

Di Yang

Assistant Professor, Department of Geography, University of Florida

Turlington Hall 3141, 330 Newell Drive, Gainesville, FL 32611, USA

Email: yangdi1031@ufl.edu

Lab website: [GeoDI Lab at the University of Florida](#)

AREAS OF SPECIALIZATION AND INTERESTS

Remote sensing applications on human-environment interactions, geovisualization, geospatial analytics, digital image processing, machine learning and GeoAI, citizen science, cloud-based big data analysis and management, and land change science.

EDUCATION

- 2019** **Ph.D., Geography** (Minor in Forest Resources and Conservation), University of Florida
- 2013** **M.S., Environmental Engineering**, Texas A&M University-Kingsville
- 2011** **B.S., Environmental Science**, Liaoning University of Petroleum and Chemical Technology

ACADEMIC APPOINTMENTS

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|--|---------------------|
| Assistant Professor
Department of Geography, University of Florida | 2024–Present |
| Science Advisor
DEVELOP Program, NASA | 2023–Present |
| Adjunct Assistant Professor
Program in Ecology, University of Wyoming | 2021–2024 |
| Assistant Professor
Wyoming Geographic Information Science Center (WyGIS), University of Wyoming | 2020–2024 |
| Editorial Board
Scientific Reports (Nature Portfolio) | 2022–Present |
| Postdoctoral Research Associate
Spatial Analysis Lab, Montana Natural Heritage Program, University of Montana (NSF #1703062) | 2019–2020 |

RESEARCH GRANTS AND CONTRACTS

- Co-P.I.** “Utilizing Big Data and GeoAI to Monitor Harmful Algal Blooms since 2016 in the Southern Indian River Lagoon, FL”, EPA, Herrero H, Yang D, Blackburn J, Insalaco S. (\$499,045) 01/2027 – 12/2028
- Lead P.I.** “Forecasting Mosquito-Borne Disease Risk in a Changing Climate: Integrating GLOBE Citizen Science and NASA Earth System Modeling”, NASA, Yang D, Huang X, Mollalo A, He Y. (\$832,836) 01/2025 – 12/2027

Lead P.I. “Evaluating Long-term Impacts of Land-use Transformation on Fire Regimes: A Comprehensive 60-Year Analysis Utilizing CORONA, GEDI, and GLOBE Observer over Western U.S. Forest”, NASA Early-Career, Yang D, (\$299,604) 08/2024 – 07/2026

Lead P.I. “Environmental Monitoring through Education, Research & Geospatial Engagement (EMERGE)”, Yang D, Nickerson C, Zhang O, Earth Science Information Partners (ESIP) (\$20,000), 02/2026-12/2026

Co-P.I. “Monitoring the Yermo xanthocephalus (desert yellowhead) using high resolution UAS data and novel AI/ML workflows”, BLM, Madson A, Yang D, Tronstad L. (\$77,143)

Co-P.I. WyldTech Innovation Center, University of Wyoming, Dillon M, Murphy M, Yang D, Kauffman M, Koger B, Taylor D (\$300,000).

Senior Personnel “Equipment: MRI: Track 2 Acquisition of an Advanced Infrastructure to Accelerate Impact of AI Through Applications and Innovation for Wyoming (AI4WY)”. NSF, Kirby A, (\$4,000,000). 06/2024 – 05/2027

Senior Personnel “CUNY-GLOBE Partnership”, NASA, Boger R, Low R. (\$16,000,000) 01/2025-12/2029

Lead P.I. “Building A Wyoming Citizen Science Data Clearinghouse for Community Coordination and Engagement”. University of Wyoming, Yang D, Xu C, Gong J, Liang Y. (\$25,000). 02/2024-08/2024

Co-P.I. “Quantifying Effects of Land Cover Change-Climate Interaction on Ecosystem Productivity Over Western North America”, NASA Experimental Program to Stimulate Competitive Research, He Y, Yang D. 10/01/2023 – 09/30/2024, (\$93,548).

Lead P.I. “Harnessing HPC for Predictive Geospatial Analytics: Modeling Biogeophysical Impacts of Potential Forestation on Regional Climate over Western US”, NCAR Large Allocation Grants, NCAR, Yang D. 09/01/2023-04/30/2025, (9,000,000 credit hours).

Remote Sensing Team Leader “NSF Engines Development Award: Advancing Precision Forestry and Rangeland Technologies”, #2305683, National Science Foundation, Whittenburg S, 05/15/2023 – 04/30/2025, (\$987,278).

Co-P.I. “High Resolution Upload and Riverbank Erosion Monitoring to Inform Best Management Practices that Seek to Reduce Sediment Accumulation at the Willwood Dam” Water Research Program, Madson A., Yang D. University of Wyoming 07/01/2023-06/30/2025 (\$199,999).

Co-P.I. “Establish Edge-Computing Sensory Data Collection Platforms at the UW-AMK Ranch Field Station”, UW Research Excellence Fund Seed Grants, University of Wyoming, Gong J, Kirby A, Albeke S, Yang D; 11/01/2023-05/31/2025, (\$40,000).

Lead P.I. “Analyzing NEON hyperspectral signatures using Amazon SageMaker”, Amazon AWS Public Sector Cloud Credit for Research Award, Yang D; 05/06/2023-05/05/2023, (\$30,000 AWS Credit)

Lead P.I. “Incorporating Geoinformatics with CLIMATE: Community Led Initiative to Monitor Alpine Temperature Extremes”, School of Computing Faculty Awards, University of Wyoming, Yang D, Klancher J; 04/2023-08/2023, (\$15,000).

Lead P.I. Faculty & Staff International Research Grant, Center for Global Studies, University of Wyoming, Yang D, 05/15/2022-05/15/2023, (\$3,340).

- Lead P.I.** “Mapping and Assessing Standing Dead Trees Across Different Scales in Rockies Forests Incorporating In-Situ Field Observation with LiDAR and Hyperspectral Datasets”, NASA Experimental Program to Stimulate Competitive Research Faculty Research Grants, NASA, Yang D, 05/31/2022-05/31/2023, (\$26,501).
- Lead P.I.** “A Meta-Learning Framework for Characterizing and Accessing Machine Learning Training Data for GLOBE Observer Mosquito and Land Cover Protocols”, NASA, Yang D., McBride S., Huang X, 09/01/2021-09/01/2023, (\$99,502).
- Lead P.I.** “Enhancing Student Technology to Support Undergraduate/Graduate Learning and Research in Spatial Data Science”, Central Student Technology Committee’s (CSTC) Grant, University of Wyoming, Madson A., Yang D., 06/30/2021-06/30/2022, (\$9,998).
- Lead P.I.** “i-Tree Database Viewer”, Wyoming State Forestry Division, Hodza P., Yang D., 06/30/2021-06/30/2022, (\$9,965).
- Co-P.I.** “Unprecedented Western Bird Die-offs: Disentangling the Factors of Mortality Events at the Species-Level Using Machine/Deep Learning and Citizen Science”, Azure Compute Credit Grant, Microsoft, Yang A., Yang D., Yang J., Xu R., Qiu H., 04/01/2021-03/31/2022, (\$15,000 Credit).
- Lead P.I.** NCAR Research Computing Grant, University Corporation for Atmospheric Research, Yang D., 2021-2023 (610,000 credit hours).
- Co-P.I.** “Assessing Net Ecosystem Carbon Exchange for the Conterminous United States with MODIS Data and Machine/Deep Learning Models”, Azure Compute Credit Grant, Microsoft, Xu R., Chen J., Yang D., He Y., 01/01/2021-12/31/2021, (\$15,000 Credit).
- Lead P.I.** “CitizenScaping: Linking People and Pixel Using Artificial Intelligence”, Azure Compute Credit Grant, Microsoft, Yang D., Wan HY., Gao P., Zhang J., 01/01/2020-01/01/2022, (\$15,000 Credit).

AWARDS AND HONORS

2026	Affordable Access Awards, UF Center of Excellence	
2026	UF Global Fellow, University of Florida	\$5,000
2025	NSF NEON 2024-2025 Ambassador	\$2,000
2024	Early Career Research Award, University of Wyoming	\$2,000
2023	Presidential Faculty Fellowship, University of Wyoming	\$15,000
2022	NASA EPSCoR Travel Grants, NASA Wyoming Space Grant	\$500
2021	Learning Actively Mentoring Program (LAMP) Fellow, University of Wyoming	\$5,000
2020	Ellbogen Center for Teaching & Learning Online Teaching Grant, University of Wyoming	\$1,500
2020	NEON Early Career Award, NEON	\$1,500
2019	NEON Summit Travel Grant, National Science Foundation	\$658
2019	University of Florida Open Access Publishing Fund (UFOAP)	\$1,500
2018	Graduate School Doctoral Dissertation Award, University of Florida	\$9,000
2018	Ary Lamme Service to Geography Awards, University of Florida	\$500

2018	Top Student Research Articles in Geographic Techniques, University of Florida	\$500
2018	NASA-MSU Professional Enhancement Award	\$620
2013–2018	Graduate Student Geography Department Travel Grant	\$1,200
2015–2018	Graduate Student Council Travel Grant, University of Florida	\$1,050
2017	Land Use and Environmental Change Institute (LUECI) Travel Grant, University of Florida	\$900
2017	Office of Research Travel Grant, University of Florida	\$400
2017	Annual Best Paper Award, Transactions of the Chinese Society of Agricultural Machinery	
2017	Best Paper Award in Geospatial Analysis and Techniques, University of Florida	\$150
2015–2016	Microsoft Azure Research Award, Microsoft	\$20,000
2013–2015	College of Liberal Arts and Sciences Doctoral Fellowship, University of Florida	\$12,000
2013	Outstanding Master Thesis Award, Texas A&M University-Kingsville	\$500
2011–2012	Merit Scholarship, Frank H. Dotterweich College of Engineering, Texas A&M University-Kingsville	\$1,000
2012	1st Prize in the 4th Annual Javelina Symposium, Texas A&M University-Kingsville	\$500

PUBLICATIONS

Asterisk (*) marks the corresponding author. Caret (^) marks a student mentee of Dr. Di Yang.

Journal Articles and Proceedings

- 2026** He, Y., **Yang, D***, Li, S., Cheng, L., & Fang, F. (2026). Enhanced extreme precipitation simulation in China using NCAR CESM based on a realistic remotely-sensed time series of annual land cover and land use data from 1982 to 2013. *Earth and Space Science*, 13(6), e2025EA004618.
- 2026** Kianfar, N., Savoji, K., Huang, X., **Yang, D.**, & Mollalo, A. (2026). The role of citizen science in mosquito-borne disease surveillance and control: A scoping review. *PLoS One*, 21(5), e0348697.
- 2026** Liu, W[^], & **Yang, D***. (2026). Century-Scale Earth Observation: Systematic Review of Georeferencing Methods for Historical Aerial and Satellite Imagery. *Remote Sensing*, 18(7), 1052.
- 2026** Li, S[^], He, Y*, **Yang, D***, Li, Y., & Liu, W. (2026). Incorporating learned geospatial embeddings to deep image prior for inpainting cloud areas in remotely sensed images. *Science of Remote Sensing*, 100404.
- 2026** Li S[^], **Yang D***, He Y*, Parazoo N, Liu W. (2026). The impact of land cover change-climate interactions on ecosystem productivity in the Arctic-Boreal region. *Agricultural and Forest Meteorology*, 383, 111137.

- 2025** Tefera, B. B., Southworth, J., Mossa, J., Rahaman, M., Safaei, M., **Yang, D.**, & Karuppannan, S. (2025). Predictive groundwater quality responses to land cover and lithology in the upper Awash River basin (Ethiopia) with stacking ensembles. *Journal of Environmental Management*, 394, 127572.
- 2025** Li, S[^]., **Yang, D***., He, Y^{*}., Parazoo, N. C., & Liu, W. (2025). The biogeophysical impacts of land cover change on climate extremes in the Arctic and Boreal regions. *Environmental Research Letters* 20(8), 084057.
- 2025** Liu, W[^]., Li, S., Fan, D., Wen, Y., Madson, A., Mitchell, J., ... & **Yang, D***. (2025). A Deep Learning Workflow for CORONA-based Historical Land Use Classifications. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*.
- 2025** Shilpakar C[^]., **Yang, D.**, Holbrook, D. L., Norton, U., & Islam, M. A. (2025). Impact of Grazing Duration and Environment on Soil Carbon in Reclaimed Uranium Mines Tailings: A Region Specific Study. *Land Degradation & Development*, 36(13), 4474-4485.
- 2025** Prescott, C[^]., Ozdes, M., & **Yang, D***. (2025). Classification and clustering analysis of standing dead trees and associated park asset wildfire vulnerability in Yellowstone National Park. *Forest Ecosystems*, 12, 100284.
- 2024** Nelson, P. V., Low, R., Kohl, H., Overoye, D., **Yang, D.**, Huang, X., ... & Schwerin, T. (2024). GLOBE Observer: A Case Study in Advancing Earth System Knowledge with AI-Powered Citizen Science. *Citizen Science: Theory and Practice*, 9(1).
- 2024** Chukwu, M., Huang, X., Wang, S., **Yang, D.**, & Ye, X. (2024). Crowdsourcing geographic information for terrorism-related disaster awareness and mitigation: perspectives and challenges. *Geo-spatial Information Science*, 1-18.
- 2024** Yang, A., Cheng, W., Yang, J., Cai, C., Li, H., & **Yang, D.** (2024). Unveiling disparities: a social media analysis of urban park usage and sentiments in Oklahoma City. *GeoJournal*, 89(4), 173.
- 2024** Thomas, A., Kolb, T., Biederman, J. A., Venturas, M. D., Ma, Q., **Yang, D.**, ... & Tai, X. (2024). Mitigating drought mortality by incorporating topography into variable forest thinning strategies. *Environmental Research Letters*, 19(3), 034035.
- 2024** Huang, X., Wang, S., **Yang, D.**, Hu, T., Chen, M., Zhang, M., ... & Hohl, A. (2024). Crowdsourcing Geospatial Data for Earth and Human Observations: A Review. *Journal of Remote Sensing*, 4, 0105.
- 2023** Amoako, P. Y. O., Cao, G., **Yang, D.**, Amoah, L., Wang, Y., & Yu, Q. (2023). A Meta-reinforcement Learning based Hyperspectral Image Classification with Small Sample Set. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*.
- 2023** Shi, H., Zhang, Y., Cao, G., & **Yang, D.** (2023). MHCFormer: Multiscale Hierarchical Conv-Aided Fourierformer for Hyperspectral Image Classification. *IEEE Transactions on Instrumentation and Measurement*.
- 2023** Yan, X., Li, J., Smith, A. R., **Yang, D.**, Ma, T., & Su, Y. (2023). Rapid Land Cover Classification Using a 36-Year Time Series of Multi-Source Remote Sensing Data. *Land*, 12(12), 2149.

- 2023** Ozsahin, E., Ozdes, M., Ozturk, M., & **Yang, D.** (2023). Coastal Vulnerability Assessment of Thrace Peninsula: Implications for Climate Change and Sea Level Rise. *Remote Sensing*, 15(23), 5592.
- 2023** Yan, X., Li, J., Smith, A. R., **Yang, D.**, Ma, T., Su, Y., & Shao, J. (2023). Evaluation of machine learning methods and multi-source remote sensing data combinations to construct forest above-ground biomass models. *International Journal of Digital Earth*, 16(2), 4471-4491.
- 2023** Wang, G., Yue, D., Yu, Q., **Yang, D.**, Xu, C., & Wang, F. (2023). Study on Forest and Grassland Ecological Space Structure in Eyu Mining Area and Potential Alternatives for Enhancing Carbon Sequestration. *Forests*, 14(8), 1587.
- 2023** Li, S[^]., Ma, H., **Yang, D***., Hu, W., & Li, H. (2023). The Main Drivers of Wetland Evolution in the Beijing-Tianjin-Hebei Plain. *Land*, 12(2), 480.
- 2023** Huang, X., **Yang, D***., He, Y., Nelson, P., Low, R., McBride, S., ... & Guarraia, M. (2023). Land cover mapping via crowdsourced multi-directional views: The more directional views, the better. *International Journal of Applied Earth Observation and Geoinformation*, 122, 103382.
- 2023** **Yang, D***., Fu, C. S., Herrero, H. V., Southworth, J., & Binford, M. (2023). Linking forest management to surrounding lands: a citizen-based approach towards the regional understanding of land-use transitions. *Frontiers in Remote Sensing*, 4, 1197523.
- 2023** Shi, H., Cao, G., Zhang, Y., Ge, Z., Liu, Y., & **Yang, D.** (2023). F3Net: Fast Fourier Filter Network for Hyperspectral Image Classification. *IEEE Transactions on Instrumentation and Measurement*.
- 2023** Yang, Z., Yu, Q., Yang, Z., Peng, A., Zeng, Y., Liu, W[^]., ... & **Yang, D.** (2023). Spatio-Temporal Dynamic Characteristics of Carbon Use Efficiency in a Virgin Forest Area of Southeast Tibet. *Remote Sensing*, 15(9), 2382.
- 2023** Shafique, A., Seydi, S. T., Alipour-Fard, T., Cao, G., & **Yang, D.** SSViT-HCD: A Spatial Spectral Convolutional Vision Transformer for Hyperspectral Change Detection. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*.
- 2023** He, Y., Seminara, P., Huang, X., **Yang, D.**, Fang, F., Xu, R. A spatial analysis of empirical associations of health, socioeconomic, demographic, and environmental factors with COVID-19 in Arkansas, US. *ISPRS Journal of Geoinformation*, 12(2), 45.
- 2023** Yang, A., Liu, C., **Yang, D.**, & Lu, C. (2023). Electric vehicle adoption in a mature market: A case study of Norway. *Journal of Transport Geography*, 106, 103489.
- 2022** Yan X, Li J, **Yang, D***, Li J, Ma T, Su Y, Shao J, Zhang R. (2022) A Random Forest Algorithm for Landsat Image NDWI and MNDWI Chromatic Aberration Restoration Based on GEE Cloud Platform: a case study of Yucatán Peninsula, Mexico. *Remote Sensing*, 14(20), 5154.
- 2022** SanClements, M.D., Record, S., Rose, K.C., Donnelly, A., Chong, S.S., Duffy, K., Hallmark, A., Heffernan, J.B., Liu, J., Mitchell, J.J., Moore, D., ...and **Yang, D.** People, infrastructure, and data: A pathway to an inclusive and diverse ecological Network of Networks. *Ecosphere*, 13(11), e4262.

- 2022** Ozsahin, E., Ozdes, M., Smith, A. C., & **Yang, D***. (2022). Remote Sensing and GIS-Based Suitability Mapping of Termite Habitat in the African Savanna: A Case Study of the Lowveld in Kruger National Park. *Land*, 11(6), 803.
- 2022** Huang, X., Zhao, Y., Wang, S., Li, X., **Yang, D.**, Feng, Y., ... & Chen, B. Unfolding Community Homophily in US Metropolitans Via Fine-Grained Mobile Phone Location Data. *Cities*, 129, 103929.
- 2022** Yang, A., Rodriguez, M., **Yang, D.**, Yang, J., Cheng, W., Cai, C., & Qiu, H. (2022). Leveraging Machine Learning and Geo-Tagged Citizen Science Data to Disentangle the Factors of Avian Mortality Events at the Species Level. *Remote Sensing*, 14(10), 2369.
- 2021** Nagy, C, Balch, J, Bissell, E, Cattau, M, Glenn, N, Halpern, B, Ilangakoon, N, Johnson, B, Joseph, M, Marconi, S, Riordan, C, Sanovia, J, Swetnam, T, Travis, W, Wasser, L, Zarnetske, P, & **Yang, D.** Harnessing the NEON Data Revolution to Advance Open Environmental Science with a Diverse and Data-Capable Community. *Ecosphere*. 12(12), e03833.
- 2021** Yang, A., Yang, J., **Yang, D.**, Xu, R., He, Y., Qiu, H. Human Mobility to Open Space and Public Parks under COVID19 Pandemic and Wildfire Seasons in Western and Central United States. *GeoHealth*. 2021: e2021GH000494.
- 2021** Kitzes J, Blake R, Bombaci S, Chapman M., Duran, S... **Yang D**, Yule K. Expanding NEON Biodiversity Surveys with New Instrumentation and Machine Learning Approaches. *Ecosphere*. 12(11), e03795.
- 2021** He Y, Xu R, Prior S, **Yang D**, Yang A, Chen J. Satellite-detected ammonia changes in the United States: natural or anthropogenic impacts. *Science of the Total Environment*. 2021. 147899.
- 2021** **Yang D**, Yang A, Yang J, Xu R, Han Q. Unprecedented Migratory Bird Die-Off: A Citizen-based Analysis on the Spatiotemporal Patterns of Mass Mortality Events in the Western United States. *GeoHealth*. 2021. 5, e2021GH000395.
- 2021** **Yang D***, Fu C. Mapping Regional Forest Management Units: A Road-based Framework in Southeastern U.S. Coastal Plain and Piedmont. *Forest Ecosystems*. 2021, 8(1): 1-17. DOI: 10.1186/s40663-021-00289-w
- 2020** Merz L, **Yang D**, Hull V. A Metacoupling Approach to Watershed Management: The Case of an Irrigation Project in the Transnational Limpopo River Watershed. *Sustainability*. 2020, 12(5):1879. DOI: 10.3390/su12051879
- 2020** Herrero H, Waylen P, Southworth J, Khatami R, **Yang D**, Child B. A Healthy Park Needs Healthy Vegetation: The Story of Gorongosa National Park in the 21st Century. *Remote Sensing*. 2020, 12(3):476. DOI: 10.3390/rs12030476.
- 2019** **Yang D***, Wan H, Huang TK, Liu J. The Role of Citizen Science in Conservation Under the Framework of Telecoupling. *Sustainability*. 2019, 11; 1108. DOI: 10.3390/su11041108
- 2019** Kapsar K, Hovis C, Silva R, Buchholtz E, Carlson A, Dou Y, Du Y, Furumo P, Li Y, Torres A, **Yang D**, Wan H, Zaehring J, Liu J. Telecoupling Research: The First Five Years. *Sustainability*. 2019, 11(4): 1033. DOI: 10.3390/su11041033

- 2019** Yang D*, Yang A, Qiu H, Zhou Y, Herrero H, Fu C-S, Yu Q, Tang J. A Citizen-Contributed GIS Approach for Evaluating the Impacts of Land Use on Hurricane-Harvey-Induced Flooding in Houston Area. *Land*. 2019; 8(2):25. DOI: 10.3390/land8020025
- 2019** Wang G, Qiang Y, Yang D, Zhang Q, Yue D, Liu J. Hierarchical Ecological Network Structure Based on Complex Network Analysis. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 07/2019; 50(7):258-265. DOI: 10.6041/j.issn.1000-1298.2019.07.028
- 2019** Su K, Yu Q, Yang D, Zhang Q, Yang L, Sun X. Simulation of Forest-Grass Ecological Network Based on Multi-scene Model in Typical Desert-Oasis Ecotone. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 07/2019
- 2019** Liu J, Zhang Q, Yang D, Yue D, Yu Q, Lan Y. Simulation of Ecological Land Transition in Baotou City Based on MCR-ANN-CA Model. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 02/2019; 50(2):187-194. DOI: 10.6041/j.issn.1000-1298.2019.02.021
- 2019** Zhu J, Yu Q, Yang D, Xu C, Yue D, Chen X. Extraction and Optimization of Microscopic Image Vein Network Based on eCognition Software. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 01/2019; 50(1):51-57. DOI: 10.6041/j.issn.1000-1298.2019.01.005
- 2018** Marsik M, Staub CG, Kleindl WJ, Hall J, Fu C, Yang D, Stevens FR, Binford MW. Regional-scale management maps for forested areas of the Southeastern United States and the US Pacific Northwest. *Nature Scientific Data*. 2018 Aug 28; 5:180165. DOI: 10.1038/sdata.2018.165
- 2018** Zhu J, Yu Q, Yang D, He W, Xu C, Kong X. Ecological Balance of Leaf Ecological Characteristics and Their Correlation to Thermal Effects of Underlying Surfaces. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 11/2018; 49(11):201-209. DOI: 10.6041/j.issn.1000-1298.2018.11.024
- 2018** Zhang L, Yue D, Yang D, Luo Z, Xu Y, Yu Q. GIS Design and Experiment of Soil Erosion Intensity Calculating Based on Hadoop. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 09/2018; 49(9):160-165. DOI: 10.6041/j.issn.1000-1298.2018.09.019
- 2017** Yang D*, Fu C, Smith A, Yu Q. Open Land-Use Map: A Regional Land-Use Mapping Strategy for Incorporating OpenStreetMap with Earth Observations. *Geo-Spatial Information Science*. 20(3): 269-281, 2017. DOI: 10.1080/10095020.2017.1371385
- 2017** Yu Q, Jiang Q, Yang D, Yue D *et al.* Incorporating Temporal and Spatial Variations of Groundwater into Constructing Water-based Ecological Network: A Case Study in Deng Kou County. *Water*, 2017, 9(11): 864. DOI: 10.3390/w9110864
- 2017** Cao G, Chu Y, Yang D, Southworth J. A New Different Image Creation Methods Based on Deep Neural Networks for Change Detection. *International Journal of Remote Sensing*. 38(23): 7161-7175, 2017. DOI: 10.1080/01431161.2017.1371861

- 2017** Huang Y, Yue D, **Yang D**, *et al.* Simulation of Heat Island Based on Data Assimilation and CA Model in Baotou City. *Resources Science*, 2017, 39(11):2197-2207. DOI: 10.18402/resci.2017.11.01
- 2017** Ma H, Yue D, **Yang D**, Zhang Q, Huang Y. Interpolation of Groundwater Depth based on Data Assimilation. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 04/2017; 48(4):206-214. DOI: 10.6041/j.issn.1000-1298.2017.04.027
- 2016** **Yang D**, Su H, Yong Y. MODIS-Landsat Data Fusion for Estimating Vegetation Dynamics-A Case Study for Two Ranches in Southwestern Texas. *In Proceedings of the 1st Int. Electron. Conf. Remote Sens.*, Sciforum Electronic Conference Series, Vol. 1, 2015, d016; DOI: 10.3390/ecrs-1-d016
- 2016** Yu Q, Yue D, **Yang D**, H. Ma, Zhang Q. Layout Optimization of Ecological Nodes Based on BCBS Model. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 12/2016; 47(12):330-336. DOI: 10.6041/j.issn.1000-1298.2016.12.041
- 2016** Yu Q, Yue D, **Yang D**, Zhang Q, Ma H, Li Y. Simulation on Ecological Land Use Expansion Based on EnKF-MCRP Model. *Nongye Jixie Xuebao/Transactions of the Chinese Society of Agricultural Machinery* 06/2016; 47(9):285-293., DOI: 10.6041/j.issn.1000-1298.2016.09.039. (Annual Best Paper Award)

Book Chapters

- 2026** **Yang, D.**, Tai, X., He, Y., Liu, T., Li, S., & Katabuchi, M. (2026). Deforestation assessment: Future challenges and opportunities in data-driven Earth observation. In *Data-Driven Earth Observation for Disaster Management* (pp. 347–367). Elsevier.
- 2026** **Yang, D.**, Huang, X., He, Y., Low, R., & Nelson, P. (2026). Forecasting Mosquito-Borne Disease Risk Integrating GLOBE Citizen Science and NASA Earth Observations. In *Citizen Earth: Crowdsourced Geospatial Data for Earth and Human Observations* (Huang, X., **Yang, D.**, & Low, R., Eds.). Springer Nature. *Accepted, In Progress.*
- 2026** **Yang D**, Huang X, Mitchell J, He Y, Nelson P, Low P. (2026). Chapter 16: How Citizen Science and New Technologies Can Integrate with Big Data: Empowering Public Participation in Geospatial Research and Environmental Monitoring. In *Remote Sensing, Big Data, and GeoAI: Exploring Applications with Geospatial Insights*. Elsevier. In press.
- 2026** He Y, **Yang D**, Peter B, Huang X, Vire F. (2026). Chapter 7: Integration of Remote Sensing, Big Data, and GeoAI: Harnessing the Synergy of Cutting-Edge Technologies for Sustainable Development. In *Remote Sensing, Big Data, and GeoAI: Exploring Applications with Geospatial Insights*. Elsevier. In press.
- 2025** He, Y., **Yang, D.**, Lee, E., & Yang, A. (2025). Land cover and land use change impacts on temperature extremes in China from 1982 to 2013. In *Revealing Ecosystem Services Through Geospatial Technologies: Beyond the Surface* (pp. 225-241). Cham: Springer Nature Switzerland.
- 2023** Huang, X., Li, X., **Yang, D.**, & Zou, L. (2023). Crowdsourced geospatial data in human and Earth observations: Opportunities and challenges. In N. Stathopoulos, A. Tsatsaris, & K. Kalogeropoulos (Eds.), *Geoinformatics for geosciences: Advanced geospatial analysis using RS, GIS and soft computing* (pp. 109–129). Elsevier.

- 2017** **Yang D.** Mapping Regional Landscape by Using OpenStreetMap (OSM): A Case Study to Understand Forest Patterns in Maya Zone, Mexico. *Volunteered Geographic Information and the Future of Geospatial Data*, February 2017, 138-157; IGI Global. ISBN: 9781522524465, DOI:10.4018/978-1-5225-2446-5.

Open Educational Resources

- 2026** Zhang, O., **Yang, D.**, et al. (2026). *Participatory Science and GeoAI (Textbook 2)*. Published May 2026.

Manuscripts Under Review and In Preparation

- Yang D***, Mitchell J, Glenn N. Spatial Vegetation Diversity Patterns from Stands to Regional Scales Incorporating Airborne Observatory Platform (AOP) Datasets with Satellite Data in Northeastern U.S. *Remote Sensing. Under Review.*
- Tefera, B[^], Southworth, J., **Yang, D.**, Chakraborty, T., Safaei, M., & Rahaman, M. (under review). CNN-Transformer downscaling of GRACE reveals compartmentalized water storage dynamics in Stellenbosch, South Africa (2002–2024). *Remote Sensing of Environment. Under Review*
- Li, S[^], **Yang, D***, He, Y., Li, Y., & Liu, W. (2026). A Geospatial Foundation Model Driven Framework for Remote Sensing Spatiotemporal Fusion. *GIScience & Remote Sensing. Under review.*
- Li, Y., **Yang, D***, He, Y., Liu, W., & Li, S. (2026). Long-term Spatiotemporal Analysis of Land Cover and Land Use Change Effects on Fire Regimes. *Global Change Biology. Under review*
- Li, Y., **Yang, D***, He, Y., Liu, W., & Li, S. (2026). Characterizing Fire Regimes Across Colorado NEON Sites Using Multi-Source Remote Sensing and Ecological Observatory Data. In preparation.
- Li, Y., Li, S., **Yang, D***, & Liu, W. (2026). Wildland–Urban Interface (WUI) Vulnerability Assessment: 1990–2020 Temporal Analysis at California NEON Sites and Surrounding Areas. In preparation.
- Liu, W., & **Yang, D***. (2026). Historical Footprints in Modern Landscapes: Assessing Land Use Legacy Effects on Ecosystem Productivity Using CORONA Imagery. *Applied Geography. In preparation.*
- Wu, Y., Tang, J., Guan, X., Hao, D., Jiao, L., Shao, Y., **Yang, D.**, Wang, Q., & Chen, L. (under review). JPDFusion: A joint-probability-distribution-based fusion framework for unified optical–optical and optical–SAR time-series reconstruction in cloud-prone regions. *Remote Sensing of Environment. Under Review.*
- Chen, Y., Ma, Z., **Yang, D.**, & Huang, X. (2026). When Earth Foundation Models Meet Diffusion: An Application to Land Surface Temperature Super-Resolution. *arXiv. Target: SIAM SDM26. Under Review.*
- Ma, Z., Ning, H., Jia, Y., Wu, Q., Chen, Y., Liu, H., Song, C., Schiller, K., Mollalo, A., **Yang, D.**, Qian, H., Yu, R., & Huang, X. (2026). Earth Observation for Vector Habitat Mapping and Species Distribution Modeling: A Comprehensive Review. *Journal of Remote Sensing. In preparation.*
- He, Y., Grant, J., **Yang, D.**, Huang, X., Sorker, R., Low, R. D., & Nelson, P. V. (2026). Assessing global satellite-derived land-cover products using NASA GLOBE citizen-science observations: Effects of positional accuracy, landscape homogeneity, observation season, and biome context. In preparation.

TEACHING EXPERIENCE

Courses Taught

GeoCloud Computing for Remote Sensing (GEO 4938/6938)

- Instructor of undergraduate/graduate course introducing cloud computing principles with Google Earth Engine for processing large-scale remote sensing datasets, teaching both JavaScript and Python APIs.
- Developed comprehensive curriculum covering essential remote sensing concepts, including image enhancement, vegetation indices, and time-series analysis through cloud-based platforms.
- Responsible for designing and implementing hands-on labs and assignments using public Earth observation datasets, emphasizing practical applications in environmental monitoring and land use analysis.

Enterprise GIS Systems (GIST 5350)

- Instructor of online class introduced the roles and responsibilities in Enterprise GIS systems, data visualization and analysis to fit into Enterprise GIS's best practices.
- Responsible for setting up, maintaining, and running the class Server and Portal with ArcGIS Server and ArcGIS Enterprise.
- Responsible for all aspects of the course, University of Wyoming.

Spatial Modeling and Data Analysis (GIST 5220)

- Instructor of online class-Core Grad course of GIST Program introduced geospatial modeling at different scales (software: ArcGIS Pro and Google Earth Engine API).
- Responsible for all aspects of the course, University of Wyoming.

Geographic Visualization (GIST 5200)

- Instructor of online class-Core Grad course of GIST Program introduced advanced Cartography and comprehensive skills of geographic visualizations.
- Responsible for all aspects of the course, University of Wyoming.
- Average enrollment: 23

Extreme Weather (GEO 2242)

- Introduced climatology with a focus on extreme events and climate variability. Responsible for all aspects of the course, University of Florida.
- Average enrollment: 140.

Physical Geography (GEO 2200)

- Instructor of both online and in-class covering all aspects of physical geography. Responsible for all aspects of the course (online exams, quizzes, assignments, grading).
- Developed online teaching modules and designed an interactive discussion forum. Average enrollment: in-class, 40; online, 100.

Geography of Africa (GEA 3600)

- Instructor of the online course.
- Developed the online course framework.
- Grader of all exams, scientific essays and quizzes.
- Average enrollment: 170.

Workshops, Hackathons, and Training Webinars

- 2026** Hackathon Organizer. EMERGE NASA Data Hackathon. January 31, 2026. UF Marston Science Library, Gainesville, FL. 13 teams, six tracks. Co-hosted with SciStarter, Florida Community Innovation, NASA, and UF Libraries.
- 2025** Nickerson C, Hays A, Zhang O, **Yang D**, Low R, Soeffing C. "Teaching with EMERGE & GLOBE Mission Mosquito: Coding and Citizen Science for Mosquito-Borne Disease Risk." Two-part NASA GLOBE Program Webinar Series, September 17 & 24, 2025. Trained global educators to integrate GLOBE Observer app data with NASA satellite observations using guided coding tutorials. Online.
- 2025** Hackathon Organizer. EMERGE Hackathon and Data Visualization Contest. September 27, 2025. Broward County Libraries, FL. 100+ participants. Co-hosted with Dream in Green, SciStarter, and Florida Community Innovation.
- 2025** Organizer. EMERGE Kickoff Week. July 28–August 1, 2025. Five virtual webinars on citizen science, data analysis, and GLOBE Observer protocols.
- 2025** **Yang D.** "GLOBE Mission Mosquito: Citizen Science for Mosquito-Borne Disease Forecasting." NASA GLOBE Program International Webinar, February 27, 2025. Presented EMERGE project integrating citizen science data, AI models, and NASA satellite observations for early warning system for disease outbreaks. [Global audience via GLOBE network in 125+ countries]
- 2023** Organizer. Google Earth Engine (GEE) as a tool for Enhancing Land Change Analysis with Cloud-Based Satellite Imagery. November 6-10, 2023. University of Wyoming. Enrollment: 30.
- 2023** Organizer & Instructor. Digital Storytelling through Storymaps Workshop. February 15-18, 2023. University of Wyoming. Enrollment: 30.
- 2022** Organizer & Instructor. 9H Smart Ranch AI and Machine Learning Workshop. June 15, 2022. University of Wyoming. Enrollment: 10.
- 2022** Hackathon Organizer. WyoGLOBE Land Cover Classification Challenge. May 25–June 8, 2022. University of Wyoming, and Wyoming Community Colleges. Enrollment >150.
- 2019** Instructor, nation-wide workshop "Working with NEON Field and Airborne Observatory Platform (AOP) Data to Map Biodiversity", Swarthmore College, Swarthmore, Pennsylvania. Enrollment: 21; October 16-18, 2019.
- 2017** Organizer, lecturer and facilitator, campus-wide workshop "Google Earth Engine JavaScript API for Remote Sensing in Geographic Applications", University of Florida, Gainesville, Florida. Enrollment: 45; October 26, 2017

INVITED TALKS

- Jul 2025** **Yang D.** International Society for Digital Earth (ISDE) International Lectures Series: “Advanced Methodologies for Integrating Crowdsourced Environmental Data with Remote Sensing Technologies.” One of three featured international experts in 16th ISDE lecture on GeoAI for Intelligent Earth Observation. Co-presenters: Dr. Qiusheng Wu (University of Tennessee), Dr. Xiao Huang (Emory University). Audience: 5,000+ global participants.
- Jul 2025** **Yang D.** “Tracking Mosquito Breeding Grounds from Your Backyard to the World: How Citizens and Satellites Work Together.” GLOBE Latin America and Caribbean (GLOBE LAC) Regional Webinar, Mosquito Subcommittee, July 24, 2025. Invited presentation to Latin American and Caribbean GLOBE network on integrating citizen science with satellite Earth observation for mosquito-borne disease monitoring
- Oct 2024** **Yang D,** Huang X, He Y, Mollalo A, Low R. Advancing Mosquito-Borne Disease Forecasting: Bridging GLOBE Data, NASA Observations, and AI Models. GLOBE XII Regional Meeting for Latin America and the Caribbean, Santo Domingo, Dominican Republic.
- Sep 2024** **Yang D.** Advancing Mosquito-Borne Disease Forecasting: Bridging GLOBE Data, NASA Observations, and AI Models. South America Network for One Health (SANO) Monthly Meeting.
- Mar 2024** **Yang D.** Guest Lecture on “Advancing Landscape Analysis through Citizen-Driven Data and Geospatial AI Integration”, in Geography, Environment and Planning Colloquium, Sonoma State University, Sonoma, California, USA.
- Oct 2023** **Yang D.** Guest Lecture on “Making Environmental Monitoring Inclusive: Uniting Geospatial AI and Citizen Science for Conservation” in GEO525 Advanced GIS, University of New Mexico, Albuquerque, New Mexico.
- Jul 2023** **Yang D.** Invited speaker in “Synergizing Geospatial AI and Citizen Science: A New Era for Landscape and Ecological Monitoring” in the Summer Bridge Program, Frank H Dotterweich College of Engineering, Texas A&M University – Kingsville, Texas.
- Jun 2023** **Yang D.** Invited speaker in “Geospatial AI Meets Citizen Science: Revolutionizing Landscape and Ecological Monitoring” in NASA STEM Enhancement in Earth Science (SEES) Summer High School Intern Program, NASA.
- Feb 2023** **Yang D.** Guest Lecture on “Uncovering the Interconnections between Citizen Science and Earth Observation for Biodiversity Conservation and Land-Use Monitoring” in Geospatial Modeling, University of Arkansas, Fayetteville, Arkansas.
- Dec 2022** **Yang D.** The Power of Crowd: Integrating Geospatial Artificial Intelligence and Citizen Science in Landscape and Ecological Monitoring. WyGISC Geospatial Forum, University of Wyoming.
- Oct 2022** **Yang D.** Guest Lecturer on “Landscape Ecology – Landscape Metrics” in ECOL 5100: Ecology as a Discipline, University of Wyoming, Laramie, Wyoming.
- Jul 2022** **Yang D.** Combining Citizen Science and Data Science: Assessing Citizen Science Labeled Training Data for NASA GLOBE Observer Land Cover Protocols. NASA SEES Seminar.

- Jul 2022** **Yang D.** Remote Sensing and GIS Applications in the NASA Citizen Science Program. In Texas A&M University-Kingsville Summer Research Programs Webinar Series, Texas A&M University-Kingsville.
- Jun 2022** Huang X, **Yang D.** Artificial intelligence application examples. In NASA STEM Enhancement in Earth Science (SEES) program.
- Apr 2022** **Yang D;** Huang X, McBride S. Combining Citizen Science and Data Science: Characterizing and Accessing Citizen Science Labeled Training Data for GLOBE Observer Land Cover Protocols. NASA AICOE Seminar.
- Dec 2021** **Yang D.** NASA GLOBE Opportunities. Wyoming NASA Space Grant Consortium 2022 Meeting.
- Nov 2021** **Yang D.** Guest Lecture on “Citizen-based GIS Applications on Human-Environmental Interactions” in GGY 281 Introduction to GIS, University of North Carolina – Wilmington, Wilmington, North Carolina.
- Nov 2021** **Yang D.** Guest Lecture on “Remote Sensing and GIS Applications on Biosphere” in GEO2200: Physical Geography, University of Florida, Gainesville, Florida.
- Oct 2021** **Yang D.** Guest Lecture on “Land-Use Monitoring from Local to Macrosystems Scales: Linking Open-Source Data to Land Management”, Department Seminar, Beijing Forestry University, China.
- Oct 2021** **Yang D.** Guest Lecturer on “Landscape Ecology – Landscape Metrics” in ECOL 5100: Ecology as a Discipline, University of Wyoming, Laramie, Wyoming.
- May 2021** **Yang D.** Speaker, HARVEST Network for Agricultural Research and Innovation Monthly Seminars. Virginia Tech University, Blacksburg, Virginia.
- Oct 2020** **Yang D.** Guest Lecture, Geography in Academic Discipline. University of North Carolina Wilmington, Wilmington, North Carolina.
- Feb 2020** **Yang D.** Guest Lecture, Leveraging NEON Data to Investigate Remote Sensing of Biodiversity Variables Across Scales. University of Tennessee, Knoxville, Tennessee.
- Feb 2020** **Yang D.** Spatial Vegetation Biodiversity Patterns from Stands to Regional Scales in Eastern United States. Systems Ecology Seminar. University of Montana, Missoula
- Jan 2020** **Yang D,** Wu Q, Liu T. Keynote Speaker, MDPI Remote Sensing 2020 Webinar Series: Spatial Analytics for Earth Observation Using Google Earth Engine. Virtual
- Feb 2019** **Yang D.** Application of Remote Sensing Techniques to Petroleum Exploration. National Institute of Technology of Mexico, Coahuila, Mexico.

CONFERENCE PRESENTATIONS

- 2026** **Yang, D.,** et al. (2026). EMERGE: Engaging Communities in Environmental Research and Geospatial Education. Conference for Advancing Participatory Sciences (CAPS), May 26–29, 2026. Virtual.
- 2026** Liu W., **Yang, D.** (2026). Land-Use Legacy Shapes the Spatial Co-Occurrence Patterns of Wildfire Events. American Association of Geographers (AAG) Annual Meeting, March 19, 2026. Oral Presentation

- 2026** Li, Y., **Yang, D.**, Liu, W., & Li, S. (2026). Vegetation Transition History Predicts Wildfire Risk Beyond Climate Forcing: A Spatiotemporal Analysis of California. ForestSAT 2026, Gainesville, FL, May 5, 2026. Oral Presentation
- 2026** Li, Y., **Yang, D.**, Liu, W., & Li, S. (2026). Spatially Explicit Assessment of Human Land-Use Effects on Wildfire Regimes Using Explainable Machine Learning. IALE 2026, Athens, GA, April 29, 2026. Oral Presentation
- 2026** Li, S., **Yang, D.**, & He, Y. (2026). Leveraging Geospatial Embeddings for Cloud-Free Reconstruction and Phenology Monitoring in Optical Remote Sensing. ForestSAT 2026, Gainesville, FL, May 5, 2026. Oral Presentation
- 2026** Liu, W., & **Yang, D.** (2026). Tracing Land-Use Imprints on the Spatiotemporal Patterns of Wildfires. ForestSAT 2026, Gainesville, FL, May 4–8, 2026. Oral Presentation
- 2025** Hays, A., Nickerson, C., Zhang, O., **Yang, D.**, & Low, R. (2025). EMERGE: Youth Environmental Action through Citizen Science and Spatial Thinking. National 4-H Volunteer Conference of Southern States, October 3–5, 2025.
- 2025** **Yang, D.**, Li, Y., Huang, X., He, Y., Zhang, O., Kasem, R., Barbeto, T., Campbell, L., Low, R., Nelson, P., & Mitchell, J. (2025). Calibrating the Globe: A Framework to Transform Citizen Science Potential Bias into a Predictive Ecological Blueprint. American Geophysical Union (AGU) Fall Meeting 2025, New Orleans, Louisiana, December 18, 2025. Poster Presentation [SY43E-0658].
- 2025** Zhang, O., Hays, A., Nickerson, C., **Yang, D.**, & Low, R. (2025). EMERGE: Participatory Science Outreach and Education for Mosquito Habitat Mapping. American Geophysical Union (AGU) Fall Meeting 2025, New Orleans, Louisiana, December 18, 2025. Poster Presentation [SY43E-0667].
- 2025** He, Y., Sorker, R., **Yang, D.**, Huang, X., Low, R., & Nelson, P. (2025). Intercomparison of NASA GLOBE Observer Land Cover Data with Satellite-Derived Products. American Geophysical Union (AGU) Fall Meeting 2025, New Orleans, Louisiana, December 18, 2025. Poster Presentation [SY43E-0661].
- 2025** Li, Y. & **Yang, D.** (2025). Long-term Spatiotemporal Analysis of Forest Change Effects on Fire Regime. American Geophysical Union (AGU) Fall Meeting 2025, New Orleans, Louisiana, December 17, 2025. Oral Presentation [B34C-06].
- 2025** Li, Y., & **Yang, D.** (2025). Long-term Spatiotemporal Analysis of Forest Change Effects on Fire Regime. SEDAAG Annual Meeting 2025, Lexington, KY, November 24, 2025. Oral Presentation
- 2025** Li S, **Yang D**, He Y, Parazoo N, Liu W. Biogeophysical impacts of land cover change on regional climate in the ABoVE domain. 2025 NASA ABoVE Annual Meeting, Fairbanks, Alaska, May 12th – 15th, 2025. Poster Presentation.
- 2025** Li S, He Y, **Yang D**, Parazoo N, Liu W. The biogeophysical effects of land cover change on climate extremes in the ABoVE domain. 2025 AAG Annual Meeting, Detroit, March 24th-28th, 2025. Oral Presentation.

- 2024** Li S, **Yang D**, He Y, Parazoo N. Land Cover Change-Climate Interactions Amplified the Diminishment of Spring Ecosystem Productivity in the Arctic-Boreal Region. 2024 AGU Annual Meeting, Washington DC, December 2024. Oral Presentation
- 2024** **Yang D**. Harnessing GeoAI and Big Data to Disentangle Land Use Legacy Effects on Forest Structure Across Scales. 5th Open Science Program Annual Meeting (OSM). Oaxaca, Mexico. November 4th -8th 2024. Oral Presentation
- 2024** **Yang D**. Assessment of Forest Ecosystem Vulnerability to Wildfire in Yellowstone National Park: Integrating NEON Data with Spatial Analysis. 3rd Long Term Ecological Research Network (ILTER) Open Science Meeting. Xishuangbanna, Yunnan, China. October 14th – 19th 2024, Oral Presentation
- 2024** **Yang D**, Prescott C. Classification and clustering analysis of standing dead trees and associated park asset wildfire vulnerability in Yellowstone National Park. Biennial Scientific Conference on the Greater Yellowstone Ecosystem. September 3rd – 5th 2024. Big Sky, Montana, USA. Oral Presentation
- 2024** **Yang D**, Li S, He Y, Parazoo. Counteracting Climate Change: How Land Cover Shifts Regulate Temperature in the Vulnerable ABoVE Domain. 11th International Carbon dioxide Conference (ICDC11). July 29th to August 2nd 2024. Poster Presentation
- 2024** Ozdes M, Prescott C, **Yang D**. Wildfire Risk Assessment in Yellowstone National Park. 2024 AAG Annual Meeting, Honolulu, April 16th to 20th 2024. Oral Presentation
- 2024** Liu W, Li S, Prescott C, Fan D, Madson A, He Y, **Yang D**. Land Use Classification from Historical Images Using Deep Learning. 2024 AAG Annual Meeting, Honolulu, April 16th to 20th. Oral Presentation
- 2024** He Y, **Yang D**, Yang A, Lee E. Land Cover and Land Use Change Impacts on Regional Climate Extremes in China Using Remote Sensing and Climate Model. 2024 AAG Annual Meeting, Honolulu, April 16th to 20th. Oral Presentation
- 2024** **Yang D**, Liu W, Li S, He Y, Mitchell J, Madson A. Quantifying Legacy Effects of Land Use on Forest Structure Across Scales. 2024 AAG Annual Meeting, Honolulu, April 16th to 20th. Oral Presentation
- 2023** Shilpakar C, **Yang D**, Holbrook D, Anowarul M. Effect of Land Management, Above-Ground and Below-Ground Properties on Soil Carbon in Reclaimed Grassland. 2023 Annual Meeting of American Society of Agronomy. St. Louis, Missouri, October 29 – November 1. Oral Presentation.
- 2023** Liu W, Yu Q, Pei Y, Wu Y, Niu T, Wang Y, **Yang D**. Characteristics of Ecological Spatial Network in the Yellow River Basin. 2023 GIS in the Rockies Annual Meeting, Denver, Colorado, September 20 – 21. Poster Presentation. 3rd Place in Student Poster Competition
- 2023** Ozdes M, Ozsahin E, **Yang D**. Assessing Coastal Vulnerability and Hydrodynamic Responses to Climate Change in the Thrace Peninsula. 2023 GIS in the Rockies Annual Meeting, Denver, Colorado, September 20 – 21. Oral Presentation.

- 2023** Shilpaker C, **Yang D**, Holbrook D, Islam A. Impacts of Spatial and Temporal Vegetation Cover on Soil Organic Carbon in Reclaimed Grassland. 2023 Annual Meeting of Western Society of Crop Science. Honolulu, Hawaii, June 28, 2023. Oral Presentation.
- 2022** **Yang D**, Huang X, Nelson P, Low R, McBride S, Mitchell J. A Meta-Learning Framework for Characterizing and Accessing Training Data for GLOBE Observer Program Land Cover Protocols. 2022 American Geophysical Union Annual Meeting, Chicago, December 12th - 16th, 2022. Poster Presentation.
- 2022** Yang A, Rodrigue M, **Yang D**, Yang J, Cheng W, Cai C, Qiu H. Leveraging Machine Learning and Geo-Tagged Citizen Science Data to Disentangle the Factors of Avian Mortality Events at the Species Level. 2022 American Geophysical Union Annual Meeting, Chicago, December 12th -16th, 2022. Poster Presentation.
- 2022** Smith A, Ozsahin E, Ozdes M, **Yang D**. Remote Sensing and GIS-Based Suitability Mapping of Termite Habitat in the African Savanna: A Case Study of the Lowveld in Kruger National Park. 2022 Annual Southeastern Division of the Association of American Geographers Annual Meeting (SEDAAG) Meeting. November 20 – 21, Atlanta, Georgia. Oral Presentation.
- 2022** **Yang D**, Huang X, Nelson P, Low R, Mitchell J, McBride S. Assessing the Accuracy of Land Cover Mapping Using Multi-Directional Views GLOBE Observer Images. 2022 Pecora Annual Meeting. Denver, October 23 – 28, 2022. Invited Oral Presentation.
- 2022** Shilpakar C, Holbrook D, **Yang D**, Islam M.A. Mapping Soil Carbon Content of Reclaimed Grassland at Different Depth Using Empirical Bayesian Kriging. 2022 Western Society of Crop Science Annual Meeting, Fort Collins, Colorado, June 21st – 22nd, 2022. Poster Presentation.
- Yang D**, Geospatial Awareness and Literacy: Visual and Active Learning Opportunities through Geospatial Citizen Science Data. In Leadership and Academic Mentorship Program (LAMP) Annual Conference, University of Wyoming. Poster Presentation.
- 2021** **Yang D**, Wan H, Huang T, Gao P. Leveraging Citizen Science and Earth Observation for Monarch Butterfly Conservation. 2021 AGU Annual Meeting, New Orleans, Louisiana, December 13th – 18th, 2021. Poster Presentation.
- 2021** Yang A, **Yang D**, Yang J, Xu R, Qiu H. Unprecedented Migratory Bird Die-off: A Citizen-based Analysis on the Spatiotemporal Patterns of Mass Mortality Events in Western United States. 2021 ESA Annual Meeting, August 2nd – 6th Virtual, 2021. Poster Presentation.
- 2021** **Yang D**, Mitchell J, Farella M, Liu T, Ryan R, Nancy Glenn. Biodiversity Sensing: A NEON-based Approach toward a Regional Understanding of Spatial Vegetation Diversity in Northeastern U.S. 2021 ESA Annual Meeting, August 2nd – 6th Virtual, 2021. Poster Presentation.
- 2020** **Yang D**, Mitchell J, Rock R, Xu R, Tolbaske C, Hart M. Spatial Vegetation Diversity Patterns from Stands to Regional Scales Incorporating Airborne Observatory Platform (AOP) Datasets with Satellite Data in Northeastern U.S. 2020 AGU Annual Meeting, December 1st – 17th, 2020. Poster Presentation.

- 2019** **Yang D**, Mitchell J, Glenn N. Spatial Vegetation Diversity Patterns from Stands to Regional Scales Incorporating Airborne Observatory Platform (AOP) Datasets with Satellite Data in Northeastern U.S. 2019 AGU Annual Meeting, San Francisco, United States. December 9th – 13th, 2019. Poster Presentation.
- 2019** Stoy P, Kleindl W, Binford M, Desai A, Dietze M, Duffy P, Fu C, Rollinson C, Schultz C, Starr G, Marsik M, **Yang D**, Staudhammer. Integrating Management into Models of Forest Function at Local to Continental Scales. 2019 12th North American Forest Ecology Workshop, Flagstaff, Arizona, United States, June 23rd -27th, 2019, Oral Presentation.
- 2019** Marsik M, Staub C, Kleindl W, Hall J, Fu CS, **Yang D**, Stevens F, Binford M. Regional-scale Management Maps for Forested Areas of the Southeastern United States and the U.S. Pacific Northwest. 2019 AAG Annual Meeting, Washington, D.C. United States. April 3rd - 7th, 2019, Oral Presentation.
- 2019** Fu C, **Yang D**, Binford M. Characterizing Forest Disturbance Regimes: Impact Assessment of Management in US Forests. 2019 AAG Annual Meeting, Washington, D.C. United States. April 3rd -7th, 2019, Oral Presentation.
- 2018** **Yang D**, Fu C, Binford M. Linking Forest Management to Surrounding Lands: A Citizen-Based Approach Towards the Regional Understanding of Land-Use Change. 2018 AGU Annual Meeting, Washington, D.C. United States. December 10th - 14th, 2018, Oral Presentation.
- 2018** Fu C, **Yang D**, Binford M. The Role and Impact of Land Ownership on Forest Disturbance in the Southeastern United States. 2018 AGU Annual Meeting, Washington, D.C. United States. December 10th -14th, 2018, Oral Presentation.
- 2018** Staudhammer C, Binford M, Desai A, Dietze M, Duffy P, Fu C, Kleindl W, Rollinson C, Schultz C, Marsik M, Starr G, Stoy P, **Yang D**. The Future of US Forest Function under Changing Climate, Disturbance, and Forest Management. 2018 AGU Annual Meeting, Washington, D.C. United States. December 10th - 14th, 2018, Oral Presentation.
- 2018** **Yang D**, Yang A, Qiu H, Fu C, Binford M. Contributions of Citizen Science to Regional Landscape Ecology: The Impact of Land-Use on Flooding Due to Hurricane Harvey. 2018 US-IALE Annual Meeting, Chicago, Illinois, United States. April 9th - 13th, 2018, Oral Presentation.
- 2017** **Yang D**, Fu C, Binford M. Open Land-Use Map: A Regional Mapping Strategy for Incorporating OpenStreetMap with Earth Observations. 2017 AGU Annual Meeting, New Orleans, Louisiana, United States. December 11th - 15th, 2017, Oral Presentation.
- 2017** **Yang D**, Fu C, Binford M. Design and Implementation of a Self-Supervised Cloud Computing Framework to Link Forest Management to Surrounding Lands. 2017 US-IALE Annual Meeting, Baltimore, United States. April 9th - 14th, 2017, Oral Presentation.
- 2017** **Yang D**, Marsik M, Fu C, Ozdes M, Smith A, Binford M. Design and Implementation of a Self-Supervised Cloud Computing Framework to Link Forest Management to Surrounding Lands. 2017 AAG Annual Meeting, Boston, United States. April 5th - 9th, 2017, Oral Presentation.

- 2017** Binford M, Marsik M, Fu C, **Yang D**. Mapping the Distribution and Spatial Characteristics of Forest Management in Two Major Forested Areas of the USA. 2017 AAG Annual Meeting, Boston, United States. April 5th - 9th, 2017, Oral Presentation.
- 2017** Ozdes M, Smith A, **Yang D**, Southworth J. Evaluation of Vegetation Change in Kruger National Park Using a Markov Chain Monte Carlo Model. 2017 AAG Annual Meeting, Boston, United States. April 5th - 9th, 2017, Oral Presentation.
- 2017** Smith A, **Yang D**, Ozdes M, Southworth J. Vegetation Dynamics and Undernutrition: A Spatiotemporal Analysis of NDVI and Child Stunting in Zambia. 2017 AAG Annual Meeting, Boston, United States. April 5th - 9th, 2017. Oral Presentation.
- 2016** **Yang D**, Ozdes M, Smith A, Binford M. Open-Source Land-Use Mapping: A Strategy for the Southeastern U.S. Coastal Plain and Piedmont. Southeastern Division of the Association of American Geographers Annual Meeting. November 20th – 22nd, 2016, Columbia, USA. Oral Presentation.
- Marsik M, Binford M, Fu. C, **Yang, D**, Staub C, Hall J. Mapping Forest Management at Regional Scales in the Southeast U.S. AAG Annual Meeting. March 29th - April 2nd, San Francisco, USA, Oral Presentation.
- 2015** **Yang D**, Marsik M, Fu. C, Hall J, Binford M. Estimating Forest Management Units from Road Network Maps in the Southeastern U.S. AGU Annual Meeting. December 13th - 19th, 2015, San Francisco, USA. Poster Presentation.
- 2014** **Yang D**, Stevens F, Staub C, Hall J, Binford M. How smoothing Affects Disturbance Detection in Decomposed MODIS Time Series? AAG Annual General Meeting. April 8th - 12th, 2014, Tampa, Florida, USA. Poster Presentation.
- 2012** **Yang D**, Su H. MODIS-Landsat Data Fusion for estimating Vegetation Dynamics-A Case Study for Two Ranches in West Texas, 14th Annual CREST-RESSACA Environmental and Energy Sustainability Conference”, April 26th - 27th, 2012, Houston, Texas. Poster Presentation.

MENTORING HIGHLIGHTS

Olivia Zhang (Undergraduate, UF): Led development and publication of *Participatory Science and GeoAI* (Textbook 2, May 2026). Selected for inaugural Data Stewardship Learning Circle with the Open Environmental Data Project. Attended Environmental Data Science Summit (NCEAS, Feb 2026) and AI for Sustainability Summit (CU Boulder ESIL, May 2026). Led national expansion proposal to scale EMERGE to 10 additional states (submitted Aug 2025). John R. and Fawn T. Dunkle Geography Award (Apr 2025). Best Poster, Conference for Advancing Participatory Sciences (May 2025). 2025–2026 Early Career Fellow, UCLA Center for Developing Leadership in Science.

Di Fan (Research Consultant, UF): Selected as 2025–2026 Early Career Fellow, UCLA Center for Developing Leadership in Science (Nov 2025).

Kaitlyn Anderson (M.S. Student, UF): PASG Graduate Student Paper Award for “Ecological Fragmentation: Road Networks in U.S. National Parks and Forests,” American Association of Geographers.

SERVICE

National and International Service

2026–Present	Guest Editor: Land Use Change and Technological Innovations: Remote Sensing and Artificial Intelligence Approaches. <i>Land</i>
2025–Present	NEON Site Management and Disturbance Technical Working Group Member
2025–Present	NASA Open Science Data Repository Analysis Working Group Member
2025	Guest Editor: Technological advances in forest monitoring and management, <i>Nature Scientific Reports</i>
2024–Present	Subject Matter Expert (SME), NASA Science Activation Program
2024	NASA DEVELOP Science Advisor
2024–Present	USDA NIFA Review Panelist
2023	NSF Review Panelist
2023–Present	Wyoming-NCAR Alliance Resource Advisory Panel (WRAP)
2023	NASA ROSES Review Panelist
2022–Present	Editorial Board: Scientific Reports, Nature
2022–Present	Guest Editor: Community Science. <i>Nature Humanities & Social Sciences Communications and Scientific Reports.</i>
2022–Present	Guest Editor: The Potential Impacts of Climate Change on the Distribution of Tree Species. <i>Frontiers in Forests and Global Change</i>
2022–Present	Guest Editor: Research on the Structure and Function of Forest and Grassland Based on Multi-Source Remote Sensing Data. <i>Remote Sensing</i>
2022	NSF External Reviewer
2021–Present	Guest Editor: Remote Sensing
2021	NASA SMD STEM Review Panelist
2021–Present	Guest Editor: Advances in Remote Sensing of Land-Sea Ecosystems. <i>Remote Sensing.</i>
2020–Present	Topical Editor: Sustainability
2020	National Science Foundation (NSF) Review Panelist
2020–Present	Program Committee: 1st–3rd ACM SIGSPATIAL COVID Workshop
2019–Present	Reviewer: University of Florida-IFAS Extension Administration
2019–Present	Judge: Outstanding Student Paper Award – American Geophysical Union
2018	APN (Asia-Pacific Network for Global Change Research) External Reviewer
2017	Book Reviewer: Volunteered Geographic Information and the Future of Geospatial Data

2015–Present Ad hoc journal reviewer: Remote Sensing of Environment; Stochastic Environmental Research and Risk Assessment; Landscape Ecology; Technological Forecasting and Social Change; Sensors; Journal of Cleaner Production; Remote Sensing; Sustainability; Science of the Total Environment; ISPRS International Journal of Geo-Information; Ecological Applications; Applied Sciences; Water; International Journal of Environmental Research and Public Health; The Egyptian Journal of Remote Sensing and Space Sciences; Remote Sensing Letters; International Journal of Remote Sensing.

University Service

2024–Present Student Service Committee, Department of Geography, UF

2025 UF Geography Club Faculty Mentor

2024 Panelist: AI Eyes on Earth: Transforming Remote Sensing with AI (UF AI Days)

2023 Faculty Search Committee, Department of Plant Science, UWYO

2023 Grant Reviewer: Data Science Fellow – Data Science Center, UWYO

2022 Thesis-based Master Admission Committee, WyGIS

2021 Ad-hoc Committee of GIS Certificate, WyGIS

2021 Nominated and elected to be the Member of Graduate Admission Affairs Committee, Program in Ecology, University of Wyoming

2021 Amazon AWS Certified Educator and Representative of AWS Academy Institution in University of Wyoming

2020 GIS Certificate Ad Hoc Committee, University of Wyoming

2019 Judge: Outstanding Student Paper Award – American Geophysical Union

2018 Grant Reviewer: Graduate Student Council, University of Florida

2017–2018 Geography Department Graduate Student Representative, University of Florida

2012–2013 Chinese Students Association – President, Texas A&M University-Kingsville

2011 Volunteer: 9th Annual Pathways Student Research Symposium. College Station, Texas.

TECHNICAL EXPERTISE

- **Programming:** Architect robust geospatial analytics workflows using Python, R, IDL, JavaScript, C++.
- **Cloud Platforms:** Harness the power of Google Earth Engine (GEE), AWS, and Azure.
- **Geospatial AI:** Implement state-of-the-art deep learning solutions for remote sensing and GIS applications using TensorFlow and PyTorch.
- **App Development:** Build interactive web apps, 3D visualizations, and dashboards using Streamlit, Leaflet, Plotly.
- **High-Performance Computing:** Develop optimized code to accelerate geospatial computations on clusters, GPUs, and cloud computing resources.

MEDIA COVERAGE AND NEWS RELEASES

- NASA Science Feature (September 2025): Teaching with EMERGE and GLOBE Mission Mosquito webinar series.
- NASA Science Feature (March 23, 2026): “NASA Data Hackathon Inspires Community Action”.
- UF Department of Geography (February 11, 2026): “EMERGE NASA Data Hackathon”.
- GLOBE Mission Mosquito: EMERGE featured in GLOBE Mission Mosquito webinar series and project video.
- Lake Okeechobee News (July 29, 2025): “NASA-supported EMERGE program launches across Florida.”
- Featured in AAAS EurekAlert! article “New study assesses wildfire risk from standing dead trees in Yellowstone National Park”.
- Dillon, N. (2023). Changing weather is affecting songbirds’ migration. Tracking devices will find where they’re going. Wyoming Public Radio.
- Featured in Wyoming Truth article “Women You Should Know in Wyoming: Scientist Brings NASA’s Work to the West”, March 2023.
- Featured in Wyoming Tribune Eagle article “UW study shows fires, summer snowstorms created unprecedented migratory bird die-off”, June 2021.

PROFESSIONAL ORGANIZATIONS

- Institute of Electrical and Electronics Engineers (IEEE)
- Regional Association of the International Association for Landscape Ecology (US-IALE)
- American Geophysical Union (AGU)
- American Association of Geographers (AAG)
- American Academy of Environmental Engineers and Scientists (AAEE)

LANGUAGES

- Chinese (native proficiency)
- English (full professional proficiency)
- Spanish (minimum professional proficiency)