

CURRICULUM VITAE

Padmanava Dash, Ph.D.

Associate Professor

Department of Geosciences

P.O. Box 5448

355 Lee Blvd., 109 B Hilbun Hall

Mississippi State University, Mississippi State, MS 39762

Email: pd175@msstate.edu

Office Ph: (662) 325-0364

URL: <http://www.geosciences.msstate.edu/people/professors/padmanava-dash/>

Cell Ph: (225) 772-6588

PROFESSIONAL PREPARATION

- Louisiana State University, Baton Rouge, LA. Oceanography & Coastal Sci., Ph.D., 2011
- Bowling Green State University, Bowling Green, OH. Geology, M.S., 2005
- Indian Institute of Technology (IIT), Bombay, India. Applied Geology, M.S., 2003
- Utkal University, Bhubaneswar, India. Geology, M. S., 2001
- Dharanidhar College, Keonjhar, India. Geology, B. S., 1999

APPOINTMENTS

Associate Professor, Dept. of Geosciences, Mississippi State University, Starkville, MS. Aug 2019-Present

Assistant Professor (tenure-track), Dept. of Geosciences, Mississippi State University, Starkville, MS. Aug 2013-2019

- Areas of Teaching and Research: Remote Sensing & Water Biogeochemistry
- Courses Teaching: GR 6333/4333 Remote Sensing of Physical Environment, GR 8333 Field Remote Sensing, GR 6343/4343 Advanced Remote Sensing, GG 3133 Environmental Geology, & GG 8633 Water Biogeochemistry
- Courses Taught: GG 3613 Water Resources
- Research areas: Assessment of water quality, remote sensing of water quality parameters, influence of land use & land cover, and precipitation on water quality, source-tracking pollutants using CDOM & Parafac modeling, coastal acidification, groundwater estimation using GRACE satellite data, determining the influence of surface discharge of untreated waste water using Unmanned Aerial Systems, and impacts of agriculture on water quality.

Assistant Professor, Dept. of Biology and Environmental Science Ph.D. Program, Jackson State University, Jackson, MS. Feb 12 - Aug 13

- Areas of Teaching and Research: Remote Sensing & Environmental Science
- Courses Taught: ENV 717/BIO 617 Remote Sensing of Environment, BIO 114/201 Environmental Science

- Research areas: Detection and mapping of cyanobacterial harmful algal blooms using satellite data, quantification of Harmful Algal Blooms, pathogens, and toxic metals in multiple water bodies.

Graduate Research and Teaching Assistant, Louisiana State University, Baton Rouge, LA. Aug 05 - Dec 2011

- Research on NASA funded: “Quantitative Mapping of Cyanobacterial Blooms Using Oceansat-1 OCM Satellite Data”.
- Course Taught: OCS 1005 Introduction to Oceanography

Graduate Research and Teaching Assistant, Bowling Green State University, Bowling Green, OH. Aug 03 – Aug 05

- Research on “SeaWiFS Algorithm for Mapping Phycocyanin in Incipient Freshwater Cyanobacterial Blooms”.
- Course Taught: Geol 105 Life Through Time

PEER-REVIEWED PUBLICATIONS (* denotes authorship by advised student)

1. Shuo, C., Lu, Y. H., **Dash, P.**, Das, P., Li, J., Capps, K., Majidzadeh, H., and Elliot, M. 2019. Hurricane pulses: Small watershed exports of dissolved nutrients and organic matter during large storms in the Southeastern USA, *Science of the Total Environment*, 689, 232-244 (Impact Factor: 5.589).
2. Gao, F., Feng, G., Han M., **Dash, P.**, Jenkins, J., and Liu, C. 2019. Assessment of surface water resources in the big sunflower river watershed using coupled SWAT–MODFLOW model, *Water*, 11, 528 (Impact factor: 2.72).
3. Singh*, S., **Dash, P.**, Sankar, M. S., Silwal, S., Lu, Y. H., Shang, P., and Moorhead, R., J. 2019. Hydrological and Biogeochemical Controls of Seasonality in Dissolved Organic Matter Delivery to a Blackwater Estuary, *Estuaries and Coasts*, 42, 2, 439-454 (Impact factor: 2.67).
4. Sankar*, M. S., **Dash, P.**, Singh*, S., Lu, Y. H., Mercer, A. E., and Chen, S. 2019. Effect of photo-biodegradation and biodegradation on the biogeochemical cycling of dissolved organic matter across diverse surface water bodies, *Journal of Environmental Sciences*, 77, 130-147 (Impact factor: 3.62).
5. Ying, O., Parajuli, P., Feng, G., Leininger, T. D., Wan, Y., and **Dash, P.** 2018. Application of Climate Assessment Tool to Estimate Climate Change Impacts on Nutrient Loading from Local Watersheds, *Journal of Hydrology*, 563, 363-371 (Impact factor: 4.938).
6. Singh*, S., **Dash, P.**, Silwal*, S., Moorhead, R., Feng, G., and Adeli, A. 2017. Influence of land use and land cover on the spatial variability of dissolved organic matter in multiple aquatic environments, *Environmental Science and Pollution Research*, 24, 16, 14124-14141 (Impact factor: 2.914).

7. Maguigan*, M., Rodgers, J., **Dash, P.**, and Meng, Q. 2016. Assessing net primary production in montane wetlands from proximal, airborne, and satellite remote sensing platforms, *Advances in Remote Sensing*, 5, 2, 118-130 (Impact factor: 0.75).
8. Nagaraju, A., Sreedhar*, Y., Thejaswi, A., and **Dash, P.** 2016. Integrated Approach Using Remote Sensing and GIS for Assessment of Groundwater Quality and Hydrogeomorphology in Certain Parts of Tummalapalle Area, Cuddapah District, Andhra Pradesh, India, *Advances in Remote Sensing*, 5, 2, 83-92 (Impact factor: 0.75).
9. Arveti, N., Etikala*, B., and **Dash, P.** 2016. Land Use/Land Cover Analysis Based on Various Comprehensive Geospatial Data Sets: A Case Study from Tirupati Area, South India. *Advances in Remote Sensing*, 5, 2, 73-82 (Impact factor: 0.75).
10. **Dash, P.**, Silwal* S., Ikenga, J. O., Pinckney, J. L., Arslan, Z., and Lizotte, R. E. 2015. Water quality of four major lakes in Mississippi, USA: Impacts on human and aquatic ecosystem health, *Water*, 7, 4999-5030 (Impact factor: 2.72).
11. **Dash, P.**, Walker, N., Mishra, D. and D'Sa, E. 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 (Impact factor: 4.740).
12. **Dash, P.**, Walker, N., Mishra, D., Hu, C., Pinckney, J., and D'Sa, E. 2011. Estimation of cyanobacterial pigments in a freshwater lake using OCM satellite data, *Remote Sensing of Environment*, 115, 12, 3409-3423 (Impact factor: 8.791).
13. Garcia, A., Bargu, S., **Dash, P.**, Rabalais, N., Morrison, W. and Walker, N. 2010. Evaluating the potential risk of microcystins to blue crab (*Callinectes sapidus*) fisheries and human health in a eutrophic estuary. *Harmful Algae*, 9, 134–143 (Impact factor: 5.012).
14. Anbazhagan, S., and **Dash, P.** 2003. Environmental case study of Cauvery river flood plain. *GIS Development*, 7, 12, 30-35 (Impact factor: 0.7).

CONFERENCE PROCEEDINGS

1. **Dash, P.**, and Vincent R. K. 2005. Computer Animation of Cyanobacteria Blooms in Lake Erie from July-October 2003, As Mapped from SeaWiFS Data with a New Phycocyanin Algorithm, *Proceedings of the 16th Pecora Conference on Global Priorities in Land Remote Sensing*, Sioux Falls, SD, October 23-27.

FEATURED IN NEWSPAPER

https://www.nola.com/news/environment/article_5ed1a994-9c32-11e9-9695-bb42b9b7a073.html

INVITED PRESENTATIONS (* denotes presentations in near future)

1. **Dash, P.**, 2019: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: Departmental Seminar, Department of Marine Science, University of Southern Mississippi, Stennis Space Center, MS, March 1, 2019.

2. **Dash*, P.**, 2018: Coastal Acidification in the Western Mississippi Sound (oral), *Invited Speaker*: Hypoxia Monitoring Working Group Meeting, Stennis Space Center, MS, September 20, 2018.
3. **Dash*, P.**, 2018: Water quality algorithms using reflectance data (oral), *Invited Speaker*: Mississippi Based RESTORE Act Center of Excellence (MBRACE) All Hands Meeting, Ocean Springs, MS, October 31, 2018.
4. **Dash, P.**, 2018: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: Water Seminar, Starkville, MS, August 31, 2018.
5. **Dash, P.**, 2018: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: IEEE Summer Workshop, Starkville, MS, July 10, 2018.
6. **Dash, P.**, 2018: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: For a panel of faculty and students from Clarence Fitzroy Bryant College, St. Kitts: Starkville, MS, August 12, 2018.
7. **Dash, P.**, 2018: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: Remote Sensing Seminar, Starkville, MS, September 26, 2018.
8. **Dash, P.**, 2017: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: Indian Institute of Science, Bangalore, India, December 11, 2017.
9. **Dash, P.**, 2017: Assessment of Water Quality Using Remote Sensing Technology (oral), *Invited Speaker*: Jawaharlal Nehru University, New Delhi, India, December 5, 2017.
10. **Dash, P.**, 2017: Assessment of water quality using Unmanned Aerial Systems (UASs) (oral), *Invited Speaker*: Department of Geology and Geological Engineering, University of Mississippi, Oxford, MS, March 24, 2017.
11. **Dash, P.**, 2016: Assessment of water quality using remote sensing technology (oral), *Invited Speaker*: *Department of Geological Sciences, University of Alabama*, Tuscaloosa, AL, November 04, 2016.
12. **Dash, P.**, 2016: Towards fine-tuning satellite algorithms for Ocean Acidification Product Suite (OAPS) in the Mississippi River outfall region: my concept for next year (oral), *NOAA Atmospheric and Meteorological Laboratory, Key Biscane, Miami, FL*, March 16, 2016.
13. Clary, R.M. (moderator) with Cooke, W. H., Ambinakudige, S., **Dash, P.**, Meng, Q., and Rodgers, J. R. (panelist), 2015: Geospatial Science: How Sense of Place Influences Life- A panel discussion of geospatial techniques relevant to the Maroon Edition book ‘Same Kind of Different as Me’ (oral), *Department of Geosciences, Mississippi State University*, Mississippi State, MS, October 08, 2015.

14. **Dash, P.**, 2015: We're going to drink THAT water?! Mapping water quality using remote sensing technology (oral), *Invited Speaker: Department of Agricultural Economics, Mississippi State University*, Mississippi State, MS, February 27, 2015.

CONFERENCE PRESENTATIONS

* denotes authorship by advised student

1. Wickramaratna*, S., Paul, V., **Dash, P.**, Chandrajith, R., Senarathne, A., Wickramashinghe, S., Li, X., Brinckerhoff, W., van Amerom, F., Microbial diversity in hematitic bearing rock from tropical Sri Lanka, *AbSciCon conference*, Seattle, WA, June 24-28, 2019.
2. **Dash, P.** and Moorhead, R. J., Assessment of water quality using remote sensing technology over the Henderson Point and Pass Christian oyster reefs, Mississippi (oral), *Mississippi Academy of Sciences*, Hattiesburg, MS, February 21-22, 2019.
3. Sankar*, M. S., **Dash, P.**, Yuehan, L. H., and Moorhead, R. J., Dissolved Organic Matter Biogeochemistry and its effect on Ocean Acidification Over an Oyster Bed in the Western Mississippi Sound, MS, USA (oral), *Mississippi Academy of Sciences*, Hattiesburg, MS, February 21-22, 2019.
4. Hunt*, M. P., **Dash, P.**, Wickramaratna*, S., and Moorhead, R. J., Whether pigments other than chlorophyll a and phycocyanin significantly affect remote sensing reflectance? (poster), *Mississippi Academy of Sciences*, Hattiesburg, MS, February 21-22, 2019.
5. Beshah*, W., **Dash, P.**, and Moorhead, R. J., Estimation of suspended particulate matter over the Henderson Point and Pass Christian Oyster Reefs, Mississippi using unmanned aerial systems imagery (poster), *Mississippi Academy of Sciences*, Hattiesburg, MS, February 21-22, 2019.
6. Wickramaratna*, S., **Dash, P.**, and Moorhead, R. J., Assessment of colored dissolved organic matter using unmanned aerial systems over the oyster reefs in the western Mississippi Sound (poster), *Mississippi Academy of Sciences*, Hattiesburg, MS, February 21-22, 2019.
7. Sanders*, L., **Dash, P.**, and Parajuli, P., 2018: Improving the Accuracy of Land Use and Land Cover Classification of Landsat Data in an Agricultural Watershed (poster), *AGU Fall Meeting*, Washington D. C., December 10-14, 2018.
8. Sankar*, M. S., **Dash, P.**, Lu, Y. H., Paul, V., Mercer, A. E., and Arslan, Z., 2018: Application of Multivariate Statistics to Geochemical and Precipitation Data to Evaluate Dissolved Organic Matter-Trace Element Variability in a Coastal Bay (poster), *AGU Fall Meeting*, Washington D. C., December 10-14, 2018.
9. Beshah*, W., **Dash, P.**, Skarke, A., and Moorhead, R. J., An interactive map-based water quality visualization tool for the Gulf of Mexico, *Bays and Bayous Symposium*, Mobile, AL., November 28-29, 2018.

10. Wickramarathna*, S., **Dash, P.**, Arslan, Z., and Moorhead, R. J., Water biogeochemistry affecting the oyster beds in the Western Mississippi Sound, *Bays and Bayous Symposium*, Mobile, AL., November 28-29, 2018.
11. Sankar*, M. S., **Dash, P.**, Yuehan, L. H., and Arslan, Z., Biogeochemical evaluation of Dissolved Organic Matter and Trace Elements over an Oyster Bed in the Western Mississippi Sound using Multivariate Statistics, *Bays and Bayous Symposium*, Mobile, AL., November 28-29, 2018.
12. Moorhead, R. J., **Dash, P.**, Hathcock, L., and Devkota, M., Coastal Water Quality Algorithm Development, *IEEE VIS*, Berlin, Germany, October 21-26, 2018.
13. Wickramarathna*, S., Chandrajith, R., Senarathne, A., Wickramashinghhe, S., Paul, V., and **Dash, P.**, Microbial diversity in hematitic bearing rock from tropical Sri Lanka, *Goldschmidt conference*, Boston, MA, August 12-17, 2018.
14. Fei, G., Feng, G., **Dash, P.**, and Ouyang, Y., Impact of different ratios of surface water and groundwater for row crops irrigation on groundwater level in Mississippi Delta, *Mississippi Water Resources Conference*, Jackson, MS, April 3-4, 2018.
15. Feng, G., Fei, G., Ouyang, Y., and **Dash, P.**, Conjunctive use of groundwater and surface water for supporting irrigated agriculture in Mississippi, *Mississippi Water Resources Conference*, Jackson, MS, April 3-4, 2018.
16. Shekhar*, S., **Dash, P.**, Saraf, A. K., 2017: Influence of changes in Land Use and Land Cover, and Precipitation patterns on the groundwater storage changes in the Mississippi River Watershed (USA) from 2003-2015, *AGU Fall Meeting*, New Orleans, LA, December 11-15, 2017.
17. Silwal*, S., **Dash, P.**, Moorhead, R. J., 2017: Remote sensing algorithms to quantify chlorophyll a and phycocyanin using two popular UAS based sensors and three currently operational satellite sensors in multiple water bodies, *AGU Fall Meeting*, New Orleans, LA, December 11-15, 2017.
18. Devkota*, M., **Dash, P.**, 2017: Improved algorithms for estimating Total Alkalinity in Northern Gulf of Mexico, *AGU Fall Meeting*, New Orleans, LA, December 11-15, 2017.
19. Sankar*, M. S., **Dash, P.**, Singh, S., Lu, Y. H., 2017: Effect of photodegradation and biodegradation on the concentration and composition of dissolved organic matter in diverse waterbodies, *AGU Fall Meeting*, New Orleans, LA, December 11-15, 2017.
20. **Dash, P.**, Ambinakudige, S., Elliott, M., Lu, Y. H., Turnage, G., Moorhead, R. J., 2017: A Pilot Study for Identifying Failing Septic Systems Using Unmanned Aerial Systems, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.
21. Silwal*, S., **Dash, P.**, Moorhead, R. J., 2017: Remote Sensing Algorithms to Quantify Chlorophyll A and Phycocyanin Using Two Popular UAS Based Sensors and Three Currently Operational Satellite Sensors in Mississippi Lakes, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.

22. Shekhar*, S., **Dash, P.**, Feng, G, Moorhead, R. J., 2017: Cloud Shadow and Sun-Glint Correction In UAS Imagery Using Machine Learning Algorithms, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.
23. Zarzar*, C., **Dash, P.**, Dyer, J., and Moorhead, R. J., 2017: Quantifying Atmospheric Effects in Unmanned Aerial System Imagery, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.
24. Sankar*, M.S., **Dash, P.**, Paul, V., Singh, S., Varco, J., Rodgers, J. R., Lu, Y. H., Arslan, Z., Phipps, S., 2017: The Nature of Dissolved Organic Matter and its Effect on Biogeochemical Cycling of Toxic Trace Metals in Weeks Bay Estuary, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.
25. Adhikari*, P., **Dash, P.**, Sankar, M. S., Nagpal, S., Sudedi, Sudedi, N., Ariunbold, G. O., 2017: A Spectroscopic Study Of Dissolved Organic Matter Under Storm Flow Conditions, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.
26. Devkota*, M., and **Dash, P.**, 2017: A Total Alkalinity Algorithm for Northern Gulf of Mexico, *72nd Annual Meeting of the Southeastern Division of the AAG*, Starkville, MS, November 19-20, 2017.
27. Singh*, S., **Dash, P.**, Silwal, S, Sasidharan*, M. S., Moorhead, R. J., Shang, P., and Lu, Y., 2016: Hydrologic conditions control the seasonal changes in dissolved organic matter (DOM) delivery to the Lower Pearl River estuarine waters (oral), *Bays and Bayous Symposium*, Biloxi, MS, November 30-December 1, 2016.
28. **Dash, P.**, 2016: Remote sensing for climate smart agriculture (oral), *Workshop for the Cochran Fellows*, Starkville, MS, August 1-12, 2016.
29. Zarzar*, C. M., Dyer, J., **Dash, P.**, Moorhead, R. J., Turnage, G., 2016: Understanding Coastal Changes Using High Resolution Imagery from Unmanned Aerial Systems (oral). *2016 State of the Coast Conference*, New Orleans, LA, June 1-3, 2016.
30. Zarzar*, C. M., Dyer, J., **Dash, P.**, Moorhead, R. J., Turnage, G., 2016: Defining Surface Land Cover Features Using High Resolution Unmanned Aerial System Imagery (oral). *14th Annual Southeast Severe Storms Symposium*, Starkville, MS, April 4-5, 2016.
31. Meritt*, D. N., Skarke, A., Silwal, S., **Dash, P.**, 2016: Remote Sensing of Suspended Sediment Dynamics in the Mississippi Sound (poster), *ASLO Aquatic Sciences Meeting*, New Orleans, LA, February 21-26, 2016.
32. Zarzar*, C. M., **Dash, P.**, Moorhead, R. J., Dyer, J., Turnage, G., 2016: Defining Surface Land Cover Features Using High Resolution Imagery from Unmanned Aerial Systems (poster). *2016 Gulf of Mexico Oil Spill and Ecosystem Science Conference*, Tampa, FL, February 1-4, 2016.
33. Zarzar*, C. M., **Dash, P.**, Dyer, J., Turnage, G., Moorhead, R. J., 2016: Defining Surface Land Cover Features Using High Resolution Imagery from Unmanned Aerial Systems (oral). *American Meteorological Society 30th Conference on Hydrology*, New Orleans, LA, January 10-14, 2016.

34. Singh*, S., **Dash, P.**, Silwal*, S, Moorhead, R. J., 2015: Optical characterization and spatial distribution of dissolved organic matter (DOM) in seven water bodies of Mississippi, USA (oral), *AGU Fall Meeting*, San Francisco, CA, December 14-18, 2015.
35. **Dash, P.**, 2015: Investigating the water quality of lower Pearl River estuary (oral), *Coastal and Estuarine Research Federation 23rd Biennial Conference*, Portland, OR, November 8-12, 2015.
36. Silwal*, S, **Dash, P.**, Moorhead, R. J., Sackreiter, J., Ochs, C. A., Pinckney, J. L., 2015: Phytoplankton community structure in Lower Pearl River Estuary (poster), *Coastal and Estuarine Research Federation 23rd Biennial Conference*, Portland, OR, November 8-12, 2015.
37. Zarzar*, C. M., **Dash, P.**, Dyer, J., Turnage, G., Moorhead, R. J., 2015: Application of Unmanned Aerial Systems (UAS) in Aquatic Plant Identification (oral). *MidSouth Aquatic Plant Management Society 34th Annual Meeting*, Mobile, AL, September 14-16, 2015.
38. Zarzar*, C. M., **Dash, P.**, Dyer, J., Hathcock, L., Moorhead, R. J., Turnage, G., Van Horn, J., 2015: Development of Spectral-based Classification Schemes Using Unmanned Aerial System Imagery (oral). *River Forecasting Center Post Mission Review*, Starkville, MS, August 15, 2015.
39. Zarzar*, C. M., **Dash, P.**, Dyer, J., Hathcock, L., 2015: Development of Spectral-based Classification Schemes Using Unmanned Aerial System Imagery (oral). *Association of American Geographers*, Chicago, IL, April 21-25, 2015.
40. Van Horn*, J., **Dash, P.**, Dyer, J., Hathcock, L., Moorhead, R., 2015: Potential of Unmanned Aerial Systems Imagery Relative to Landsat Imagery (oral), *Association of American Geographers*, Chicago, IL, April 21-25, 2015.
41. Domenech*, J., **Dash, P.**, Clary, R., Schmitz, D., 2015: Multispectral Mapping of Sediment Plumes in Pierpont Bay, CA Using MODIS Satellite Data (poster), *Association of American Geographers*, Chicago, IL, April 21-25, 2015.
42. Parnell*, R., **Dash, P.**, Silwal, S., 2015: Investigation of Water Quality Of Ross Barnett Reservoir, Mississippi, USA (poster), *Mississippi Academy of Sciences 79th Annual Meeting*, Hattiesburg, MS, February 26-27, 2015.
43. **Dash, P.**, 2014: Investigating the Water Quality of Four Large Mississippi Lakes and Grand Bay, MS-AL Gulf Coast (oral), *Mississippi Water Resources Conference*, Jackson, MS, April 1-2, 2014.
44. **Dash, P.**, 2014: Investigating the Water Quality of Four Large Mississippi Lakes and Grand Bay, MS-AL Gulf Coast (oral), *Mississippi Academy of Sciences 78th Annual Meeting*, Hattiesburg, MS, March 5-6, 2014.
45. Silwal*, S., **Dash, P.**, Ikenga, J. O., and Pinckney, J. L., 2014: Algal Community Structure in Four Major Mississippi Lakes and in Grand Bay, Mississippi-Alabama Gulf Coast (oral), *Mississippi Academy of Sciences 78th Annual Meeting*, Hattiesburg, MS, March 5-6, 2014.

46. Peavy*, L., **Dash, P.**, Ikenga, J. O., and Pinckney, J. L., 2014: A Comprehensive View of the Water Quality of Ross Barnett Reservoir (poster), *Mississippi Academy of Sciences 78th Annual Meeting*, Hattiesburg, MS, March 5-6, 2014.
47. Collins*, M., **Dash, P.**, Ikenga, J. O., and Pinckney, J. L., 2014: Comprehensive Study of Water Quality of Lake Enid, MS, USA (poster), *Mississippi Academy of Sciences 78th Annual Meeting*, Hattiesburg, MS, March 5-6, 2014.
48. Norwood*, T., **Dash, P.**, Ikenga, J. O., and Pinckney, J. L., 2014: Investigation of the Water Quality of Lake Grenada, MS, USA (poster), *Mississippi Academy of Sciences 78th Annual Meeting*, Hattiesburg, MS, March 5-6, 2014.
49. Grant*, I., **Dash, P.**, Ikenga, J. O., and Pinckney, J. L., 2014: Water Quality & Harmful Algal Bloom Analysis of Lake Sardis (poster), *Mississippi Academy of Sciences 78th Annual Meeting*, Hattiesburg, MS, March 5-6, 2014.
50. **Dash, P.**, 2013: Water quality and remote sensing technology (oral), *Brown Bag Speaker: Department of Geosciences, Mississippi State University*, Mississippi State, MS, October 04, 2013.
51. **Dash, P.**, 2013: Detection and Mapping of Cyanobacterial Harmful Algal Blooms using Satellite Data in One Louisiana Lake and Four Mississippi Lakes (poster), *Mississippi Water Resources Conference*, Jackson, MS, April 2-3, 2013.
52. **Dash, P.**, 2013: Quantification of Cyanobacterial Blooms and Cyano-Toxins in Four Large Mississippi Lakes (oral), *Mississippi Academy of Sciences 77th Annual Meeting*, Hattiesburg, MS, February 21-22, 2013.
53. Kibet*, D., **Dash, P.**, Ayensu, W., Ikenga, J. O., and Pinckney, J. L., 2013: Quantification and analysis of harmful cyanobacterial blooms in Lake Grenada using field and satellite data (poster), *Mississippi Academy of Sciences 77th Annual Meeting*, Hattiesburg, MS, February 21-22, 2013.
54. Chumo*, J., **Dash, P.**, Ayensu, W., Ikenga, J. O., and Pinckney, J. L., 2013: Quantifying the concentration of Harmful Alga Blooms (HABs) in Lake Enid (poster), *Mississippi Academy of Sciences 77th Annual Meeting*, Hattiesburg, MS, February 21-22, 2013.
55. Flowers*, M., **Dash, P.**, Ayensu, W., Ikenga, J. O., and Pinckney, J. L., 2013: Detection of Harmful Algal Blooms in Lake Sardis, MS, US (poster), *Mississippi Academy of Sciences 77th Annual Meeting*, Hattiesburg, MS, February 21-22, 2013.
56. Tanui*, W., **Dash, P.**, Ayensu, W., Ikenga, J. O., and Pinckney, J. L., 2013: Detection and Quantification of Harmful Algal Blooms (HABs) in the Ross Barnett Reservoir, Mississippi, USA (poster), *Mississippi Academy of Sciences 77th Annual Meeting*, Hattiesburg, MS, February 21-22, 2013.
57. **Dash, P.**, 2012: Detection and Mapping of Cyanobacterial Harmful Algal Blooms using Satellite Data in One Louisiana Lake and Four Mississippi Lakes (poster), *Bays and Bayous Symposium*, Biloxi, MS, November 14-15, 2012.
58. **Dash, P.**, 2012: Detection and Mapping of Cyanobacterial Harmful Algal Blooms using Satellite Data in One Louisiana Lake and Four Mississippi Lakes (oral), *Ninth International Symposium on Recent Advances in Environmental Health Research*, Jackson, MS, September 16-19, 2012.

59. **Dash, P.**, Walker, N. D., Mishra, D., Hu, C., 2011: Atmospheric Correction, Vicarious Calibration and Development of Algorithms for Quantifying Cyanobacterial Blooms from Oceansat-1 OCM Satellite Data (oral), *AGU Fall Meeting*, San Francisco, CA, December 5-9, 2011.
60. **Dash, P.**, Walker, N. D., Mishra, D., Hu, C., 2011: Atmospheric Correction, Vicarious Calibration and Development of Algorithms for Quantifying Cyanobacterial Blooms from Oceansat-1 OCM Satellite Data (oral), *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico, February 13-18, 2011.
61. **Dash, P.**, Walker, N. D., Garcia, A. C., Bargu, S., Rabalais, N. N., Pinckney, J. L., 2008: Quantitative mapping of cyanobacteria blooms from Oceansat-1 OCM satellite data (poster), *Annual Northern Gulf Institute Conference*, Biloxi, MS, May 16-17, 2008 **(Second best poster award)**.
62. **Dash, P.**, Walker, N. D., Garcia, A. C., Bargu, S., Rabalais, N. N., Pinckney, J. L., 2008: Quantitative mapping of cyanobacteria blooms from Oceansat-1 OCM satellite data (poster), *Graduate Student Symposium*, LUMCON, Cocodrie, LA, February 22-24, 2008 **(Best poster award)**.
63. **Dash, P.**, Walker, N. D., Garcia, A. C., Bargu, S., Pinckney, J. L., 2007: Quantitative mapping of cyanobacteria blooms from Oceansat-1 OCM satellite data (poster), *Fourth Symposium on Harmful Algae in the U.S.*, Woods Hole, MA, October 29- November 1, 2007.
64. Garcia, A. C., **Dash, P.**, Bargu, A., 2007: Bioaccumulation of Cyanobacterial Cylindrospermopsis Toxin in Louisiana Blue Crab, *Callinectes sapidus* (poster), *Fourth Symposium on Harmful Algae in the U.S.*, Woods Hole, MA, October 29- November 1, 2007.
65. **Dash, P.**, Vincent, R. K., 2005: Computer Animation of Cyanobacteria Blooms in Lake Erie from July-October, 2003 (oral), *16th Pecora Conference on Global Priorities in Land Remote Sensing*, Sioux Falls, SD, October 23-27, 2005.

GRANT PROPOSALS AWARDED

1. Moorhead, R. J., **Dash, P.**, Chesser, D., Persistent Autonomous Mobile Monitoring of Waterborne Biochemical Agents, Co-PI, 7/22/2019-7/21/2022, \$2,000,000, US Army Engineer Research and Development Center, Portion of funding to Dash: \$750,000.
2. Moorhead, R. J., **Dash, P.**, Skarke, S., Water Quality and Benthic Habitat Observations for Enhanced Understanding and Sustainable Management of Oyster Reefs in Mississippi Sound, Co-PI, 8/1/2017-7/31/2019, \$624,953, US Department of Treasury (via RESTORE Act Center of Excellence), Portion of funding to Dash: \$208,317.
3. Parajuli, P., **Dash, P.** and Ouyang, Y., Assessment of nutrient sources and movement at watershed scale agro-ecosystems, Co-PI, 1/1/2017-12/31/2019, \$499,535, USDA, Portion of funding to Dash: \$124,883.

4. Parajuli, P., **Dash, P.**, Reddy, K. R. R., Ambinakudige, S., and Sharma C. S., 2016 Cochran Fellowship Program for Mali, Senegal, and Burkina Faso - Climate Smart Agriculture, Co-PI, 06/25/2016- 06/24/2017, \$48,653, USDA, Portion of funding to Dash: \$12,163.
5. **Dash, P.**, Towards fine-tuning satellite algorithms for Ocean Acidification Product Suite (OAPS), PI, 09/01/2015-08/31/2016, \$22,000, NOAA/AOML, Portion of funding to Dash: \$22,000.
6. Ambinakudige, S., **Dash, P.**, Reddy, R., Parajuli, P., An international working group to study environmental and food security issues in wetland ecosystems in South Asia, Co-PI, 1/1/2015 – 12/31/2015, \$2,500, International Institute, Mississippi State University, Portion of funding to Dash: \$625.
7. **Dash, P.**, Monitoring harmful cyanobacterial blooms using data from multiple satellite sensors in four large Mississippi lakes, PI, 08/01/2014-07/31/2015, \$10,000, Henry Family Research Fund, Portion of funding to Dash: \$5,000.
8. **Dash, P.**, Walker, N. D., and D'Sa, E. J., Access to HICO Data for Detection and Mapping of Harmful Algal Blooms (HABs) using HICO Data in Four Large Inland Lakes in Mississippi and the Grand Bay, MS-AL Gulf Coast, PI, 01/01/2013-08/31/2015, \$0.00, Naval Research Laboratory, Portion of funding to Dash: \$0.00.
9. Tchounwou, P., Farah, I., **Dash, P.**, Kim, Y., Han, F., NOAA ECSC (Environmental Cooperative Science Center), Co-PI, 09/01/2011- 08/01/2013, \$1,150,000, NOAA, Portion of funding to Dash: \$230,000.
10. Vincent, R., Leshkevich, G., **Dash, P.**, Al-Rshaidot, M., Development of a MODIS image product for mapping phycocyanin pigment in blue-green algal blooms (Toxic Algae), 4/1/2005-6/30/2006, \$13,253.00, NOAA, Ohio Sea Grant, Portion of funding to Dash: \$3,313.

ADDITIONAL FUNDING FOR SUPPORTING UNDERGRADUATE STUDENT INTERNS

1. **Dash, P.**, How water quality affects fisheries and human health in the Western Mississippi Sound, PI, 05/21/2018-07/27/2018, \$11,000, Mississippi INBRE, University of Southern Mississippi, Hattiesburg, MS, Portion of funding to Dash: \$2,000.
2. **Dash, P.**, Detection and mapping of cyanobacterial harmful algal blooms using satellite data in four Mississippi lakes, PI, 05/13/2014-07/26/2014, \$5,500, Mississippi INBRE, University of Southern Mississippi, Hattiesburg, MS, Portion of funding to Dash: \$1,000.
3. **Dash, P.**, Detection and mapping of cyanobacterial harmful algal blooms using satellite data in four Mississippi lakes, PI, 05/13/2013-07/26/2013, \$12,000, Mississippi INBRE, University of Southern Mississippi, Hattiesburg, MS, Portion of funding to Dash: \$3,000.
4. **Dash, P.**, Detection and mapping of cyanobacterial harmful algal blooms using satellite data in four Mississippi lakes, PI, 05/13/2012-07/26/2012, \$16,000, Mississippi INBRE,

University of Southern Mississippi, Hattiesburg, MS, MS, Portion of funding to Dash: \$4,000.

GRANT PROPOSALS UNDER REVIEW

1. Ambinakudige, S., **Dash, P.**, Shaha, D. C., Hossain, A., Research on Resilient Rice-Fish Farming System for Small Holders in Bangladesh to Achieve Food Security, Human Nutrition and Strengthened and Equitable Livelihoods, Co-PI, 09/1/2019 to 8/31/2022, \$495,000, NOAA, Portion of funding to Dash: \$150,000.
2. Paul, V., **Dash, P.**, Yun, S., Kim, A., Kim, D., Gholson, D., A Hybrid Approach to Sustainable Groundwater Resource Management: Supply-Demand Mapping with Economics Modeling in the Lower Mississippi River Valley Aquifer system, Co-PI, 8/1/2020-7/31/2023, \$299,000, USDA, Portion of funding to Dash: \$70,000.

GRANT PROPOSALS SUBMITTED BUT NOT FUNDED

1. **Dash, P.** and Jackson, J., Development of 3-dimensional visualizations of the biogeochemical parameters collected by biogeochemical-Argo (BGC-Argo) floats, an autonomous surface vehicle, and in situ data in the region east of the Mississippi River Delta, northern Gulf of Mexico, PI, 07/31/2019 to 9/30/2020, \$400,000, NOAA, Portion of funding to Dash: \$350,000.
2. **Dash, P.**, Measurement and visualization of acidification over the largest oyster reef in the Mississippi Sound and determination of acidification's potential impacts on oysters in the Mississippi Sound, PI, 1/10/2019-9/9/2019, \$20,000, NSF, Portion of funding to Dash: \$20,000.
3. Sankar, M. S., Dash, P., Yuehan, Y. H., Chen, S. Integrating Remote Sensing and Biogeochemical Characterizations to Determine Roles of Dissolved Organic Matter in Declining Water Quality over Oyster Reefs, MS, Co-PI, 1/10/2019-9/9/2019, \$10,000, NSF, Portion of funding to Dash: \$10,000.
4. Bora, G., **Dash, P.**, Digital and Data-Driven Smart Farming Using Unmanned Aircraft Systems and Processing Tool for Useful Format Delivery to End Users, Co-PI, 1/1/2019-12/31/2020, \$198,937, USDA-NIFA, Portion of funding to Dash: \$59,681.
5. Ma, J., Marufuzzaman, M., **Dash, P.**, Sparks, E. Developing a Marine Debris Removal Logistics Network to Improve Coastal Resilience, Co-PI, 1/1/2019-6/30/2020, \$124,926, National Fish and Wildlife Foundation, Portion of funding to Dash: \$21,236.
6. Ma, J., Marufuzzaman, M., Shahavari, O., **Dash, P.** Sustainable Waste Management System Development to Reduce Marine Debris in Kalpitiya, Sri Lanka, Co-PI,

9/1/2018-8/31/2020, \$246,478.76, U.S. Department of State, Portion of funding to Dash: \$61,619.

6. **Dash, P.** The National Academies of Sciences, Engineering, and Medicine, Gulf Research Program, Early Career Research Fellowship, PI, 9/1/2018-8/31/2020, \$76,000, The National Academies of Sciences, Engineering, and Medicine, Gulf Research Program, Portion of funding to Dash: \$75,000.
7. Gabitov, R., Paul, V., **Dash, P.**, Kirkland, B., Microbial metabolism and mineralized products as a response to environmental conditions, Co-PI, 4/1/2018-3/31/2019, \$79,999, NSF, Portion of funding to Dash: \$19,999.
8. Elliott, M., **Dash, P.**, Ambinakudige, S., Investigating the role of illicit household wastewater “straight pipe” discharges on potential oyster fisheries in and around Bay St. Louis, Co-PI, 3/1/2018-2/28/2019, \$74,471, Gulf States Marine Fisheries, Portion of funding to Dash: \$28,479.
9. Elliott, M., **Dash, P.**, Ambinakudige, S., Lu, Y., Rakocinski, C., Raw wastewater discharges in Alabama and Mississippi: determining the scope and impacts, Co-PI, 1/1/2018-12/31/2018, \$99,995, GOMA, Portion of funding to Dash: \$36,595.
10. Ambinakudige, S., **Dash, P.**, Elliott, M., Lu, Y., Discharge of untreated wastewater: An integrated geospatial study of water quality, sanitation, health, environmental, social and economic problems in the Alabama Black Belt, Co-PI, 08/01/2018-07/31/2021, \$412,844.00, NSF, Portion of funding to Dash: \$137,614.
11. **Dash, P.**, Ambinakudige, S., Posadas, B., Howden, S., Regional Vulnerability Assessment of Human Communities in the United States Gulf of Mexico Coast to Ocean Acidification, PI, 09/01/2017-08/31/2019, \$349,648, NOAA, Portion of funding to Dash: \$139,860.
12. Ambinakudige, S., **Dash, P.**, Saravan S. A., Vulnerability and adaptations of coastal communities in India, Bangladesh, and Sri Lanka to ocean acidification: an integrated approach involving natural, social and geospatial Sciences for finding place-based solutions to a major global change problem, Co-PI, 07/1/2017-06/30/2018, \$45,870, Asia-Pacific Network, Portion of funding to Dash: \$22,935.
13. Reddy, K. R. R., Ambinakudige, S., **Dash, P.**, Parajuli, P. and Zakaria, A. K. M. Sustainable Intensification Research for Efficient and Resilient Farming System for Small Holders in Bangladesh, Co-PI, 10/1/2015-9/30/2019, \$858,197, USAID, Portion of funding to Dash: \$214,549.
14. Parajuli, P., **Dash, P.** and Ouyang, Y., Evaluation of downstream nutrient loadings through watershed spatial and temporal scales agroecosystems in Mississippi, Co-PI, 1/1/2016-12/31/2018, \$499,535, USDA, Portion of funding to Dash: \$124,883.

15. Fuhrmann, C., Clary, R., Sherman-Morris, K., and **Dash, P.**, C4: Connected Communities for Citizen Climate, Co-PI, 01/01/2017 – 12/31/2020, \$499,984, NOAA, Portion of funding to Dash: \$124,996.
16. Clary, R., **Dash, P.**, Sherman-Morris, K., and Ambinakudige, S., GP: IMPACT Geosciences Streamlined Pipeline And Research for Community Colleges (Geo-SPARCC), Co-PI, 8/1/2016-7/31/2019, \$355,645, NSF, Portion of funding to Dash: \$88,911.
17. Nagaraju, A., Ambinakudige, S., **Dash, P.**, Parajuli, P., and Reddy, R., A multidisciplinary study on the environmental quality of water bodies in India and the US using geomorphology, hydrology and remote sensing approaches, Co-PI, 1/1/2016-12/31/2018, \$200,000, University Grants Commission, India, Portion of funding to Dash: \$50,000.
18. **Dash, P.**, Amin, R., Reda, M., and Gremes-Cordero, S., Effects of Oil and Dispersant on Phytoplankton and Dissolved Organic Matter in Coastal Waters, PI, 1/1/16-12/31/18, \$715,821, Gulf of Mexico Research Alliance, Portion of funding to Dash: \$270,346.
19. Interis, M., Freeman, M., **Dash, P.**, Petrolia, D., and Gaunt, P., The Cost of HABs and the value of HAB forecasts to the Gulf of Mexico, Co-PI, 9/1/2015-8/31/2017, \$459,837, NSF, Portion of funding to Dash: \$101,164.
20. **Dash, P.** and Parajuli, P, Integrated Assessment of Pollutant Sources in Pascagoula River Watershed and Water Quality in Eastern Mississippi Sound, PI, 12/01/2014-11/30/2016, \$129,951, MS-AL Seagrant, Portion of funding to Dash: \$88,164.
21. McAnally, W., **Dash, P.** and Gallegos, S., Identification of Pollutant Sources, Co-PI, 10/1/2014-09/30/2017, \$525,319, NASA, Portion of funding to Dash: \$210,127.
22. Kirkland, B., **Dash, P.**, and Gabitov, R., The role of microbes and organic matter in the genesis of complex carbonate microfacies and lithologies, in the sacramento mountains, New Mexico, Co-PI, 05/15/2014-05/14/2016, \$307,775, NSF, Portion of funding to Dash: \$102,591.
23. **Dash, P.**, Ambinakudige, S., Cooke, W. H., and Boyd, C., Measurement and Monitoring of Algal Blooms in the Eastern Mississippi Sound using Multiple Satellite Sensors and Source-Tracking the Pollutants from the Pascagoula River Watershed, PI, 3/1/2014-2/28/2017, \$299, 998, U.S. Environmental Protection Agency - Gulf of Mexico Program, Portion of funding to Dash: \$119,999.
24. **Dash, P.**, Detection and Mapping of Cyanobacterial Harmful Algal Blooms Using Data From Multiple Satellite Sensors in Four Large Mississippi Lakes, PI, 01/01/2014-12/31/2015, \$10,000, Oak Ridge Associate Universities (ORAU), Portion of funding to Dash: \$10,000.

25. **Dash, P.** and Ma, D., Increasing the Photosynthesis Efficiency of Phytoplankton, PI, 01/01/2014-12/31/2015, \$12,000, NSF and Davidson College, Davidson, NC, Portion of funding to Dash: \$12,000.
26. **Dash, P.**, Begonia, M., Ayensu, W., and Ikenga, J., Detection and mapping of cyanobacterial harmful algal blooms using data from multiple satellite sensors in four large Mississippi lakes, PI, 01/15/2013-12/15/2013, \$5,000, Creative Awards for Faculty and Staff, Jackson State University, Jackson, MS, Portion of funding to Dash: \$4,000.
27. Ayensu, W., **Dash, P.**, Isokpehi, R., and Ikenga, J., Quantification of Heterophile microbes in Ecological Competition with Harmful Algal Blooms in Mississippi Water ways, Co-PI, 01/15/2013-12/15/2013, \$5,000, Creative Awards for Faculty and Staff, Jackson State University, Jackson, MS, Portion of funding to Dash: \$2,000.
28. **Dash, P.** and Das, H., MSHABS (Mississippi Harmful Algal Blooms): A ne-stop website on the water quality of the inland lakes and coastal Mississippi, PI, 01/01/2014 – 12/31/2014, \$100,000, Army Corps of Engineers, Vicksburg, MS, Portion of funding to Dash: \$75,000.
29. Peterson et al., Advancing Basic & Applied Research through Genomics, Co-I, 5 yrs, \$20 Million, NSF EPSCoR, Portion of funding to Dash: \$20,000.
30. Yu et al., GIS-Based Decision Support Systems for Assessment of Climate Change Impacts on Water Quality, Pollutant Loadings and Bioaccumulation, and Associated Health Risks, Co-I, 5 yrs, \$20 Million, NSF EPSCoR, Portion of funding to Dash: \$20,000.
31. Walker, N., **Dash, P.**, Bargu, S., and D'Sa, E., Rapid detection of cyanobacterial blooms using near real-time satellite data in an urban oligohaline estuary, Lake Pontchartrain, Louisiana, 9/1/2012-8/31/2015, \$651,067.00, NOAA, Portion of funding to Dash: \$315,000.
32. Walker, N., Bargu, S., **Dash, P.**, and Garcia, A., Detecting and quantifying toxic cyanobacterial blooms using Oceansat-1 OCM satellite data, 7/1/2008-7/31/2009, \$56,000.00, COYPU Foundation Trust, New Orleans, LA, Portion of funding to Dash: \$35,000.

TEACHING

- Courses teaching at MSU
 - Remote Sensing of the Physical Environment (GR 6333/4333), Every Fall, Class size- 30
 - Field Remote Sensing (GR 8333), Every Fall, Class size-30
 - Advanced Remote Sensing (GR 6343/4343), Every Spring, Class size- 30
 - Environmental Geology (GG 3133), Every Spring, Class size- 30
 - Water Biogeochemistry (GG 8633), Every Alternate Spring, Class size- 15

- Courses previously taught at MSU
 - Water Resources (GG 3613), Fall 2013 & 2014, Class size- 60
- Courses taught at JSU
 - Introduction to Remote Sensing for Environmental Science (ENV 717/BIO 617), Every Spring, Class size- 45
 - Introduction to Remote Sensing for Environmental Science (ENVL 717/BIOL 617), Every Spring, Class size- 45
 - Applications of Remote Sensing in Environmental Science (ENV 718/BIO 618), Every Fall, Class size- 45
 - Applications of Remote Sensing in Environmental Science (ENVL 718/BIOL 618), Every Fall, Class size- 45
 - Environmental Science Lecture/Laboratory (BIO 201/BIOL 201), Every Fall, Class size- 30
 - Introduction to Marine and Environmental Science (BIO 114), Every Fall & Spring, Class size- 55
- Courses taught at LSU
 - Introductory Oceanography (OCS 1005), Fall, 2008 and Spring, 2009, Class size- 120
- Courses taught at BGSU
 - Graduate level - Geographic Info. Systems Lab (Geol 503), Fall of 2004, Class size- 24
 - Life Through Time (Geol 105), Fall of 2003 and Spring of 2004, Class size- 30

STUDENT RESEARCH SUPERVISION

- **Major Professor for Ph.D. Students:**
 - Sankar M. Sasidharan (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Characterization and Determination of Biogeochemical Significance of Dissolved Organic Matter in Coastal and Inland Water Bodies.*
 - Wondimagegn T. Beshah (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *A Decision Support System for evaluating the climatic impacts on suspended sediments delivery to the Mississippi Sound*
 - Haibin Gu (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Soil moisture, texture, organic matter, and iron oxide content estimation using Unmanned Aerial Systems Imagery.*
- **Major Professor for M.S. Students:**
 - Landon Sandors (MS, Geosciences, Mississippi State University).
Thesis title: *Evaluation of Land Use and Land Cover Classification methods in classifying crop types.*
 - Sudeera Wickramarathna (MS, Geosciences, Mississippi State University).
Thesis title: *Remote Sensing observations of colored dissolved organic matter in the Mississippi Sound.*
 - Rusch Ragland (MS, Geosciences, Mississippi State University).

Thesis title: *Hyperspectral Remote sensing of harmful algal blooms in the Western Mississippi Sound.*

○ **Committee Member for Ph.D. Students:**

Jamie McFadden (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Remote Sensing and GIS of biodiversity habitats.*

Julia Domenech (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Remote Sensing of water quality and geoscience education.*

Keith Tischler (Ph.D. Earth & Environmental Sci., Mississippi State University)

Dissertation title: *The Role of Microbes and Organic Matter in the Genesis of Complex Carbonate Facies and Lithologies in the Sacramento Mountains.*

Yongwoo Cho (Ph.D. Earth & Environmental Sci., Mississippi State University)

Dissertation title: *Three-dimensional modelling of outcrops.*

Aynaz Lotfata (Ph.D. Earth & Environmental Sci., Mississippi State University)

Dissertation title: *Origins and Processes of Groundwater Salinization band Depletion: A Spatial and Temporal Multiscale Approach.*

○ **Research Advisor for Undergraduate Students:**

Brian Roberts (major: Geosciences, Mississippi State University).

Leah Jackson (major: Human Anatomy and Physiology, East MS Community College).

Javia Anderson (major: Biology, Meridian Community College).

Mallory Hunt (major: Geosciences, Mississippi State University)

○ **Major Professor for Past Ph.D. Students:**

Saurav Silwal (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Quantification of harmful algal blooms in multiple water bodies of Mississippi using in-situ, analytical, and remote sensing techniques.*

Shatrugan Singh (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Influence of land use, land cover, and hydrology on the spatial and temporal characteristics of dissolved organic matter (DOM) in multiple aquatic ecosystems.*

○ **Major Professor for Past M.S. Students:**

Victoria Cheek (MS, Geology, Mississippi State University).

Thesis title: *Influence of discharge patterns and land use land cover of a watershed on the water quality of a reservoir.*

Madhur Devkota (MS, Geology, Mississippi State University).

Thesis title: *An improved algorithm for estimating Total Alkalinity in the Northern Gulf of Mexico.*

Sushant Shekhar (MS, Geology, Indian Institute of Technology, Roorkee).

Thesis title: *Comparative Study of Groundwater trends and factors affecting them in Mississippi River Watershed (USA) AND Indo-Gangetic Plains (India).*

○ **Minor Professor for Past Ph.D. Student:**

Xiaojing Ni (Ph.D. Ag. And Bio. Engg., Mississippi State University).

Dissertation title: *Evaluation of impacts of conservation practices on surface water and groundwater at watershed scale.*

○ **Committee Member for Past Ph.D. Students:**

Chris Zarzar (Ph.D. Earth & Environmental Sci., Mississippi State University)

Dissertation title: *Hydrometeorological modelling of Lower Pearl River Estuary*

Pushkar Inamdar (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Spatiotemporal Analysis of Glacier Mass Variations in the South Western Regions of South and North America.*

Xiaojing Ni (Ph.D. Ag. And Bio. Engg., Mississippi State University).

Dissertation title: *Watershed modelling of Big sun flower River Watershed.*

Brittney Garner (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Carbonate mineralization as a function of temperature and pressure.*

Jeremy Weremeichik (Ph.D. Earth & Environmental Sci., Mississippi State University)

Dissertation title: *Environmental and growth rate effects on trace element incorporation to calcite and aragonite: An experimental study.*

Michael Maguigan (Ph.D. Earth & Environmental Sci., Mississippi State University).

Dissertation title: *Primary differences between function and productivity of coastal and montane wetland ecosystems.*

○ **Committee Member for Past M.S. Students:**

Madison Dixon (MS, Geospatial Sciences, Mississippi State University).

Thesis title: *Geospatial accuracy of prosumer small unmanned aircraft systems*

Devon Flickinger (MS, Geospatial Science, Mississippi State University).

Thesis title: *Analysis of suspended particulate matter concentrations in Weeks Bay, Alabama using Landsat imagery.*

Marvin Kunath (MS, Geology, Mississippi State University).

Thesis title: *Substrate availability in the Upper Cretaceous oyster *Exogyra costata*.*

John Van Horn (MS, Meteorology, Mississippi State University).

Thesis title: *Potential of Unmanned Aerial Systems imagery relative to Landsat 8 imagery in the Lower Pearl River Basin.*

Danielle Meritt (MS, Geology, Mississippi State University).

Thesis title: *Estimation of suspended particulate matter concentration in the Mississippi Sound using MODIS imagery.*

Jeremy Foote (MS, Geology, Mississippi State University).

Thesis title: *An examination of the hydrological environment in Choctaw County Mississippi since 1995, with a focus on an area surrounding an industrial complex established in 1998*

Cheryl McLaurin (MS, Geology, Mississippi State University).

Thesis title: *Investigating the relationship between stream gauge stage and nearby soil moisture in a longleaf pine biome.*

Lucy Tettech (MS, Geospatial Science, Mississippi State University).

Thesis title: A multi-decadal remote sensing study on glacial change in the North Patagonia Ice field, Chile.

Bruce Smylie (MS, Geosciences, Mississippi State University). Non thesis M.S. Degree.

○ **Research Advisor for Past Undergraduate Students:**

Audra Sawyer (major: Geosciences, Mississippi State University)

Haley Ray (major: Geosciences, Mississippi State University)

Dustin Hampton (major: Geosciences, Mississippi State University)

Luciano Mendoza (major: Geosciences, Mississippi State University)

Brandan Berenato (major: Geosciences, Mississippi State University).

Kyaw Khine (major: Geosciences, Mississippi State University).

Landon Sanders (major: Geosciences, Mississippi State University).

Rayford Parnell (major: Geosciences, Mississippi State University).

Molly Murdock (major: Wildlife and Fisheries, Mississippi State University).

David Shelley (major: Geosciences, Mississippi State University).

Clark Jackson (major: Civil and Environmental Engg., Mississippi State University).

LaTia Peavy (major: Biology, Jackson State University).

Michael Collins (major: Biology, Jackson State University).

Tasha Norwood (major: Biology, Jackson State University).

Grant Ikenga (major: Natural Sciences, Mississippi Valley State University).

Tanjia Coleman (major: Biology, Jackson State University).

Daniel Kibet (major: Biology and Chemistry, Mississippi Valley State University)

Winnie Tanui (major: Natural Sciences, Mississippi Valley State University)

Marlon Flowers (major: Natural Sciences, Mississippi Valley State University)

Joyce Chumo (major: Biology and Chemistry, Mississippi Valley State University)

Meredith Hunt (major: Marine Science, Louisiana State University).

SYNERGISTIC ACTIVITIES

- Advisor/Mentor for graduate and undergraduate students
- Expert skills and knowledge on using SeaDAS, Erdas Imagine, ENVI, ARC GIS 10.1, IDL, MATLAB, SAS, STELLA
- Develops remote sensing algorithms/models for atmospheric correction and water quality indicators
- Assesses water quality parameters in both inland and coastal waters
- Serves in the National Steering Committee of Gulf of Mexico Coastal Acidification Network (G-CAN)
- Editorial Board Member: *Advances in Remote Sensing*, 2012-present.
- Editorial Board Member: *Journal of Biochemistry & Physiology*, 2013-present
- Editorial Board Member: *International J. of Oceanography & Aquaculture*, 2016-present
- Reviewer: NSF Geography & Spatial Sciences program, 2016
- Reviewer: NOAA Unmanned Aircraft Systems (UAS) Program, 2017
- Reviewer: *Remote Sensing of Environment*, 2012-present.
- Reviewer: *IEEE Transactions in Geoscience and Remote Sensing*, 2011-present.
- Reviewer: *Journal of Applied Phycology*, 2012-present.

- Reviewer: *International Journal of Digital Earth*, 2013-present.
- Reviewer: *Advances in Space Research*, 2013-present.
- Reviewer: *Science of the Total Environment*, 2013-present.
- Reviewer: *Remote Sensing*, 2013-present.
- Reviewer: *Plos One*, 2015-present.
- Reviewer: *Water*, 2015-present.
- Reviewer: *Estuarine, Coastal and Shelf Science*, 2015-present
- Reviewer: *Estuaries and Coasts*, 2016-present
- Reviewer: *Water, Air, & Soil Pollution*, 2016-present.
- Reviewer: *Journal of Environmental Quality*, 2016-present.
- Reviewer: *Cogent Geoscience*, 2016-present.
- Reviewer: *Cogent Chemistry*, 2016-present.
- Reviewer: *Cogent Food & Agriculture*, 2016-present.
- Reviewer: *International J. of Environmental Research and Public Health*, 2016-present.
- Mentor, Mississippi IDeA Network of Biomedical Research Excellence (MS INBRE), 2012-present (mentored 11 undergraduate students)
- Volunteer: ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico (2011)
- Session Chair: Recent Advances in Satellite Oceanography I Posters, AGU Fall Meeting, San Francisco, CA (2011)
- Judge: Student Poster Competition in the 9th International Symposium on Recent Advances in Environmental Health Research, Jackson, MS (2012)
- Judge: Science exhibits in Mississippi Science and Engineering Fair - Region II, Jackson, MS (2012)
- Session Chair: Remote Sensing of Physical Environment using Unmanned Aerial Systems, 72nd Annual Meeting of the Southeastern Division of the AAG, Starkville, MS, November 19-20, 2017.
- Session Chair: Zoology and Entomology, Mississippi Academy of Sciences Annual Meeting (2014)
- Judge: oral and poster presentations in the Coastal and Estuarine Research Federation 23rd Biennial Conference, November 8-12, 2015, Portland, OR.

MEMBERSHIPS AND AFFILIATION

- a) Association for the Sciences of Limnology and Oceanography (ASLO)
- b) American Geophysical Union (AGU)
- c) American Association of Geographers (AAG)
- d) Coastal and Estuarine Research Federation (CERF)
- e) Sigma Xi

UNIVERSITY, COLLEGE, AND DEPARTMENT SERVICE

- University Committee on Courses and Curricula, MSU 2018 –
- Department Action Committee
- Building operator for Hilbun Hall and Geosciences labs in Buckner and Etheredge Hall
- Department Space Committee
- Department Seminar Committee

- Search Committee, Assistant or Associate Professor Position in Human Geography
- Search Committee, Assistant or Associate Professor Position in Environmental Geology

COMPUTATIONAL EXPERIENCE

- Programming Languages: IDL, MATLAB, PYTHON, FORTRAN-90, HTML
- Packages: SeaDAS, ENVI, ERDAS Imagine, ER Mapper, Arc GIS, SAS, MINITAB

CREDENTIALS AND AWARDS

- Invited to review proposal for the NOAA Unmanned Aerial Systems Program (2017)
- Invited to serve on the National Steering Committee of Gulf of Mexico Coastal Acidification Network (G-CAN) (2017)
- Invited to review NSF proposal for the Geography & Spatial Sciences program (2016)
- Invited for scientific peer review for NASA CASIS proposal (2014)
- Selected to the Academy for Research and Scholarly Engagement, JSU (2012)
- Travel Award, AGU Fall Meeting, San Francisco, CA (2011)
- Travel Award, ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico (2011)
- Best Poster Award, Graduate Student Symposium, LUMCON, Cocodrie, LA (2008)
- Second Best Poster Award, Northern Gulf Institute Conference, Biloxi, MS (2008)
- Travel Award, 4th Symposium on Harmful Algae in the US, Woods Hole, MA (2007)
- Representative to Graduate Student Senate (GSS), BGSU (2004).
- Representative to Student Achievement Assessment Committee, BGSU (2004)
- Secured 4th position in All India Entrance Examination for IIT Bombay MS Applied Geology Admission Test (2001)
- Awarded Merit Cum Means (MCM) scholarship at IIT Bombay (2001-2003)
- Qualified Graduate Aptitude Test in Engineering (GATE), India (2001)
- Qualified Council of Scientific and Industrial Research National Eligibility Test (CSIR-NET), India (2001)
- Junior and Senior National Merit Scholarship, Ministry of HRD, India (1994 - 1996)