

Dr. SATHISH SAMIAPPAN

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Residential Address

35 Lakes Blvd
Starkville, MS 39759
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EDUCATION

- Ph.D*, Electrical and Computer Engineering/Minor in Computer Science
Mississippi State University(MSU), Starkville, MS August 2014
- Master of Science*, Computer Science and Engineering
Amrita University, India May 2006
- Bachelor of Engineering*, Electronics and Communication Engineering
Bharathiar University, India May 2003

PROFESSIONAL EXPERIENCE

- Mississippi State University*
Assistant Research Professor, Geosystems Research Institute May 2018 – Present
Postdoctoral Associate, Geosystems Research Institute October 2014 – April 2018
- National Oceanic and Atmospheric Administration* May – August 2013
Intern, National Data Buoy Center, Stennis Space Center, MS
- Amrita University* June 2006 – July 2009
Lecturer, Department of Electronics and Communication Engineering

CONTRACTS AND GRANTS

1. PI- K. O. Evans and Co-PI- **S. Samiappan**. (2022). *Maintenance, Update, and Streamlining of the Strategic Conservation Assessment Tools*. Funded by United States Department of Interior- Start Date: January 2022, Amount:\$150,000
2. PI- **S. Samiappan** and Co-PI- R. B. Iglay. (2021). *Using multiple object tracking (MOT) to identify escape reactions of two gull species from sUAS videos: video tracking tool development for principal study*. Funded by United States Department of Agriculture (USDA) National Wildlife Research Center (NWRC) and Federal Aviation Administration (FAA) – 2021 to 2022, Grant Number: AP21WSNWRC00C048 Amount \$61,925.50

3. PI- R. B. Iglay and Co-PI- **S. Samiappan**. (2020a). *Companion Study to UAS Monitoring Study, Mammal and nocturnal surveys using sUAS: role in airport environments*. Funded by USDA NWRC and FAA – 2020 to 2022, Grant Number: AP20WSNWRC00C026 Amount \$824,753.00
4. PI- R. B. Iglay and Co-PI- **S. Samiappan**. (2020b). *Developing UAS operator guide and evaluating estimate bias for airport wildlife monitoring*. Funded by USDA NWRC and FAA – 2020 to 2022, Grant Number:AP20WSNWRC00C010 Amount \$233,498.00
5. PI- R. J. Moorhead, Co-PIs- J. M. P. Czarnecki, **S. Samiappan**, and M. Kurum. (2019). *Advancement of UAS/UAV application systems*. Funded by USDA – Agriculture Research Service (ARS) – 2019 to 2022, Grant Number:58-6064-9-007 Amount \$863,092.00

SCHOLARLY ACCOMPLISHMENTS

[Google Scholar](#)

Journal Publications

1. J. M. P. Czarnecki, **S. Samiappan**, M. Zhou, C. D. McCraine, and L. L. Wasson (2021). “Real-Time Automated Classification of Sky Conditions Using Deep Learning and Edge Computing”. In: *Remote Sensing* 13.19. URL: <https://www.mdpi.com/2072-4292/13/19/3859>
2. M. Zhou, J. A. Elmore, **S. Samiappan**, K. O. Evans, M. B. Pfeiffer, B. F. Blackwell, and R. B. Iglay (2021). “Improving Animal Monitoring Using Small Unmanned Aircraft Systems (sUAS) and Deep Learning Networks”. In: *Sensors* 21.17. URL: <https://www.mdpi.com/1424-8220/21/17/5697>
3. J. A. Elmore, M. F. Curran, K. O. Evans, **S. Samiappan**, M. Zhou, M. B. Pfeiffer, B. F. Blackwell, and R. B. Iglay (2021-06). “Evidence on the effectiveness of small unmanned aircraft systems (sUAS) as a survey tool for North American terrestrial, vertebrate animals: a systematic map protocol”. In: *Environmental Evidence* 10.1, p. 15. URL: <https://doi.org/10.1186/s13750-021-00228-w>
4. S. Sawant, P. Manoharan, and **S. Samiappan** (2020). “A modified Cuckoo Search algorithm based optimal band subset selection approach for hyperspectral image classification”. In: *Journal of Spectral Imaging* 9.1, a6. URL: <https://doi.org/10.1255/jsi.2020.a6>
5. A. Shamaskin, **S. Samiappan**, J. Liu, J. Roberts, A. Linhoss, and K. O. Evans (2020). “Multi-Attribute Ecological and Socioeconomic Geodatabase for the Gulf of Mexico Coastal Region of the United States”. In: *Data* 5.1. URL: <https://www.mdpi.com/2306-5729/5/1/3>
6. **S. Samiappan**, L. A. Hathcock, G. Turnage, C. McCraine, J. Pitchford, and R. J. Moorhead (2019). “Remote Sensing of Wildfire Using a Small Unmanned Aerial System: Post-Fire Mapping, Vegetation Recovery and Damage Analysis in Grand Bay,

- Mississippi/Alabama, USA”. in: *Drones* 3.2. URL: <https://www.mdpi.com/2504-446X/3/2/43>
7. P. C. Burr, **S. Samiappan**, L. A. Hathcock, R. J. Moorhead, and B. S. Dorr (n.d.). “Estimating Waterbird Abundance on Catfish Aquaculture Ponds Using an Unmanned Aerial System”. In: (). URL: <https://digitalcommons.usu.edu/hwi/vol13/iss2/16/>
 8. **S. Samiappan**, A. Shamaskin, J. Liu, J. Roberts, A. Linhoss, and K. O. Evans (2019). “Land Conservation in the Gulf of Mexico Region: A Comprehensive Review of Plans, Priorities, and Efforts”. In: *Land* 8.5. URL: <https://www.mdpi.com/2073-445X/8/5/84>
 9. P. Manoharan, S. Sawant, **S. Samiappan**, and L. Agilandeeswari (2018-10-23). “Three-dimensional discrete cosine transform-based feature extraction for hyperspectral image classification”. In: *Journal of Applied Remote Sensing* 12.4, pp. 1–. URL: <https://lens.org/017-263-908-627-877>
 10. **S. Samiappan**, J. M. P. Czarnecki, H. Foster, B. K. Strickland, J. L. Tegt, and R. J. Moorhead. (2018). “Quantifying damage from wild pigs with small unmanned aerial systems”. In: *Wildlife Society Bulletin* 42.2, pp. 304–309. URL: <https://wildlife.onlinelibrary.wiley.com/doi/abs/10.1002/wsb.868>
 11. **S. Samiappan**, G. Turnage, C. McCraine, J. Skidmore, L. A. Hathcock, and R. J. Moorhead (2017). “Post-Logging Estimation of Loblolly Pine (*Pinus taeda*) Stump Size, Area and Population Using Imagery from a Small Unmanned Aerial System”. In: *Drones* 1.1. URL: <https://www.mdpi.com/2504-446X/1/1/4>
 12. J. M. P. Czarnecki, **S. Samiappan**, L. Wasson, J. D. McCurdy, D. B. Reynolds, W. P. Williams, and R. J. Moorhead (2017). “Applications of Unmanned Aerial Vehicles in Weed Science”. In: *Advances in Animal Biosciences* 8.2, pp. 807–811
 13. **S. Samiappan**, G. Turnage, L. A. Hathcock, and R. J. Moorhead (2017). “Mapping of invasive phragmites (common reed) in Gulf of Mexico coastal wetlands using multispectral imagery and small unmanned aerial systems”. In: *International Journal of Remote Sensing* 38.8-10, pp. 2861–2882. URL: <https://doi.org/10.1080/01431161.2016.1271480>
 14. **S. Samiappan**, G. Turnage, L. A. Hathcock, L. Casagrande, P. Stinson, and R. J. Moorhead (2017). “Using unmanned aerial vehicles for high-resolution remote sensing to map invasive *Phragmites australis* in coastal wetlands”. In: *International Journal of Remote Sensing* 38.8-10, pp. 2199–2217. URL: <https://doi.org/10.1080/01431161.2016.1239288>
 15. J. E. Ball, D. T. Anderson, and **S. Samiappan** (2014-06-13). “Hyperspectral band selection based on the aggregation of proximity measures for automated target detection”. In: *Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery* 9088, pp. 908814–. URL: <https://lens.org/047-861-140-764-10X>
 16. **S. Samiappan**, S. Prasad, and L. M. Bruce (2013). “Non-Uniform Random Feature Selection and Kernel Density Scoring With SVM Based Ensemble Classification for

- Hyperspectral Image Analysis”. In: *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 6.2, pp. 792–800. URL: <https://doi.org/10.1109/JSTARS.2013.2237757>
17. B. Sridhar, I. A. Sheriff, K. A. N. Kutty, and **S. Samiappan** (2010). “Comparison of Cascaded LMS-RLS, LMS and RLS Adaptive Filters in Non-Stationary Environments”. In: *Novel Algorithms and Techniques in Telecommunications and Networking*. Ed. by Tarek Sobh, Khaled Elleithy, and Ausif Mahmood. Dordrecht: Springer Netherlands, pp. 495–499. URL: https://doi.org/10.1007/978-90-481-3662-9_85

Conference/Workshop Proceedings

1. **S. Samiappan** and R. Bheemanahalli (2021). “Early Detection of Root-Knot Nematode (*Meloidogyne Incognita*) Infestation in Cotton Using Hyperspectral Data”. In: *IGARSS 2021 - 2021 IEEE International Geoscience and Remote Sensing Symposium*, pp. 493–496
2. M. Zhou, **S. Samiappan**, E. Worch, and J. E. Ball (2020). “Hyperspectral Image Classification Using Fisher’s Linear Discriminant Analysis Feature Reduction with Gabor Filtering and CNN”. in: *IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium*, pp. 493–496. URL: <https://doi.org/>
3. E. Worch, **S. Samiappan**, M. Zhou, and J. E. Ball (2020). “Hyperspectral Band Selection Using Moth-Flame Metaheuristic Optimization”. In: *IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium*, pp. 1271–1274. URL: <https://doi.org/10.1109/IGARSS39084.2020.9323754>
4. **S. Samiappan**, A. Shamaskin, J. Liu, A. Linhoss, and K. O. Evans (2020). “Strategic Conservation of Gulf Coast Landscapes Using Multi-Criteria Decision Analysis and Open Source Remote Sensing and GIS Data”. In: *IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium*, pp. 6662–6665. URL: <https://doi.org/10.1109/IGARSS39084.2020.9323166>
5. S. Sawant, P. Manoharan, and **S. Samiappan** (2019). “A Band Selection Method For Hyperspectral Image Classification Based On Cuckoo Search Algorithm With Correlation Based Initialization”. In: *2019 10th Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, pp. 1–4. URL: <https://doi.org/10.1109/WHISPERS.2019.8920950>
6. J. M. P. Czarnecki and **S. Samiappan** (2019). “A The application of structure from motion techniques in late-season corn damage”. In: *2019 Proceedings of Precision Agriculture, Montpellier, France*, pp. 405–411. URL: https://doi.org/10.3920/978-90-8686-888-9_50
7. C. D. McCraine, **S. Samiappan**, J. M. P. Czarnecki, and D. M. Dodds (2019). “Plant density estimation and weeds mapping on row crops at emergence using low altitude UAS imagery”. In: *Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping IV*. ed. by J. Alex Thomasson, Mac McKee,

- and Robert J. Moorhead. Vol. 11008. International Society for Optics and Photonics. SPIE, pp. 249–257. URL: <https://doi.org/10.1117/12.2520252>
8. **S. Samiappan**, L. Casagrande, G. M. Machado, G. Turnage, L. A. Hathcock, R. J. Moorhead, and J. Ball (2018). “Texture Classification of Very High Resolution UAS Imagery Using a Graphics Processing Unit”. In: *IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium*, pp. 6476–6479. URL: <https://doi.org/10.1109/IGARSS.2018.8519298>
 9. P. Manoharan, S. Sawant, and **S. Samiappan** (2018). “Texture Classification of Very High Resolution UAS Imagery Using a Graphics Processing Unit”. In: *Proceedings of Asian conference on Remote Sensing*
 10. L. Casagrande, G. M. Machado, **S. Samiappan**, G. Turnage, L. A. Hathcock, and R. J. Moorhead (2017). “Probabilistic Neural Network and Wavelet Transform for Mapping of Phragmites Australis Using Low Altitude Remote Sensing”. In: *2017 30th SIBGRAPI Conference on Graphics, Patterns and Images (SIBGRAPI)*, pp. 269–276. URL: <https://doi.org/10.1109/SIBGRAPI.2017.42>
 11. R. J. Moorhead, J. M. P. Czarnecki, **S. Samiappan**, and W. B. Henry (2017). “Swimming in sensors and drowning in data: what is needed for UASs to be effective?”. In: *Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping II*. ed. by J. Alex Thomasson, Mac McKee, and Robert J. Moorhead. Vol. 10218. International Society for Optics and Photonics. SPIE, pp. 141–148. URL: <https://doi.org/10.1117/12.2267721>
 12. **S. Samiappan**, G. Turnage, L. A. Hathcock, H. Yao, R. Kincaid, R. J. Moorhead, and S. Ashby (2017). “Classifying common wetland plants using hyperspectral data to identify optimal spectral bands for species mapping using a small unmanned aerial systems — A case study”. In: *2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, pp. 5924–5927. URL: <https://doi.org/10.1109/IGARSS.2017.8128357>
 13. J. M. P. Czarnecki and **S. Samiappan** (2017). “Applications of unmanned aerial vehicles in weed science”. In: *Proceedings of 11th European Conference on Precision Agriculture*. Cambridge University Press, Edinburgh, Scotland
 14. **S. Samiappan**, L. Dabbiru, and R. J. Moorhead (2016). “Fusion of hyperspectral and LiDAR data using random feature selection and morphological attribute profiles”. In: *2016 8th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, pp. 1–4. URL: <https://doi.org/10.1109/WHISPERS.2016.8071662>
 15. **S. Samiappan** and R. J. Moorhead. (2015). “Semi-supervised co-training and active learning framework for hyperspectral image classification”. In: *2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, pp. 401–404. URL: <https://doi.org/10.1109/IGARSS.2015.7325785>
 16. L. Dabbiru, **S. Samiappan**, R. A. A. Nobrega, J. A. Aanstoos, N. H. Younan, and R. J. Moorhead. (2015). “Fusion of synthetic aperture radar and hyperspectral imagery to detect impacts of oil spill in Gulf of Mexico”. In: *2015 IEEE International*

- Geoscience and Remote Sensing Symposium (IGARSS)*, pp. 1901–1904. URL: <https://doi.org/10.1109/IGARSS.2015.7326165>
17. **S. Samiappan**, L. M. Bruce, H. Yao, Z. Hruska, R. L. Brown, D. Bhatnagar, and T. E. Cleveland. (2013). “Support vector machines classification of fluorescence hyperspectral image for detection of aflatoxin in corn kernels”. In: *2013 5th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, pp. 1–4. URL: <https://doi.org/10.1109/WHISPERS.2013.8080645>
 18. **S. Samiappan**, S. Prasad, and L. M. Bruce. (2011). “Automated hyperspectral imagery analysis via support vector machines based multi-classifier system with non-uniform random feature selection”. In: *2011 IEEE International Geoscience and Remote Sensing Symposium*, pp. 3915–3918. URL: <https://doi.org/10.1109/IGARSS.2011.6050087>
 19. **S. Samiappan**, S. Prasad, L. M. Bruce, and E. A. Hansen. (2011). “Branch and bound based feature elimination for support vector machine based classification of hyperspectral images”. In: *2011 IEEE International Geoscience and Remote Sensing Symposium*, pp. 2523–2526. URL: <https://doi.org/10.1109/IGARSS.2011.6049725>
 20. **S. Samiappan**, S. Prasad, L. M. Bruce, E. A. Hansen, and W. Robles. (2010). “NASA’s upcoming HypsIRI mission — precision vegetation mapping with limited ground truth”. In: *2010 IEEE International Geoscience and Remote Sensing Symposium*, pp. 3744–3747. URL: <https://doi.org/10.1109/IGARSS.2010.5651974>
 21. S. Prasad, H. Kalluri, L. M. Bruce, and **S. Samiappan** (2010). “Data dependent adaptation for improved classification of hyperspectral imagery”. In: *2010 IEEE International Geoscience and Remote Sensing Symposium*, pp. 68–71. URL: <https://doi.org/10.1109/IGARSS.2010.5653683>
 22. A. Baskar, P. Manoharan, and **S. Samiappan** (2007). “Improved Adaptive Skip Algorithm for Video Shot Boundary Detection”. In: *2007 International Conference on Signal Processing, Communications and Networking*, pp. 492–496. URL: <https://doi.org/10.1109/ICSCN.2007.350787>

Other Conference Presentations

1. **S. Samiappan**, M. Zhou, and R. J. Moorhead. (2020). *Identifying wildlife from aerial imagery using CNNs*. Presented at The Wildlife Society annual conference (virtual online)
2. **S. Samiappan** and A. Shamaskin. (2020). *A science-based land conservation prioritization framework based multicriteria acceptability analysis*. Presented at 2020 Gulf of Mexico Oil Spill and Ecosystem Science Conference, Tampa, FL
3. J. Liu, A. Shamaskin, and **S. Samiappan**. (2019). *Dynamic Rshiny Applications to Support Gulf of Mexico Land Conservation*. Presented at American Fisheries Society and The Wildlife Society 2019 Joint Annual Conference, Reno, NV

4. A. Shamaskin, K. Evans, and **S. Samiappan**. (2019). *Valuing land conservation to support estuarine biotic health in the Gulf of Mexico – a Hierarchical Approach*. Presented at American Fisheries Society and The Wildlife Society 2019 Joint Annual Conference, Reno, NV
5. **S. Samiappan** and A. Shamaskin. (2019). *Science-Based Land Conservation Prioritization Framework: An Overview*. Presented at Mississippi Water Resource Conference, Jackson, MS
6. G. Turnage, **S. Samiappan**, L. Hathcock, and R. J. Moorhead. (2018). *Detection of aquatic plant species using UAS technology*. Presented at 15th International Symposium on Aquatic Plants, Queenstown, New Zealand
7. C. D. McCraine, **S. Samiappan**, G. Turnage, L. Hathcock, H. Yao, R. Kincaid, R. J. Moorhead, and S. Ashby. (2018). *Classifying common aquatic plants using hyperspectral data to identify optimal spectral bands for species mapping using a small unmanned aerial system – a case study*. Presented at the Society of Lake Management Professionals annual conference, Baton Rouge, LA
8. **S. Samiappan**, C. D. McCraine, and L. Hathcock (2017). *Wildfire Mapping and Damage Analysis in Grand Bay National Estuarine Research Reserve, Mississippi Using a Small Unmanned Aerial System with a Multispectral Payload*. Presented at 2017 The Wildlife Society annual conference, Albuquerque, NM
9. G. Turnage, **S. Samiappan**, L. Hathcock, and R. J. Moorhead (2016). *Mapping of Phragmites australis using 5-band imagery collected from an Unmanned Aerial System*. Presented at 2016 The Wildlife Society annual conference, Raleigh, NC
10. **S. Samiappan**, A. Crain, and L. Hathcock (2016). *Identification and Estimation of Damage caused by Feral Hogs in Corn Fields using Change Detection and an Unmanned Aerial System*. Presented at The Wildlife Society annual conference, Raleigh, NC
11. P. Burr, **S. Samiappan**, and L. Hathcock (2016). *Estimating the Distribution and Abundance of Water Birds on Catfish Aquaculture Facilities Using Imagery Collected from an Unmanned Aerial System*. Presented at The Wildlife Society annual conference, Raleigh, NC
12. G. Turnage, S. Samiappan, and L. Hathcock (2016). *Mapping of Phragmites australis using 5-band Imagery Collected from an Unmanned Aerial System*. Presented at Midsouth Aquatic Plant Management Society conference, Baton Rouge LA
13. **S. Samiappan**, G. Turnage, and R. J. Moorhead. (2016). *Identifying and Mapping Chinese Tallow Tree Using Unmanned Aerial Systems and Multispectral Imagery*. Presented at Midsouth Aquatic Plant Management Society conference, Baton Rouge LA
14. **S. Samiappan**, B. W. Henry, and R. J. Moorhead. (2016). *Plant stand count and corn crop density assessment using texture analysis on visible imagery collected using unmanned aerial vehicles*. Presented at the 13th International conference on Precision Agriculture, St.Louis, MO

15. **S. Samiappan** and R. J. Moorhead. (2016). *Mapping of Phragmites Australis in Gulf Of Mexico Wetlands Using Small UAS*. Presented at the Gulf of Mexico Oil Spill and Ecosystem Science conference, Tampa, FL
16. M. Hock, W. B. Henry, and **S. Samiappan**. (2016). *Evaluating Texture Modelling Techniques to Determine Stand Establishment and Plant Populations in Corn*. Presented at South branch American society of Agronomy, Houston TX
17. G. Turnage, P. Stinson, and **S. Samiappan**. (2013). *Mapping of Common Reed (Phragmites Australis) Using Unmanned Aerial Vehicles, Gray Level Co-Occurrence Matrix Texture Extraction, and eCognition*. Presented at Midsouth Aquatic Plant Management Society conference, Mobile, AL
18. K. Grissom, **S. Samiappan**, R. Beets, D. Petraitis, and Z. Zhou. (2013). *Improvements to the TAO web-based Data Management System*. Presented at NOAA's 38th Climate Diagnostics and Prediction Workshop

Dissertation and Thesis

- **Doctoral - S. Samiappan** (2014). "Spectral Band Selection for Ensemble Classification of Hyperspectral Images with Applications to Agriculture and Food Safety". In: *Mississippi State University - Scholars Junction*
- **Masters - S. Samiappan** (2006). "Extraction of saliency regions using human visual attention model". In: *Amrita University*
- **Undergraduate - S. Samiappan** (2003). "Industrial air quality monitoring (CO₂) using PIC 16F877A microcontroller". In: *Bharathiar University*

ACADEMIC ACCOMPLISHMENTS

Undergraduate Research

- **Jacob Lee** B.S Computer Science 2021-Present
- **Ashutosh Shah** B.S Mechanical Engineering 2021-Present
- **Ethan Worch** B.S Computer Engineering 2019-2020
- **Meilun Zhou** B.S Computer Engineering 2019-2020
- **Cary Daniel McCraine** B.S Electrical Engineering 2017-2018
- **Donna Jaison** B.S Electrical Engineering 2016
- **Preston Stinson** B.S Computer Engineering 2015
- **Luan Carlos da Silva Casagrande** B.S Computer Science 2015

Graduate Advising and Post Graduate Supervision

- **Siva Annamalai** Ph.D Computational Engineering 2020-Present
- **Meilun Zhou** Research Associate 2020-2021
- **Joseph Crumpton** Postdoctoral Associate 2021-Present

Advising - Honors Thesis and Senior Design Teams

- **Cary Daniel McCraine *et al.*** Project Title: ivWatch Sensor Test Bench System 2018
- **Luan Carlos da Silva Casagrande** Honors Thesis (Universidade Federal de Santa Catarina, Brazil): Comparative Study of Image Texture analysis And Machine Learning Methods For classification of phragmites Australis using True-Color High Resolution Images 2017
- **Manoj Kumar *et al.*** Project Title: Non-Chronological Dynamic Video Abstraction using Rack Through Method 2009
- **Sylvania Golla *et al.*** Project Title: Extracting Cricket Game Summaries via Frame Clustering 2008
- **Arunchander Kalyanasamy *et al.*** Project Title: Video object based Content-Based Video Retrieval system 2007
- **Kaushik Prakash *et al.*** Project Title: Resolution Enhancement of Color Video Sequences 2007

Courses Taught

Taught approximately 21 sections of 9 different courses at the undergraduate and graduate levels resulting in more than 1000 students. Maintained a high level of dedication to teaching, resulting in instructor evaluation scores averaging 4.0/5.0. (*Most recent teaching evaluation can be found in the application packet*)

- Directed Individual Study - Special topics in Computer Vision Fall 2021
- ECE3413 Introduction to Electric Circuits Fall 2015, Fall 2017, Spring 2020
- ECE3443 Signals and Systems Fall 2014, Fall 2006
- ECE3714 Digital Devices and Logic Design - Laboratory 2012-2014
- EC3072 Digital Communication Spring 2009, Spring 2007
- EC5049 Adaptive Signal Processing Fall 2008, Fall 2007
- EC3091 Analog Communication Fall 2008, Fall 2007
- EC3020 Digital Signal Processing Spring 2008, Spring 2007

- EC5084 Digital Image Processing

Spring 2008

Graduate Assistantships

- Graduate Teaching Assistant, Dept. of Electrical and Computer Engineering @ MSU
January 2013 – August 2014
- Graduate Research Assistant, Geosystems Research Institute @ MSU August 2009 –
December 2013
- Research Assistant, Dept. of Computer Science and Engineering @ Amrita University
July 2004 – April 2006

SERVICE

Professional Contributions

- Session Chair - IEEE International Geoscience and Remote Sensing Symposium, Brussels, Belgium
2021 July
- Guest Editor - MDPI-Remote Sensing (Impact Factor 4.8) - Special Issue "Wavelet Transform for Remote Sensing Image Analysis"
July 2020-2022
- Workshop Lecture - IEEE Geoscience and Remote Sensing Society Summer School (GR4S) "Image Analysis using Trimble eCognition"
July 2018
- Conference Keynote - International Virtual Conference on Recent Trends, Challenges in Image Analysis & Information Security "Applications of unmanned aerial system for remote sensing and aerial image analysis"
September 2018
- Peer Reviewer - Reviewed for over 20 top-tiered journals in engineering and science
[Publons Review Verification](#)

University Service

- State of Mississippi - Unmanned Aerial Systems curriculum for Career and Technical Education programs – Member of curriculum development team
2017-Present
- Evaluator – Graduate Student Research Symposium (GSRS) , MSU
2016-Present
- Evaluator – Honors Undergraduate Student Symposium, MSU
2015-Present
- Faculty Mentor, Day One – Montgomery Leadership Program Day One is a service-learning community for entering freshmen in which students take a two-credit course on leadership and apply what they learn towards 20 hours of community service in the fall semester. This is offered out of the Office of Student Leadership and Community Engagement. A Mentor is a faculty who guides a single team of 5-7 students towards the completion of its community service project over the semester. Mentors help coordinate

the efforts of the team with the needs of the community and help the team members develop their leadership skills. 2015-2018

- Team Mentor, Dawg Daze, MSU Dawg Daze is an exciting collection of service, other activities and events held to welcome new freshmen & transfer students to Mississippi State. 2015 and 2016
- American Cancer Foundation – Volunteer – 2014 2017-Present

COMPUTER SKILLS

- Programming: Python, Matlab, C, C++, Java, and R
- Platforms: Windows, Linux, Linux/Unix high performance computing
- Packages: Keras, PyTorch, NumPy, LibSVM

MEMBERSHIPS

- Institute of Electrical and Electronics Engineers(IEEE)
- The Wildlife Society
- American Geophysical Union
- Life Member, IETE

HONORS

- IEEE Eta Kappa Nu (HKN) International Honor Society
- Full Graduate Research Assistantship, MSU
- Full Graduate Teaching Assistantship, MSU

MEDIA COVERAGE

- Drones gauge wild pigs' damage to crops [Published in wildlife.org](#)
- When invasive plants attack, a new tech tool can nip it in the bud [Published in Mississippi Today](#)
- MSU coastal researchers get to throw out their muddy boots in favor of drone [Published in The Times – Picayune](#)
- Assessment of Wild Pig Damage in Mississippi Crop Fields [Published by Mississippi Soy Promotion Board](#)
- Eating the Elephant: The Strategic Conservation Assessment for the Gulf Coast [URL](#)
- MSU Collinsville resident's research project recognized at summer undergraduate research symposium [URL](#)