. Hybinette), **NSF**, \$951,683. 05/01/14-04/30/2017.
41. Mountaintops to mangroves: Modeling complex social and ecological dynamics in watersheds of the Pájaro Campana Biological Corridor, Costa Rica, (Role: Co-I, PI: Q. Newcomer, Co-Is: Numerous), **NSF**, \$1,496,807. 08/01/2014-07/31/2018.
40. Development of MODIS based algorithms for mapping the initiation, growth, and senescence of Cyanobacterial harmful algae in turbid productive waters, (Role: PI), **NASA**, \$649,888. 01/01/2014-12/31/2017

39. Establishing a Center of Research Excellence in Integrated Ecosystem Management at Bethune-Cookman University, (Role: Co-I, PI: M. Reiter, Co-Is: numerous), **NSF**, \$5,000,000. 01/01/2014-12/31/2019

2013:

38. CyberSEES: Type 1: Meghdoot: A multi-cloud infrastructure for effective monitoring of inland waters and coastal wetlands sustainability, (Role: Co-I, PI: L. Ramaswamy, Co-I: S. Bhandarkar), **NSF**, \$294,762. 08/15/2013-08/14/2015

37. Investigation, prediction, and management of agricultural landscapes to reduce the risk of lethal cyanotoxins in livestock ponds, (Role: Co-I, PI: S. Wilde, Co-Is: G. Burtle, R. Haynie, and A. Jones), **USDA**, \$500,000. 09/01/2013-08/31/2016

36. Developing a rapid remote sensing tool for improving early detection of marsh dieback events, (Role: Co-I, PI: G. Carbone), **NOAA**, \$94,964. 10/01.2013-09/30/2015

35. Coastal SEES Track 2: Reaching coastal sustainability through investigating human-natural systems and stakeholder literacy of LA-MS wetlands, (Role: Co-I, PI: K. McNeal, Co-Is: T. Mlsna, J. Paz, and A. Mercer), **NSF**, \$2,996,160. 09/01/2013-08/31/2018

34. Center for Sustainable Water and Nutrient Management, (Role: Co-I, PI: D. Franklin, Co-Is: numerous), **EPA**, \$3,282,732. 10/31/2013-09/30/2017

33. Enhancing higher education and economic development through a partnership in environmental and energy science & engineering partnership (EESEP), (Role: Co-I, PI: K. Das, Co-Is: M. Eiteman, J. Kastner, G. Gama, and S. Mani), **US India Educational Foundation (USIEF)**, \$249,272. 08/1/2013-07/31/2016

2012:

32. Long-term study of the impact of Deepwater Horizon oil spill on the health and productivity of Gulf Coast salt marshes, (Role: PI, Co-Is: K. McNeal and A. Mercer), **GoMRI**, \$850,000. 08/15/2012-08/14/2015.

31. Characterization of microclimate in heterogeneous landscapes: Utilization of hyperspectral and multispectral remote sensing (Role: Co-I, PI: U. Nair, Co-Is: S. Christopher, and D. Niyogi), **NASA (A.26)**, \$450,000. 08/15/2012-08/14/2015.

30. Establishing a center of research excellence in integrated ecosystem management at Bethune-Cookman University (Role: Collaborator, PI: H. Cho, Co-Is: numerous), **NSF**, \$4,764,362. 08/01/2012-07/31/2017.

29. Oil spill impact assessment along the Alabama Coast: Transport modeling and remote sensing of wetlands and shallow marine benthic habitats, (Role: Co-I, PI: U. Nair, Co-Is: S. Christopher, and H. Cho), **Gulf Research Initiative**, \$1,000,000. 08/15/2012-08/14/2015.

28. CCEP II: Climate Literacy Partnership in the South East (CLiPSE): Creating a good climate for civic dialogue through a values-based education approach for formal and informal

audiences, (Role: Co-I, PI: K. McNeal, Co-Is: R. Smith, D. Hare, D. Rutherford, U. Nair, H. Cho, A. Mercer, J. Paz), **NSF**, \$6,111,160. 09/2015/12-08/31/2017.

27. Developing and implementing novel algorithms for detection and quantification of cyanobacterial harmful algae using Visible Infrared Imager Radiometer Suite (VIIRS), (Role: PI, Co-I: H. Cho), **NESDIS/NOAA**, \$355,132. 05/01/2012-04/30/2014.
26. Advanced water correction for shallow littoral zone mapping using Visible Infrared Imager Radiometer Suite (VIIRS), (Role: Co-I, PI: H. Cho), **NESDIS/NOAA**, \$304,355 (MSU Portion: \$108,451). 05/01/2012-04/30/2014.
25. Remote sensing quantification of rising CO₂ threats to warm-season grasses: An experimental approach, (Role: PI, Co-Is: D. Lang, J. Varco, and J. Martin), **NASA**, \$690,481. 05/01/2012-04/30/2015.

2011:

24. Developing and implementing an early warning system for remote detection and quantification of cyanobacterial harmful algae in Mississippi waters, (Role: PI), **Mississippi Water Resources Research Institute**, \$55,219. 05/01/2011-04/30/2012
23. Advanced water correction for shallow littoral zone mapping, (Role: Co-I, PI: H. Cho, Co-I: D. Lu), **DOD**, \$620,000. 05/01/2011-04/30/2014.
22. Reduction in minority heat-related deaths through heat-island mitigation in poor and rural towns, (Role: Co-I, PI: G. Dixon, Co-Is: C. Fulford, and R. Cossman), **NSF**, \$780,819. 05/01/2011 - 04/30/2014.
21. Gulf State nano-technology consortium for oil spill assessment and remediation (NCOSAR), (Role: Co-I, PI: J. Ge, Co-Is: numerous), **GoMRI**, \$21,093,344. 10/01/2011-09/30/2014.
20. Gulf oil spill remote sensing readiness consortium, (Role: Co-I, PI: G. Carter, Co-Is: numerous), **GoMRI**, \$18,635,000. 10/01/2011-09/30/2014.
19. Consortium for northern Gulf ecosystem research (CoNGER), (Role: Co-I, PI: W. McAnally, Co-Is: numerous), **GoMRI**, \$21,000,000. 10/01/2011-09/30/2014.
18. DWH Impact on Environment, Human Health and Community Resiliency, (Role: Co-I, PI: P. Tchounwou, Co-Is: numerous), **NIH**, \$7,142,873. 10/01/2011-09/30/2014.

2010:

17. Impact of periodic climate changes on the dynamics of bird population and influenza A viruses at the delta region of the Mississippi River, (Role: Co-I, PI: H. Wan, Co-Is: B. Cooke, R. Kaminski, and B. Davis), **NASA**, \$2,188,420. 02/01/2011-01/31/2014.
16. Assessing post-spill stress and recovery across wetland landscapes using fine-scale hyperspectral imaging spectrometry, (Role: Co-I, PI: D. Reed, Co-I: A. Gitelson), **Interagency Alternative Technology Assessment Program**, \$978,000. 10/01/2010-09/30/2011.

15. Developing a prototype remote detection tool to detect the off-flavor causing cyanobacteria in catfish ponds, FY 2010 Food Safety Initiative, (Role: PI), **Mississippi Agricultural and Forestry Experiment Station**, \$46,635. 08/01/2010-07/31/2011.
14. Advanced water correction for shallow littoral zone mapping, (Role: Co-I, PI: H. Cho), **NGA**, \$300,000. 08/01/2010-07/31/2012.
13. Theory and model for remote detection of cyanobacterial harmful algae in turbid productive waters: A tangible step toward an early warning system, (Role: PI), **NASA**, \$447,820. 10/01/2010-09/30/2013.
12. Advanced correction to remove the confounding effect of water column from remotely sensed data for shallow coastal benthic habitat mapping, (Role: Co-I, PI: H. Cho), **NASA**, \$459,869. 10/01/2010-09/30/2013.

2009:

11. A stochastic modeling approach for characterizing the dynamics of coupled natural and human systems, (Role: PI), **NSF**, \$112,208. 08/01/2009-07/31/2010.
10. Quantifying the effectiveness of previous marsh restoration efforts by monitoring marsh biophysical parameters, (Role: PI), **Coastal Restoration and Enhancement Through Science And Technology (CREST) Louisiana**, \$22,179. 07/01/2009-06/30/2010.
9. A novel field based remote sensing model: Working towards development of an early warning tool for remote detection of cyanobacterial harmful algal bloom, (Role: PI), **Research Initiation Program - MSU**, \$9,972. 08/01/2009-07/31/2010.
8. Developing a tool for remote detection of cyanobacterial harmful algal bloom in Mississippi waters: A tangible step toward an early warning system, (Role: PI), **Mississippi Water Resources Research Institute**, \$56,446. 05/01/2009-04/30/2010.
7. Geospatial modeling for salt marsh stress monitoring and restoration, (Role: PI, Co-I: H. Cho), **NGA**, \$300,000. 05/01/2009-04/30/2011.
6. Collaborative research: Episodes of algal bloom along southern California Coast: Dust storm or coastal upwelling? (Role: Co-I, PI: R. Singh, Co-I: A. Prasad, and B. Wright), **NSF**, \$817,832. 08/01/2009-07/31/2011.

2008:

5. Non-destructive mapping of seagrass habitats using semi-analytical models and hyperspectral remote sensing techniques: the Chandeleur Islands of coastal Louisiana and Mississippi, (Role: PI, Co-Is: S. Narumalani, D. Rundquist), **EPA**, \$329,241. 08/01/2008-07/31/2010.
4. Prediction and validation of nesting sites for sea turtles in the coastal zone of Louisiana: an adaptive management approach for conservation and restoration, (Role: Co-I, PI: J. Hoffman) **Coastal Restoration and Enhancement Through Science And Technology (CREST) Louisiana**, \$114,619. 07/01/2008-06/30/2009.

3. Developing a tool to enhance detection and spatio-temporal monitoring of cyanobacterial harmful algal bloom in Louisiana estuarine environments, (Role: PI), **BoR-LSU**, \$134,907. 08/01/2008-07/31/2010.

2007:

2. A Non-destructive approach for mapping the spatial distribution of submerged aquatic vegetation in Lake Pontchartrain using hyperspectral remote sensing techniques, (Role: PI), **Coastal Restoration and Enhancement Through Science And Technology (CREST) Louisiana**, \$72,961. 07/01/2007-06/30/2008.
1. Responses of Louisiana coastal waters to nutrient loading from the Mississippi River: Algorithm development, mapping, and monitoring from satellite data, (Role: PI), **BoR-LSU**, \$156,675. 08/01/2007-07/31/2009.

NEWS AND MEDIA REPORTS

- Featured stories, interviews and media reports on the NASA and AirForce funded CubeSat projects at: UGA Today, Red and Black, Online Athens, GA Public Radio, March 2016
- Featured stories, interviews, media reports, and blogs on the Nature Climate Change paper at 270 outlets including: NY Times, Yahoo News, National Geographic, Time Magazine, LA Times, Chicago Tribune, Bloomberg News, Daily Mail, Guardian, Miami Herald, Reuters, Wired, Carbon Brief, Climate Central, Mashable, Phys, Times of India, India Times, Orlando NPR, Daytona News Journal, Environment & Energy Publishing (Washington, D.C.), WNCT Channel 9, Greenville, NC, Fox35, Orlando, Reuters TV, Weather Plus, Huffington Post, Star Tribune, Forbes, Atlanta Journal Constitution, UGA Today, Online Athens, GA Public Radio, Red and Black, Informs, Hartford Courant, WYNC, The Telegraph, South Florida Sun-Sentinel, Business Insider, The Boston Globe, World News SBS, Adelaide Now, EurekAlert!, NOLA - New Orleans Local News, Daily Press, Arstechnica, The Hamilton Spectator, Shanghai Daily, SF Gate, MSN, Manila Bulletin, The Economic Times, Popular Science, Christian Science Monitor, Live Science, Tampa Bay Times, Irish Examiner, International Business Times, Seattle Post-Intelligencer, Fusion, Public Radio International, Newsweek, and numerous others. Link to all reports at: <http://www.nature.com/nclimate/journal/v6/n7/nclimate2961/metrics/news>

Ranked #21 in media coverage among all climate science papers published in 2016.

- Interviewed by German Public Radio on the 3rd Anniversary of BP DWH Oil Spill at: <http://www.dradio.de/dlf/sendungen/forschak/2080031/>
- Research activities featured in Gulf Research Initiative website at: <http://gulfresearchinitiative.org/2012/identification-of-marsh-stress-hot-spots-leads-to-restoration-tool/>
- Research activities featured in May 2012 issue of NOAA Communicator at: http://www.externalaffairs.noaa.gov/communicator/noacom_16.html

- Vastag, B. (2011, April 18). A year after BP spill, fate of Gulf ecosystem still murky. *Washington Post*, Web: http://www.washingtonpost.com/national/a-year-after-bp-oil-spill-fate-of-gulf-ecosystem-remains-murky/2011/04/15/AFH3FEwD_story.html
- Kaufman, L. (2011, April 11). Gulf's complexity and resilience seen in studies of oil spill. *The New York Times*, Web: <http://www.nytimes.com/2011/04/12/science/12spill.html?pagewanted=all>

POSTDOCTORAL ASSOCIATE SUPERVISED (CURRENT & FORMER)

- Dr. Jessica L. O'Connell (Ph.D. Oklahoma State University, 2011): 2013-present (Co-supervisor)
- Dr. David L. Cotton (Ph.D. University of Georgia, 2011): 2014-present (Co-supervisor)
- Dr. Jianbin Tao (Ph.D. Wuhan University, 2010): 2015-2016 (Supervisor)
- Dr. Ahmed Wahid (Ph.D. Suez Canal University, Egypt, 2008): 2014 (Co-supervisor)
- Dr. Prashanth Alluvada (Ph.D. Indian Institute of Technology, Kanpur, 2003): 2009-2010

STUDENTS ADVISED (CURRENT & FORMER)

Current Ph.D. Students:

Shuvankar Ghosh (Ph.D. Geography, University of Georgia). Dissertation title: *Bio-physical remote sensing of salt marshes*.

Abhishek Kumar (Ph.D. Geography, University of Georgia). Dissertation title: *TBD*.

Dina Rasquinha (Ph.D. ICON/Geography, University of Georgia). Dissertation title: *TBD*.

Ike Astuti (Ph.D. Geography, University of Georgia). Dissertation title: *Characterizing the impacts of two decades land use change in tropical watersheds (1994 – 2014) on the water quality of reservoirs, Indonesia*.

Jayanta Ganguli (Ph.D. Geography, University of Georgia). Dissertation title: *Exploring resilience through properties of systems and systems of property*

Thanan Pequeno (Ph.D. Department of Cartography, São Paulo State University, Presidente Prudente, Brazil). Dissertation title: *TBD* (Co-Adviser)

Past Ph.D. Students:

Fernanda Watanabe (Ph.D. Department of Cartography, São Paulo State University, Presidente Prudente, Brazil). Dissertation title: *Parametrization of bio-optical models for estimating chlorophyll-a concentration in the Bonita Reservoir, Tiete River, SP, Brazil* (Co-Adviser). (**Graduated: Mar, 2016**).

Luiz Henrique da Silva Rotta (Ph.D. Department of Cartography, São Paulo State University, Presidente Prudente, Brazil). Dissertation title: *Estimation of submerged aquatic vegetation height and distribution in Nova Avanhandava Reservoir (São Paulo State, Brazil) using bio-optical modeling* (Co-Adviser). (**Graduated: Mar, 2014**).

Sachi Mishra (Ph.D. Earth and Atmospheric Sciences, Mississippi State University).
Dissertation title: *Remote sensing of cyanobacterial harmful algal bloom in turbid productive waters. (Graduated: Aug, 2012).*

Current Masters Students:

B. Page (M.S. Geography, University of Georgia). Thesis title: *A multi-satellite based technique for rapid detection and monitoring of cyanobacterial algal blooms across inland waters* (Adviser)

S. Weber (M.S. Geography, University of Georgia). Thesis title: *Understanding and managing the risk from cyanobacteria toxicity in farm ponds due to land management and climate interactions* (Adviser)

Past Masters Students:

Li Wang (M.S. Geography, University of Georgia; 2015). Thesis title: *Tide adjusted wetland index (TAWI) for Georgia salt marsh ecosystem: A model to minimize the tide effect on MODIS surface reflectance.*

Edward Huell (M.S. Geosciences, Mississippi State University; 2012). Thesis title: *Comparative study on DEM interpolation using Monte Carlo and Latin Hypercube simulation.*

Sara K. Moore (M.S. Earth and Environmental Sciences, University of New Orleans; 2010). Thesis title: *Developing a geospatial tool to quantify the effectiveness of the previous and current marsh restoration efforts.*

Current M.S. and Ph.D. Committees:

Robert Sorrells (Ph.D. Geography, University of Georgia). Dissertation title: *TBD*

Subash Dahal (Ph.D. Plant and Soil Sciences, University of Georgia). Dissertation title: *TBD*

Moumita Chanda Das (M.S. Computer Science, University of Georgia). Thesis title: *TBD*

Vinay Kumar Boddula (Ph.D. Computer Science, University of Georgia). Dissertation title: *TBD*

Brad Johnson (Ph.D. Geography, University of Georgia). Dissertation title: *Towards the understanding and development of an urban-influenced climate framework*

Elizabeth Anne Guinessey (Ph.D. Ecology, University of Georgia). Dissertation title: *TBD.*

Ashton Griffin (Ph.D. Ecology, University of Georgia). Dissertation title: *TBD.*

Steve Padgett-Vasquez (Ph.D. Geography, University of Georgia). Dissertation title: *From the rainforest to the mangrove: Using NASA EOS to evaluate and direct Costa Rica's payment for ecosystem services in a coupled human-natural system.*

Paul Merani (Ph.D. Geography, University of Nebraska, Lincoln). Dissertation title: *Using remote sensing for non-destructive estimation and mapping of above-ground biomass associated with emergent salt marsh vegetation.*

Past M.S. and Ph.D. Committees:

Brett Stephen Berry (M.S. Ecology, University of Georgia; 2016). Thesis title: *Quantifying the effects of white pox disease and bleaching in Elkhorn coral in the Florida Keys from 1994-2014.*

Fang Cao (Ph.D. Marine Science, University of Georgia; 2015). Dissertation title: *A new algorithm to retrieve Colored Dissolved Organic Matter (CDOM) absorbance spectra in the UV from ocean color.*

Awani Joshi (M.S. Computer Science, University of Georgia; 2015). Thesis title: *A measurement study on harmful algal blooms using social media-Twitter*

Reshma Chowdary (M.S. Computer Science, University of Georgia; 2015). Thesis title: *Computation analysis of satellite data for chlorophyll concentration*

Branden McGee (M.E.P.D, College of Environmental Design, University of Georgia; 2014). Thesis title: *Using spatial analysis to determine critical areas of the encroachment of saltwater for planning*

Siva Venkat Gogineni (M.S. Computer Science, University of Georgia; 2014). Thesis title: *An empirical evaluation of big data technologies for federated sensor services*

Igor Ogashawara (M.S. Remote Sensing, National Institute for Space Research, INPE, Brazil; 2014). Thesis title: *Re-parameterization of a quasi-analytical algorithm and phycocyanin estimation for a tropical reservoir*

Jamie Morgan (M.S. Forestry, University of Georgia; 2013). Thesis title: *Novel methods for detection and management of the epiphytic cyanobacterium, (Order Stigonematales) on Hydrilla Verticillata*

Calista Gauthrie (M.S. Geosciences, Mississippi State University; 2012). Thesis title: *Salt marsh sediment biogeochemical response to the BP Deepwater Horizon blowout (Skiff Island, LA, and Cat Island, Marsh Point and Saltpan Island, MS)*

Richard Carley Jr. (M.S. Geosciences, Mississippi State University; 2012). Thesis title: *Evaluation of the impact of the Deepwater Horizon oil spill and hurricanes on wildfires in southeast Louisiana*

Sarane Dutta (M.S. Geosciences, Mississippi State University; 2010). Thesis title: *Landscape partitioning for within class fire size variance reduction*

Matthew Byron Bethel (Ph.D. Earth and Environmental Sciences, University of New Orleans; 2009). Dissertation title: *Geospatial technology/traditional ecological knowledge-*

derived information tools for the enhancement of coastal restoration decision support processes.

Jennifer C. Roberts (M.S. Earth and Environmental Sciences, University of New Orleans; 2008). Thesis title: *Vegetative response to hurricane sedimentation.*

Ph.D. External Examiner:

Debishree Khan (Ph.D. Environmental Science, Indian School of Mines, Dhanbad; 2015). Dissertation title: *Evaluating the scenario and options of solid waste management using GIS: A case study of Dhanbad city, India.*

Undergrads Mentoring:

Caleb Adam, Juweek Adolphe, Ryan Babaie, Helena Bales, Anurag Banerjee, Chrissie Brady, Kenny Cochran, Paige Copenhaver, CJ Gonzales, Graham Grable, Nicholas Gravina, Nirav Ilango, Paul Keith, Adam King, Megan LeCorre, Nicholas Neel, Khoa Ngo, Jaicob Stewart, Timothy Brown, Zachary Grayson, James Headley, William Hill, Matthew Hinton, Edward Holland, Tyler Hunt, Jermil Lott, Mirandy Lott, Andrew Tucker, Brent Wallace

LABORATORY STAFF SUPERVISED (CURRENT & FORMER)

- Wenjing Xu, Research Assistant, 2014-2015
- Benjamin Page, Part-time Worker, 2014-2015
- Jacob M. Spaulding, Part-time Worker, 2014-2015
- Ayn Remillard, Part-time Worker, 2014-2015
- Pradeep Ragu Chanthar, Web Developer (part-time) , 2013-2014
- Joel Craig, Field Operation Manager, 2013-2014
- Christopher Downs, Field Operation Manager, 2010-2012

MEMBERSHIPS

- Member: **American Geophysical Union**
- Member: **Geological Society of America**
- Member: **Association of American Geographers**
- Member: **American Society for Photogrammetry and Remote Sensing**
- Member: **Sigma Xi**
- Member: **Southeastern Estuarine Research Society**
- Member: **Southeastern Division of the Association of American Geographers**

ACADEMIC AND PROFESSIONAL SERVICE

Grant Review:

- Reviewer for Netherland's Technology Foundation STW (STW) Grant Proposal, 2016
- Reviewer for Belgian Federal Government's Support to Exploitation and Research in Earth Observation (STEREO III) Grant Proposal, 2016
- Reviewer for New Zealand Government's National Science Challenges "Sustainable Seas

- Challenge” Grant Proposal, 2016
- NSF Proposal Reviewer for the Division of Ocean Sciences, Ocean Technology and Interdisciplinary Coordination Program (OTIC) Program, 2016
 - Reviewer for Civilian Research & Development Foundation (CRDF) Global Grant Program, 2016
 - NSF Geography and Spatial Sciences (GSS) Advisory Panel, 2014-2016
 - Review Panel Member (May, 2015): NASA ROSES 2015 proposal solicitation A.45, HypsIRI Preparatory Airborne Activities and Associated Science: Coral Reef and Volcano Research.
 - Reviewer for Brazilian National Council for Scientific and Technological Development (CNPq) Grant Proposals, 2015
 - NSF Proposal Ad-hoc Reviewer for the Major Research Instrument (MRI) Program, 2015
 - NASA Proposal Reviewer for the Remote Sensing Theory (RST) Program, 2015
 - Reviewer for Estonian Research Council (ETAg) Grant Proposal, 2015
 - Reviewer for Estonian Research Council (ETAg) Postdoctoral Grant Proposal, 2015
 - Reviewer for U.S. Civilian Research & Development Foundation (CRDF) Global Grant Program, 2014
 - NSF Proposal Ad-hoc Reviewer for the Geography and Spatial Sciences Program 2013-2014
 - Reviewer for Civilian Research & Development Foundation (CRDF) Global Grant Program, 2013
 - Review Panel Member (March, 2011): Henry Family Research Fund proposal solicitation; College of Arts and Sciences, Mississippi State University.
 - Review Panel Member (March, 2010): NASA ROSES 2009 proposal solicitation A.40- Earth Science for Decision Making: Gulf of Mexico Region.
 - Reviewer (2009): Natural Environment Research Council (NERC) -Technologies Proof of Concept Funding Programme (NE/H002685/1).

Editorial Service

- Co-Editor: *Southeastern Geographer*, 2015-present
- Associate Editor: *MDPI Remote Sensing*, 2016-present
- Co-Editor: Book on “*Bio-Optical Modelling and Remote Sensing of Inland Waters*” Elsevier (Anticipated publication date: January, 2017)
- Co-Editor: Book on “*Ecology, Restoration, and Conservation of Chilika Lake*”, Springer (Anticipated publication date: August, 2017)
- Co-Editor of 2016 Special Issue on “Remote Sensing in Coastal Environments” for the journal “*Remote Sensing*”
- Co-Editor of 2015 Special Issue on “Remote Sensing of Water Resources” for the journal “*Remote Sensing*”
- Editorial Board Member: *GIScience and Remote Sensing*, 2014-present
- Editorial Board Member: *Remote Sensing*, 2014-present
- Editor of 2013 Special Issue on “Coastal Remote Sensing” for the journal “*GIScience and Remote Sensing*”

Journal and Book Review:

- Book Reviewer: *Coral Reef Remote Sensing: A Guide for Mapping, Monitoring and Management* for Springer
- Editorial Review Panel Member (November 2011): Springer Book on "Coral Reef Remote Sensing: A Guide for Mapping, Monitoring and Management"
- Reviewer for
 - International Journal of Health Geographics* 2016-present
 - Marine Pollution Bulletin* 2016-present
 - Environmental Monitoring and Assessment* 2016-present
 - Harmful Algae* 2015-present
 - Agricultural and Forest Meteorology* 2015-present
 - Remote Sensing Letters* 2015-present
 - Environmental Practice* 2015-present
 - Ecological Modelling* 2014-present
 - Pedosphere* 2014-present
 - IEEE Geoscience and Remote Sensing Letters* 2014-present
 - Sensors* 2013-present
 - Journal of Applied Remote Sensing* 2013-present
 - Ecological Informatics* 2012-present
 - PLOS* 2012-present
 - Science of the Total Environment* 2012-present
 - Journal of Applied Meteorology and Climatology* 2012-present
 - Limnology and Oceanography Methods* 2012-present
 - Environmental Research Letters* 2012-present
 - Environmental Monitoring and Assessment* 2011-present
 - Journal of Vegetation Science* 2011-present
 - Chinese Journal of Oceanology and Limnology* 2010-present
 - Geomatics, Natural Hazards and Risk* 2010-present
 - Marine Ecology* 2010-present
 - Arid Land Research and Management* 2010-present
 - IEEE Transactions on Geoscience and Remote Sensing* 2010-present
 - Global Change Biology Bioenergy* 2010-present
 - Earth Interactions* 2010-present
 - IEEE J-STARS* 2010-present
 - Environmental Management* 2009-present
 - Continental Shelf Research* 2009-present
 - International Journal of Environmental Research and Public Health* 2009-present
 - Journal of Environmental Management* 2009-present
 - Central European Journal of Geosciences* 2008-present
 - Remote Sensing of Environment* 2008-present
 - Advances in Space Research* 2008-present
 - Journal of Coastal Research* 2008-present
 - International Journal of Remote Sensing* 2007-present
 - SPIE: Journal of Applied Remote Sensing* 2007-present
 - Geophysical Research Letters* 2006-present
 - Marine Geodesy* 2006-present
 - Photogrammetric Engineering and Remote Sensing* 2005-present
 - Geological Society of America (GSA Books)* 2005-present
 - Geocarto Internationals* 2005-present

Invited Lectures:

- Invited Speaker: Department of Civil Engineering, Institute of Technical Education and Research (ITER), Bhubaneswar, India, December, 2016
- Invited Speaker and Visiting Faculty: Department of Environmental Sustainability, Xavier University, Bhubaneswar, India, December, 2016
- Invited Speaker: Asian Institute of Public Health, Bhubaneswar, India, December, 2016
- Invited Speaker: Department of Marine Sciences, Berhampur University, India, December, 2016
- Invited Speaker: Department of Environmental Science and Engineering, Indian School of Mines, Dhanbad, India, December, 2016
- Invited Speaker: Center for Oceans, Rivers, Atmosphere and Land Sciences, Indian Institute of Technology, Kharagpur, India, November, 2016
- Keynote Speaker: Research Scholar Day at CORAL, Indian Institute of Technology, Kharagpur, India, November, 2016
- Keynote Speaker: 91th Annual Scientific Meeting of Indonesian Geographer Society (IGI), Malang, Indonesia, October, 2016
- Invited Speaker: Department of Geography Social Science, Universitas Negeri Malang, October, 2016
- Invited Speaker: Geography Colloquium, University of South Carolina, Columbia (USC), September, 2016
- Invited Speaker: Earth Science Seminar, Indiana University-Purdue University Indianapolis (IUPUI), March, 2016
- Invited Speaker: Graduate Lecture Series, Bethune-Cookman University, Florida, March, 2016
- Plenary Speaker: Coffee with the Pros: Crafting Your NSF CAREER Award Proposal, University of Georgia, November, 2015
- Plenary Speaker: UGA Big Data Symposium, University of Georgia, October, 2015
- Invited Speaker: Earth, Planetary, and Space Sciences Institute seminar, Michigan Tech, September, 2015
- Invited Speaker: Impact of Deepwater Horizon on wetlands in the Gulf of Mexico workshop, LA SeaGrant, New Orleans, August, 2015
- Invited Speaker: Distinguished Lectures in Mathematics and Computing, Embry-Riddle Aeronautical University, April, 2015
- Invited Speaker: Odum School of Ecology, University of Georgia, April, 2015
- Invited Speaker: Department of Cartographic Engineering, São Paulo State University, Presidente Prudente, Brazil, March 2015
- Invited Speaker: Chilika Development Authority (CDA), Government of Odisha, India, July 2014
- Invited Speaker: National Institute of Technology (NIT), Rourkela, India, July 2014
- Invited Speaker: Department of Geology, Indian School of Mines (ISM), Dhanbad, June 2014
- Invited Speaker: National Institute for Space Research (INPE), Brazil, March 2014
- Invited Speaker: Center for Integrative Conservation Research, University of Georgia, March 2014
- Invited Speaker: Department of Cartographic Engineering, São Paulo State University, Presidente Prudente, Brazil, November 2013

- Invited Speaker: Department of Marine Science, University of Southern Mississippi, Stennis Space Center, November 2011
- Invited Speaker: Integrated Environmental Science, Bethune-Cookman University, November 2011
- Invited Speaker: Department of Biological Sciences, Mississippi State University, November 2009

Other Service:

- Judge in 2015 AAG RSSG Student Honors Poster Competition
- Investigator and Mentor: NASA DEVLOP program (January 2013-present)
- Member: HICO data user (November 2012-present)
- Director: Remote Sensing Specialty Group (RSSG) (748 members), Association of American Geographers (AAG), March 2009-present
- Judge in 2009 AAG RSSG Student Honors Paper Competition
- Coordinator for 2006 *Joint Remote Sensing Seminar* hosted by Purdue University

University and Departmental Service:

- Chair, UGA's Georgia Informatics Initiative Executive Committee, January 2017-present
- UGA Department of Geography Advisory Committee, August 2016-2017
- UGA's Georgia Informatics Initiative Founding Committee, 2016
- UGA's Georgia Informatics Symposium Planning Committee, 2016
- UGA Department of Geography Graduate Studies Committee, August 2015-present
- UGA ICON Graduate Admission Committee, August 2014-2016
- Search Committee Member for CGR Associate Director, 2015
- UGA Department of Geography Colloquium Committee Chair, August 2014-2015
- UGA Department of Geography Advisory Committee, August 2013-2015
- Center for Integrative Conservation Research (CICR) Research Committee, August 2013-2014
- UGA Department of Geography Curriculum Committee, August 2013-present
- UGA Department of Geography Ad hoc Committee on undergraduate major recruitment, January 2013-present
- UGA Department of Geography Instructional Tech Committee, August 2012-July 2013
- MSU Department of Geosciences Ph.D. Enhancement Committee, August 2009- July 2012
- UNO Earth and Environmental Sciences Undergraduate Advising Committee, August 2008-July 2009

RECOGNITIONS AND AWARDS

- 2016 Creative Research Medal, University of Georgia
- Best Poster Award, TROPMET 2016, India
- Featured Researcher (2016), Center for Integrative Conservation Research (CICR), UGA
- SEDAAG Research Honors Award, 2015
- Best Poster Award, Southeast Climate Consortium Fall Meeting, 2015
- Provost's Sumer Research Grant (\$5,000), UGA, (2013)
- Mississippi State University - Centers and Institutes Faculty Research Award (2012)
- Mississippi State University - Cherri M. Musser Faculty Award (\$2,500), (2011)

- Geosystems Research Institute, Mississippi State University: GRI Academic Faculty of the year (2011)
- University of Nebraska, Lincoln- Outstanding Research Assistant of the year (2006)
- Invited Talk: Represented School of Natural Resources in *Nebraska Symposium on Interdisciplinary Graduate Science Research*, (2005).
- David and Anne Larric Student Fund, School of Natural Resources, UNL, (2005).
- ONR/NSF funding for attending a training course “Ocean Optics: Radiative Transfer and Inversions of Ocean Color Remote Sensing” at Darling Marine Center, Maine, (2004).
- Ted Elliott Memorial Student Fellowship, School of Natural Resources, (2004).
- Goddard Coastal Research (GCR) Fellowship, GSFC, NASA, (2003)
- Graduate Fellowship, School of Natural Resources, University of Nebraska, (2002)
- Graduate Fellowship, Indian Institute of Technology, Kanpur, India, (2000)
- Best Student Certificate, National Geophysical Research Institute (NGRI), India, (2000).
- Oil and Natural Gas Corporation (O.N.G.C), Chennai, India, Gold Medal, (2000).
- Pondicherry University Gold Medal, (2000).