

# JONATHAN W. CHIPMAN

*Director, Citrin Family GIS/Applied Spatial Analysis Laboratory  
Dartmouth College*

## CONTACT

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Google Scholar: <https://scholar.google.com/citations?user=TuF474QAAAAJ>

## EDUCATION

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Ph.D. (Environmental Monitoring) University of Wisconsin-Madison, 2001

*Dissertation: Topographic Mapping of Forested Areas in the Western Great Lakes Region Using Spaceborne Synthetic Aperture Radar Interferometry*

M.S. (Environmental Monitoring) University of Wisconsin-Madison, 1996

*Thesis: Analysis of Spaceborne Synthetic Aperture Radar Images to Assist in Statewide Land Cover Mapping and Long-Term Ecological Research*

A.B. (Music), Dartmouth College, 1990

## PROFESSIONAL EXPERTISE

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Geographic information science, spatial analysis, remote sensing

Satellite-based monitoring of terrestrial and aquatic ecosystems

Cartography and geographic data visualization (geovisualization)

Facilitating the adoption of geospatial science and technology in the curriculum

## ACADEMIC EMPLOYMENT

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| 2007-present | Director, Citrin Family GIS/Applied Spatial Analysis Laboratory, Dartmouth College<br>Geography Department (Faculty, 2007-present)<br>Earth Sciences Department (Adjunct Faculty, 2007-present)<br>Quantitative Social Sciences Program (Steering Committee, 2014-present)<br>Ecology, Evolution, Environment, and Society (Affiliated Faculty, 2022-present) |
| 2004-2007    | Assistant Scientist, Environmental Remote Sensing Center, University of Wisconsin-Madison                                                                                                                                                                                                                                                                     |
| 2001-2004    | Research Associate, Center for Limnology, University of Wisconsin-Madison                                                                                                                                                                                                                                                                                     |

## TEACHING

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Current        GEOG 54: Geovisualization  
                  GEOG 77/EARS 37 & EARS 137: Environmental Applications of GIS

Previous        ENGG 139.02 (co-instructor): Polar Science and Engineering  
                  EARS 65/GEOG 51 & EARS 165: Remote Sensing  
                  GEOG 85: Advanced Reading in Geography  
                  EARS 87: Special Projects  
                  Co-instructor for EARS 45, 46, 47: Off campus program in Earth Sciences

Contributions to other classes    EARS 16: Hydrology and Water Resources  
                                          EARS 76/ENGS 46: Advanced Hydrogeology  
                                          ENVS 40, 42, 84: Foreign study program in Environmental Studies  
                                          GEOG 1: Introduction to Human Geography  
                                          GEOG 3: The Natural Environment  
                                          GEOG 33: Earth Surface Processes and Landforms  
                                          GEOG 35/EARS 71: River Processes and Watershed Science

At University of Wisconsin    IES 301: Introduction to Aerial Photographic Systems  
                                          IES 302: Introduction to Electro-Optical and Microwave Remote Sensing Systems

Participant in the 2009 Active Learning Institute, 2024 GenAI Teaching Institute and awarded a 2025 Generative AI Teaching Grant, Dartmouth Center for the Advancement of Learning.

Recipient of the University of Wisconsin's Excellence in Teaching Award, 1999.

## RESEARCH AWARDS AND GRANTS

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Principal investigator (PI). *Integrating remote sensing, field observations, and citizen science to inform alpine zone stewardship efforts*. National Science Foundation Human, Environmental, and Geographical Sciences program, 2026-2028, \$480,875 (pending).

Con-Investigator (Co-I), with PI Jeffrey Kerby. *RESHAPE: A field-based, computational imaging framework for quantifying geospatial herbivory impacts on Arctic tundra*. Neukom Institute CompX award, 2026-2027; \$33,853.05.

Team member, with PI Jesse Casana. *Discovering Global Archaeological Heritage using AI and Remote Sensing*. Schmidt Sciences Humanities and AI Virtual Institute, 2025-2026. \$20,000 for Citrin Lab.

Co-I, with PI Kate Lichter. *Climate-Resilient Cancer Care in Cold-Climate Communities: A Dartmouth Living Lab for Winter Hazard Alerts & Telehealth Conversion*. Dartmouth As Living Lab award, 2026-2027, \$25,500.

PI. *Unmanned Aerial System (UAS) Hyperspectral Images to Enable Alpine Zone Ecological Research*. Neukom Institute CompX award, 2025-2026; \$15,000.

Co-PI, with lead PI Christopher Sneddon. *Hydropower Development and Knowledge Controversies in Transboundary Rivers*. Arthur L. Irving Institute for Energy and Society award, 2019-2022; \$19,101 (completed).

Co-I, with PI Margaret Karagas. *A prospective study of critical environmental exposures in formative early life that impact lifelong health in rural US children*. NIH Epidemiology program, award UG3OD023275. 9/2018-8/2023; \$36,578,865 (completed).

Other personnel, with PI Meredith Kelly. *Collaborative Research: Assessing the response of tropical temperature to global forcings since the Last Glacial Maximum*. National Science Foundation P2C2 program, award 9/1/2017-8/31/2022; \$376,997 (completed).

PI. *A Virtual-Reality Node for Interdisciplinary 3D Visualization in the Spatial Sciences*. Dartmouth College Neukom Institute CompX award, 2019-2021; \$21,586, plus \$12,106 supplementary award (completed).

Co-I, with PI Jonathan Winter. *Expansion of Lyme Disease in the Northeast: Climate, Land Use, and Ticks*. Dartmouth College Neukom Institute CompX award, 2016-2017; \$24,721 (completed).

Co-I, with PI Xun Shi. *Maintaining Environmental Flows and Sustainable Water Use Strategies in a Rapidly Developing Watershed*. Porter Family Foundation, 2013-2017; \$50,000 (completed).

Other personnel, with PI Christopher Sneddon. *Environmental Conflicts and the Social Dimensions of Dam Removal*. National Science Foundation, Geography Program, award 7/1/2012-6/30/2015; \$257,732 (completed).

PI (2006-2007, University of Wisconsin) / Co-I (2007-2011, Dartmouth). *Multisensor Spaceborne Monitoring of Large Lakes Worldwide: Assessment of Trends in Water Quantity and Quality*. NASA Terrestrial Hydrology Program; 2006-2011. \$527,930 (completed).

PI. *Facilitating the Adoption of Geographic Information Systems and Spatial Analysis in the Curriculum*. 2008 Computing Technology Venture Fund award; Dartmouth College; 2008-2009; \$9868 (completed).

Co-I (at University of Wisconsin), with PI Jonathan Patz. *Health Risks from Climate Variability and Change in the Upper Midwest: a Place-based Assessment of Climate-related Morbidity*. US EPA Science to Achieve Results; University of Wisconsin. 2005-2008; \$598,599 (completed).

Co-I (at University of Wisconsin), with PI Stephen Carpenter. *Comparative Study of a Suite of Lakes in Wisconsin*. National Science Foundation Long-Term Ecological Research Program; University of Wisconsin; 2002-2008; \$6,720,000 (completed).

PI (at University of Wisconsin). *LakeSat: Near Real-time Monitoring of Water Quality in Green Bay and Wisconsin's Lake Michigan Coastal Waters via Satellite Remote Sensing*. Wisconsin Sea Grant; University of Wisconsin; 2004-2007; \$319,155 (completed).

PI on Subcontract (at University of Wisconsin). *Assessing the Performance of Various Proximal and Remote Sensing Platforms for Estimating Lake Trophic Status and Trends*. Subcontract from North American Lake Management Society (NALMS), funded by proposal to US EPA; 2005-2006; UW-Madison subtotal \$27,782 (completed).

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## **PUBLICATIONS: PEER-REVIEWED JOURNAL ARTICLES**

- Tourville J, Chipman JW, Galloway W, Murray G, Southgate M, Nelson S. In review. Heterogeneous warming, snowmelt timing, and topography shape alpine plant phenology in Northeastern North America. *Ecology and Evolution*, in review.
- Chipman JW, Tourville J, Ko I. 2026. Long-term trends in greenness and landscape phenology in the alpine zone from remote sensing. *Ecosphere*, 17(9): e70765. <https://doi.org/10.1002/ecs2.70765>.
- Ronan A, Hawley R, Chipman JW. 2024. Impacts of differing melt regimes on satellite radar waveforms and elevation retrievals. *The Cryosphere*, 18(12): 5673–5683. <https://doi.org/10.5194/tc-18-5673-2024>.
- Shi X., Zhang F, Chipman JW, Li M, Khatchikian C, Karagas M. 2024. Measuring greenspace in rural areas for studies of birth outcomes: a comparison of street view data and satellite data. *GeoHealth*, 8(4), e2024GH001012. <https://doi.org/10.1029/2024GH001012>.
- Chipman JW, Shi X, Gilbert-Diamond D, Khatchikian C, Baker E, Nieuwenhuijsen M, Karagas M. 2024. Greenspace and land cover diversity during pregnancy in a rural region, and associations with birth outcomes. *GeoHealth*, 8(1), p.e2023GH000905. <https://doi.org/10.1029/2023GH000905>.
- Bourne K, Curtis A, Chipman JW, Chen C, Borsuk M. 2023. Patterns of co-contamination in freshwater and marine fish of the northeastern United States. *Environmental Modeling and Assessment*, 2023-06-26. <https://doi.org/10.1007/s10666-023-09912-2>.
- Doughty A, Kelly M, Russell J, Jackson M, Anderson B, Chipman JW, Nakileza B. 2023. Last Glacial Maximum reconstructions of Rwenzori mountain glaciers. *Paleoceanography and Paleoclimatology*, 38(1), p.e2022PA004527. <https://doi.org/10.1029/2022PA004527>.
- He Y, Chipman JW, Mankin J. 2022. Rapid land cover and land use change in the Indo-Malaysian region over last 34 years based on AVHRR NDVI data. *Annals of the American Association of Geographers*, 12(8), 2131-2151. <https://doi.org/10.1080/24694452.2022.2077168>.
- Ratti V, Chipman JW, Wallace D. 2022. Larval flushing alters malaria endemicity patterns in regions with similar habitat abundance. *Current Research in Parasitology & Vector-Borne Diseases*, 2:100080. <https://doi.org/10.1016/j.crpvbd.2022.100080>.
- Buckman K., Mason R, Seelen E, Taylor V, Balcom P, Chipman JW, Chen C. 2021. Patterns in forage fish mercury concentrations across Northeast US estuaries. *Environmental Research*, 194: 110629. <https://doi.org/10.1016/j.envres.2020.110629>.
- Doughty A, Kelly M, Russell J, Jackson M, Anderson B, Chipman JW, Nakileza B, Dee S. 2021. Modeling glacier extents and equilibrium line altitudes in the Rwenzori Mountains, Uganda, over the last 31,000 yr. *Geological Society of America Special Papers*, 548. [https://doi.org/10.1130/2020.2548\(09\)](https://doi.org/10.1130/2020.2548(09)).
- Morgan B, Chipman JW, Bolger D, Dietrich J. 2021. Spatiotemporal analysis of vegetation cover change in a large ephemeral river: multi-sensor fusion of unmanned aerial vehicle (UAV) and Landsat imagery. *Remote Sensing*, 13(1): 51. <https://dx.doi.org/10.3390/rs13010051>.
- Rubin H, Lutz D, Steele B, Cottingham K, Weathers K, Ducey M, Palace M, Johnson K, Chipman JW. 2021. Remote sensing of lake water clarity: performance and transferability of both historical algorithms and machine learning. *Remote Sensing* 13(8): 1434. <https://doi.org/10.3390/rs13081434>.

- Webb M, Winter J, Spera S, Chipman JW, Osterberg E. 2021. Water, agriculture, and climate dynamics in central Chile's Aconcagua River Basin. *Physical Geography*, 1790719. <https://doi.org/10.1080/02723646.2020.1790719>.
- Winter J, Partridge T, Wallace D, Chipman JW, Ayres M, Osterberg E, Dekker E. 2021. Modeling the sensitivity of blacklegged ticks (Acari: Ixodidae) to temperature and land cover in the northeastern United States. *Journal of Medical Entomology*, 58(1): 416-427. <https://doi.org/10.1093/jme/tjaal179>.
- Dominy N, Ikram S, Moritz G, Wheatley P, Christensen J, Chipman JW, Koch P. 2020. Mummified baboons reveal the far reach of early Egyptian mariners. *eLife* 60860. <https://doi.org/10.7554/eLife.60860>.
- Fleisch A, Rokoff L, Garshick E, Grady S, Chipman JW, Baker E, Koutrakis P, Karagas M. 2020. Residential wood stove use and indoor exposure to PM2.5 and its components in northern New England. *Journal of Exposure Science and Environmental Epidemiology*, 30: 350-361. <https://doi.org/10.1038/s41370-019-0151-4>.
- Fleisch A, Seshasayee S, Garshick E, Chipman JW, Koutrakis P, Baker E, Karagas M. 2020. Assessment of maternal glycemia and newborn size among pregnant women who use wood stoves in northern New England. *JAMA Network Open*, 3(5):e206046. <https://doi.org/10.1001/jamanetworkopen.2020.6046>.
- Jackson M, Kelly M, Russell J, Doughty A, Howley J, Chipman JW, Cavagnaro D, Zimmerman S, Nakileza B, Baber M. 2020. Glacial fluctuations in tropical Africa during the last glacial termination and implications for tropical climate following the Last Glacial Maximum. *Quaternary Science Reviews*, 243: 106455. <https://doi.org/10.1016/j.quascirev.2020.106455>.
- Liu J, Lawson D, Hawley R, Chipman JW, Tracy B, Shi X, Chen Y. 2020. Estimating the longevity of glaciers in the Xinjiang region of the Tian Shan through observations of glacier area change since the Little Ice Age using high-resolution imagery. *Journal of Glaciology*, 66(257):471-484. <https://doi.org/10.1017/jog.2020.24>.
- Morgan B, Bolger D, Chipman JW, Dietrich J. 2020. Lateral and longitudinal distribution of riparian vegetation along an ephemeral river in Namibia using remote sensing techniques. *Journal of Arid Environments*, 181: 104220. <https://doi.org/10.1016/j.jaridenv.2020.104220>.
- Chipman JW. 2019. A multisensor approach to satellite monitoring of trends in lake area, water level and volume. *Remote Sensing*, 11(2):158. <https://doi.org/10.3390/rs11020158>.
- Finger Higgs R, Chipman JW, Lutz D, Culler L, Virginia R, Ogden L. 2019. Changing lake dynamics indicate a drier Arctic in western Greenland. *Journal of Geophysical Research-Biogeosciences*. <https://doi.org/10.1029/2018JG004879>.
- Jackson M., Kelly M, Russell J, Doughty A, Howley J, Chipman JW, Cavagnaro D, Nakileza B, Zimmerman S. 2019. High-latitude warming initiated the onset of the last deglaciation in the tropics. *Science Advances*, 5(12): eaaw2610. <https://doi.org/10.1126/sciadv.aaw2610>.
- Wallace D, Ratti V, Kodali A, Winter J, Ayres M, Chipman JW, Aoki C, Osterberg E, Silvanic C, Partridge T, Webb M. 2019. Effect of rising temperature on Lyme disease: *Ixodes scapularis* population dynamics and *Borrelia burgdorferi* transmission and prevalence. *Canadian Journal of*

- Infectious Diseases and Medical Microbiology*, 2019: 9817930.  
<https://doi.org/10.1155/2019/9817930>.
- Winter J, Bowen F, Partridge T, Chipman JW. 2019. Future extreme event risk in the rural northeastern United States. *Annals of the American Association of Geographers*.  
<https://doi.org/10.1080/24694452.2018.1540920>.
- Heindel R, Chipman JW, Dietrich J, Virginia R. 2018. Quantifying rates of soil deflation with Structure-from-Motion photogrammetry in West Greenland. *Arctic, Antarctic, and Alpine Research*, special issue on “Environmental Change and Impacts in the Kangerlussuaq Area, West Greenland”, 50(1): S100012. <https://doi.org/10.1080/15230430.2017.1415852>.
- Kopec B, Feng X, Posmentier E, Chipman JW, Virginia R. 2018. Use of principal component analysis to extract environmental information from lake water isotopic compositions. *Limnology and Oceanography* 63(3): 1340-1354. <https://doi.org/10.1002/lno.10776>.
- Li B, Chen Y, Chipman JW, Shi X. 2018. Why does the runoff in Hotan river show a slight decreased trend in northwestern China? *Atmospheric Sciences Letters* 19(1). <https://doi.org/10.1002/asl.800>.
- Spera S, Winter J, Chipman JW. 2018. Evaluation of agricultural land cover representations on regional climate model simulations in the Brazilian Cerrado. *Journal of Geophysical Research-Atmospheres*, 123(10): 5163-5176. <https://doi.org/10.1029/2017JD027989>.
- Schild K., Hawley R, Chipman JW, Benn D. 2017. Quantifying suspended sediment concentration in subglacial sediment plumes discharging from two Svalbard tidewater glaciers using Landsat-8 and in situ measurements. *International Journal of Remote Sensing* 38(23): 6865-6881.  
<https://doi.org/10.1080/01431161.2017.1365388>.
- Wallace D, Prosper O, Savos J, Dunham A, Chipman JW, Shi X, Ndenga B, Githeko A. 2017. Modeling the response of *Anopheles gambiae* (Diptera: Culicidae) populations in the Kenya Highlands to a rise in mean annual temperature. *Journal of Medical Entomology* 54(2): 299-311.  
<https://doi.org/10.1093/jme/tjw174>.
- Chipman JW, Shi X, Magilligan F, Chen Y, Li B. 2016. Impacts of land cover change and water management practices on the Tarim and Konqi river systems, Xinjiang, China. *Journal of Applied Remote Sensing*, 0001;10(4):046020. <https://doi.org/10.1117/1.JRS.10.046020>.
- Magilligan F, Graber B, Nislow K, Chipman JW, Sneddon C, Fox C. 2016. River restoration by dam removal: enhancing connectivity at watershed scales. *Elementa: Science of the Anthropocene*, 4: 000108. <https://doi.org/10.12952/journal.elementa.000108>.
- Heindel R, Chipman JW, Virginia R. 2015. The spatial distribution and ecological impacts of aeolian soil erosion in Kangerlussuaq, West Greenland. *Annals of the Association of American Geographers*, 105(5): 875-890. <https://doi.org/10.1080/00045608.2015.1059176>.
- Wallace D, Southworth B, Shi X, Chipman JW, Githeko A. 2014. A comparison of five malaria transmission models: benchmark tests and implications for disease control. *Malaria Journal*, 13:268.  
<https://doi.org/10.1186/1475-2875-13-268>.

- Caller T, Chipman JW, Field H, Stommel E. 2013. A spatial analysis of amyotrophic lateral sclerosis in northern New England, USA, 1997-2009. *Muscle and Nerve*, 48(2):235-41. <https://doi.org/10.1002/mus.23761>.
- Morriss B, Hawley R, Chipman JW, Andrews L, Catania G, Hoffman M, Lüthi P, Neumann T. 2013. A ten-year record of supraglacial lake evolution and rapid drainage in West Greenland using an automated processing algorithm for multispectral imagery. *The Cryosphere*, 7: 1869-1877. <https://doi.org/10.5194/tc-7-1869-2013>.
- Caller T, Field N, Chipman JW, Shi X, Harris B, Stommel E. 2012. Spatial Clustering of Amyotrophic Lateral Sclerosis and the Potential Role of BMAA. *Amyotrophic Lateral Sclerosis*, 13(1): 25-32. <https://doi.org/10.3109/17482968.2011.621436>.
- Chipman JW, Wright R, Ellis M, Holloway S. 2012. Mapping the evolution of racially mixed and segregated neighborhoods in Chicago. *Journal of Maps*, 15 Nov 2012 special issue on Innovative Mapping in Spatial Demography, <https://doi.org/10.1080/17445647.2012.740431>.
- San Gil I. and 36 other authors including Chipman JW. 2009. The Long-Term Ecological Research community metadata standardisation project. *Int. J. Metadata Semantics and Ontologies*, 4: 141–153. <https://doi.org/10.1504/IJMSO.2009.02775>.
- Carpenter S., Benson B, Biggs R, Chipman JW, Foley J, Golding S, Hammer R, Hanson P, Johnson P, Kamarainen A, Kratz T, Lathrop R, McMahon K, Provencher B, Rusak J, Solomon C, Stanley E, Turner M, Vander Zanden J, Wu C, Yuan H. 2007. Understanding regional change: a comparison of two lake districts. *BioScience*, 57(4): 323-335. <https://doi.org/10.1641/B570407>.
- Chipman JW and Lillesand T. 2007. Satellite-based assessment of the dynamics of new lakes in southern Egypt. *International Journal of Remote Sensing*, 28(19): 4365-4379. <https://doi.org/10.1080/01431160701241787>.
- Dash J, Mathur A, Foody G, Curran P, Chipman JW, Lillesand T. 2007. Land cover classification using multi-temporal MERIS vegetation indices. *International Journal of Remote Sensing*, 28(5-6): 1137-1159. <https://doi.org/10.1080/01431160600784259>.
- Peckham S, Chipman JW, Lillesand T, and S. Dodson. 2006. Alternate stable states and the shape of the lake trophic distribution. *Hydrobiologia*, 571:401-407. <https://doi.org/10.1007/s10750-006-0221-1>.
- Chipman JW, Lillesand T, Schmaltz J, Leale J, and Nordheim M. 2004. Mapping lake water clarity with Landsat images in Wisconsin, USA. *Canadian Journal of Remote Sensing*, 30(1):1-7. <https://doi.org/10.5589/m03-047>.
- Reese H, Lillesand T, Nagel D, Stewart J, Goldmann R, Simmons T, Chipman JW, Tessar P. 2002. Statewide land cover derived from multiseasonal Landsat TM data: a retrospective of the WISCLAND project. *Remote Sensing of Environment*, 82(2-3): 224-237. [https://doi.org/10.1016/s0034-4257\(02\)00039-1](https://doi.org/10.1016/s0034-4257(02)00039-1).
- Means J, Hopkins P, Jensen J, Schill S, Chipman JW, Ramsey R, Stow D. 2001. ARC partnerships: industry and academia explore remote sensing applications. *Journal of Forestry* 99: 4-12.
- Chipman JW, Lillesand T, Gage J, Radcliffe S. 2000. Spaceborne imaging radar in support of forest resources management. *Photogrammetric Engineering and Remote Sensing*, 66(11): 1357-1366.

## **PUBLICATIONS: BOOKS, BOOK CHAPTERS, AND PEER-REVIEWED REPORTS**

Lillesand T, Kiefer R, Chipman JW. 2015. *Remote Sensing and Image Interpretation*, 7th edition. John Wiley & Sons, NY. (Lead author for 7<sup>th</sup> edition and primary responsibility for 5 of 8 chapters).

Hostert P, Swayne F, Cohen W, Chipman JW. 2010. "The Role of Remote Sensing in Long-Term Ecological Research Projects." In F. Müller, C. Baessler, H. Schubert, and S. Klotz (editors), *Long-Term Ecological Research: Between Theory and Application*, Springer, New York.

Chipman JW, L.Olmanson, and A.Gitelson. 2009. *Remote Sensing Methods for Lake Management*. North American Lake Management Society, Madison, WI.

Lillesand T, Kiefer R, Chipman JW. 2008. *Remote Sensing and Image Interpretation*, 6th edition. John Wiley & Sons, NY.

Chipman JW. 2006. "Remote Sensing." In J. Pfafflin and E. Ziegler, eds., *Encyclopedia of Environmental Science and Engineering*, 5<sup>nd</sup> edition. CRC Press, Boca Raton, FL.

Benson B, Hanson P, Chipman JW, Bowser C. 2005. "Breaking the Data Barrier: Research Facilitation Through Data and Information Management." In J. Magnuson, Kratz T and Benson B, *Long Term Ecological Research of North Temperate Lakes: Dynamics of Lakes in the Landscape*. Oxford University Press, NY.

Lillesand T, Kiefer R, Chipman JW. 2004. *Remote Sensing and Image Interpretation*, 5th edition. John Wiley & Sons, NY.

Chipman JW, Kiefer R, Lillesand T. 2004. "Remote Sensing." In R. Dorf, *The Engineering Handbook*, 2<sup>nd</sup> edition. CRC Press, Boca Raton, FL.

Lillesand T, Chipman JW, Nagel D, Reese H, Bobo M, Goldmann R. 1998. *Upper Midwest Gap Analysis Program Image Processing Protocol*. US Geological Survey, Onalaska, WI.

Cartographic design of maps for Dartmouth faculty books by Emily Walton, Robert Baum, Elizabeth Lhost, Susan Ackerman, Abigail Neely, Coleen Fox, Chelsey Kivland, Daryl Press, Paul Musselwhite, Walter Simons, Edward Miller, Levi Gibbs, Douglas Irwin, Rashauna Johnson, Chris Sneddon, Jennifer Fluri, Nadhav Samin, DG Webster, and James Igoe, and for art exhibit catalogs for Margaret Darrow and the Hood Museum.

## **WORKSHOPS AND PRESENTATIONS AT PROFESSIONAL CONFERENCES**

Chipman J, Belson S, Galloway W, Tourville J. 2026. High-resolution satellite mapping of persistent snowbeds above treeline. Northeast Alpine Stewardship Gathering, October 2026, Carrabassett Valley, ME.

Tourville J, Chipman JW. 2026. Tree encroachment in alpine environments of Northeastern North America: Evidence from multiple approaches. General Assembly of the European Geophysical Union, May 2026, Vienna, Austria.

- Oehmig P, Chipman JW, Cottingham K, Edwardson K, Danielson T, Chen C. 2025. Is there something fishy in New England lakes? A PFAS in lake fish analysis. Strategic Environmental Research and Development Program (SERDP) PFAS Meeting, August 2025, Long Beach CA.
- Dethier E., Renshaw C, Chipman JW, Valencius I, Snyder N, Sheehan C, McDaniels C. 2024. Weekly river monitoring of rivers by Sentinel-2 and Planet Labs satellites reveals sub-seasonal patterns from the Tropics to the Arctic. Annual meeting of the American Geophysical Union, December 2024, Washington, DC.
- Chipman JW, Ko I, Tourville J. 2024. Systematic monitoring of alpine zone vegetation change regionwide using satellite remote sensing. Northeast Alpine Stewardship Gathering, October 2024, Bretton Woods, NH.
- Halvorson V, Hawley R, Chipman JW. 2023. Automated glacier classification in High Mountain Asia using a Random Forest classifier model. Annual meeting of the American Geophysical Union, December 2023, San Francisco, CA.
- He Y, Chipman JW, Mankin J. 2020. Rapid Indo-Malaysian land-use and land cover change over the last 35 years. Annual meeting of the American Geophysical Union, December 2020, San Francisco.
- Kelly M, Doughty A, Russell J, Jackson M, Chipman JW, Garelick S, Anderson N, Nakileza B. 2019. Amplified temperature change at high elevation in the tropics during the LGM. Annual meeting of the American Geophysical Union, December 2019, San Francisco, CA.
- Lutz D, Rubin H, Steele B, Ducey M, Cottingham K, Palace M, Weathers K, Chipman JW. 2019. Harnessing machine learning and citizen science data to improve remotely sensed estimates of lake water clarity and document regional clarity trends. Annual meeting of the American Geophysical Union, December 2019, San Francisco, CA.
- Wallace D, Chipman JW, Ratti V. 2019. The impact of hydroclimatological processes on malaria transmission in the Western Kenya Highlands. Annual meeting of the American Geophysical Union, December 2019, San Francisco, CA.
- Wallace D, Chipman JW, Ratti V, Shaw M. 2019. Integrating land use, topography, and rainfall in a model of larval habitat. International Congress on Industrial and Applied Mathematics, July 2019, Valencia, Spain.
- Jackson M, Kelly M, Russell J, Doughty A, Howley J, Cavagnaro D, Chipman JW, Zimmerman S, Nakileza B. 2019. Tropical glacier fluctuations during late glacial time: a view from equatorial Africa. European Geophysical Union General Assembly, April 2019, Vienna, Austria.
- Jackson M, Kelly M, Russell J, Doughty A, Vickers A, Shakun J, Goehring B, Howley J, Chipman JW, Cavagnaro D, Zimmerman S, Nakileza B. 2019. Holocene glaciation in the African and South American tropics. Geological Society of America, Northeastern Section Annual Meeting, March 2019, Portland, ME.
- Finger Higgins R, Chipman JW, Lutz, Culler L, Virginia R, Ogden L. 2018. A drier Arctic? Evapotranspiration in changing lake dynamics in western Greenland. Annual meeting of the American Geophysical Union, December 2018, Washington, DC.
- Liu J, Lawson D, Hawley R, Tracy B, Chipman JW, Shi X, Chen Y. 2018. Estimating the longevity of glaciers in the Tian Shan in Xinjiang, China through remote sensing observations of glacier area change. Annual meeting of the American Geophysical Union, December 2018, Washington, DC.
- Chipman JW, Shi X. 2017. Characterizing landscape dynamics using satellite image time series in the Tarim Basin, Xinjiang. Annual meeting of the American Association of Geographers, 6 April 2017, Boston, MA.
- Heindel R, Chipman JW, Dietrich J, Virginia R. 2017. 3D photogrammetric modeling of aeolian soil erosion in west Greenland. Annual meeting of the American Association of Geographers, 7 April 2017, Boston, MA.
- Winter J, Bowen F, Partridge T, Chipman JW. 2017. Future extreme event vulnerability in the northeastern United States. Annual meeting of the American Geophysical Union, December 2017, New Orleans, LA.

- Chipman JW, Magilligan F, Shi X, Sneddon C, Winter J, Chen Y, and Li B. 2016. Land cover change and water management on the Tarim and Konqi river systems, Xinjiang, China. 33<sup>rd</sup> Annual Meeting of the International Geographical Congress, August 2016, Beijing, China.
- Heindel R, Culler L, Urbanowicz C, Chipman JW, Virginia R. 2016. The geomorphic and ecological impacts of soil deflation in West Greenland. Annual Meeting of the Geological Society of America, September 2016, Denver, CO.
- Heindel R, Culler L, Chipman JW, Virginia R. 2016. Soil response to aeolian disturbance in west Greenland. 46<sup>th</sup> International Arctic Workshop, April 2-3, 2016, Boulder, CO.
- Dominy N, Ikram S, Moritz G, Christensen J, Wheatley P, Chipman JW. 2015. Mummified baboons clarify ancient Red Sea trade routes. Annual meeting of the American Association of Physical Anthropologists, March 28, 2015, St Louis, MO.
- Heindel R, Culler L, Chipman JW, Virginia R. 2015. Soil response to aeolian disturbance in west Greenland. Annual meeting, American Geophysical Union, San Francisco, CA.
- Wallace D, Prosper O, Shi X, Chipman JW, Savos J, Wilkins E, Cleaves H, Dunham A, Githeko A, Ndenga B. 2015. The impact of temperature on mosquito larval dynamics and habitat productivity, with implications for mosquito borne disease transmission. Impact of Environmental Changes on Infectious Disease (IECID), March 24, 2015, Melia, Sitges, Spain.
- Chipman JW, Shi X, Magilligan F, Chen Y, Sneddon C, Lawson D. 2014. Multisensor spaceborne monitoring of landscape change in the Tarim River watershed, Xinjiang, China. Annual meeting of the Association of American Geographers, April 2014, Tampa, FL.
- Chipman JW. 2014. High-resolution earth observation satellites in the optical spectrum. Digital Domains: A Conference on Remote Sensing of Past Human Landscapes, 20-22 March 2014, Hanover, NH.
- Moore J, Hallock H, Chipman JW, Sharma M. 2013. Iridium and osmium fluences across the K-Pg boundary indicate a small impactor. Annual conference on Lunar and Planetary Science, 22 March 2013, The Woodlands, TX.
- Chipman JW. 2011. Land cover variability across spatial and temporal scales: implications for wild ungulate populations in Tanzania. Annual conference, American Society for Photogrammetry and Remote Sensing (ASPRS), 4 May 2011, Milwaukee, WI.
- Meyer E., Osterberg E, Dade W, Sonder L, Renshaw C, Kelly M, Hawley R, Chipman JW, Mikucki J, Posmentier E, Moore J. 2011. Dartmouth College Earth Sciences Mobile Field Program. Annual conference, American Geophysical Union, San Francisco, CA.
- Chipman JW, Durand M. 2010. Remote sensing of the Great Lakes. Workshop on NASA's Role in Great Lakes Research, sponsored by NASA Physical Oceanography Program, 12 April 2010, NASA Glenn Research Center, Cleveland, OH.
- Kelson K, Amos C, Simpson D, Baldwin J, Rose R, Ticci M, Kelson J, Salesky E, Chipman JW. 2010. Structural and Geomorphic Control on Landscape Evolution by the Kern Canyon Fault, Southern Sierra Nevada, California. Annual conference, American Geophysical Union, San Francisco, CA.
- Chipman JW. 2009. Remote sensing for lake management: fundamental concepts. Annual symposium, North American Lake Management Society, workshop on Remote Sensing Methods for Lake Assessment, 27 October 2009, Hartford, CT.
- Chipman JW. 2009. Satellite remote sensing III: regional- to global-scale systems. Annual symposium, North American Lake Management Society, workshop on Remote Sensing Methods for Lake Assessment, 27 October 2009, Hartford, CT.
- Greb S, Martin A, Chipman JW. 2009. Water clarity monitoring of Wisconsin lakes (USA) using Landsat satellites. 33<sup>rd</sup> International Symposium on Remote Sensing of Environment: Sustaining Millennium Development Goals, 4-8 May 2009, Stresa-Lago Maggiore, Italy.
- Muldoon K, Godfrey L, Jungers W, Chipman JW. 2009. Geographic patterning in subfossil primate community dynamics in Madagascar. Annual Meeting of the American Association of Physical Anthropologists, 31 March – 4 April 2009, Chicago, IL.
- Chipman JW. 2008. Satellite monitoring of lake ecosystems. Annual Meeting, New England Region – American Society for Photogrammetry and Remote Sensing, 6 October 2008, Hanover, NH.

- Chipman JW. 2008. Mapping invasive reed canarygrass at the landscape scale with remote sensing. US-International Association for Landscape Ecology, 23rd annual Landscape Ecology Symposium, 6-10 April 2008, Madison, WI.
- Chipman JW. 2007. Satellite monitoring of hydrologic transformations in southern Egypt. Annual Meeting of the American Society for Photogrammetry and Remote Sensing, 7-11 May 2007, Tampa, FL.
- Chipman JW. 2007. Remote sensing for lake management: fundamental concepts. 20th Annual National Conference on Enhancing the States' Lake Management Programs, workshop on Satellite-Based Remote Sensing Methods for Lake Assessment, 24 April 2007, Chicago, IL.
- Chipman JW. 2007. Satellite remote sensing III: regional- to global-scale systems. 20th Annual National Conference on Enhancing the States' Lake Management Programs, workshop on Satellite-Based Remote Sensing Methods for Lake Assessment, 24 April 2007, Chicago, IL.
- Chipman JW. 2006. Monitoring large lakes using regional-scale satellite imagery from MODIS, MERIS, and other sensors. Annual symposium, North American Lake Management Society, 8-10 Nov. 2006, Indianapolis. IN.
- Chipman JW. 2006. Remote sensing for lake management: fundamental concepts. Annual symposium, North American Lake Management Society, workshop on Satellite-Based Remote Sensing Methods for Lake Assessment, 8-10 Nov. 2006, Indianapolis, IN.
- Chipman JW. 2006. Satellite remote sensing III: regional- to global-scale systems. Annual symposium, North American Lake Management Society, workshop on Satellite-Based Remote Sensing Methods for Lake Assessment, 8-10 Nov. 2006, Indianapolis. IN.
- Marburg A, Binder M, Carpenter S, Chipman JW, Kratz T, Lillesand T, Turner M. 2006. Relationship of riparian land-cover change and initial lake color clarity and conductivity in Northern Wisconsin USA. Annual Meeting. International Association of Landscape Ecologists, US chapter, March 28- April 1, San Diego, CA.
- Sugden-Newbery A, Chipman JW, Binder M, Wegener M, Riera J, Lillesand T, Scarpace F, Kratz T, Turner M, Carpenter S. 2005. Historical cause and effect: Are changes in lake chemistry drivers of or driven by changes in land-use? LTER student collaborative research symposium, 13-17 April 2005, Andrews Experimental Forest, Blue River, OR.
- Chipman JW. 2005. Multi-sensor satellite monitoring of lakes in the US midwest region. Annual symposium, North American Lake Management Society, 9-11 Nov. 2005, Madison, WI.
- Chipman JW, Batzli S. 2005. LakeSat: satellite remote sensing of Green Bay and Lake Michigan. Joint Conference on Lake Michigan: State of the Lake, 2-3 Nov. 2005, Green Bay, WI.
- Chipman JW, Lillesand T, Batzli S, Peckham S, Wolter P. 2005. Satellite monitoring of Wisconsin's nearshore Lake Michigan waters. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, 7-11 March 2005, Baltimore, MD.
- Lillesand T, Chipman JW, Podger N, Wolter P, Olsen T, Batzli S. 2005. Using multi-scale and multi-temporal satellite data to assess tornado damage. Annual meeting of the American Society for Photogrammetry and Remote Sensing, 7-11 March 2005, Baltimore, MD.
- Batzli S, Chipman JW, Schmaltz J, Howe P, Weiler P, Lillesand T. 2004. Near real-time Internet delivery of processed MODIS imagery in Wisconsin. Proceedings of the 2004 annual meeting of the American Society for Photogrammetry and Remote Sensing, May 2004.
- Lillesand T, Chipman JW, Batzli S. 2004. Understanding the big picture of lake water clarity via multi-stage remote sensing. Proceedings of the 2004 annual meeting of the American Society for Photogrammetry and Remote Sensing, May 2004.
- Chipman JW. 2004. Satellite-based monitoring of lake water clarity, chlorophyll, and suspended solids. 17th Annual National Conference on Enhancing the States' Lake Management Programs, 22 April 2004, Chicago, IL.
- Chipman JW. 2003. Remote sensing of water quality in Green Bay and the Fox/Wolf Basin. Phosphorus Research Update workshop sponsored by University of Wisconsin Green Bay and University of Wisconsin Extension, 18 Nov. 2003, Green Bay, WI.

- Lillesand T, Chipman JW, Binder M, Nordheim M. 2003. Monitoring Lakescape changes through integration of satellite remote sensing of water clarity and airphoto interpretation of land use/land cover in the riparian zone. Proceedings: North American Lake Management Society International Symposium, Mashantucket, CT.
- Chipman JW. 2003. Historical trends in land use/land cover. Long-Term Ecological Research (LTER) Program All Scientists Meeting, 18-21 Sept. 2003, Seattle, WA.
- Chipman JW. 2003. Lake water quality assessment – satellites and citizens. Wisconsin Land Information Association Workshop on Remote Sensing, 24 July 2003, Wisconsin Rapids, WI.
- Lillesand T, Chipman JW. 2003. Overview of remote sensing: basic principles and aerial systems. Wisconsin Land Information Association Workshop on Remote Sensing, 24 July 2003, Wisconsin Rapids, WI.
- Lillesand T, Chipman JW. 2003. Emerging remote sensing technologies and satellite systems. Wisconsin Land Information Association Workshop on Remote Sensing, 24 July 2003, Wisconsin Rapids, WI.
- Chipman JW. 2003. Long-term land use change in two Wisconsin lake districts: dynamics and implications. US National Science Foundation (NSF)/European Union (EU) International Workshop on Long-Term Environmental Research, 30 June - 6 July 2003, Motz, France.
- Chipman JW, Lillesand T, Schmaltz J, Leale J, Lewelling K, Goldmann R, Olsen T. 2002. Satellite remote sensing of North Temperate Lakes at multiple spatial, spectral, and temporal resolutions. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 2002, Washington, DC.
- Lillesand T, Podger N, Chipman JW, Goldmann R, Lewelling K, Olsen T. 2002. Assessing tornado damage via multi-temporal analysis of Landsat 7 ETM+ data. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 2002, Washington, DC.
- Chipman JW. 2002. Regional monitoring of lakes from space: the Wisconsin Satellite Lake Observatory Initiative. Annual symposium of the Wisconsin Land Information Association, March 2002, Green Bay, WI.
- Lillesand T, Podger N, Chipman JW, Goldmann R, Lewelling K, Olsen T. 2002. Using Landsat-7 data for assessing the damage due to the June 18, 2001 “Siren” tornado. Annual symposium of the Wisconsin Land Information Association, March 2002, Green Bay, WI.
- Lillesand T, Chipman JW, Leale J. 2001. The Wisconsin Satellite Lake Observatory Initiative and the role of Landsat data in statewide lake transparency measurement. Proceedings: North American Lake Management Society Symposium, 7-9 Nov. 2001, Madison, WI.
- Schmaltz J, Chipman JW, Lillesand T. 2001. MODIS: A new data source for monitoring water quality trends in large lakes at regional scales. Proceedings: North American Lake Management Society Symposium, 7-9 Nov. 2001, Madison, WI.
- Leale J, Chipman JW, Schmaltz J, Lillesand T, Olsen T, Knight S, Panuska J, Webster K, Filbert J, Wudi J. 2001. The Wisconsin Satellite Lake Observatory (SLOI), North American Lake Management Society Symposium, 7-9 Nov. 2001, Madison, WI.
- Chipman JW, Lillesand T, Schmaltz J, Leale J. 2001. A multi-sensor approach to monitoring the transparency of Wisconsin’s lakes. Proceedings, Workshop on Remote Sensing and Resource Management in Nearshore and Inland Waters, Alliance for Marine Remote Sensing, 22-24 October 2001, Wolfville, Nova Scotia, Canada.
- Schmaltz J, Chipman JW, Leale J, Lillesand T. 2001. The Wisconsin Satellite Lake Observatory Initiative. Workshop on Remote Sensing and Resource Management in Nearshore and Inland Waters, Alliance for Marine Remote Sensing, 22-24 October 2001, Wolfville, Nova Scotia, Canada.
- Chipman JW, Lillesand T, Scarpace F, Gage J. 2001. Dependence of L-band interferometric elevation measurements on forest stand structural parameters. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 2001, St. Louis, MO.
- Lillesand T, Riera J, Chipman JW, Gage J, Janson M, Panuska J, Webster K. 2001. Integrating multi-resolution satellite imagery into a satellite lake observatory. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 2001, St. Louis, MO.

- Bauer M, Olmanson L, Kloiber S, Schultze M, Brezonik P, Chipman JW, Riera J, Lillesand T. 2001. Assessment of lake water clarity in the upper Great Lakes region. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 2001, St. Louis, MO.
- Chipman JW, Lillesand T, Scarpace F. 2000. Assessing the bias in interferometric radar measurements of elevation acquired over a forested region. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, 22-26 May 2000, Washington, DC.
- Chipman JW, Lillesand T, McEnaney P, Scarpace F. 2000. Topographic mapping in the western Great Lakes region using repeat-pass synthetic aperture radar interferometry. Annual Meeting of the American Society for Photogrammetry and Remote Sensing, 22-26 May 2000, Washington, DC.
- Dahman N, Krumbach T, Chipman JW, Dudka M, Scarpace F, Gage J. 1999. Geospatial tools, techniques, and methods for the near future. Wisconsin Land Information Association Conference, 10 March 1999, Appleton, WI.
- Lillesand T, Gage J, Chipman JW. The Visiting Investigator Program (VIP) at the University of Wisconsin-Madison. Proceedings of the American Society for Photogrammetry and Remote Sensing Conference, April 1998, Tampa, FL.
- Chipman JW. 1997. Comparison of TM, ERS-1, and SIR-C data for forest type mapping in the Lake states. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 1997, Seattle, WA.
- Wynne R, Lillesand T, Chipman JW. 1997. AirStat: a simple program to calculate airphoto interpretation accuracy assessment and summary statistics for classroom instruction. Proceedings, Annual Meeting of the American Society for Photogrammetry and Remote Sensing, April 1997, Seattle, WA.
- Cardille J, Bolgrien D, Wynne R, Chipman JW. 1996. Variation in landscape metrics derived from multiple independent classifications." Proceedings of Eco-Informa, 4-7 November 1996, Lake Buena Vista, FL.

## MENTORING OF POSTDOCTORAL SCHOLARS

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|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| 2024-2026 | Jiixin Feng (Guarini PROF Fellows program, Dartmouth College)     |
| 2021-2023 | Joanmarie Del Vecchio (Neukom Fellows program, Dartmouth College) |
| 2020-2022 | Ryan Collins (Neukom Fellows program, Dartmouth College)          |
| 2019-2021 | * Danielle Poole (Neukom Fellows program, Dartmouth College)      |
| 2017-2018 | Stephanie Spera (Neukom Fellows program, Dartmouth College)       |
| 2012-2014 | Jason Herrmann (Neukom Fellows program, Dartmouth College)        |
| 2006-2007 | * Samantha Kaplan (University of Wisconsin-Madison)               |

\* Denotes primary mentor; otherwise co-mentor.

## SERVICE ON GRADUATE STUDENT MS/PhD COMMITTEES

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In progress (8) Jonathan Alperstein (PhD, EEES), Peter Galloway (MS, EARS), Michelle Irengbam (PhD, EEES), Bavani Kathir (PhD, EARS), Katherine Lutz (PhD, EARS), Lan Nguyen (PhD, EEES), Chunmeng Wang (PhD, EEES), Phoebe Oehmig (PhD, EEES)

Completed (21) Jenica Andersen (MS, EARS), Alexandra Arntsen (PhD, ENGS), Eirik Buraas (MS, EARS), Ali Giese (PhD, EARS), Jamie Good (MS, EARS), Victoria Halvorson (MS, EARS), Ruth Heindel (PhD, EARS), Maggie Jackson (PhD, EARS), Keith Kantack (MS, EARS), Blaine Morriss (MS, EARS), Caleb Okpala (MS, EARS), Noemi Ortega (MS, EARS), Thomas Overly (PhD, EARS), Alex Ronan (MS, EARS), Torie Roseborough (MS, EARS), Ivan Rykin (MS, EARS), Kristin Schild (PhD, EARS), Matthew Siegfried

(MS, EARS), Chenyang Su (PhD, EEES), Debbie Sulca (MS, EARS), Nicholas Wright (PhD, ENGS)

*EARS denotes Earth Sciences Department, Dartmouth College*

*EEES denotes Ecology, Evolution, Environment, and Society Program, Dartmouth College*

*ENGS denotes Thayer School of Engineering, Dartmouth College*

## UNDERGRADUATE STUDENT AND POST-BACCALAUREATE MENTORING

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Senior honors thesis advisor or co-advisor for undergraduates (8): Cyrus Kiely '27, Henry Stauch '27, Ryan Glenn '26, Lily Gray '24, Jared Cape '21, Hannah Rubin '20, Mariana Webb '18, and Bryn Morgan '17.

Faculty mentor for students with research awards at Dartmouth (12): Henry Stauch '27 (Northern Studies grant), Spencer Belson '28 (Presidential Scholar, URAD grant, and Leave-Term Grant), Grace Payne '26 (Northern Studies grant), Ryan Glenn '26 (URAD grant and Leave-Term grant), Irene Ko '27 (Women In Science Program), Mason Capone '27 (Women In Science Program), Danielle Lu '25 (Women In Science Program), Nikolina Klinkenberg '25 (Women In Science Program), Jenna Myers '23 (Presidential Scholar), Hannah Rubin '20 (Junior Research Scholar), Alexandra Sclafani '18 (Presidential Scholar), Julia Kelson '12 (Presidential Scholar).

Faculty mentor for other undergraduate research assistants (5): Irene Ko '27, Aiden Casey '25, Lucas DiSilvestro '25, Jenny Vazquez Torres '24, Grace Alston '22.

Faculty mentor for post-baccalaureate research assistants (3): Warren Galloway (2025-2026), Onome Ofoman (2025), Clay Foye (2022).

## REVIEWER

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|--------------------------------------------------------------|--------------------------------------------|------------------------------------------|
| <i>Annals of the American Association<br/>of Geographers</i> | <i>Global Change Biology</i>               | <i>Journal of Great Lakes Research</i>   |
| <i>Applied Geography</i>                                     | <i>Hydrologic Processes</i>                | <i>Lake and Reservoir Management</i>     |
| <i>Aquatic Ecology</i>                                       | <i>IEEE Journal of Selected Topics in</i>  | <i>Landscape Ecology</i>                 |
| <i>Canadian Journal of Forest</i>                            | <i>Earth Observations and Remote</i>       | <i>Photogrammetric Engineering &amp;</i> |
| <i>Research</i>                                              | <i>Sensing</i>                             | <i>Remote Sensing</i>                    |
| <i>Ecosystems</i>                                            | <i>ISPRS International Journal of Geo-</i> | <i>Remote Sensing of Environment</i>     |
| <i>Frontiers in Earth Sciences</i>                           | <i>Information</i>                         | <i>Smart Cities</i>                      |
| <i>Geophysical Research Letters</i>                          | <i>International Journal of Remote</i>     | <i>SpringerPlus</i>                      |
| <i>GeoHealth</i>                                             | <i>Sensing</i>                             | <i>Water</i>                             |
|                                                              | <i>Journal of Applied Geography</i>        |                                          |

Reviewer of grant proposals for the National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), and US Department of Agriculture (USDA).