

CURRICULUM VITAE

Padmanava Dash, Ph.D.

Associate Professor

Department of Geosciences

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

EDUCATION

- 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

PROFESSIONAL EXPERIENCE

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

Assistant Professor (tenure-track), Dept. of Geosciences, Mississippi State University, Mississippi State, 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: (1) Assessment of water quality and biogeochemical processes, (2) Remote sensing of water quality parameters, (3) Determining the influence of land use & land cover, and precipitation on water quality, (4) Source-tracking pollutants using parallel factor modeling of colored dissolved organic matter, (5) Determining the effects of coastal acidification, and (6) Determining the 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 harmful algal blooms using satellite data, quantification of Harmful Algal Blooms, pathogens, and toxic metals in water bodies.

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

- Research on NASA funded project: “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)

2022

1. Osborne, E., Hu, X., Hall, E., Yates, K., Vreeland-Dawson, J., Shamberger, K., Barbero, L., Hernandez-Ayon, J. M., Gomez, F., Hicks, T., Xu, Y., McCutcheon, M., Acquafredda, M., Chapa-Balcorta, C., Norzagaray, O., Pierrot, D., Munoz-Caravaca, A., Dobson, K., Williams, N., Rabalais, N., **Dash, P.** 2022. Ocean Acidification in the Gulf of Mexico: Drivers, Impacts, and Unknowns, *Progress in Oceanography*, In Press (Impact Factor: 4.416)
2. Das, P., Panda, R.M., **Dash, P.**, Jana, A., Jana, A., Ray, D., Tripathi, P., and Kolluru, V. 2022. Multi-Decadal Mapping and Climate Modelling Indicates Eastward Rubber Plantation Expansion in India. *Sustainability*, 14, 7923 (Impact Factor: 3.889).
3. Kyaw*, T. Y., Siegert, C. M., **Dash, P.**, Poudel, K. P., Pitts, J. J., and Renninger, H. J. 2022. Using hyperspectral leaf reflectance to estimate photosynthetic capacity and nitrogen content across eastern cottonwood and hybrid poplar taxa, *Plos One*, 17, 3 (Impact Factor: 3.752).
4. **Dash, P.**, Devkota*, M., Mercer, A. E., and Ambinakudige, S. 2022. A geographic weighted regression approach for improved total alkalinity estimates in the Northern Gulf of Mexico, *Environmental Modelling & Software*, 148, 105275 (Impact Factor: 5.471).

2021

5. Paul, V., Vattikuti*, S., **Dash, P.**, and Arslan, Z. 2021. Evaluating hydrogeochemical characteristics of groundwater and surface water in the Upper Pearl River Watershed, USA, *Environmental Monitoring and Assessment*, 193, 296 (Impact Factor: 3.420).
6. Wickramarathna*, S., Chandrajith, R., Senaratne, A., Paul, V., **Dash, P.**, Wickramasinghe, S., and Biggs, P. 2021. Bacterial influence on the formation of hematite: Implications for Martian dormant life. *International Journal of Astrobiology*, 20, 4, 270-284 (Impact Factor: 1.358).
7. Nguyen*, A., Gabitov, R., Jimenez, A., Dygert, A., Varco, J., Pérez-Huerta, A., Migdisov, A., Paul, V., Kirkland, B., **Dash, P.** 2021. Retaining Geochemical Signatures

during Aragonite-Calcite Transformation at Hydrothermal Conditions, *Minerals*, 11, 1052 (Impact Factor: 2.818).

8. Ni*, X., Parajuli, P. B., Ouyang, Y., **Dash, P.**, Siegert, C. 2021. Assessing land use change impact on stream discharge and stream water quality in an agricultural watershed, *Catena*, 198, 105055 (Impact Factor: 6.367).

2020

9. Paul, V., Sankar*, M.S., Vattikuti*, S., **Dash, P.**, Arslan, Z. 2020. Pollution assessment and land use land cover influence on trace metal distribution in sediments from five aquatic systems in southern USA, *Chemosphere*, 263, 128243 (Impact Factor: 8.943).
10. Risal*, A., Parajuli, P., **Dash, P.**, Ouyang, Y., Linhoss, A. 2020. Sensitivity of hydrology and water quality to variation in land use and land cover data, *Agricultural Water Management*, 241, 106366 (Impact Factor: 6.611).
11. Zarzar*, C. M., **Dash, P.**, Dyer, J. L., Moorhead, R., Hathcock, L. 2020. Development of a Simplified Radiometric Calibration Framework for Water-Based and Rapid Deployment Unmanned Aerial System (UAS) Operations, *Drones*, 4, 17 (Impact Factor: 5.532).
12. Osorio*, R.J., Linhoss, A., **Dash, P.** 2020. Evaluation of Marsh Terraces for Wetland Restoration: A Remote Sensing Approach, *Water*, 12, 336 (Impact factor: 3.53).
13. Sankar*, M.S., **Dash, P.**, Lu, Y., Turnage, G., Shoemaker, C. M., Chen, S., Moorhead, R. J. 2020. Land use and land cover control on the spatial variation of dissolved organic matter across 41 lakes in Mississippi, USA, *Hydrobiologia*, 847, 1159–1176 (Impact Factor: 2.92).

2019

14. Sankar*, M.S., **Dash, P.**, Lu, Y., Paul, V., Mercer, A.E., Arslan, Z., Varco, J.J., and Rodgers, J.C. 2019. Dissolved organic matter and trace element variability in a blackwater-fed bay following precipitation, *Estuarine, Coastal and Shelf Science*, 231, 106452 (Impact Factor: 3.229).
15. Chen, S., 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: 10.753).
16. 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: 3.53).
17. 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: 3.246).

18. 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: 6.796).

2018

19. 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: 6.708).

2017

20. 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: 5.19).

2016

21. 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: 1.8).
22. 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: 1.8).
23. 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: 1.8).

2015

24. **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: 3.53).

2012

25. **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: 5.349).

2011

26. **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: 13.85).

2010

27. 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: 5.905).

2003

28. Anbazhagan, S., and **Dash, P.** 2003. Environmental case study of Cauvery River flood plain. *GIS Development*, 7, 12, 30-35 (Impact factor: 0.7).

PUBLICATIONS IN CONFERENCE PROCEEDINGS

2021

1. **Dash, P.**, Sankar*, M. S., Moorhead, R. J., Herman, J., Moorhead, J., Beshah*, W., Chesser, D., Lowe, W., Simmerman*, J., and Turnage, G. 2021. Evaluation of Water Quality Data Collected using a Novel Autonomous Surface Vessel, *Global Oceans 2021 Conference and Exposition*, San Diego, CA, September 20-23, 2021.
2. Beshah, W. T., Moorhead, J., **Dash, P.**, Moorhead, R. J., Sankar, M. S., Chesser, G. D. Jr., Lowe, W., Simmerman, J., Turnage, G. 2021. IoT Based Real-Time Water Quality Monitoring and Visualization System Using an Autonomous Unmanned Surface Vehicle, *Global OCEANS 2021 Conference and Exposition*, San Diego, CA, September 20-23, 2021.
3. Simmerman, J., Chesser, G. D. Jr., Lowe, W., Moorhead, J., Beshah, W. T., Turnage, G., **Dash, P.**, Sankar, M.S., Moorhead, R. J. and Herman, J. 2021. Evaluation of the Utility and Performance of an Autonomous Surface Vehicle for Mobile Monitoring of Waterborne Biochemical Agents, *Global OCEANS 2021 Conference and Exposition*, San Diego, CA, September 20-23, 2021.

2005

4. **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.

PEER-REVIEWED PUBLICATIONS UNDER REVIEW

1. Sankar, M.S., **Dash, P.**, Lu, Y. H., Hu, X., Mercer, A. E., Wickramarathna, S., Beshah, W. T., Arslan, Z., Dyer, J., Moorhead, R. J. Seasonal changes in trace metal-nutrient-dissolved organic matter conveyance along with coastal acidification over the largest oyster reef along the Western Mississippi Sound, USA, *Environmental Monitoring and Assessment*, under review (Impact Factor: 3.42).
2. Ahmad, H., Jose, F., Bhuyan, M. S., Islam, M. N., **Dash, P.**, & Islam, M. M. Modeling on Land use and Land Surface Temperature by Integrating Remote Sensing and Machine Learning Techniques for the Chittagong Coastal City of Bangladesh, *Remote Sensing Applications: Society and Environment*, under review (Impact Factor: 3.371)

PEER-REVIEWED PUBLICATIONS SOON-TO-BE-SUBMITTED

1. **Dash, P.**, Sanders, L., Sankar, M. S., Lu, Y., Parajuli, P., and Ouyang, Y. Source and composition of dissolved organic matter and nutrients in streams from an intensively

managed agricultural watershed, *River Research Applications* (Impact factor: 2.78).

2. **Dash, P.**, Sanders, L., Parajuli, P., and Ouyang, Y. Improving the Accuracy of Land Use and Land Cover Classification of Landsat Data in an Agricultural Watershed, *Remote Sensing* (Impact factor: 5.349).
3. Ahmad, H., Jose, F., Bhuyan, M. S., Islam, M. N., **Dash, P.** Seasonal Influence of Freshwater Discharge on Saptio-temporal Variations in Chlorophyll-a, Sea Surface Temperature, Euphotic Zone Depth, and Primary Productivity in the Northern Bay of Bengal, *Remote Sensing Applications: Society and Environment* (Impact Factor: 3.371)

INTELLECTUAL PROPERTIES DEVELOPED

1. Developed an interactive map-based water quality visualization tool for the Gulf of Mexico, which can be accessed on the world-wide-web www.water.geosci.msstate.edu. It provides scientists and natural resource managers with robust science-based resources to monitor the health and resilience of our coastal waters and will help funding future research proposals.
2. Developed a web-based platform <https://water.geosci.msstate.edu/monitor/> to receive, archive, and display data from an autonomous surface vessel (ASV) that collects water quality data using 15 sensors onboard the ASV. This web-tool also displays the charts and maps in real-time. Similar to the above visualization tool, it provides scientists and natural resource managers with robust science-based resources to monitor the health and resilience of our inland and coastal waters, and will help funding future research proposals.

INVITED PRESENTATIONS

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, Bangaluru, 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), Invited Speaker, *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), Invited Speaker, *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)

2022

1. **Dash, P.**, Beshah, W. T., Nur, A., Hu, X. 2022. Influence of river input on the carbonate chemistry of the northern Gulf of Mexico, Ocean Sciences Meeting, Virtual, February 24-March 4, 2022.
2. Moorhead, R., Moorhead, J., **Dash, P.**, Chesser, G. D., Lowe, W., Turnage, L. G., Beshah, W. T., Sankar, M., and Wolfe, J. S. Water quality collection using satellites, autonomous aerial systems, autonomous surface vessels, and in-situ sensors, Ocean Sciences Meeting, February 24-March 4, 2022.

2021

3. **Dash, P.**, Sankar, M. S., Moorhead, R. J., Herman, J., Moorhead, J., Beshah, W., Chesser, D., Lowe, W., Simmerman, J., and Turnage, G. 2021. Evaluation of Water Quality Data Collected using a Novel Autonomous Surface Vessel, Global OCEANS 2021 Conference and Exposition, San Diego, CA, September 20-23, 2021.
4. Beshah*, W. T., Moorhead, J., **Dash, P.**, Moorhead, R. J., Sankar, M. S., Chesser, G. D. Jr., Lowe, W., Simmerman, J., Turnage, G. 2021. IoT Based Real-Time Water Quality Monitoring and Visualization System Using an Autonomous Unmanned Surface Vehicle, Global OCEANS 2021 Conference and Exposition, San Diego, CA, September 20-23, 2021.
5. Simmerman*, J., Chesser, G. D. Jr., Lowe, W., Moorhead, J., Beshah, W. T., Turnage, G., **Dash, P.**, Sankar, M.S., Moorhead, R. J. and Herman, J. 2021. Evaluation of the Utility and Performance of an Autonomous Surface Vehicle for Mobile Monitoring of Waterborne Biochemical Agents, Global OCEANS 2021 Conference and Exposition, San Diego, CA, September 20-23, 2021.
6. Gabitov, R. G., Varco, J., Dygert, D., Kirkland, B., Paul, V., **Dash, P.**, Migdisov, A., Nguyen, A., Jimenez, A., Perez-Huerta, A. 2021. Retention of geochemical signatures during the transformation of aragonite to calcite at elevated temperatures, Goldschmidt conference, Virtual, July 4-9, 2021.

2020

7. Beshah*, W. T., **Dash, P.**, Hathcock, L., and Moorhead R. J. Pre- and Post-Processing of Multispectral Unmanned Aerial Systems Imagery for Estimating Suspended Particulate Matter over an Oyster Reef, AAG 2020 Annual Meeting, Virtual Event: April 6-10, 2020.
8. Paul, V., Vattikutti*, S., Sankar*, M. S., **Dash, P.**, Berry, M., and Arslan, Z. Geochemical Assessment of Trace Metals from Varied Aquatic Systems in Southern USA, Mississippi Water Resources Conference, Virtual Event: March 31 - April 1, 2020.
9. 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 (oral), Bays and Bayous Symposium, Virtual Event: December 1-3, 2020.

2019

10. **Dash, P.**, Devkota, M., Sankar, M. S., Beshah, W., Mercer, A. E., Ambinakudige, S. 2019: Influence of river input on the carbonate chemistry of northern Gulf of Mexico (oral), Coastal and Estuarine Research Federation 25th Biennial Conference, Mobile, AL, November 2-8, 2019.
11. Sankar*, M. S., **Dash, P.**, Lu, Y., Arslan, Z., Sanders, S. L., Pallayapelage, S., Ragland, R., Moorhead, R. J. 2019: Changes in dissolved Organic matter, trace metals, and ocean acidification parameters over an oyster bed in the western Mississippi Sound, Northern Gulf of Mexico (oral), Coastal and Estuarine Research Federation 25th Biennial Conference, Mobile, AL, November 2-8, 2019.

12. Katkar*, A., **Dash, P.**, Sankar, M. S., and Moorhead, R. J. 2019: Effects of coastal acidification on the oyster reefs in the western Mississippi sound (poster), Coastal and Estuarine Research Federation 25th Biennial Conference, Mobile, AL, November 2-8, 2019.
13. Wickramarathna*, 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.
14. **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.
15. 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.
16. Hunt*, M. P., **Dash, P.**, Wickramarathna*, 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.
17. 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.
18. Wickramarathna*, 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.

2018

19. 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.
20. 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.
21. 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.
22. 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.

23. 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.
24. Moorhead, R. J., **Dash, P.**, Hathcock, L., and Devkota, M., Coastal Water Quality Algorithm Development, *IEEE VIS*, Berlin, Germany, October 21-26, 2018.
25. Wickramarathna*, S., Chandrajith, R., Senarathne, A., Wickramashinghe, S., Paul, V., and **Dash, P.**, Microbial diversity in hematitic bearing rock from tropical Sri Lanka, *Goldschmidt conference*, Boston, MA, August 12-17, 2018.
26. 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.
27. 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.

2017

28. 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.
29. 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.
30. 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.
31. 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.
32. **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.
33. 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.
34. 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.

35. 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.
36. 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.
37. Adhikari*, P., **Dash, P.**, Sankar, M. S., Nagpal, S., 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.
38. 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.

2016

39. 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.
40. **Dash, P.**, 2016: Remote sensing for climate smart agriculture (oral), *Workshop for the Cochran Fellows*, Starkville, MS, August 1-12, 2016.
41. 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.
42. 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.
43. 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.
44. 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.
45. 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.

2015

46. 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.
47. **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.
48. 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.
49. 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.
50. 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.
51. 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.
52. 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.
53. 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.
54. 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.

2014

55. **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.
56. **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.
57. 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.

58. 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.
59. 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.
60. 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.
61. 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.

2013

62. **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.
63. **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.
64. **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.
65. 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.
66. 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.
67. 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.
68. 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.

2012

69. **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.
70. **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.

2011

71. **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.
72. **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.

2008

73. **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**).
74. **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**).

2007

75. **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.
76. 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.

2005

77. **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 (Total: \$15,694,141; Portion to Dash: \$2,218,097)

1. **Dash, P.**, Bhushan, S., Chesser, D., Kulawardhana, R. and Easson, G. Assessment of Climate Change Impacts on Mississippi Sound Coastal Waters using NASA's Satellite Data, Datasets Collected by a Novel Autonomous Surface Vessel, and a Visualization Tool, Sc-I, 7/1/2022 to 6/30/2025, \$750,000, NASA EPSCoR, Portion of funding to Dash: \$738,500

2. Ochs, C., Shields, F. D., **Dash, P.**, Taylor, J. Nutrient Removal & Algae/Cyanobacteria Production in Backwater Areas of the Mississippi River, Co-PI, 5/16/2022 to 8/15/2022, \$159,819, US Army Engineer Research and Development Center (ERDC), Portion of funding to Dash: \$10,493.
3. **Dash, P.**, Linhoss, A., Parajuli, P., Moorhead, R. J., Potential risk of harmful algal blooms to oysters and human health in the western Mississippi Sound, Co-PI, 5/1/2021-8/15/2021, \$14,994, Mississippi Based RESTORE Act Center of Excellence (MBRACE), Portion of funding to Dash: \$14,994.
4. Linhoss, A., **Dash, P.**, Moorhead, R. J., Parajuli, P., MBRACE 2 Core Research Program: Approaches for understanding water quality and oyster habitat suitability in the Mississippi Sound, Co-PI, 3/1/2020 to 2/28/2023, \$388,184, Mississippi Based RESTORE Act Center of Excellence (MBRACE), Portion of funding to Dash: \$97,046.
5. Moorhead, R. J., **Dash, P.**, Chesser, D., Persistent Autonomous Mobile Monitoring of Waterborne Biochemical Agents, Co-PI, 7/22/2019-7/21/2023, \$2,000,000, US Army Engineer Research and Development Center, Portion of funding to Dash: \$750,000.
6. 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.
7. Parajuli, P., **Dash, P.** and Ouyang, Y., Assessment of nutrient sources and movement at watershed scale agro-ecosystems, Co-PI, 4/1/2017-03/31/2022, \$499,535, USDA, Portion of funding to Dash: \$124,883.
8. 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.
9. **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.
10. Gabitov, R., **Dash, P.**, Paul, V., Reverse flow injection spectrophotometric determination of iodate and iodide in table salt, Co-PI, 1/1/2020-12/31/2020, \$10,000, College of Arts & Sciences, Mississippi State University, Portion of funding to Dash: \$700.
11. Paul, V., **Dash, P.**, Yun, S., Kim, D., Interdisciplinary Grant Writing Group, Co-PI, 8/1/2018-5/31/2019, \$250, Office of Institutional Diversity and Inclusion, Mississippi State University, Portion of funding to Dash: \$62.50.
12. 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.

13. **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.
14. **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.
15. 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.
16. 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. Bhushan, S., **Dash, P.**, Narsipur, S., Burgreen, G., and Li, C. M., Characterization of Hydrokinetic Energy Potential in the Lower Mississippi River, Co-PI, 7/1/2022 to 6/30/2025, \$750,000, DoE, Portion of funding to Dash: \$200,000 (Invited proposal after winning a state-wide competition of the pre-proposals submitted to Mississippi DoE EPSCoR).

GRANT PROPOSALS SUBMITTED BUT NOT FUNDED

1. White, J. R., **Dash, P.**, Li, C., Xue, Z. G., Collaborative Research: Projecting Future Carbon and Nutrient Loss from Deltaic Coastal Wetlands Today through Outwelling: Filling the Knowledge and Modelling Gap, Co-PI, 7/1/2022 to 6/30/2025, \$750,000, NSF, Portion of funding to Dash: \$246,511
2. **Dash, P.**, Chesser, D., and Lowe, W. Coastal Carbon Export from Wetland dominated coasts Driven by Oceanic and Weather Forcing under today's and future Sea Level Rise, PI, 8/15/2021 to 8/14/2024, \$386,002, NASA ROSES, Portion of funding to Dash: \$338,133.
3. White, J. R., **Dash, P.**, Li, C., Cooke, R. L., and Xue, Z. G., Coastal Carbon Export from Wetland dominated coasts Driven by Oceanic and Weather Forcing under today's and future Sea Level Rise, Co-PI, 08/1/2021 to 7/31/2023, \$1,000,000, DoE, Portion of funding to Dash: \$199,304.
4. Rivera-Monroy, V., Walker, N. D., **Dash, P.**, and Meselhe, E., Nutrient and Sediment Loading from River Diversions: Spatio-temporal Hierarchical Analyses Using Field and Satellite Data to Validate Predictive Modeling Systems, Co-PI, 08/1/2021 to 7/31/2022, \$230,000, RESTORE Act Center of Excellence for Louisiana (LA-COE), Portion of funding to Dash: \$90,000.
5. Hunt*, M., Potential risk of harmful algal blooms to oysters and human health in the western Mississippi Sound, Supervisor, 8/15/2021 to 8/14/2023, \$138,000, NSF (Graduate Student Fellowship).
6. Ariunbold, G., **Dash, P.**, Wang, H., and Fitzkee, N., CAS-MNP: High-throughput in situ study of weathering in plastic debris and its degraded micro-fragments, Co-PI, 09/1/2020 to 8/31/2022, \$331,920, NSF, Portion of funding to Dash: \$90,000.
7. **Dash, P.**, Chesser, D., Howden, S., Eldek, A., High Resolution Collection and Visualizations of the Dynamics of Freshwater Inflow and Associated Biogeochemical Parameters Affecting the Water Quality of Western Mississippi Sound Collected by an Autonomous Surface Vehicle, Unmanned Aerial Systems, and In Situ Data, PI, 1/1/2020 to 12/31/2021, \$449,957, Mississippi Based RESTORE Act Center of Excellence (MBRACE), Portion of funding to Dash: \$357,422.
8. Mlsna, T., Schauwecker, T., Paul, V., **Dash, P.**, Ramirez, J. Removing Nitrate and Phosphate from Runoff and Baseflow using Low-cost, Engineered Biochar, Co-PI, 1/1/2021 to 12/31/2023, \$937,912, United States Environmental Protection Agency (USEPA), Portion of funding to Dash: \$312,637.
9. **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.

10. 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.
11. 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.
12. Ariunbold, G. O. and **Dash, P.**, Joint Mongolia-US Collaborative Research Initiative to Study Environmental Pollution of Lake Hovsgol, Co-PI, 01/01/2020 – 07/31/2020, \$5,000, International Institute, Mississippi State University, Portion of funding to Dash: \$2,500.
13. **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.
14. 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.
15. Linhoss, A., Dash, P., Dyer, J., Skarke, A., Moorhead, R. J., Identifying drivers of success in marsh terrace restoration, Co-PI, 9/1/2019-8/31/2014, \$2,670,437, NOAA, Portion of funding to Dash: \$392,311.
16. 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.
17. 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.
18. 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.
19. **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.

20. 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.
21. 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.
22. 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.
23. 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.
24. **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.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.

30. 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.
31. **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.
32. 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.
33. **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.
34. 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.
35. 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.
36. **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.
37. **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.
38. **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.
39. **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.

40. 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.
41. **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.
42. Peterson et al., Advancing Basic & Applied Research through Genomics, Co-I, 5 yrs, \$20 Million, NSF EPSCoR, Portion of funding to Dash: \$20,000.
43. 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.
44. 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.
45. 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-15
 - 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:**
 - 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*
 - Ankita Katkar (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Dissolved organic matter dynamics in the coastal waters of the northern Gulf of Mexico.*
 - Abduselam Nur (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Remote sensing of suspended sediments in the Mississippi Sound.*
 - Shakiul Islam (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Remote sensing of dissolved organic matter dynamics in the Mississippi Sound.*
 - Omar Shahed (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Effects of Ocean acidification on the western Mississippi Sound*
- **Major Professor for M.S. Students:**
 - John Preston Liles (MS, Geosciences, Mississippi State University).
Thesis title: *Development of algorithms for quantifying harmful algal blooms in the western Mississippi Sound.*
 - Brooke Walker (MS, Geosciences, Mississippi State University; distance education).
Thesis title: *A Spatially Explicit, Multi-Criteria Decision Support Model for Loggerhead Sea Turtle Nesting Habitat Suitability: A Remote Sensing-Based Approach.*
- **Committee Member for Ph.D. Students:**
 - Angel Jimenez (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Immobilization of Uranium and Iodine by Calcium Phosphate Minerals.*

- Anh Nguyen (Ph.D. Earth & Environmental Sci., Mississippi State University).
Dissertation title: *Evaluation of Fluid-Rock Interactions to Solve Emerging Environmental Issues.*
- Hossein Lotfi (Ph.D. Earth & Environmental Sci., Mississippi State University)
Dissertation title: *Sensitivity of Land Use and Land Cover Changes on Convective Processes.*
- Jannatul Ferdush (Ph.D. Earth & Environmental Sci., Mississippi State University)
Dissertation title: *Effects of elevated CO₂ on soil inorganic carbon pools.*
- Shannon Vattikutti (Ph.D. Earth & Environmental Sci., Mississippi State University)
Dissertation title: *Environmental & Socioeconomics related to EPA TRI sites & COVID morbidity and mortality rates.*
- Thu Ya Kyaw (Ph.D. Earth & Environmental Sci., Mississippi State University)
Dissertation title: *Using hyperspectral leaf reflectance to estimate the photosynthetic capacity and nitrogen content of eastern cottonwood and hybrid poplar genotypes.*
- **Committee Member for MS Students:**
 - Emma Tucker (MS, Geology, Mississippi State University).
Thesis title: *Climate Change and the Effects on Algal Bloom Strength and Toxicity*
 - Jordan.McDaniel (MS, Geospatial Sciences, Mississippi State University; distance).
Thesis title: *Remote sensing of Floating vegetation.*
 - Nick Chastian (MS, Geospatial Sciences, Mississippi State University)
Thesis title: *identifying hurricane-induced vegetation damage in Puerto Rico following Hurricane Maria.*
 - Ben Taylor (MS, Geology, Mississippi State University)
Thesis title: *Biochar amendment for nutrient removal from agricultural runoff.*
 - **Major Professor for Past Post-doctoral Fellow:**
Sankar M. S. (2019-2021)
 - **Major Professor for Past Ph.D. Students:**
 - Sankar M. S. (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.*
 - 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.*
 - Shatrughan 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:**
 - Robert Craven (MS, Geosciences, Mississippi State University; distance education).
Capstone project: *Change Detection in the Huntsville, Alabama Area using ERDAS Imagine DeltaCue*

- Landon Sandors (MS, Geosciences, Mississippi State University).
Thesis title: *Evaluation of Land Use and Land Cover Classification methods in classifying crop types.*
- Sudeera Wickramaratna (MS, Geosciences, Mississippi State University).
Thesis title: *Remote Sensing observations of colored dissolved organic matter in the Mississippi Sound.*
- 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.*
 - Razieh Barzin (Ph.D. Ag. And Bio. Engg., Mississippi State University).
Dissertation title: *Multispectral in-field sensors observations to estimate leaf nitrogen and yield of corn using machine learning.*
 - **Committee Member for Past Ph.D. Students:**
 - Avay Risal (Ph.D. Ag. And Bio. Engg., Mississippi State University).
Dissertation title: *Assessment of nutrient sources at watershed scale in agro-ecosystem of Mississippi.*
 - Supriya Nagpal (Ph.D. Physics, Mississippi State University).
Dissertation title: *Implementation of second-order correlation spectroscopy (SOCOS) via all-Gaussian coherent Stokes and anti-Stokes Raman scattering.*
 - Raul Osorio (Ph.D. Ag. And Bio. Engg., Mississippi State University).
Dissertation title: *Assessment and optimization of marsh terracing for wetland restoration in the northern Gulf of Mexico using remote sensing and a wave model.*
 - 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.*
- 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:**
- J. D. Cox (MS, Environmental Geosciences, Mississippi State University; distance).
 Thesis title: *Use of Consumer Grade Small Unmanned Aerial Systems for Mapping Storm Damage in Forested Environments.*
- Adjoa Insitful (MS, Geospatial Sciences, Mississippi State University).
 Thesis title: *Glacier change assessment of the Columbia Icefield in the Canadian Rocky Mountains, Canada (1985 – 2018)*
- 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:**

Kayla Anastasio (major: Geosciences, Mississippi State University).

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)

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).

Tanajia 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

- Assesses water quality parameters in both coastal and inland waters. Thus, supports federal, state and coastal community efforts to manage human health and fisheries.
- Advisor/Mentor for postdoctoral fellow, graduate, and undergraduate students
- Serves in the National Steering Committee of Gulf of Mexico Coastal Acidification

Network (G-CAN)

- Editor for the journal Remote Sensing with the special issues “Remote Sensing Applications in Agricultural Ecosystems” and “Remote Sensing of Natural Disasters”.
- 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: *Journal of Geophysical Research- Oceans*, 2018-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.

FEATURED IN NEWSPAPER

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

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 – Present.
- University Library Committee, MSU 2020 – Present.
- College of A&S Committee on Courses and Curricula, MSU 2020 – Present.
- Department of Geosciences Action Committee
- Building operator for Hilbun Hall and Geosciences labs in Buckner and Etheredge Hall
- Department of Geosciences Space Committee
- Department of Geosciences Seminar Committee
- Search Committee, Assistant Professor Position in Human Geography
- Search Committee, Assistant Professor Position in Environmental Geology
- Search Committee, Assistant Professor Position in 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 and served as a reviewer for pre-proposals for the Louisiana NASA EPSCoR program (2022)
- Invited and served as a reviewer for proposals for the NOAA Unmanned Aerial Systems Program (2017)
- Invited and served as a reviewer of NSF proposals for the Geography & Spatial Sciences program (2016)
- Invited for scientific peer review for NASA CASIS proposals (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)