12.2024

ZHE ZHU

Department of Natural Resources and the Environment
University of Connecticut (UConn), Storrs, CT, USA
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RESEARCH INTERESTS

Remote Sensing; Time Series Analysis; Global Environmental Change; Land Cover and Land Use Change; Disaster and Hazard Monitoring; Artificial Intelligence, Biodiversity Conservation; Climate Change

EDUCATION

2013	Ph.D. in Geography, Boston University
2006	B.E. in Remote Sensing and Photogrammetry, Wuhan University

APPOINTMENTS

2025-	Visiting Fellow, Yale University
2023-	Associate Professor (with tenure), Department of Natural Resources and the Environment, UConn
2023-2024	Consultant, Bay Area Environmental Research Institute
2022	Consultant, Wildfire.org
2019-2023	Assistant Professor, Department of Natural Resources and the Environment, UConn
2016-2018	Assistant Professor, Department of Geosciences, Texas Tech University
2014-2016	Land Change Scientist, Contractor to USGS Earth Resources Observation and Science (EROS) Center
2013-2014	Post-doctoral Associate, Department of Earth and Environment, Boston University
2008-2012	Research Assistant, Department of Geography, Boston University

PROFESSIONAL ACTIVITIES

2025.01-	Special Issue Editor, Remote Sensing of Environment & Science of Remote Sensing
2024	Chair and Organizer, Annual Meeting of Association of American Geographers, Honolulu
2024.02-	Member, LP DAAC User Working Group
2023.06-	Member, NASA Carbon Monitoring System (CMS) Science Team
2022.09-	Volume Editor, Remote Sensing Data Processing and Analysis Methodology, Comprehensive Remote Sensing (Book), Second Edition, Elsevier.
2022.08-2024	Guest Editor, Remote Sensing of Environment, Special Issue
2022.08-	Interim Editor in Chief, Remote Sensing of Environment
2022.07-2024	Editorial Board, Journal of Geodesy and Geoinformation Science
2022-2023	Associate Editor, Journal of Remote Sensing
2022-2024	Guest Editor, Journal of Remote Sensing, Special Issue
2021-	Member, NASA Black Marble Science Team
2021	Timeseries Application Session Chair, ARD21 Satellite Data Interoperability Workshop
2021-2023	Author, Fifth National Climate Assessment (NCAS)
2021-	Founding Director, CATALYST and UConn Center of Excellence
2019-	Founding Director, Global Environmental Remote Sensing Laboratory
2019-	Associate Editor, Science of Remote Sensing
2019-2024	Editorial Board, Remote Sensing
2018-2023	Member, USGS-NASA Landsat Science Team
2018-	Associate Editor, Remote Sensing of Environment

2019.01-2022.06 Member, Science Interface Panel, USGS EROS CalVal Center of Excellence
2017-2024 Editorial Board, PeerJ
2014- Member, American Geographical Union
2019-2020 Guest Editor, Remote Sensing, Special Issue
2018-2021 Chair, American Geographical Union (AGU), San Francisco and New Orleans
2018 Chair and Organizer, Annual Meeting of Association of American Geographers, New Orleans
2017-2018 Guest Editor, Remote Sensing, Special Issue
2017-2018 Guest Editor, Forests, Special Issue
2017-2018 Associate Editor, Arabian Journal of Geosciences
2017 Chair and Organizer, Annual Meeting of Association of American Geographers, Boston
2014-2019 Member, Association of American Geographers

AWARDS

2024 UConn Excellence in Teaching Award
2020-2023 Web of Science Highly Cited Researchers
2021 UConn-AAUP Excellence Awards - Excellence in Research & Creativity: Early Career
2020 UConn Excellence in Teaching Award
2016 Outstanding Contribution in Reviewing Remote Sensing of Environment
2007-2008 Presidential University Graduate Fellowships, Boston University, Boston

TEACHING

Academic Courses

Quantitative Remote Sensing Methods, NRE 5545: UConn, Fall 2024 (Instructor)
Remote Sensing Image Processing, NRE 5535: UConn, Spring 2024 (Instructor)
Remote Sensing of Environment, NRE 3535: UConn, Fall 2023 (Instructor)
Remote Sensing Image Processing, NRE 4535/5535: UConn, Spring 2023 (Instructor)
Quantitative Remote Sensing Methods, NRE 5545: UConn, Fall 2022 (Instructor)
Remote Sensing Image Processing, NRE 5535: UConn, Spring 2022 (Instructor)
Remote Sensing of Environment, NRE 3535: UConn, Fall 2021 (Instructor)
Remote Sensing Image Processing, NRE 4535/5535: UConn, Spring 2021 (Instructor)
Quantitative Remote Sensing Methods, NRE 5545: UConn, Fall 2020 (Instructor)
Remote Sensing Image Processing, NRE 4535/5535: UConn, Spring 2020 (Instructor)
Remote Sensing of Environment, NRE 3535: UConn, Fall 2019 (Instructor)
Advanced Remote Sensing, GIST 5320: Texas Tech University, Fall 2018 (Instructor)
Remote Sensing of Environment, GIST 3301/5301: Texas Tech University, 2016-2017 (Instructor)
Digital Image Processing, GE 440/640, Boston University, Spring 2012 (Teaching Assistant)
Digital Image Processing, GE 440/640, Boston University, Fall 2011 (Guest Lecturer)

Certificate

Exploring Online Learning, UConn, April 5, 2020

MENTORING

Postdocs

Ji Won Suh (2022-), PhD., UConn, 2022

Yongquan Zhao (2021-2022), PhD., The Chinese University of Hong Kong, 2018
Current Position: Associate Professor at University of Chinese Academy of Sciences

Su Ye (2020-2023), Ph.D., Clark University, 2020
Current Position: Hundred Talents Assistant Professor at Zhejiang University

Xiucheng Yang (2020-), Ph.D., University of Strasbourg, 2019

Shi Qiu (2019-2022), Ph.D., University of Electronic Science and Technology of China, China, 2018
Current Position: Research Assistant Professor at UConn

Rong Shang (2018-2020), Ph.D., Chinese Academy of Sciences, China, 2018
Current Position: Associate Professor at Fujian Normal University

Congcong Li (2018-2019), Ph.D. Beijing Normal University, China, 2014
Current Position: Research Scientist, Contractor USGS EROS Center

Lei Ma (2018), Ph.D. Nanjing University, China, 2016
Current Position: Associate Professor at Nanjing University

MS/ Ph.D. Advisees

Alec Henderson (2024-), MS Student, Dept. of Natural Resources and the Environment, UConn

Ashley Grinstead (2023-), MS Student, Dept. of Natural Resources and the Environment, UConn

Mari Cullerton (2022-2024), MS Student, Dept. of Natural Resources and the Environment, UConn
Current Position: Conservation Research Scientist, Remote Ecologist, Inc

Falu Hong (2020-), Ph.D. Student, Dept. of Natural Resources and the Environment, UConn

Song Kexin (2020-), Ph.D. Student, Dept. of Natural Resources and the Environment, UConn

Tian Li (2019-), Ph.D. Student, Dept. of Natural Resources and the Environment, UConn

Junxue Zhang (2017-2020), MS Student, Dept. of Natural Resources and the Environment, UConn
Current Position: Software Engineer, Amazon

Visiting Scholar Advisees

Lin Yukun (2018-2019), Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences
Current Position: Assistant Professor at Shanghai Normal University

Shi Qiu (2017-2018), School of Resources & Environment, University of Electronic Science and Technology of China
Current Position: Research Assistant Professor at UConn

M.S., Ph.D. Dissertation, Orals, and/or guiding Committees

Jiali Zhu (2023-), Ph.D. Student, School for Environment and Sustainability, University of Michigan

Nadia Ahmad (2024-), Ph.D. Student, School of Environment, Yale University

Hangkai You (2023-), Ph.D. Student, Department of Forest and Wildlife Ecology, University of Wisconsin-Madison

Mei-Ling Emily Feng (2022-), Ph.D. Student, Department of Ecology and Evolutionary Biology, UConn

Durga Joshi (2021-), Ph.D. Student, Department of Natural Resources and the Environment, UConn

Frank Gigliotti (2021-), Ph.D. Student, Department of Ecology and Evolutionary Biology, UConn

Moataz Kilany (2020-2023), Ph.D. Student, Department of Geography, UConn

Elana Berlin (2021-2022), M.S. Student, Department of Natural Resources and the Environment, UConn

Ji Won Suh (2020-2023), Ph.D. Student, Department of Geography, UConn

Ankit Singh (2020-2022), Ph.D. Student, Department of Natural Resources and the Environment, UConn

Zhijie Zhang (2019-2022), Ph.D. Student, Department of Geography, UConn
Current Position: Professional Practice Assistant Professor at the University of Arizona

Amal H. Aljaddani (2016-2022), Ph.D. Student, Department of Geosciences, Texas Tech University
Current Position: Assistant Professor at University of Jeddah

Su Ye (2017-2020), Ph.D. Student, Graduate School of Geography, Clark University
Current Position: Hundred Talents Assistant Professor at Zhejiang University

Tarek Kandakji (2016-2020), Ph.D. Student, Department of Geosciences, Texas Tech University

Current Position: Remote Sensing Specialist and Manager at Yale University

Yazhou Sun (2017-2019), M.S. Student, Department of Plant and Soil Science, Texas University
Current Position: Ph.D. Student at University of Wisconsin-Madison

Congliang Zhou (2017-2019), M.S. Student, Department of Geosciences, Texas Tech University
Current Position: Assistant Professor at the Louisiana State University

Abir Raihan (2017-2018), M.S. Student, Department of Plant and Soil Science, Texas Tech University

Aaron Flores (2017-2018), M.S. Student, Department of Geosciences, Texas Tech University
Current Position: Assistant Professor at Arizona State University

Undergraduate Advisees

Mari Cullerton (2019-2021), the University Scholar Program, UConn
Current Position: M.S. Student at UConn

UNIVERSITY SERVICE

2021-2022	Search Committee, Climate Change Adaptation Science Professor, Department of Natural Resources and the Environment, UConn
2021-2022	Search Committee, Grant Specialist, CAHNR, UConn
2021-2022	Search Committee for Data Science, Research Fellow, CLAS, UConn
2021-	NRE Graduate Program/Admission Committee, UConn
2019-2023	NRE Seminar Committee, UConn
2019-2024	CAHNR Faculty Advisory Council, UConn
2020.9.22	Panelist for UConn's Postdoc Appreciation Week Event
2020-2021	NRE Seminar Committee Chair, UConn
2019-2020	Search Committee, GIS Assistant Professor, Department of Geography, UConn
2019	External Search Committee, GIS Assistant Professor, Department of Geography, UConn
2017	Organizer, Climate Science Center Monthly Seminar Series, Texas Tech University
2017-2018	Sedimentary Geology Position Search Committee, Texas Tech University

JOURNAL & BOOK REVIEW (# of manuscripts or book chapters)

Access (1)
Agricultural and Forest Meteorology (2)
Applied Sciences (1)
Arid Land Research and Management (1)
Canadian Journal of Remote Sensing (4)
Computer & Geosciences (2)
CRC Press Taylor & Francis Group (1)
Ecography (1)
Ecological Complexity (1)
Environmental Research Letters (4)
Environmental Science: Processes & Impacts (2)
Forests (3)
Frontiers of Earth Science (2)
Geocarto International (2)

Geoinformatics & Geostatistics: An Overview, Geosciences (1)
Geophysical Research Letters (1)
Geoscience and Remote Sensing Letters (4)
Geo-spatial Information Science (1)
GIScience and Remote Sensing (4)
International J of Applied Earth Obs and Geoinformation (1)
International J of Digital Earth (3)
International J of Remote Sensing (10)
International J of the Physical Sciences (1)
J of Applied Remote Sensing (5)
Journal of Cleaner Production (1)
J of Environmental Informatics (1)
J of Mountain Science (1)
J of Photogrammetry & RS (13)
J of Selected Topics in Applied Earth Obs & RS (10)
Methods in Ecology and Evolution (1)
Multimedia Tools and Applications (1)
Nature Cities (1)
Nature Climate Change (1)
Nature Communication (1)
Nature Geoscience (1)
Nature Sustainability (2)
Photogrammetric Engineering and RS (1)
Remote Sensing (33)
RS Applications: Society and Environment (5)
Remote Sensing of Environment (55)
Science (1)
Science Bulletin (1)
Sensors (4)
South African Geographical Journal (1)
Sustainability (1)
Transactions on Geoscience and Remote Sensing (7)

SOFTWARE DEVELOPED

https://github.com/GERSL

SELECTED MEDIA COVERAGE

Mangroves Are Losing Their Resilience, *NASA Landsat Science*
UConn Researchers Develop Pioneering Monitoring Technique to Help Build Mangrove Resilience, *UConn Today*
UConn Researchers Closer to Near Real-Time Disaster Monitoring, *UConn Today*
Eyes on Earth Episode 84 – Hurricane Disturbance Mapping, Eyes on Earth podcast
Viewing Earth from Space at Night: Tracking Our Changing Black Marble, *UConn Today*
UConn Researchers Assessing the Aftermath of Hurricane Ian, *UConn Today*
New satellite mapping with AI can quickly pinpoint hurricane damage across an entire state to spot where people may be trapped, *The Conversation*
DECODE: A New Automatic Algorithm To Track Coastal Tidal Wetland Changes, *USGS News*
Six From UConn Named to World's Highly Cited Research List, *UConn Today*
Diagnosis from the Sky: Catching Insect Infestations within Forests Before It's Too Late, *UConn Today*

Research Beat: UConn team develops techniques for spotting bug infestations, *The Daily Campus*
New Center of Excellence Seeks to Radically Improve Study of Landscapes Over Time, *UConn Today*
UConn Puts Eight On List Of World's Most Highly Cited Researchers, UConn Today
Landsat Science Team Members Support the Free and Open Landsat Data Policy, *NASA News*
What are the Benefits of Landsat's Current Free and Open Policy? *GIS Lounge*
The US government might charge for satellite data again – here's why that would be a big mistake, *The Conversation*
A Policy Proposal That Could Curb Remote Sensing Research, *UConn Today*
Meet the Researcher: Zhe Zhu, Natural Resources and the Environment, *UConn Today*

RESEARCH FUNDING

Active Funding (PI/Institutional PI – 2.1 million; Total – 7.4 million)

29. Advancing coastal wetland restoration outcomes: examining temporal trajectories and spatial variation of past management scale interventions across the Long Island Sound, PI: B. Lawrence, **Co-PI: Z. Zhu**, EPA/Long Sounds Study, Total **$838,517**, 1/2025-12/2026.

28. High-resolution Water Use Efficiency Mapping Connecticut: Integration of Novel Remote Sensing Data and the State-of-the-Art Numerical Modeling, PI: Y. Wang, **Co-PI: Z. Zhu**, *USGS*, Total $**30,000**, 09/2024-08/2025

27. Mapping understory vegetation change using animal- and space-borne sensor, **PI: Z. Zhu**, *USDA*, Total **$60,000**, 10/2024-09/2027.

26. Collaborative Research: BoCP-Implementation: Estimating the extinction risk of biodiversity with a time-based dynamic system, PI: S.B. Hedges, **PI: Z. Zhu**, *NSF*, Total **$1,952,698**, UConn Proportion **$961,763**, 10/2023-9/2027.

25. Estimating roadside tree risk to grid resilience and reliability using PlanetScope time series, **PI: Z. Zhu**, *Eversource*, Total **$88,000**, 9/2023-8/2025.

24. A Sample-based Approach for Analyzing the Driver of Coastal Tidal Wetland Changes, **PI: Z. Zhu**, *USGS*, Total **$29,994**, 7/2023-6/2026.

23. IUCRC Phase I Grant University of Connecticut: Center for Weather Innovation, Smart Energy and Resilience (WISER), PI: E. Anagnostou, **Senior Personal: Z. Zhu**, *NSF*, Total **$750,000**, 1/2023-12/2027.

22. Improvements of QA Band and New Science Data Layers Proposed for the NASA Harmonized Landsat and Sentinel-2 Product, **PI: Z. Zhu**, *NASA*, Total **$299,950**, 4/2023-3/2025.

21. An Alkalinity and Inorganic Blue Carbon Monitoring System: Crediting Wetland-to-Ocean Lateral Fluxes in Carbon Markets and Inventories, PI: Kevin Kroeger, **Institutional PI: Z. Zhu**, *NASA*, Total **$1,199,695**, UConn Proportion **$182,743**, 1/2024-1/2027.

20. Water-use and Land-cover change detection using ECOSTRESS and OpenET, PI: Y. Yang, **Institutional PI: Z. Zhu**, *NASA*, Total **$388,237**, UConn Proportion **$120,076**, 1/2023-12/2025.

19. Maintenance and Continuation of NASA's Black Marble Nighttime Lights Product Suite from Suomi-NPP and NOAA-20 VIIRS, PI Z. Wang, **Institutional PI: Z. Zhu**, *NASA*, Total **$689,856**, UConn Proportion **$234,578**, 2021-2025.

18. High-performance computing (HPC) cluster, **PI: Z. Zhu** and S. Steinbach, *UConn CAHNR Equipment Grant*, **$107,453**, 2021-2025.

Past Funding (PI/Institutional PI – 3.7 million; Total – 24.7 million)

17. Mapping changes in deciduous forest understory vegetation using remotely sensed data, **PI: Z. Zhu**, Co-PI: C. Rittenhouse, *McIntire-Stennis Capacity Grant*, **$59,995**, 2021-2024.

16. WATCH: Wide Area Terrestrial Change Hypercube, **Institutional PI**: **Z. Zhu**, *Intelligence Advanced Research Projects Activity (IARPA)*, Total **$14,166,466**, UConn Proportion **$567,967**, 2020-2024.

15. Evaluating Coastal Tidal Wetland Change in the Conterminous United States, **PI: Z. Zhu**, *National Wildlife Refuge System (NWRS)*, Total **$84,996**, 7/2022-9/2023.

14. Green energy development and carbon mitigation potential of forests and working lands, PI A. Morzillo, **Co-PI: Z. Zhu**, *Eversource*, **$49,999**, 2021-2023.

13. Assessing Forest Risk to Infrastructure Using Remotely Sensed Imagery, **PI: Z. Zhu**, *Eversource*, **$207,094**, 2020-2023.

12. Improving land cover classification and land change detection for LCMAP, **PI: Z. Zhu**, *USGS*, **$349,758**, 2019-2024.

11. Toward Near Real-time Monitoring and Characterization of Land Surface Change for the Conterminous US, **PI: Z. Zhu**, *USGS-NASA Landsat Science Team Program*, **$870,381**, 2019-2023

10. A Moderate Spatial Resolution Data Record of 21st Century Global Land Cover, Land Use, and Land Cover Change, PI: M. Friedl, **Collaborator: Z. Zhu**, *NASA Making Earth System Data Records for Use in Research Environments*, **$4,039,454**, 2018-2023

9. Detection and Characterization of Coastal Tidal Wetland Change, **PI: Z. Zhu**, *USGS*, **$103,019**, 2019-2022.

8. IUCRC Planning Grant University of Connecticut: Center for Weather Innovation, Smart Energy and Resilience (WISER), PI: E. Anagnostou, **Contributor: Z. Zhu**, *NSF*, **$20,000**, 2021-2022.

7. Estimation of Young Forest and Shrubland Habitat in Connecticut, PI: Chadwick Rittenhouse, **Co-I: Z. Zhu**, *Department of Energy and Environmental Protection (DEEP)*, **$181,367**, 2019-2021.

6. Mapping and Characterizing Human Activity Changes using NASA Black Marble Product Suite, **Institutional PI: Z. Zhu**, *NASA*, **$116,338**, 2019-2021.

5. NASA's Black Marber Standard Product Suite: Algorithm Refinement Effort, PI: M. Roman, **Collaborator: Z. Zhu**, *NASA the Science of TERRA, AQUA, and SUOMI NPP*, **$862,698**, 2017-2020

4. Quantifying Cotton Water Stress Using Unmanned Aerials Systems and Satellite Remote Sensing, PI: W. Guo, **Co-I: Z. Zhu**, *The Climate Corp*, **$130,000**, 2018-2019

3. Toward Near Real-time Monitoring and Characterization of Land Surface Change for the Conterminous US, **PI: Z. Zhu**, *USGS-NASA Landsat Science Team Program*, **$1,062,069**, 2017-2022 (discontinued after leaving Texas Tech University in Dec. 2018)

2. Algorithm Improvement, Near Real-time Monitoring, and New Change Product Designed for the LCMAP Initiative, **PI: Z. Zhu**, *USGS Great Plains Cooperative Ecosystem Studies Unit (CESU) Program*, **$283,045**, 2017-2021 (discontinued after leaving Texas Tech University in Dec. 2018)

1. A Historically Consistent and Broadly Applicable MRV System Based on Lidar Sampling and Landsat Time-series, PI: W. Cohen, **Consultant: Z. Zhu**, *NASA Carbon Monitoring System*, **$2,180,302**, 2013-2016

PUBLICATIONS (~20,000 citations in total and an average of ~200 citations per paper)

**** Corresponding authors, † Students or postdocs under my supervision (or co-supervision)***

88. Hong, F.†*, S.B. Hedges, Z. Yang, J.W. Suh, S. Qiu, J. Timyan, Z. Zhu, Decoding primary forest changes in Haiti and the Dominican Republic using Landsat time series, *Remote Sensing of Environment*, **Accept**.

87. Zhou, Q.*, C. Neigh, J. Ju, P. Dabney, B. Cook, **Z. Zhu**, C. Crawford, F. Gascon, P. Strobl, M. Sridhar, Towards Seamless Global 30-meter Terrestrial Monitoring: Evaluating 2022 Cloud Free Coverage of Harmonized Landsat and Sentinel-2 (HLS) v2.0, *GIScience & Remote Sensing*, **Accept**.

86. Chen, C.*, L. Yang, X. Wang, X. Luo, Y. Li, Y. Cheng, **Z. Zhu**, Biophysical effects of croplands on land surface temperature, *Nature Communication*, **Accept**.

85. Yang, X.†*, **Z. Zhu**, K. Kroeger, S. Qiu, S. Covington, J.R. Conrad, Zhiliang Zhu., Tracking mangrove condition changes using dense Landsat time series, *Remote Sensing of Environment*, 315, 114461, **2024**.

84. Zhang, H.K.*, S. Qiu, J. Suh, D. Luo, Z. Zhu., Machine Learning and Deep Learning in Remote Sensing Data Analysis, *Comprehensive Remote Sensing (book)*, Elsevier, **2024**.

83. Fu, Y.*, **Z. Zhu**, et al., Remote Sensing Time Series Analysis: A Review of Data and Applications, *Journal of Remote Sensing*, 4, 0285, **2024**.

82. Li, Y.*, M.A. Wulder, **Z. Zhu**, J. Verbesselt, D. Masiliūnas, Y. Liu, G. Bohrer, Y. Cai, Y. Zhou, Z. Ding, K. Zhao, Detecting breakpoints in multispectral time series – a multivariate algorithm, *Remote Sensing of Environment*, 315, 114402, **2024**.

81. Fu, Y.*, R. Li, **Z. Zhu**, X. Wang, H. Ding, B. Guo, and W. Xia, A new strategy for estimating carbon density based on the improved cascade random forest and Landsat time series, *Remote Sensing of Environment*, 314, 114348 **2024**.

80. Suh, J.†*, **Z. Zhu**, and Y. Zhao, Monitoring construction changes using dense satellite time series and deep learning, *Remote Sensing of Environment*, 309, 114207, **2024**.

79. Worthley, T., A. Bunce, A.T. Morzillo, C. Witharana, **Z. Zhu**, …, and R.T. Fahey*, Stormwise: Innovative Forest Management to Promote Storm Resistance in Roadside Forests. Journal of Forestry, p.fvae011, **2024**.

78. Ye, S.†*, **Z. Zhu**, J. Suh, Leveraging past information and machine learning to accelerate land disturbance monitoring, *Remote Sensing of Environment*, 305, 114071, **2024**.

77. Radeloff, V.*, D. Roy, M. Wulder, …, and **Z. Zhu**, Need and vision for global medium-resolution Landsat and Sentinel-2 data products, *Remote Sensing of Environment*, 300, 113918, **2024**.

76. Stanimirova, R.*, K. Tarrio, K. Turlej, ..., and **Z. Zhu**, A global land cover training dataset from 1984 to 2020, *Scientific Data*, 10, **2023**.

75. Thornton, P.E., B.C. Reed, G.Z. Xian, L. Chini, A.E. East, J.L. Field, C.M. Hoover, B. Poulter, S.C. Reed, G. Wang, and Z. Zhu, 2023: Ch. 6. Land cover and land-use change. In: *Fifth National Climate Assessment*. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. https://doi.org/10.7930/NCA5.2023.CH6, **2023**.

74. Crawford, C.J.*, Roy, D.P., Arab, S., Barnes, C., Vermote, E., Hulley, G., Gerace, A., Choate, M., Engebretson, C., Micijevic, E. and Schmidt, G., …, **Z. Zhu**, and S. Zahn, The 50-year Landsat Collection 2 Archive. *Science of Remote Sensing*, p.100103, **2023**.

73. Yang, X.†*, S. Qiu, **Z. Zhu**, C. Rittenhouse, D. Riordan, Mapping understory species in deciduous forests from Sentinel-2 time series, 293, 113601, *Remote Sensing of Environment*, **2023**.

72. Hu, J., A.E. Hartemink, A.R. Desai, P.A. Townsend, R.Z. Abramoff, **Z. Zhu**, D. Sihi, J. Huang, A Continental-Scale Estimate of Soil Organic Carbon Change At NEON Sites and 2 Their Environmental and Edaphic Controls, *Journal of Geophysical Research Biogeosciences*, 128, e2022JG006981, **2023**.

71. Jin, S.*, J. Dewitz, C. Li, D. Sorenson, **Z. Zhu,** R. Shogib, P. Danielson, B. Granneman, C. Costello, A. Case, L. Gass, National Land Cover Database 2019: A comprehensive strategy for creating the 1986-2019 forest disturbance product, 3, p.0021, *Journal of Remote Sensing*, **2023**.

70. Ye, S.†*, **Z. Zhu**, and G. Cao, Object-based continuous monitoring of land disturbance, *Remote Sensing of Environment*, 287, 113462, **2023**.

69. Tollerud, H.*, **Z. Zhu**, K. Smith, R. Hussain, D. Wellington, Towards consistent change detection with uneven availability of remote sensing input data: modification of the Continuous Change Detection and Classification, *Remote Sensing of Environment*, 285, 113372, **2023**.

68. Qiu, S.†*, **Z. Zhu**, P. Olofsson, C. Woodcock, and S. Jin, Evaluation of Landsat Image Compositing Algorithms for Landsat Imagery, *Remote Sensing of Environment*, 285, 113375, **2023.**

67. Jin, S.*, J. Dewitz, P. Danielson, B. Granneman, C. Costello, K. Smith, and **Z. Zhu**, National Land Cover Database 2019: A new strategy for creating clean leaf-on and leaf-off Landsat composite images, 3, p.0022, *Journal of Remote Sensing*, **2023.**

66. Qiu, S.†*, **Z. Zhu,** and X. Yang, Characterization of land disturbances based on Landsat time series, *Earth and Space Science Open Archive*, *36*, *https://doi.org/10.1002/essoar.10511010.1*., **2022**

65. **Zhu, Z.***, S. Qiu*, and S. Ye*, Remote Sensing of Land Change: A Multifaceted Perspective, *Remote Sensing of Environment*, 282, 113266, **2022**.

64. Tian, L.†*, **Z. Zhu**, Z. Wang, M. Román, V. Kalb, and Y. Zhao, Continuous Monitoring of Nighttime Light Changes Based on Daily NASA's Black Marble Product Suite, *Remote Sensing of Environment*, 282, 113269, **2022**.

63. Wulder, M.A.*, D.P. Roy, V.C. Radeloff; T.R. Loveland, M.C. Anderson, D.M. Johnson, S. Healey, **Z. Zhu**, T.A. Scambos, N. Pahlevan, M. Hansen, N. Gorelick, C.J. Crawford, J.G. Masek, T. Hermosilla, J.C. White, A.S. Belward, C. Schaaf, C. Woodcock, J.L. Huntington, L. Lymburner, P. Hostert, F. Gao, A. Lyapustin, J-F. Pekel, P. Strobl, and B.C. Cook, Fifty years of Landsat science and impacts, *Remote Sensing of Environment*, 280, 113195, **2022**.

62. Zhang, Y.*, C. Woodcock, P. Arévalo, P. Olofsson, X. Tang, R. Stanimirova, E.L. Bullock, K.R. Tarrio, **Z. Zhu** and M. Friedl, A global analysis of the spatial and temporal variability of usable Landsat observations at the pixel scale, *Frontiers in Remote Sensing*, 3, 894618, **2022**.

61. M.A. Friedl*, C. Woodcock, P. Olofsson, **Z. Zhu**, T.R. Loveland, R. Stanimirova, P.A. Arévalo, E. Bullock, K. Hu, Y. Zhang, K. Turlej, K. Tarrio, K. Mcavoy, N. Gorelick, J.A. Wang, C.P. Barber, and C.M. Souza, Medium Spatial Resolution Mapping of Global Land Cover and Land Cover Change Across Multiple Decades from Landsat, *Frontiers in Remote Sensing*, 3, 894571, **2022**.

60. Zhou, Q.*, G. Xian, J. Horton, D. Wellington, G. Domke, R. Auch, C. Li, and **Z. Zhu**, CONUS Tree Regrowth Map from LCMAP Collection 1.0 Land Cover Products, *GIScience & Remote Sensing*, 59(1), 959-974, **2022**.

59. Auch, R.F., D.F. Wellington, J.L. Taylor, S.V. Stehman, H.J. Tollerud, J.F. Brown, T.R. Loveland, B.W. Pengra, J.A. Horton, **Z. Zhu**, and A.A. Midekisa, 2022. Conterminous United States Land-Cover Change (1985–2016): New Insights from Annual Time Series, *Land*, 11(2), 298, **2022**.

58. Rittenhouse, C.D.*, E. Berlin, N. Mikle, S. Qiu, D. Riordan, and **Z. Zhu**, An Object-Based Approach to Map Young Forest and Shrubland Vegetation Based on Multi-Source Remote Sensing Data, *Remote Sensing*, 14(5), 1091, **2022**.

57. Aljaddani, A.†*, X. Song, and **Z. Zhu**, Characterizing the Patterns, Trends of Urban Growth in Saudi Arabia's 13 Capital Cities Using Landsat Time Series, *Remote Sensing*, 14910, 2382, **2022**.

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1. **Zhu, Z.***, C.E. Woodcock, J. Rogan, & J. Kellndorfer, Assessment of spectral, polarimetric, temporal, and spatial dimensions for urban and peri-urban land cover classification using Landsat and SAR data, *Remote Sensing of Environment*, 117(15), 72-82, **2012**

PRESENTATIONS AND POSTERS

62. "Green to Gone: A Time Series Tale of Caribbean Primary Forest Decline, *AGU*, Washington DC, 12/09/2024-12/13/2024 (invited talk)

61. "Connecting the dots" in a changing planet, *Clark University Colloquium Speaker Series*, Worcester, MA 04/25/2024 (invited talk)

60. "Connecting the dots" in land change research, *AAG*, Honolulu, HI, 04/20/2024 (talk)

59. Cloud Detection and Masking, *Landsat Science Team Meeting*, Reno, NV, 02/08/2023 (talk)

58. The Multifaceted View of the U.S. Land Change: the Change Agent Facet, *University of Maryland Geographical Science Seminar*, Online, 12/01/2022 (invited talk)

57. Earth Observation for Societal Impact, *SNAC22*, London, ON, Canada, 10/31/2022 (Panelist)

56. A Multifaceted View of Conterminous US Land Change, *Pecora22*, Denver, CO, 10/27/2022 (talk)

55. Monitoring and Characterization of Land Disturbance: Algorithms and Preliminary Results, *SUNY Albany Falconer Lecture*, Online, 04/26/2022 (invited talk)

54. Remote Sensing of Land Change: A Multifaceted Perspective, *NCSU Geospatial Forum*, Online, 04/07/2022 (invited talk)

53. A new land disturbance monitoring system that provides a multifaceted view of land change for the United States, *AGU*, New Orleans, LA, 12/15/2021 (invited talk)

52. Monitoring and Characterization of Land Disturbance based on Dense Landsat Time Series, *ARD21 Satellite Data Interoperability Workshop*, Online, 10/27/2021 (invited talk)

51. Understanding our changing planet through the lens of satellite imagery, *Institute of Space & Earth Information Science CUHK Seminar*, Online, 04/22/2021 (invited talk)

50. Effects of Landsat 7's Orbit Drift and a Solution to Preserve Its Science Capabilities, *AGU*, Online, 12/01/2020-12/17/2020 (poster)

49. Understanding our changing planet through the lens of satellite imagery, *UConn Geography Colloquium*, Online, 10/23/2020 (invited talk)

48. Building a Clean, Consistent, and Dense Moderate Resolution Time Series for Monitoring Land Change, *Landsat Science Team Webinar Series*, Online, 05/27/2020 (talk)

47. New Land Disturbance Products for the Conterminous US, *AGU*, San Francisco, CA, 12/09/2019-12/13/2019 (poster)

46. Envisioning the future of global monitoring, *Pecora 21*, Baltimore, MD, 10/10/2019 (keynote speaker)

45. A new system for near real-time monitoring and characterization of land disturbance, *Pecora 21*, Baltimore, MD, 10/09/2019 (talk)

44. Better cloud and cloud shadow mask for Landsats 4-8 and Sentinel-2 imagery, *Landsat Science Team Meeting*, Sioux Falls, SD, 06/19/2019-06/21/2019 (talk)

43. Better cloud and cloud shadow mask for Landsats 4-8 and Sentinel-2 imagery, *Landsat Science Team Meeting*, Sioux Falls, SD, 06/19/2019-06/21/2019 (talk)

42. Mapping our planet in near real-time, *UConn Environmental Engineering Seminar Series*, Storrs, CT, 03/08/2019 (talk)

41. Catching the "invisible ghost" in the optical imagery: What is cirrus and how to detect it?, *Center for Remote Sensing Monthly Seminar*, Boston, MA, 03/01/2019 (invited talk)

40. Continuous Monitoring of Global Land Disturbance: Algorithms & Plans, *Google Global Land Cover Workshop*, Mountain View, CA, 02/21/2019-02/22/2019 (invited talk)

39. Fmask 4.0: Improved cloud and cloud shadow detection for Landsats 4-8 and Sentinel-2 imagery, *AGU*, Washington DC, 12/09/2018-12/15/2018 (talk)

38. Monitoring land disturbance based on Landsat time series, *AGU*, Washington DC, 12/09/2018-12/15/2018 (talk)

37. Monitoring land disturbance based on Landsat time series, *ForestSAT*, College Park, MD, 10/01/2018-10/05/2018 (talk)

36. Making Landsat time series consistent for monitoring land change, *Landsat Science Team Meeting*, Boulder, CO, 08/08/2018-08/10/2018 (talk)

35. Monitoring Land Change in Near Real-time, Webinar for Geoscience and Remote Sensing Society (GRSS) Sponsored by the Washington DC / Northern Virginia Chapter of GRSS, 06/12/2018 (talk)

34. Status and updates of the Continuous Change Detection and Classification (CCDC) algorithm, *AAG*, New Orleans, LA, 04/10/2018-04/14/2018 (talk)

33. Toward near real-time monitoring and characterization of land surface change for the Conterminous US, *NASA LCLUC Spring Science Team Meeting*, Gaithersburg, MD, 03/03/2018-03/05/2018 (talk)

32. Toward near real-time monitoring and characterization of land surface change for the Conterminous US, *Landsat Science Team Meeting*, Sioux Falls, SD, 02/20/2018-02/23/2018 (talk)

31. Large-area annual land cover maps derived from Landsat analysis ready data, *Pecora20*, Sioux Falls, SD, 11/13/2017-11/16/2017 (talk)

30. Optimizing selection of training and auxiliary data for operational land cover classification of the LCMAP initiative, *AAG*, Boston, MA, 04/05/2017 (talk)

29. Change agent classification based on all available Landsat data, *Landsat Science Team Meeting*, Boston University, Boston, MA, 01/11/2017 (talk)

28. Land change monitoring, *Landsat Science Team Meeting*, Brookings, SD, 07/28/2016 (talk)

27. Progress of the LCMAP initiative: From algorithms to products, *EROS Seminar*, USGS, Sioux Falls, SD, 07/20/2016 (talk)

26. The use of all available Landsat data for land cover monitoring, *AAG,* San Francisco, CA, 03/29/2016 (talk)

25. From CCDC to LCMAP: The "magic" of using all available Landsat data, *Wetland and Aquatic Research Center,* Lafayette, LA, 03/09/2016 (talk)

24. The "magic" of using all available Landsat data: detecting land cover change from Guangzhou to global scale, *South China Normal University,* Guangzhou, China, 12/25/2015 (talk)

23. CCDC and LCMAP: The use of all available Landsat data, *University of Electronic Science and Technology of China,* Chengdu, China, 12/15/2015 (talk)

22. From CCDC to LCMAP: The "magic" of using all available Landsat data, *National Geomatics Center of China,* Beijing, China, 12/9/2015 – 12/10/2015 (talk)

21. From CCDC to LCMAP: The "magic" of using all available Landsat data, *GSE Seminars, South Dakota State University,* Brookings, South Dakota, 10/09/2015 (talk)

20. From CCDC to LCMAP: The "magic" of using all available Landsat data, *University of Electronic Science and Technology of China,* Chengdu, China, 07/22/2015-07/23/2015 (talk)

19. From CCDC to LCMAP, *Landsat Science Team Meeting, EROS, USGS,* Sioux Falls, SD, 07/07/2015-07/09/2015 (talk)

18. From CCDC to LCMAP: The "magic" of using all available Landsat data, *EROS Seminar, USGS,* Sioux Falls, SD, 06/09/2015 (talk)

17. Monitoring land cover in near real-time: the era of big data, *Clark University,* Boston, MA, 04/09/2015 (talk)

16. Landscape Change Monitoring System (LCMS) and Carbon Monitoring System (CMS) joint meeting, *LCMS & CMS*, Ogden, UT, 12/03/2014-12/04/2014 (discussion)

15. Development of a land change monitoring system: CCDC modeling and plans for system integration and applications, *Land Carbon*, Reston, VA, 10/22/2014-10/23/2014 (talk)

14. Ensemble integration of forest disturbance maps for the Landscape Change Monitoring System (LCMS), *AGU Fall Meeting*, San Francisco, CA, 12/03/2014-12/07/2014 (poster)

13. Exploring metrics for assessing composite and synthetic Landsat images, *Landsat Science Team Meeting*, Corvallis, OR, USA, 22/07/2014-24/07/2014 (talk)

12. Quantifying ecosystem carbon losses and gains following development in New England: A combined field, modeling, and remote sensing approach, *AGU Fall Meeting*, San Francisco, CA, 12/03/2013-12/07/2013 (poster)

11. Monitoring land cover through big data: finding buried treasure in Landsat data, *LCLUC Spring Science Team Meeting*, Rockville, MD, 04/23/2014-04/25/2014 (poster)

10. Continuous change detection and classification of land cover using all available Landsat data, *MultiTemp 2013*, Banff, Alberta, Canada, 06/25/2013-06/27/2013 (talk)

9. Continuous change detection and classification of land cover using all available Landsat data, *Clark University*, Boston, MA, 04/26/2013 (talk)

8. Continuous change detection and classification of land cover using all available Landsat data, *AGU Fall Meeting*, San Francisco, CA, 12/03/2012-12/07/2012 (talk)

7. Monitoring interannual variation in deciduous broadleaf forest phenology using Landsat, *AGU Fall Meeting*, San Francisco, CA, 12/03/2012-12/07/2012 (poster)

6. Continuous monitoring of forest disturbance using all available Landsat imagery, *GOFC-GOLD Meeting*, Boston, MA, UA, 01/09/2012-01/12/2012 (talk)

5. LEDAPS atmospheric correction for thin cloud or heavy aerosols - a case study over New England, *Landsat Science Team Meeting*, Boston, MA, USA, 11/01/2010-11/03/2010 (talk)

4. Comparison of cloud and cloud shadow algorithms, *Landsat Science Team Meeting*, Boston, MA, USA, 11/01/2010-11/03/2010 (talk)

3. Cloud and cloud shadow detection in Landsat imagery - Fmask 1.6v algorithm, *Landsat Science Team Meeting*, Boston, MA, USA, 11/01/2010-11/03/2010 (talk)

2. Automated cloud and cloud shadow screening in Landsat imageries based on time series analysis, *Landsat Science Team Meeting*, Boston, MA, USA, 10/27/2009-10/29/2009 (talk)

1. Object-based cloud and cloud shadow detection, *The 17th William T. Pecora Memorial Remote Sensing Symposium*, Denver, CO, USA, 11/16/2008-11/20/2008 (talk)