

Last updated: March 27, 2022

1. ACADEMIC HISTORY

Name: Michael C. Wimberly

Present Rank: Professor

Education

Ph.D., Forest Ecology, Oregon State University, 1999

M.S., Quantitative Resource Management, University of Washington, 1995

B.A., Environmental Science, University of Virginia, 1990

Positions Held

Professor, Department of Geography and Environmental Sustainability, University of Oklahoma, August 2018-present

Professor, Department of Natural Resource Management, South Dakota State University, July 2011-August 2018

Associate Professor, Departments of Geography and Wildlife and Fisheries Sciences, South Dakota State University, October 2005-June 2011 (tenure awarded in 2007)

Senior Scientist, Geospatial Sciences Center of Excellence, South Dakota State University, October 2005-August 2018

Assistant Professor, Warnell School of Forest Resources, University of Georgia, September 2001-September 2005

Ecologist, USDA Forest Service, Pacific Northwest Research Station, Corvallis, OR, July 1999-August 2001

Research Associate (Adjunct Appointment), Forest Science Department, Oregon State University, November 1999-August 2001

Graduate Research Assistant, Oregon State University, Corvallis, September 1995-June 1999

Graduate Teaching Assistant, University of Washington, Seattle, September 1993-September 1995

Environmental Consultant, E.H. Pechan and Associates, Springfield, VA January 1992-August 1993

Fellowships and Awards

2022. GeoHealth Section Award, American Geophysical Union.

2016. Faculty of Science Visiting Research Fellowship, University of New South Wales.

2015. President's International Fellowship for Visiting Scientists, Chinese Academy of Sciences.

2014. Honorable Mention – Outstanding Paper in Landscape Ecology, United States Chapter of the International Association for Landscape Ecology.

2014. Award for Faculty Engagement in Global Research, South Dakota State University.

2010. Sewrey Colloquium Lecturer, South Dakota State University.

1998. Best Forestry Presentation, Oregon State University Graduate Student Symposium.

1995-1999. NSF Graduate Research Traineeship in Landscape Studies, Oregon State University.

1995. Saubert Fellowship, Department of Forest Science, Oregon State University.

1994. Xi Sigma Pi (Forestry Honor Society), University of Washington.

2. RESEARCH

Grants Received

Competitive Grants: Principal Investigator

80NSSC21K1714 NASA Carbon Cycle Science Drought, Disturbance, and Carbon Dynamics of West African Tropical Forests PI: M. C. Wimberly; Co-I: S. Crowell	8/02/2021-8/01/2024 \$726,680
80NSSC19K1233 NASA Applied Sciences Rapid Response to Assess the Risk of Arbovirus Outbreaks Triggered by Climate Events PI: M. C. Wimberly; Co-I: J. K. Davis	6/26/2019-6/26/2022 \$316,787
NNX16AN22G NASA SERVIR Applied Sciences Team Monitoring and Projecting Environmental Change in Fragmented Tropical Forest Landscapes PI: M. C. Wimberly; Co-Is: M. A. Cochrane, I. Numata	8/1/2016-7/31/2019 \$628,713
NNX15AF74G NASA Applied Sciences An Early Warning System for Human West Nile Virus Disease PI: M. C. Wimberly; Co-I: M. B. Hildreth	3/1/2015-2/28/2018 \$685,979
NNX14AI37A NASA ACCESS Expanding Earth Science Data Access for Public Health Research and Applications PI: M. C. Wimberly; Co-I: Y. Liu	7/1/2014-6/30/2016 \$467,455
R01AI079411 (Competitive Renewal) National Institute of Allergy and Infectious Diseases An Integrated System for the Epidemiological Application of Earth Observation Technologies PI: M. C. Wimberly; Co-Is: G. M. Henebry, Y. Liu; Collaborator: G. Senay	12/1/2013-11/30/2019 \$1,729,961
NNX11AF67G NASA Applied Sciences Program Enhanced Forecasting of Mosquito-Borne Disease Outbreaks Using AMSR-E PI: M. C. Wimberly; Co-Is: T. Chuang, G. M. Henebry	4/1/2011-9/30/2013 \$149,564
R01AI079411 National Institute of Allergy and Infectious Diseases An Integrated System for the Epidemiological Application of Earth Observation Technologies PI: M. C. Wimberly; Co-Is: G. M. Henebry, Y. Liu; Collaborator: G. Senay	8/1/2008-11/30/2013 \$1,079,300
2008-35215-18814 USDA National Institute of Food and Agriculture	3/1/2008-8/31/2012 \$360,000

Influences of Physical and Social Landscapes on the Health of Rural Communities

PI: M. C. Wimberly; Co-I: B. L. Specker

R03AI062944 3/1/2005-6/30/2008

National Institute of Allergy and Infectious Diseases \$147,200

Landscape ecology and mapping of ehrlichial pathogens

PI: M. C. Wimberly; Co-Is: W. R. Davison, M. J Yabsley

05-S-04 2/15/2005-7/27/2007

USDI/USDA Joint Fire Science Program \$147,646

Best Management Practices for Fuel Reduction Treatments in Loblolly Pine Forests

PI: M. C. Wimberly; Co-Is: P. Bettinger, J. Stanturf

Competitive Grants: Co-Investigator

2200299 4/1/2022-9/30/2023

National Science Foundation \$999,977

PIPP Phase I: Next Generation Surveillance Incorporating Public Health, One Health, and Data Science to Detect Emerging Pathogens of Pandemic Potential

PI: D. S. Ebert, Co-Is: M. C. Wimberly, J. R. Vogel, T. Venkatesan, A. M. Wendelboe

R01AI153444 9/14/2020-8/31/2025

National Institute of Allergy and Infectious Diseases \$3,868,329

Redefining thermal suitability for urban malaria transmission in the context of humidity

PI: C. C. Murdock; Co-Is: M. Pascual, M. C. Wimberly

2014-67003-21772 2/1/2014-1/31/2017

USDA National Institute of Food and Agriculture \$550,000

Adaptation of Agroecosystems to Climate Change at the Edge of the U.S. Cornbelt—Assessing Different Drivers in a Network of Infrastructure

PI: D. A. Hennessy; Co-Is: A. Akyüz, X. Du, H. Feng, L. Janssen, M. C. Wimberly, and P. T. Wolter

1340583 6/1/2014-7/31/2017

National Science Foundation \$1,043,004

Climatic and Anthropogenic Forcing of Wetland Landscape Connectivity in the Great Plains

PI: C. K. Wright; Co-Is: G. M. Henebry, C. A. Johnston, M. C. Wimberly

NNX11AB89G 1/1/2011-12/31/2013

NASA Interdisciplinary Research in Earth Science Program \$1,950,000

Shifting Fire Regimes of the U.S., Australia, and Brazilian Amazonia: The Roles of Climate Change, Land Use, and Mitigation Efforts

PI: M. A. Cochrane; Co-Is: E. Arima, D. Bowman, W. M. Jolly, J. Liu, T. R. Loveland, D. P. Roy, K. C. Ryan, and M. C. Wimberly

06-3-3-11 8/16/2006-3/26/2013

USDI/USDA Joint Fire Science Program \$654,997

Fuel treatment effectiveness in the United States.

PI: M. A. Cochrane; Co-Is: M. C. Wimberly; Collaborators; J. Eidenshik, D. Ohlen

R56AI062834 6/1/2006-5/31/2008

National Institute of Allergy and Infectious Diseases \$341,750

Natural history of *Borrelia lonestari*

PI: S. E. Little; Co-Is: E. F. Blouin, M. K. Keel, K. M. Kocan, D. E. Stallknecht, M. C. Wimberly

01-1-4-09 9/19/2001-9/30/2005

USDI/USDA Joint Fire Science Program \$518,713

A novel approach to regional fuel mapping: linking inventory plots with satellite imagery and GIS databases using the Gradient Nearest-Neighbor method

PI: J. L. Ohmann; Co-Is: J. Fried, M. C. Wimberly

R01AI044235 8/1/2000-6/30-2005

National Institute of Allergy and Infectious Diseases \$643,469

Human ehrlichiosis surveillance and epidemiology

PI: W. R. Davidson; Co-Is: E. W. Howerth, S. E. Little, D. E. Stalknecht, D. E., and M. C. Wimberly

Other Agreements

AID-OAA-TO-14-00044 SUB-778 9/26/2019-4/30/2021

USAID Adaptation Thought Leadership and Assessments \$240,048

Scaling Malaria Forecasts to the National Level in Ethiopia: A Feasibility Assessment

PI: M. C. Wimberly; Co-I: D. M. Nekorchuk

NNX14AL23H 9/1/2015-8/31/2018

NASA Earth and Space Science Fellowship \$90,000

Vulnerability of Protected Areas to Human Encroachment, Climate Change and Fire in the Fragmented Tropical Forests of West Africa

PI; M. C. Wimberly; Awardee: Francis Dwomoh

14-CA-11330136-015 4/9/2014-5/31/2016

USDA Forest Service Southern Research Station \$73,716

Forest Vulnerability to Fire and Degradation in West Africa

PI: M. C. Wimberly

G12AC20295 7/1/2012-3/31/2015

United States Geological Survey \$306,000

Integrated Regional Modeling of Land Use Change and Natural Vegetation Dynamics

PI: M. C. Wimberly; Collaborator: T. L. Sohl

NNX11AP79H 9/1/2011-8/31/2014

NASA Earth and Space Science Fellowship \$90,000

Integrating multi-sensor satellite data for malaria early warning in the Amhara Region of Ethiopia

PI; M. C. Wimberly; Awardee: Alemayehu Midekisa

11-CA-11330136-098 8/1/2011-12/31/2014

USDA Forest Service Southern Research Station \$74,424

Historical Forest Land Cover Change in West Africa

PI: M. C. Wimberly

R01AI079411 (ARRA Supplement) 4/5/2010-3/31/2012

National Institute of Allergy and Infectious Diseases \$107,564

An Integrated System for the Epidemiological Application of Earth Observation Technologies

PI: M. C. Wimberly; Co-Is: G. M. Henebry, Y. Liu; Collaborator: G. Senay

DE-FG36-05GO85041 1/1/2008-9/30/2013

Sun Grant/DOE Regional Biomass Feedstock Partnership \$450,000

Development of a geospatial infrastructure to support sustainable feedstock production

PI: M. C. Wimberly; Co-Is: M. C. Hansen, G. M. Henebry

R13AI078728 3/15/2008-2/28/2009

National Institute of Allergy and Infection Diseases \$5,000

Symposium on the landscape ecology of infectious diseases

PI: M. C. Wimberly

USFS Cooperative Agreement 5/14/2007-5/30/2012

USDA Forest Service Rocky Mountain Research Station \$84,500

Landscape analysis of invasive plant response to timber harvest in the Black Hills National Forest

PI: M. C. Wimberly

NNG05GJ98H 9/1/2007-8/31/2011

NASA EPSCoR \$737,843

Land cover dynamics, regional hydrometeorology, and the vulnerability of rain-fed agriculture to climate change under scenarios of extensive cultivation of biofuel feedstocks

PI: G. M. Henebry; Co-Is: W. J. Capehart, T. G. Gilmanov, M. C. Hansen, T. E. Schumacher, G. B. Senay, T. P. Trooien, and M. C. Wimberly

PNW 06-JV-11261976-270 8/1/2006-9/30/2007

USDA Forest Service Pacific Northwest Research Station. \$30,000

Development and Testing of Methodologies for Computer Simulation of Fire Regimes and Forest Landscape Dynamics.

PI: M. C. Wimberly

RREA Focus Fund Project 9/15/2004-9/14/2008

USDA Cooperative State Research, Education, and Extension Service \$90,130

Visualizing Impacts of Local Land Use Decisions and Plans on Forest Resource Management: Setting the State for Community-Based Forestry Decision-Making.

PI: P. Bettinger; Co-Is: M. C. Wimberly, W. Hubbard

SRS 02-CA-11330136-182 7/1/2002-7/1/2005

USDA Forest Service Southern Research Station \$43,272

Landscape-scale characterization of the wildland-urban interface in the Southeastern U.S.: Development and testing of new methodologies.

PI: M C. Wimberly

Intramural

Agricultural Extension Station Seed Grant 2007-2008

South Dakota State University \$10,000

Developing molecular markers to assess soybean aphid population structure

PI: K. Tilmon, Co-Is: J. Gonzales and M. C. Wimberly

Travel Grant 2004

University of Georgia Office of the Provost \$1,500

Travel grant to attend the First International Workshop on Digital Forestry in Beijing, China

PI: M. C. Wimberly

Learning Technologies Grant 2003-2004

University of Georgia \$19,500

An infrastructure for incorporating cross-cutting technologies into natural resources education

PI: M. C. Wimberly; Co-I: P. Bettinger

Faculty Research Grant 2002-2003

University of Georgia \$10,000

Developing a spatial simulation model of forest landscape dynamics in the Georgia Piedmont

PI: M. C. Wimberly

Publications

* Authored by a student or postdoc under my mentorship

Peer-Reviewed Journal Articles

Liu Z, W. J. Wang, A. Ballantyne, H. S. He, X. Wang, S. Liu, P. Ciaais, **M. C. Wimberly**, S. Piao, K. Yu, Q. Yao. 2023. Forest disturbance decreased in China from 1986 to 2020 despite regional variations. *Communications Earth & Environment* 4(1):15.

*Kaskie, K. D., **M. C. Wimberly**, and P. J. Baumann. 2022. Predictive Mapping of Low-Density Juniper Stands in Prairie Landscapes of the Northern Great Plains. *Rangeland Ecology and Management*. 83: 81-90.

*McMahon, A., C. M. B. Franca, and **M. C. Wimberly**. 2022. Comparing satellite and ground-based measurements of environmental suitability for vector mosquitoes in an urban landscape. *Journal of Medical Entomology* 59: 1936-1946.

Neta, G., W. Pan, K. Ebi, D. F. Buss, T. Castranio, R. Lowe, A. M. Stewart-Ibarra, L. K. Hapairai, M. Sehgal, **M. C. Wimberly**, L. Rollock, M. Lichtveld, J. Balbus. 2022.

- Advancing climate change health adaptation through implementation science. *The Lancet Planetary Health* 6: e909-18.
- Wimberly, M. C.**, J. K. Davis, M. B. Hildreth, and J. Clayton. 2022. Integrated forecasts based on public health surveillance and meteorological information predict West Nile virus in a high-risk region of North America. *Environmental Health Perspectives* 130(8): 087006.
- Wimberly, M. C.**, F. K. Dwomoh, I. Numata, F. Mensah, J. Amoako, D. M. Nekorchuk, and A. McMahon. 2022. Historical trends of degradation, loss, and recovery in the tropical forest reserves of Ghana. *International Journal of Digital Earth*: 15(1), 30-51.
- Wimberly, M. C.**, D. M. Nekorchuk, and R. R. Kankanala. 2022. Cloud-based applications for accessing satellite Earth observations to support malaria early warning. *Scientific Data* 9: 208.
- Keyel A. C., M. E., Gorri, I. Rochlin, J. A. Uelmen, L. F. Chaves, G. L. Hamer, I. K. Moise, M. Shocket, A. M. Kilpatrick, N. B. DeFelice, J. K. Davis, E. Little, P. Irwin, A. J. Tyre, K. H. Smith, C. M. Fredregill, O. I. Timm, K. M. Holcomb, **M. C. Wimberly**, M. J. Ward, C. M. Barker, C. G. Rhodes, and R. L. Smith. 2021. A proposed framework for the development and qualitative evaluation of West Nile virus models and their application to local public health decision-making. *PLOS Neglected Tropical Diseases* 15(9): e0009653.
- *McMahon, A., A. Mihretie, A. A. Ahmed, M. Lake, W. Awoke, and **M. C. Wimberly**. 2021. Remote sensing of environmental risk factors for malaria in different geographic contexts. *International Journal of Health Geographics* 20: 28.
- *Nekorchuk, D. M., T. Gebrehiwot, M. Lake, W. Awoke, A. Mihretie, and **M. C. Wimberly**. 2021. Comparing malaria early detection methods in a declining transmission setting in northwestern Ethiopia. *BMC Public Health* 21: 788.
- Wimberly, M. C.**, K. M. de Beurs, T. V. Loboda, W. K. Pan. 2021. Satellite observations and malaria: new opportunities for research and applications. *Trends in Parasitology* 37: 525-537.
- *Alemu, W. G., and **M. C. Wimberly**. 2020. Evaluation of remotely sensed and interpolated environmental datasets for vector-borne disease monitoring using in situ observations over the Amhara Region, Ethiopia. *Sensors* 20: 1316.
- *Haller, D. J., and **M. C. Wimberly**. 2020. Estimating the potential for forest degradation in the eastern United States woodlands from an introduction of sudden oak death. *Forests* 11: 1334.
- Rehr, R. C., C. Bandaragoda, B. F. Zaitchik, and **M. C. Wimberly**. 2020. A GeoHealth response to a geoscience community climate change position statement. *GeoHealth* 4: e2020GH000265.
- Vincent, G. P., J. K. Davis, M. J. Wittry, **M. C. Wimberly**, Chris D. Carlson, D. L. Patton, and M. B. Hildreth. 2020. Epidemic West Nile Virus Infection Rates and Endemic Population Dynamics Among South Dakota Mosquitoes: A 15-yr Study from the United States Northern Great Plains. *Journal of Medical Entomology* 57: 862-871.
- Wimberly, M. C.**, J. K. Davis, M. V. Evans, A. Hess, P. M. Newberry, N. Solano-Asamoah, and C. C. Murdock. 2020. Land cover affects microclimate and temperature suitability for arbovirus transmission in an urban landscape. *PLoS Neglected Tropical Diseases* 14: e0008614.
- *Davis, J. K., T. Gebrehiwot, M. Worku, W. Awoke, A. Mihretie, D. M. Nekorchuk, and **M. C. Wimberly**. 2019. A genetic algorithm for identifying spatially-varying environmental

- drivers in a malaria time series model. *Environmental Modelling and Software* 119: 275-284.
- *Dwomoh, F. K., **M. C. Wimberly**, M. A. Cochrane, and I. Numata. 2019. Forest degradation promotes fire during drought in moist tropical forests of Ghana. *Forest Ecology and Management* 440: 158-158.
- *Kaskie, K. D., **M. C. Wimberly**, and P. J. Bauman. 2019. Rapid assessment of juniper distribution in prairie landscapes of the northern Great Plains. *International Journal of Applied Earth Observation and Geoinformation* 83: 101946.
- Tang, Z., Y. Zhang, N. Cong, M. C. Wimberly, L. Wang, K. Huang, J. Li, J. Zu, Y. Zhu, and N. Chen. 2019. Spatial pattern of pika holes and their effects on vegetation coverage on the Tibetan Plateau: An analysis using unmanned aerial vehicle imagery. *Ecological Indicators* 107: 105551.
- *Hess, A., J. K. Davis, and **M. C. Wimberly**. 2018. Identifying environmental risk factors and mapping the distribution of West Nile virus in an endemic region of North America. *GeoHealth* 2: 395-409.
- Vincent, G. P., J. K. Davis, **M. C. Wimberly**, C. D. Carlson, and M. B. Hildreth. 2018. Permethrin susceptibility for the vector *Culex tarsalis* and a nuisance mosquito *Aedes vexans* in an area endemic for West Nile virus. *BioMed Research International*, Article ID 2014746.
- *Davis, J. K., G. P. Vincent, M. B. Hildreth, L. Kightlinger, and **M. C. Wimberly**. 2018. Improving the prediction of arbovirus outbreaks: a comparison of climate-driven models for West Nile virus in an endemic region of the United States. *Acta Tropica* 185: 242-250.
- Lin, Y., **M. C. Wimberly**, P. Da Rosa, J. Hoover, and W. F. Athas. 2018. Geographic Access to radiation therapy facilities and disparities of early-stage breast cancer treatment. *Geospatial Health* 13:622.
- Wimberly, M. C.**, D. M. Narem, P. J. Bauman, B. T. Carlson, and M. A. Ahlering. 2018. Grassland connectivity in fragmented agricultural landscapes of the north-central United States. *Biological Conservation* 217: 121-130.
- *Davis J. K., Vincent G. P., Hildreth M. B., Kightlinger L., Carlson C., and **M. C. Wimberly**. 2017. Integrating Environmental Monitoring and Mosquito Surveillance to Predict Vector-borne Disease: Prospective Forecasts of a West Nile Virus Outbreak. *PLoS Currents Outbreaks*. 9: May 23. Edition 1.
- *Dwomoh, F. K., and **M. C. Wimberly**. 2017. Fire regimes and forest resilience: alternative vegetation states in the West African tropics. *Landscape Ecology* 32: 1849-1865.
- *Dwomoh, F. K., and **M. C. Wimberly**. 2017. Fire regimes and their drivers in the Upper Guinean Region of West Africa. *Remote Sensing* 9: 1117.
- Lin, Y., and **M. C. Wimberly**. 2017. Geographic variations of colorectal and breast cancer late-stage diagnosis and the effects of neighborhood-level factors. *Journal of Rural Health* 33: 146-157.
- *Merkord, C. L., Y. Liu, A. Mihretie, T. Gebrehiwot, W. Awoke, E. Bayabil, G. M. Henebry, G. T. Kassa, M. Lake, and **M. C. Wimberly**. 2017. Integrating malaria surveillance with climate data for outbreak detection and forecasting: the EPIDEMIA system. *Malaria Journal* 16:89.

- Wang, T. M. Luri, L. Janssen, D. A. Hennessy, H. Feng, **M. C. Wimberly**, and G. Arora. 2017. Determinants of motives for land use decisions at the margins of the Corn Belt. *Ecological Economics*: 134: 227-237.
- Vogelmann, J. E., P. V. Khoa, D. X. Lan, J. Shermeyer, H. Shi, **M. C. Wimberly**, H. T. Duong, and L. V. Huong, L.V., 2017. Assessment of Forest Degradation in Vietnam Using Landsat Time Series Data. *Forests*, 8(7), 238.
- Wimberly, M. C.**, L. L. Janssen, D. A. Hennessy, M. Luri, N. M. Chowdhury, and H. Feng. 2017. Cropland expansion and grassland loss in the eastern Dakotas: New insights from a farm-level survey. *Land Use Policy* 63: 160-173.
- *Liu, Z., **M. C. Wimberly**, F. K Dwomoh. 2017. Vegetation dynamics in the Upper Guinean Forest region of West Africa from 2001 to 2015. *Remote Sensing*. 9(1): 5.
- Sohl, T. L., **M. C. Wimberly**, V. C. Radeloff, D. M. Theobald, B. M. Sleeter. 2016. Divergent projections of future land use in the United States arising from different models and scenarios. *Ecological Modelling* 337: 281–297
- *Liu, Z., **M. C. Wimberly**. 2016. Direct and indirect effects of climate change on projected future fire regimes in the western United States. *Science of the Total Environment* 542: 65-75.
- *Alemu, H. T., A. T. Kaptue, B. G. Senay, **M. C. Wimberly**, and G. M. Henebry. 2015. Evapotranspiration in the Nile Basin: Identifying dynamics and drivers, (2002-2011). *Water* 7: 4914-4931.
- Liu, Y., J. Hu, I. Snell-Feikema, M. S. VanBemmel, A. Lamsal, **M. C. Wimberly**. 2015. Software to facilitate remote sensing data access for disease early warning systems. *Environmental Modelling and Software* 74: 238-246.
- *Liu, Z., **M. C. Wimberly**. 2015. Climatic and landscape influences on fire regimes from 1984 to 2010 in the western United States. *PLoS One* 10(10): e0140839.
- *Liu, Z., **M. C. Wimberly**, A. Lamsal, T. L. Sohl, T. J. Hawbaker. 2015. Climate change and wildfire risk in an expanding wildland-urban interface: a case study from the Colorado Front Range Corridor. *Landscape Ecology* 30: 1943-1957.
- Michimi, A., and **M. C. Wimberly**. 2015. Food environment and adult obesity in US metropolitan areas. *Geospatial Health* 10: 368.
- *Midekisa A., B. Beyene, A. Mihretie, E. Bayabil, **M. C. Wimberly**. 2015. Seasonal associations of climatic drivers and malaria in the highlands of Ethiopia. *Parasites & Vectors* 8: 339.
- Reis, S. E., Seto , A. Northcross, N.W.T. Quinn, M. Convertino, R. L. Jones, H. R. Maier, U. Schlink, S. Steinle, M. Vieno, **M. C. Wimberly**. 2015. Integrating modelling and smart sensors for environmental and human health. *Environmental Modelling and Software* 74: 238-246.
- Zhang, T., Y. Zhang, M. Xu, J. Zhu, **M. C. Wimberly**, G. Yu, S. Niu, X. Zhang, J. Wang. 2015. Light-intensity grazing improves alpine meadow productivity and adaption to climate change on the Tibetan Plateau. *Scientific Reports* 5: 15949.
- *Midekisa, A., G. B. Senay, and **M. C. Wimberly**. 2014. Multi-sensor Earth Observations to Characterize Wetlands and Malaria Epidemiology in Ethiopia. *Water Resources Research* 50: 8791-8806.
- Wimberly, M. C.**, A. Lamsal, P. Giacomo, and T. Chuang. 2014. Regional variation of climatic influences on West Nile virus outbreaks in the United States. *American Journal of Tropical Medicine and Hygiene* 91: 677-684.

- Wimberly, M. C.**, and Z. Liu. 2014. Interactions of climate, fire, and management in future forests of the Pacific Northwest. *Forest Ecology and Management* 327: 270-279.
- Mehls, C. L., K. C. Jensen, M. A. Rumble, and **M. C. Wimberly**. 2014. Multi-scale habitat use of male ruffed grouse in the Black Hills National forest. *The Prairie Naturalist* 46: 21-33.
- Zhang, Y., G. Yu, J. Yang, **M. C. Wimberly**, X. Zhang, J. Tao, Y. Jiang, and J. Zhu. 2014. Climate-driven global changes in carbon use efficiency. *Global Ecology and Biogeography* 23: 144-155.
- Broich, M., M. C. Hansen, P. V. Potapov, and **M. C. Wimberly** 2013. Patterns of tree cover loss along the Indonesia-Malaysia border on Borneo. *International Journal of Remote Sensing*. 34: 5748-5760.
- Chintala, R., **M. C. Wimberly**, G. D. Djira, and M. G. Tulbure. 2013. Interannual variability of crop residue potential in the north-central region of the United States. *Biomass and Bioenergy* 49: 231-238.
- *Narayanaraj, G., and **M. C. Wimberly**. 2013. Influences of forest roads and their edge effects on the spatial pattern of burn severity. *International Journal of Applied Earth Observation and Geoinformation* 23: 62-70.
- *Wright, C. K., and **M. C. Wimberly**. 2013. Recent land use change in the western Corn Belt threatens grasslands and wetlands. *Proceedings of the National Academy of Sciences of the United States of America* 110: 4134-4139.
- Wimberly, M. C.**, P. Giacomo, L. Kightlinger, and M. B. Hildreth. 2013. Spatio-temporal epidemiology of human West Nile virus disease in South Dakota. *International Journal of Environmental Research and Public Health* 10: 5584-5602.
- *Chuang, T., C. W. Hockett, L. Kightlinger, and **M. C. Wimberly**. 2012. Landscape-level spatial patterns of West Nile virus risk in the northern Great Plains. *American Journal of Tropical Medicine and Hygiene* 86: 724-731.
- *Chuang, T., G. M. Henebry, J. S. Kimball, D.L. VanRoekel-Patton, M. B. Hildreth, and **M. C. Wimberly**. 2012. Satellite microwave remote sensing for environment modeling of mosquito population dynamics. *Remote Sensing of Environment* 125: 147-156.
- *Chuang T., and **M. C. Wimberly**. 2012. Remote Sensing of Climatic Anomalies and West Nile Virus Incidence in the Northern Great Plains of the United States. *PLoS One* 7:e46882.
- Cochrane, M. A., C. J. Moran, **M. C. Wimberly**, A. D. Baer, M. A. Finney, K. L. Beckendorf, J. Eidenshink, and Z. Zhu. 2012. Estimation of wildfire size and risk changes due to fuels treatment. *International Journal of Wildland Fire* 21: 357-367.
- Klaver, R. W., D. Backlund, P. E. Bartelt, M. G. Erickson, C. J. Knowles, P. R. Knowles, and **M. C. Wimberly**. 2012. Spatial analysis of northern goshawk territories in the Black Hills, South Dakota. *The Condor* 114: 532-543.
- *Michimi, A., and **M. C. Wimberly**. 2012. Natural environments, obesity, and physical activity in nonmetropolitan areas of the United States. *Journal of Rural Health* 28: 398-407.
- *Midekisa, A., G. Senay, G. M. Henebry, P. Semuniguse, and **M. C. Wimberly**. 2012. Remote sensing-based time series models for malaria early warning in the highlands of Ethiopia. *Malaria Journal* 11: 165.
- *Narayanaraj, G., and **M. C. Wimberly**. 2012. Influences of forest roads on the spatial patterns of human-and lightning-caused wildfire ignitions. *Applied Geography* 32: 878-888.
- Spindler, B. D., S. R. Chipps, R. A. Klumb, B. D. S. Graeb, and **M. C. Wimberly**. 2012. Habitat and prey availability attributes associated with juvenile and early adult pallid sturgeon occurrence in the Missouri River. *Endangered Species Research* 16: 225-234.

- *Tulbure, M., **M. C. Wimberly**, A. Boe, and V. N. Owens. 2012. Climatic and genetic controls of yields of switchgrass, a model bioenergy species. *Agriculture, Ecosystems, and Environment* 146: 121-129.
- *Tulbure, M. G., **M. C. Wimberly** and V. N. Owens. 2012. Response of switchgrass yield to future climate change. *Environmental Research Letters* 7: 045903.
- Wimberly, M. C.**, A. Midekisa, P. Semuniguse, H. Teka, G. M. Henebry, T. Chuang, and G. B. Senay. 2012. Spatial synchrony of malaria outbreaks in a highland region of Ethiopia. *Tropical Medicine & International Health* 17: 1192-1201.
- *Chuang, T. M. B. Hildreth, M. B., D. L. VanRoekel, and **M. C. Wimberly**. 2011. Weather and land cover influences on mosquito populations in Sioux Falls, South Dakota. *Journal of Medical Entomology* 48: 669-679.
- *Narayanaraj, G., and **M. C. Wimberly**. 2011. Influences of forest roads on the spatial pattern of wildfire boundaries. *International Journal of Wildland Fire* 20: 792-803.
- *Tulbure, M., **M. C. Wimberly**, D. P. Roy, and G. M Henebry. 2011. Spatial and temporal distribution of fires in the central United States from three years of MODIS active fire detection data. *Landscape Ecology* 26: 211-224.
- *Michimi, A., and **M. C. Wimberly**. 2010. Associations of supermarket accessibility with obesity and fruit and vegetable consumption in the conterminous United States. *International Journal of Health Geographics* 9:49.
- *Michimi, A., and **M. C. Wimberly**. 2010. Spatial patterns of obesity and associated risk factors in the conterminous U.S. *American Journal of Preventive Medicine* 39: e1-12.
- Pijanowski, B., L. R. Iverson, A. Drew, H. Bulley, J. M Rhemtulla, **M. C. Wimberly**, A. Bartsch, and J. Peng. 2010. Addressing the interplay of poverty and landscapes: a grand challenge for landscape ecologists. *Landscape Ecology* 25: 5-16.
- Pierce, K. B., J. L. Ohmann, **M. C. Wimberly**, M. J. Gregory, and J. S. Fried. 2009. Imputation mapping of wildland fuels and forest structure for management and simulation modeling. *Canadian Journal of Forest Research* 39: 1901-1916.
- Kennedy, R. S. H., and **M. C. Wimberly**. 2009. Historical fire and vegetation dynamics in dry forests of the interior Pacific Northwest, USA and relationships to Northern Spotted Owl (*Strix occidentalis caurina*) habitat conservation. *Forest Ecology and Management* 258: 554-566.
- Spindler, B. D., S. R. Chipps, R. A. Klumb, and **M. C. Wimberly**. 2009. Spatial analysis of pallid sturgeon *Scaphirhynchus albus* distribution in the Missouri River, South Dakota. *Journal of Applied Ichthyology* 25: 8-13.
- *Wey, C. L., J. Griesse, L. Kightlinger, and **M. C. Wimberly**. 2009. Geographic variability in geocoding success for West Nile virus cases in South Dakota, USA. *Health & Place* 15: 1108-1114.
- Wimberly, M. C.**, M. A. Cochrane, A. D. Baer, and K. Pabst. 2009. Assessing fuel treatment effectiveness using satellite imagery and spatial statistics. *Ecological Applications* 19: 1377-1384.
- Wimberly, M. C.**, M. B. Hildreth, S. P. Boyte, E. Lindquist, and L. Kightlinger. 2008. Ecological niche of the 2003 West Nile virus epidemic in the northern Great Plains of the United States. *PLoS One* 3: e3744.
- Wimberly, M. C.**, A. B. Baer, and M. J. Yabsley. 2008. Enhanced spatial models for predicting the geographic distributions of tick-borne pathogens. *International Journal of Health Geographics* 7:15.

- Wimberly, M. C.**, and R. S. H. Kennedy. 2008. Spatially explicit modeling of mixed-severity fire regimes and landscape dynamics in the interior Pacific Northwest. *Forest Ecology and Management* 254: 511-523.
- Wimberly, M. C.**, M. J. Yabsley, A. B. Baer, V. G. Dugan, and W. R. Davidson. 2008. Spatial heterogeneity of climate and land cover constraints on distributions of tick-borne pathogens. *Global Ecology and Biogeography* 17: 189-202.
- *Manangan, J. S., S. H. Schweitzer, N. Nibbelink, M. J. Yabsley, S. E. J. Gibbs, and **M. C. Wimberly**. 2007. Habitat factors influencing distributions of *Anaplasma phagocytophilum* and *Ehrlichia chaffeensis* in the Mississippi Alluvial Valley. *Vector-Borne and Zoonotic Diseases* 7: 563-574.
- Nonaka, E., T. A. Spies, **M. C. Wimberly**, and J. L. Ohmann. 2007. Historical range of variability (HRV) in live and dead wood biomass: a regional-scale simulation study. *Canadian Journal of Forest Research* 37: 2349-2364.
- Wimberly, M. C.**, and M. J. Reilly. 2007. Assessment of fire severity and species diversity in the southern Appalachians using Landsat TM and ETM+ imagery. *Remote Sensing of Environment*: 189-197.
- *Zhang, Y., and **M. C. Wimberly**. 2007. The importance of scale in using hierarchical census data to identify the wildland-urban interface. *Southern Journal of Applied Forestry* 31: 138-147.
- *Reilly, M. J., **M. C. Wimberly**, and C. L. Newell. 2006. Wildfire effects on beta diversity and species turnover in a forested landscape. *Journal of Vegetation Science* 17: 447-454.
- Gibbs, S. E. J., **M. C. Wimberly**, M. Madden, J. Masour, M. J. Yabsley, and D. E. Stallknecht. 2006. Factors affecting the geographic distribution of West Nile virus in Georgia, USA. 2002-2004. *Vector-Borne and Zoonotic Diseases* 6: 73-82.
- Wimberly, M. C.** 2006. Species dynamics in disturbed landscapes: when does a shifting habitat mosaic enhance connectivity? *Landscape Ecology* 21: 35-46.
- *Reilly, M. J., **M. C. Wimberly**, and C. L. Newell. 2006. Wildfire effects on plant species richness at multiple spatial scales in forest communities of the southern Appalachians. *Journal of Ecology* 94: 118-130.
- Yabsley, M. J., **M. C. Wimberly**, D. E. Stallknecht, S. E. Little, and W. R. Davidson. 2005. Spatial analysis of the distribution of *Ehrlichia chaffeensis*, causative agent of human monocytotropic ehrlichiosis, across a multi-state region. *American Journal of Tropical Medicine and Hygiene* 72: 840-850.
- Zhao, G., G. Shao, K. M Reynolds, **M. C. Wimberly**, T. Warner, J. W. Moser, K. Rennolls, S. Magnussen, M. Kohl, H. Anderson, G. A. Mendoza, L. Dai, A. Huth, L. Zhang, J. Brey, Y. Sun, R. Ye, B. A. Martin, and F. Li. 2005. Digital forestry: A white paper. *Journal of Forestry* 103(1): 47-50.
- Wimberly, M. C.**, and J. L. Ohmann. 2004. A multi-scale assessment of human and environmental constraints on forest land cover change on the Oregon (USA) Coast Range. *Landscape Ecology* 19: 631-646.
- Wimberly, M. C.** 2004. Fire and forest landscapes in the Georgia Piedmont: An assessment of spatial modeling assumptions. *Ecological Modelling* 180: 41-56.
- Wimberly, M. C.** 2002. Spatial simulation of historical landscape patterns in coastal forests of the Pacific Northwest. *Canadian Journal of Forest Research* 32: 1316-1328.
- Wimberly, M. C.**, and T. A. Spies. 2002. Landscape- vs. gap-scale controls on the abundance of a fire-sensitive, late-successional tree species. *Ecosystems* 5: 232-243.

- Wimberly, M. C.**, and T. A. Spies. 2001. Predicting spatial patterns of understory conifer regeneration in a Pacific Northwest forest landscape. *Applied Vegetation Science* 4: 277-286.
- Wimberly, M. C.**, and T. A. Spies. 2001. Influences of environment and disturbance on forest patterns in coastal Oregon watersheds. *Ecology* 82: 1443-1459.
- Wimberly, M. C.**, T. A. Spies, C. J. Long, and C. Whitlock. 2000. Simulating Historical Variability in the Amount of Old Forests in the Oregon Coast Range. *Conservation Biology* 14: 167-180.
- Wimberly, M. C.**, and B. B. Bare. 1996. Distance-dependent and distance-independent models of Douglas-fir and western hemlock basal area growth following silvicultural treatment. *Forest Ecology and Management* 89: 1-11.

Peer-Reviewed Book Chapters

- Wimberly, M. C.**, T. Gebrehiwot, M. Bishaw, W. Yalew, and A. Mihretie. 2016. EPIDEMIA: Integrating climate information and disease surveillance for malaria epidemic forecasting in Ethiopia. Pages 110-113 In: J. Shumake-Guillemot and L. Fernandez-Montoya, editors. *Climate Services for Health: Improving Public Health Decision-Making in a New Climate*. World Health Organization/World Meteorological Organization. Geneva, Switzerland.
- Wimberly, M. C.** T. L. Sohl, Z. Liu, and A. Lamsal. 2015. Pages 233-216 In: Simulating forest landscapes as coupled human and natural systems. In: A. Perera, B. Sturtevant, and L. Buse, editors. *Modeling Forest Landscape Disturbances*. Springer, New York.
- Wimberly, M. C.**, and A. Midekisa. 2014. Hydro-epidemiology of the Nile Basin: Understanding the complex linkages between water and infectious diseases. Pages 219-236 In: A. M. Melesse, W. Abteu, and S. G. Setegn, editors. *Nile River Basin: Ecohydrological Challenges, Climate Change and Hydropolitics*. Springer, New York.
- Stanturf, J. A., and **M. C. Wimberly**. 2013. Demographic trends in the Eastern US and the wildland-urban interface: Implications for fire management. Pages 19-40 In: J. J. Qu, W. Sommers, A. Biebau, R. Yang, and M. Kafaros, editors. *Remote Sensing and Modeling Applications to Wildland Fires*. Springer, New York.
- Leptoukh, G. G., R. K. Kiang, R. P. Soebiyanto, D. Q. Tong, P. Ceccato, S. Maxwell, R. G. Rommel, G. M. Jacques, K. K. Benedict, S. A. Morain, P. Yang, Q. Huang, M. L. Golden, R. S. Chen, J. E. Pinzon, B. Zaitchik, D. Irwin, S. Estes, J. Luvall, **M. C. Wimberly**, X. Xiao, K. M. Charland, R. P. Stumpf, Z. Deng, C. E. Tilburg, Y. Liu, L. McClure, and A. Huff. 2012. Data discovery, access, and retrieval. Pages 229-292 In: S. A. Morain and A. M. Budge, editors. *Environmental Tracking for Public Health Surveillance*. Taylor & Francis Group, London.
- Wimberly, M. C.**, S. P. Boyte, and E. J. Gustafson. 2012. Understanding landscapes through spatial modeling. Pages 111-128 In: J. A. Stanturf, P. Madsen, and D. Lamb (Editors), *Forest Landscape Restoration: Integrating Natural and Social Sciences*. Springer, New York.
- Wimberly, M. C.**, E. Lindquist and C. L. Wey. 2011. Analysis of the 2002 Equine West Nile Virus Outbreak in South Dakota Using GIS and Spatial Statistics. Pages 191-206 In S. Clay (Editor), *GIS Applications in Agriculture: Invasive Species*. CRC Press, Boca Raton, FL.

- Wimberly, M. C.**, Y. Zhang, and J. A. Stanturf. 2006. Digital forestry in the wildland-urban interface. Pages 201-222. *In*: Shao, G. and K. M. Reynolds, editors. Computer Applications in Sustainable Forest Management: Including Perspectives on Collaboration and Integration. Springer, New York.
- Wimberly, M. C.**, T. A. Spies, and E. Nonaka, 2004. Using criteria based on the natural fire regimes to evaluate forest management in the Oregon Coast Range. Page 146-157. *In*: Perera, A. H., L. J. Buse, and M. G. Weber, editors. Emulating Natural Forest Landscape Disturbances: Concepts and Applications. Columbia University Press, New York.

Reports and Miscellaneous Publications

- Wimberly, M. C.**, and D. M. Nekorchuk. 2021. Malaria early warning in Ethiopia: a roadmap for scaling to the national level. USAID Technical Report.
- Wimberly, M. C.** 2012. Lyme disease: a quintessential connection between ecosystems and human health. Book Review of *Lyme Disease, the Ecology of a Complex System* by R. S. Ostfeld. *Landscape Ecology* 27: 1383-1384.
- Mitchell, R.J., K.L. Clark, M.D. Hurteau, B.J. Palik, M.E. Rocca, **M.C. Wimberly**, J.B. Bradford, P.M., Brown, J.J. Charney, B. Clinton, P.Z. Fule, P.C. Goebel, R.S.H. Kennedy, Y. Liu, L.H., MacDonald, J. J. O'Brien, H. Renninger, R. Scheller, N. Skowronski, G. Starr, and A.H. Taylor. 2012. Fire-Climate Interactions: A Technical Input Report for the National Climate Assessment.
- Wimberly, M. C.**, A. Michimi, and B. L. Specker. 2010. Rural health and rural landscapes: An ecological approach to the study of obesity. *Rural Connections*, September: 15:20.
- Wimberly, M. C.** 2008. Scaling and uncertainty: in search of conceptual linkages and practical approaches. Book Review of *Scaling and Uncertainty Analysis in Ecology* by J. Wu, K. B. Jones, H. Li, and O. L. Loucks (eds). *Landscape Ecology* 23: 369-371.
- Marshall, D. J., **M. C. Wimberly**, P. Bettinger, and J. A. Stanturf. 2008. Synthesis of knowledge of hazardous fuel management in loblolly pine (*Pinus taeda* L.) forests. General Technical Report GTR-SRS-110. USDA Forest Service Southern Research Station, Asheville, NC.
- Marshall, D. J., P. Bettinger, **M. C. Wimberly**, and J. A. Stanturf. 2007. General management practices for hazardous fuels management in loblolly pine (*Pinus taeda*) forests. Research Note # 27. University of Georgia, Warnell School of Forestry and Natural Resources, Center for Forest Business. Athens, GA.
- Marshall, D. J., P. Bettinger, **M. C. Wimberly**, and J. A. Stanturf. 2007. A selective bibliography of scientific literature on hazardous fuel management in loblolly pine-dominated forests of the southeastern U. S. Research Note # 24. University of Georgia, Warnell School of Forestry and Natural Resources, Center for Forest Business. Athens, GA.
- Wimberly, M. C.**, and E. V. Jenkins. 2006. Fire Ecology and Management of Loblolly Pine Forests. *In*: The Forest Encyclopedia Network, <http://www.forestencyclopedia.net>, Encyclopedia Identification: 66675. (Peer-reviewed online publication)

Conference Proceedings and Published Abstracts

- *Hess, A., J. K. Davis, B. M. Lind, and **M. C. Wimberly**. 2017. Remote-sensing based risk mapping for mosquito-borne diseases: a spatial modelling study. *The Lancet* 389: S10.

- Liu, Y., M. D. DeVos, M. Abdul-Rahim, and **M. C. Wimberly**. 2017. Building geospatial health applications from the EASTWeb framework. Pages 451-464 *In: Geo-Spatial Knowledge and Intelligence. 4th International Conference on Geo-Informatics in Resource Management and Sustainable Ecosystem, GRMSE 2016, Hong Kong, China, November 18-20, 2016, Revised Selected Papers, Part II.*
- *Merkord, C. L., J. K. Davis, and **M. C. Wimberly**. 2017. Evaluation of environmentally driven models for early warning of malaria: an exploratory study. *The Lancet* 389: S13.
- Wimberly, M. C.**, J. K. Davis, G. M. Henebry, M. B. Hildreth, Y. Liu, and C. L. Merkord. Integrated surveillance and modelling systems for climate-sensitive diseases: two case studies. *The Lancet* 389: S24
- Liu, Y., M. D. Devos, M. Abdul-Rahim, J. Hu, and **M. C. Wimberly**. 2016. EASTWeb framework - a plug-in framework for constructing geospatial health applications. Pages 0627-0632 *In: Proceedings of the 2016 IEEE International Conference on Electro-Information Technology (EIT). Grand Forks, ND.*
- Lamsal, A., **M. C. Wimberly**, Z. Liu, and T. L. Sohl. 2014. A simulation model of human-natural interactions in dynamic landscapes. *Proceedings of the 2014 International Congress on Environmental Modelling and Software, San Diego, CA, June 15-19.*
- Liu Y., **M. C. Wimberly** and J. Hu. 2014. On the Construction of the EASTWeb Framework – A Plug-in Framework for Processing Earth Observation Data Streams *Proceedings of the 2014 IEEE International Conference on Electro/Information Technology. Milwaukee, WI, June 5-7.*
- *Liu, Z., **M. C. Wimberly**, A. Lamsal, T. L. Sohl, and T. J. Hawbaker. 2014. Coupled simulation of human-driven and natural land cover change in the Front Range Corridor, CO. *Proceedings of the 2014 International Congress on Environmental Modelling and Software, San Diego, CA, June 15-19.*
- Wimberly, M. C.**, G. M. Henebry, Y. Liu, and G. B. Senay. 2014. EPIDEMIA – An EcoHealth informatics system for integrated forecasting of malaria epidemics. *Proceedings of the 2014 International Congress on Environmental Modelling and Software, San Diego, CA, June 15-19.*
- Hu, J., Y. Liu, and **M. C. Wimberly**. 2014. FDEOD - A Software Framework for Downloading Earth Observation Data. *Proceedings of the Association of Computing Machinery Southeast Conference. Kennesaw, GA, March 28-29.*
- Liu, Y., P. Xiao, and **M. C. Wimberly**. 2013. Constructing a Semantic-Based Image Retrieving system – Image Semantic Searching System (ISSS). *Proceedings of the 2013 International Conference on Semantic Web and Web Services (SWWS'13). Las Vegas, NV, July 22-25.*
- Snell-Feikema, I., Y. Liu, and **M. C. Wimberly**. 2013. Design and implementation of the EASTWeb System. *Proceedings of the Midwest Instruction and Computing Symposium, April 19-20.*
- Wimberly, M. C.**, T. Chuang, G. M. Henebry, Y. Liu, A. Midekisa, P. Semuniguse, and G. Senay. 2012. A computer system for forecasting malaria epidemic risk using remotely-sensed environmental data. *Proceedings of the 2012 International Congress on Environmental Modelling and Software, Leipzig, Germany, July 1-5.*
- Rop, M., Y. Liu, and **M. C. Wimberly**. 2011. FWA - A Framework for Developing Web-Atlas Applications. *Proceedings of the 2011 International Conference on Software Engineering Research and Practice (SERP'11). Las Vegas, NV, July 18-21.*

- Liu, Y., M. K. Rop, and **M. C. Wimberly**. 2010. On the construction of the framework of a web-based atlas (FWA). Proceedings of the Association of Computing Machinery Southeast Conference, Oxford, MS. April 15-17.
- Wimberly, M. C.** 2007. Understanding landscapes through spatial modeling. Pages 70-72 in Proceedings: IUFRO Conference on Forest Landscape Restoration. Seoul, Republic of Korea. May 14-19.
- Wimberly, M. C.**, R. S. H. Kennedy, and T. A. Spies. 2006. Fire, feedback, and forest landscape dynamics – Applying Landscape Simulation Model to Untangle Ecological Complexity. Proceedings: 2006 Fire Ecology and Management Congress. November 13-17, San Diego, CA. (CD-ROM)
- *Goolsby, D. A., L. Boring, and **M. C. Wimberly**. 2005. Land use legacies and upland forest overstory structure change in southwest Georgia. Pages 41-43 in Proceedings of the Fifth Longleaf Alliance Regional Conference. Hattiesburg, MS. October 12-15. Longleaf Alliance Report No. 8.
- Wimberly, M. C.**, and M. J. Reilly. 2005. Using Satellite Imagery to Map Fire Severity and Forest Community Change in the Southern Appalachians. Proceedings: EastFIRE Conference. May 11-13, Fairfax, VA. (CD-ROM)
- Wimberly, M. C.**, P. Bettinger, and S. D. Danskin. 2005. Incorporating cross-cutting spatial technologies into natural resources education. Pages 171-177 in Proceedings of the 4th Southern Forestry and Natural Resources GIS Conference. December 16-17 2004, Athens, GA.
- Melvin, M., K. McIntyre, D. Brownlie, F. Cole, and **M. C. Wimberly**. 2003. Instructing tomorrow's practitioners today: prescribed fire training in university natural resources programs. Proceedings: Second International Wildland Fire and Ecology and Fire Management Conference. November 16-20, Orlando, FL. (CD-ROM)
- Stanturf, J. A., R. Rummer, **M. C. Wimberly**, T. Rials, P. Araman, R. Busby, J. Granskog, and L. Groom. 2003. Developing an integrated system for mechanical reduction of fuel loads at the wildland/urban interface. Pages 135-138 in Proceedings: 2nd Forest Engineering Conference. Växjö, Sweden. May 12-15.
- Wimberly, M. C.**, J. L. Ohmann, K. B. Pierce, M. J. Gregory, and J. S. Fried. 2003. A multivariate approach to mapping vegetation and fuels using GIS databases, satellite imagery, and forestry inventory plots. Proceedings: Second International Wildland Fire and Ecology and Fire Management Conference. November 16-20, Orlando, FL. (CD-ROM)
- Wimberly, M. C.**, T. A. Spies, and E. Nonaka, 2002. Using natural fire regime-based criteria to evaluate forest management in the Oregon Coast Range, USA. Pages 63-66 In: Emulating Natural Forest Landscape Disturbance: Concepts and Applications, Popular Summaries. May 11-16, Sault Ste. Marie, Ontario, Canada. Paper No. 149, Ontario Forest Research Institute.

Invited Seminars and Panels

2022. Integrating environmental monitoring with public health surveillance to forecast West Nile virus in the United States. Infectious Diseases Prevention and Control Branch, Public Health Agency of Canada.
2022. The Macroscopic Meets the Microscope: Integrating Earth Science Data with Disease Surveillance for Outbreak Forecasting. *University of Oklahoma, Data Institute for*

- Societal Challenges Lecture Series: Frontiers of Data Science for Predicting Emerging Diseases.*
2022. The Macroscopic Meets the Microscope: Using Satellite Earth Observations to Study the Geography of Mosquito-Transmitted Diseases. *University of North Texas, Department of Geography and the Environment*. Denton, TX.
2021. One Health Informatics: Connecting Earth Observations with Public Health Surveillance to Forecast Diseases Outbreaks. *One Health Academy Webinar*.
2021. Studying diseases from space: The influences of land use and land cover on vector mosquitoes. *NASA GLOBE Webinar*.
2021. Virtual Panel on Tips and Tricks for Grant Writing. *AGU GeoHealth Early Career Webinar*.
2020. The Macroscopic Meets the Microscope, Connecting Earth Observations with Public Health Surveillance to Forecast Mosquito-Borne Diseases. *Louisiana State University School of Veterinary Medicine*, Baton Rouge, LA.
2020. A Framework for Forest Degradation Monitoring Using Satellite Observations. *World-Wide Human Geography Data (WWHGD) Working Group, Biodiversity Loss and Human Geography Virtual Webinar*.
2020. A Conversation on Biodiversity Loss. *World-Wide Human Geography Data (WWHGD) Working Group, 50th Event Retrospective Symposium on Planetary Health*.
2019. The Macroscopic Meets the Microscope, Connecting Earth Observations with Public Health Surveillance to Forecast Mosquito-Borne Diseases. *University of Texas, Department of Integrative Biology*, Austin, TX.
2018. The Macroscopic Meets the Microscope, Connecting Earth Observations with Public Health Surveillance to Forecast Mosquito-Borne Diseases. *Michigan State University, Center of Global Change & Earth Observations*, East Lansing, MI.
2017. Farm-Level Patterns and Drivers of Grassland Loss in the Eastern Dakotas. *Plains and Prairie Potholes LCC Monthly Webinar*.
2016. Integrated Surveillance and Modelling Systems for Climate-Sensitive Diseases. *University of New South Wales Kirby Center for Infection and Immunity in Society*, Sydney, Australia.
2016. Modelling Coupled Human and Natural Drivers of Landscape Change. *University of New South Wales School of Biological, Earth and Environmental Sciences*, Sydney, Australia.
2015. From Food Deserts to Food Mountains: The Nutritional Landscape of Rural Communities. *E. A. Martin Program Symposium: The Rural Food Environment in South Dakota*, *South Dakota State University*, Brookings SD.
2015. An Integrated Landscape Model for Simulating Human and Natural Drivers of Landscape Change. *Chinese Academy of Sciences, Institute of Geographic Science and Natural Resources Research*, Beijing, China.
2015. Applying the Global Macroscopic for Ecological Forecasting of Vector-Borne Disease Outbreaks. *Beijing Normal University, College of Global Change and Earth System Science*, Beijing, China.
2013. Tropical Disease Emergence in a Cold-Temperate Landscape: Climate and West Nile Virus in the Northern Great Plains. *National Centers for Atmospheric Research*, Boulder, CO.
2013. Analysis and Modeling of Landscape Dynamics in West Africa. *Forestry Research Institute of Ghana (FORIG)*, Kumasi, Ghana.

2013. Environmental Triggers of Outbreaks in Seasonal Vector-Borne Diseases. *The International Research Institute for Climate and Society, Columbia University, Pallsades, NY.*
2012. New Strategies for Defining and Mapping “Rural”. *Office of Nursing Research Seminar, South Dakota State University, Brookings, SD.*
2012. The Macroscopic Meets the Microscope: Applications of Satellite Remote Sensing for Global Health. *Department of Epidemiology, School of Public Health, University of Minnesota, Minneapolis, MN.*
2012. The Macroscopic Meets the Microscope: Using Satellites to Study Infectious Disease Outbreaks. *Department of Biology, University of South Dakota, Vermillion, SD.*
2011. Remote Sensing in Public Health: The Promise and the Pitfalls of Applied Science. *Geographic Information Science Center of Excellence, South Dakota State University, Brookings, SD.*
2011. Geospatial Health Research at the Geographic Information Science Center of Excellence. *E.A. Martin Program Seminar Series, South Dakota State University, Brookings, SD.*
2011. The Landscape Ecology of Health: Applying GIS and Satellite Technologies. *USGS National Center for Earth Resources Observation and Science (EROS), Sioux Falls, SD.*
2010. Macroscopic and microscopic: Applying Earth Observation Systems to Forecast Infectious Disease Outbreaks. *Sewrey Colloquium, South Dakota State University. Brookings, SD.*
2009. GIS and remote sensing applications in public health. *Nutrition and Environmental Health Seminar Series, South Dakota State University, Brookings, SD.*
2009. The macroscopic meets the microscopic: climate, land cover, and the biogeography of infectious disease. *Ecology and Evolution Graduate Program, Rutgers University, New Brunswick, NJ.*
2009. Eco-epidemiology of West Nile virus in the Northern Great Plains. *Ecology and Evolutionary Biology Seminar Series, South Dakota State University, Brookings, SD.*
2008. The landscape ecology of vector-borne and zoonotic diseases. *Department of Wildlife and Fisheries Sciences, South Dakota State University, Brookings, SD.*
2008. The macroscopic meets the microscopic: climate, land cover, and the biogeography of infectious disease. *Program in Ecology, Evolution, and Conservation Biology, University of Nevada, Reno, NV.*
2007. Satellite remote sensing and the biogeography of infectious disease. *Geographic Information Science Center of Excellence, South Dakota State University, Brookings, SD.*
2007. A landscape ecological perspective on environmental health. *Department of Environmental Health, University of Cincinnati. Cincinnati, OH.*
2005. Fire and pestilence! GIS modeling for regional assessments of safety and health. *USGS National Center for Earth Resources Observation and Science (EROS), Sioux Falls, SD.*
2003. Using historical disturbance regimes as a basis for forest landscape management: A dynamic perspective. *Department of Ecology and Evolutionary Biology, Rice University, Houston, TX.*
2002. Can natural disturbance regimes serve as models for forest ecosystem management? A case study from the Pacific Northwest. *Joseph W. Jones Ecological Research Center. Newton, GA.*
2000. Characterizing historical dynamics of forest landscapes. *Forest Science Department, Oregon State University, Corvallis, OR.*

Invited Conference Presentations

- Wimberly, M. C.** 2022. Mitigating Zoonotic Threats at the Nexus of Global Health and Global Environmental Change. *Scialog Workshop on Mitigating Zoonotic Threats*, Tucson, AZ.
- Wimberly, M. C.**, and D. M. Nekorchuk. 2022. Design and Implementation of the Arbovirus Monitoring and Prediction (ArboMAP) system for forecasting West Nile virus across multiple U.S. States. *American Mosquito Control Association Annual Meeting*, Jacksonville, FL.
- Wimberly, M. C.**, and D. M. Nekorchuk. 2022. Using Mosquito Surveillance and Meteorological Data to Predict West Nile virus Outbreaks in a High Risk Region of North America. *Pennsylvania Vector Control Association Annual Conference*, Carlisle PA
- Wimberly, M. C.**, and D. M. Nekorchuk. 2022. Design and Implementation of the Arbovirus Monitoring and Prediction (ArboMAP) System for Forecasting West Nile Virus across Multiple U.S. States. *Group on Earth Observations (GEO) Health Community of Practice Teleconference*.
- Wimberly, M. C.** 2021. A One Health Approach to Disease Surveillance: Integrating Environmental, Human, and Mosquito Data to Forecast West Nile Virus. *Applying a OneHealth Framework to Climate Change and Health: Soil and Water Quality, Sustainable Food Systems, Biodiversity, and Animal and Human Health, Fall Meeting of the American Geophysical Union*. Washington. D. C.
- Wimberly, M. C.**, D. M. Nekorchuk, and J. K. Davis. 2021. Modeling the Risk of Malaria Spread in Ethiopia. *US Embassy Manila Virtual Embassy Science Fellow webinars: Preparing for the next pandemic: Concepts and tools for predicting risk at the intersection of climate change, habitat disturbance, and emerging infectious disease*
- Wimberly, M. C.**, and D. M. Nekorchuk. 2021. A Roadmap for Scaling up Malaria Early Warning to a National Level in Ethiopia. *Consortium of Universities for Global Health Virtual Conference, Satellite Session on Closing the Gap Between Knowledge and Practice: Implementation Science Priorities for Health Adaptation for Climate Change*.
- Wimberly, M. C.**, and J. K. Davis. 2019. An Early Warning System for Human West Nile Virus Disease. *US Global Change Research Program Experimental Climate and Health Outlooks Workshop*. Washington, DC.
- Wimberly, M. C.**, and J. K. Davis. 2019. The Macroscope Meets the Microscope: Connecting Earth Observations with Public Health Surveillance for Arbovirus Monitoring and Prediction. *US Centers for Disease Control Environmental Public Health Tracking Workshop*. Atlanta, GA.
- Wimberly, M. C.**, T. Gebrehiwot, C. L. Merkord, A. Mihretie, D. Nekorchuk, W. Yalew, and G. M. Henebry. 2018. Integrating environmental monitoring and disease surveillance to forecast malaria epidemics. *American Meteorological Society 98th Annual Meeting, 9th Conference on Environment and Health*. Austin, TX.
- Wimberly, M. C.**, J. K. Davis, G. Vincent, A. Hess, and M. B. Hildreth. 2018. An operational system for surveillance and ecological forecasting of West Nile virus outbreaks. *American Meteorological Society 98th Annual Meeting, 9th Conference on Environment and Health*. Austin, TX.
- Wimberly, M. C.** 2018. Earth Science Data for GeoHealth Informatics: Applications for Mosquito-Borne Disease Surveillance and Prediction. *Environment, Health, and*

- Infectious Disease: The Rapidly Changing Landscape of Geohealth, Fall Meeting of the American Geophysical Union, Washington, DC.*
- Wimberly, M. C.,** J. K. Davis, C. L. Merkord, Y. Liu, G. M. Henebry, and M. B. Hildreth. 2017. Design and Implementation of Integrated Surveillance and Modeling Systems for Climate-Sensitive Diseases. *American Meteorological Society 97th Annual Meeting, 8th Conference on Environment and Health.* Seattle, WA.
- Wimberly, M. C.** 2016 Enhancing Vector Borne Disease Surveillance with Satellite-Based Earth Observations. *American Society of Tropical Medicine and Hygiene Annual Meeting.* Atlanta, GA.
- Wimberly, M. C.** 2016. Integrated Surveillance and Forecasting Systems for Climate-Sensitive Diseases. *Sanford Health/SDSU Biomedical Research Symposium.* Brookings SD
- Wimberly, M. C.,** and M. B. Hildreth. 2016. The South Dakota Mosquito Information System (SDMIS), 2016 Update. *South Dakota West Nile Virus and Mosquito Control Conference.* Aberdeen, SD
- Wimberly, M. C.,** C. L. Merkord, L. Kightlinger, G. Vincent, and M. B. Hildreth. 2016. Ecological Forecasting of West Nile Virus Outbreaks in a High-risk Area of the North-central United States. *American Meteorological Society 96th Annual Meeting, Seventh Conference on Environment and Health.* New Orleans, LA.
- Wimberly, M. C.,** C. L. Merkord, L. Kightlinger, G. Vincent, M. B. Hildreth. 2015. Ecological forecasting of West Nile virus outbreaks in a high-risk area of the north-central United States. *The NASA Public Health and Air Quality Application Program: Integrating Remote Sensing, Spatial Analysis, and Modeling for the Analysis of Environmentally Driven Human Health Risks, Fall Meeting of the American Geophysical Union.* San Francisco, CA.
- Wimberly, M. C.** and M. B. Hildreth. 2015 The South Dakota mosquito information system (SDMIS): An early warning system for human West Nile virus disease. *South Dakota West Nile Virus and Mosquito Control Conference.* Aberdeen, SD
- Wimberly, M. C.,** B. Beyene, E. Bayabil, Y. Liu, C. L. Merkord, A. Mihretie, G. M. Henebry. 2015. An EcoHealth Informatics Systems for Integrated Forecasting of Malaria Epidemics. *Forum on Strengthening the International Geo-Eco Global Health Research Collaborations: Challenges and Opportunities.* Wuhan, China, June 17-18, 2015.
- Wimberly, M. C.,** and D. Narem. 2015. Spatial Analysis of Grassland Fragmentation in the Western Corn Belt. Land Use Mapping and Modeling Symposium. *South Dakota State University, Brookings, SD.* July 13, 2015.
- Wimberly, M. C.,** T. L. Sohl, Z. Liu, and A. Lamsal. 2015. Simulating feedbacks between human and natural disturbance using the CHANGE model. *Symposium - Modeling Forest Landscapes in a Changing Climate, International Association for Landscape Ecology, World Congress, Portland, OR.*
- Wimberly, M. C.,** Y. Liu, G. M. Henebry, and G. B. Senay. 2014. EPIDEMIA: An EcoHealth informatics approach for mapping and forecasting infectious disease risk. *2nd Annual Computational Biology Research Symposium.* South Dakota State University, Brookings SD.
- Wimberly, M. C.,** C. L. Merkord, G. M. Henebry, and G. B. Senay. 2014. Incorporating hydroepidemiology into the EPIDEMIA malaria early warning system. *Hydroepidemiology: Bridging Hydrology and Climate with Human Health, Fall Meeting of the American Geophysical Union.* San Francisco, CA.

- Wimberly, M. C.** 2013. Spatial and temporal patterns of West Nile virus in South Dakota. *South Dakota West Nile Virus and Mosquito Control Conference*, Pierre, SD.
- Wimberly, M. C.** 2013. West Nile Virus in the United States – What is the Climate Connection? *American Geophysical Union Science Policy Conference*. Washington, DC.
- Wimberly, M. C.** 2012. The Emergence and Potential for Reemergence of West Nile Virus in South Dakota. *South Dakota West Nile Virus and North Central Mosquito Control Conference*, Aberdeen, SD.
- Wimberly, M. C., A. Midekisa, T. Chuang, G. M Henebry, Y. Liu, and G. B. Senay.** 2012. Satellite Remote Sensing for Malaria Epidemic Early Warning in a Highland Region of Ethiopia. *Gregory G. Leptoukh Online Giovanni Workshop*.
- Wimberly, M. C., and M. A. Cochrane.** 2010. Forest management for sustainability in a changing environment. *International Forum for Adaptability Science II: Technologies for a Sustainable Society*. Sendai, Japan.
- Wimberly, M. C.** 2010. Applying geospatial technologies to study connections between wildlife and human health. *South Dakota Chapter of the Wildlife Society, 2010 Annual Meeting*. Mitchell, SD.
- Wimberly, M. C., T. Chuang, G. M. Henebry, M. B Hildreth, Y. Liu, G. Senay, and L. Kightlinger.** 2010. Disease forecasting tools for use in control programs. *South Dakota West Nile Virus/Mosquito Control Conference*, Mitchell, SD.
- Wimberly, M. C., T. Chuang, G. M. Henebry, M. B Hildreth, Y. Liu, G. Senay, and L. Kightlinger.** 2010. Predicting spatial and temporal variability of West Nile virus in the Northern Great Plains. *Annual Conference of the North Central Mosquito Control Association*. Grand Forks ND.
- Wimberly, M. C., and A. Michimi.** 2009. Exploring the interrelationships of landscapes, poverty, and human health. *Symposium – Landscape Conservation and Poverty Alleviation, International Association for Landscape Ecology, United States Regional Association Meeting*. Snowbird, UT.
- Wimberly, M. C.** 2008. The macroscope meets the microscope: landscape ecology of infectious disease. South Dakota State University Geography Convention, Brookings, SD. *Symposium – Landscape Ecology of Infectious Diseases, International Association for Landscape Ecology, United States Regional Association Meeting*. Madison, WI.
- Wimberly, M. C.** 2008. People, environments, and the geography of disease. *South Dakota State University Geography Convention*, Brookings, SD.
- Wimberly, M. C.** 2007. Understanding landscapes through spatial modeling. *International Conference on Forest Landscape Restoration*. Seoul, Korea.
- Wimberly, M. C.** 2007. Applying geospatial datasets and analysis methods in the study of human health and nutrition. *24th South Dakota State University Nutrition Seminar*. Brookings, SD.
- Wimberly, M. C.** 2006. Remote sensing, geographic information systems, and their potential applications to studying children’s environmental health. *First Annual Children’s Environmental Health Seminar*. Brookings, SD.
- Wimberly, M. C., R. S. H. Kennedy, and T. A. Spies.** 2006. Fire, feedback, and forest landscape dynamics: Applying landscape simulation models to untangle ecological complexity. *Symposium – Landscape Models of Fire and Vegetation Dynamics in Research and Management, 3rd International Fire Ecology and Management Congress*. San Diego, CA.

- Wimberly, M. C.**, Y. Zhang, and J. A. Stanturf. 2004. Applications of digital spatial data and GIS analysis to support forest management in the Wildland-Urban Interface. *First International Workshop on Digital Forestry*, Beijing, China.
- Wimberly, M. C.**, and S. D. Danskin. 2003. Spatial simulation of forest community dynamics in the Georgia Piedmont. *Symposium – Studying Disturbance and Succession in Forest Ecosystems Using LANDIS*, International Association for Landscape Ecology, United States Regional Association Meeting. Banff, Alberta, Canada.
- Wimberly, M. C.** 2002. Assessing present-day forest landscapes in the context of historical disturbance regimes. *Symposium - Changing the Scale of Our Thinking: A Multi-Ownership Assessment of Forests and Watersheds in the Oregon Coast Range*. Corvallis, OR.
- Wimberly, M. C.**, T. A. Spies, and E. Nonaka. 2002. Using natural fire regime-based criteria to evaluate forest management in the Oregon Coast Range, USA. *Symposium - Emulating Natural Forest Landscape Disturbances: Concepts and Applications*. Saulte Ste. Marie, Ontario, Canada.
- Wimberly, M. C.** 2001. The influences of disturbance history and landscape pattern in a shifting mosaic of old-growth forests. *Workshop on Development of Old-Growth Douglas-fir Forests Along the Pacific Coast of North America: A Regional Perspective*. H.J. Andrews Experimental Forest. Blue River, OR.

Contributed Presentations

Presenter or co-author on more than 200 contributed presentations at conferences and workshops, including more than 100 where the lead presenter was a postdoc or student under my mentorship.

3. TEACHING AND ADVISING

University Courses Taught

University of Oklahoma

GEOG 3890 – Pandemics and Place, the Geography of Infectious Diseases (3 semester credits, lecture)

Fall 2021

GEOG 6240 – Graduate Seminar on Climate and Health (3 semester credits, lecture/discussion)

Fall 2020

GIS 4453/5453 – Advanced GIS and Spatial Analysis (3 semester credits, lecture/lab)

Spring 2019, 2020, 2021.

South Dakota State University

GSE 743 – Geospatial Analysis (3 semester credits, lecture/lab)

Spring 2006, Spring 2007, Spring 2008, Spring 2010, Spring 2012, Fall 2013, Fall 2015, Fall 2017.

GSE 790 – Geospatial Science and Engineering Seminar (1 semester credit, seminar)

Fall 2015, Spring 2018.

GSE 792 – Special Topics: Geospatial Analysis (3 semester credits, lecture/lab)

Spring 2006.

GSE 792 – Special Topics: GIS Application in Ecology (3 semester credits, lecture/lab)

Fall 2009, Spring 2011.

NRM 706 – Landscape Ecology (3 semester credits, lecture/lab)

Fall 2014, Fall 2016.

University of Georgia

FORS 3910 – Spatial Information in Forest Resources (3 semester credits, lecture/lab)

Spring 2002, Fall 2002, Spring 2004, Fall 2004, Spring 2005.

FORS 4730 – Senior Project (4 semester credits, lecture/discussion)

Summer 2003.

FORS 5930 – Prescribed Fire in the Forest Ecosystem (2 semester credits, field class)

Summer 2002, Summer 2003, Summer 2004, Summer 2005.

FORS 8000 – Landscape Ecology Seminar (2 semester credits, lecture/lab/discussion)

Spring 2002.

FORS 8330 – Landscape Ecology (3 semester credits, lecture/lab/discussion)

Spring 2003, Spring 2004, Spring 2004.

Oregon State University

FS 599 – Applied Landscape Ecology Seminar (2 quarter credits, lecture/lab/discussion)

Winter 2000, Winter 2001.

Supervision of Student/Postdoctoral Research

Postdoctoral Scholars Supervised

Dan Wanyama, 2021-present

Dawn Nekorchuk, 2017-present
Justin Davis, 2016-2020
Francis Dwomoh, 2018-2019
Woubet Alemu (co-advised with Geoff Henebry) 2017-2018
Chris Merkord, 2014-2017
Zhihua Liu, 2012-2016
Ramu Sudhagani 2012-2013
Chris Wright (co-advised with Geoff Henebry) 2011-2013
Ting-Wu Chuang, 2009-2012
Aki Michimi, 2008-2011
Mirela Tulbure, 2008-2010

Full Time Professional Research Staff Supervised

Adam Baer, Geospatial Analyst, 2006-2008
Aashis Lamsal, Geospatial Analyst, 2011-2014
Paolla Giacomo, Geospatial Analyst, 2013-2015

Graduate Student Advisement

Nikhil Poudyal

Ph.D. in Geography & Environmental Sustainability, University of Oklahoma In Progress

Eric Bump

Ph.D. in Geography & Environmental Sustainability, University of Oklahoma In Progress

Andrews Korah

Ph.D. in Geography & Environmental Sustainability, University of Oklahoma In Progress

Avery Taylor

M.S. in Geography & Environmental Sustainability, University of Oklahoma 8/2022

Andrea Hess

8/2021

Ph.D. in Geography, University of Oklahoma

Dissertation: *Earth observation and mosquito-borne diseases: assessing environmental risk factors for disease transmission via remote sensing data*

Kyle Kaskie

5/2018

M.S. in Biological Sciences, South Dakota State University

Thesis: *Mapping and risk assessment of juniper encroachment in a prairie landscape.*

Francis Dwomoh

3/2018

Ph.D. in Geospatial Science and Engineering, South Dakota State University

Dissertation Title: *Vulnerability of protected areas to human encroachment, climate change and fire in the fragmented tropical forests of West Africa.*

Henok Alemu (co-advised with Gabriel Senay)

5/2015

Ph.D. in Geospatial Science and Engineering, South Dakota State University

Dissertation: *Contemporary Evapotranspiration Changes and Drivers in the Nile Basin.*

Alemayehu Midekisa 12/2014

Ph.D. in Geospatial Science and Engineering, South Dakota State University

Dissertation: *Integrating Multi-Sensor Satellite Data for Malaria Early Warning in the Amhara Region of Ethiopia.*

Aaron Friesz 8/2012

M.S. in Geography, South Dakota State University

Thesis: *Effects of Bird Community Structure on West Nile Virus Incidence in the Northern Great Plains.*

Narayana Ganapathy 12/2011

Ph.D. in Geospatial Science and Engineering, South Dakota State University

Dissertation: *Influences of Forest Roads on the Spatial Pattern of Modern Wildfire Regimes in the East Cascades of Washington State.*

Aashis Lamsal 8/2011

M.S. in Geography, South Dakota State University

Thesis: *Evaluating Geospatial Visualization Methods for West Nile Virus Risk Mapping.*

Stephen Boyte 8/2009

M.S. in Geography, South Dakota State University

Thesis: *Modeling Fire Disturbance and Forest Structure Change in the Black Hills*

Jamie Manangan 12/2006

M.S. in Wildlife Ecology and Management, University of Georgia

Thesis: *Spatial Analysis of the Distributions of Two Tick-Borne Bacteria, *Anaplasma phagocytophilum* and *Ehrlichia chaffeensis*, in the Mississippi Alluvial Valley.*

Darroc Goolsby 12/2005

M.S. in Forest Biology, University of Georgia

Thesis: *Patterns of Land Use and Succession in a Longleaf Pine Forest.*

Yangjian Zhang 5/2005

Ph.D. in Forest Resource Management, University of Georgia

Dissertation: *Identification of the Wildland-Urban Interface at Regional and Landscape Scales.*

Matthew Reilly 5/2004

M.S. in Forest Biology, University of Georgia

Thesis: *Plant Community Dynamics Following Wildfire in the Southern Appalachians: Changes in Diversity at Multiple Spatial Scales.*

Undergraduate Student Advisement (South Dakota State University – GSCE Center Scholars)

September Gering (BS History) 2014

Daniel Wimber (BS Geography) 2011

Christy Wey (BS Biology) 2009

Audra Carson (BS Geography) 2007

Graduate Committees

I have served on more than 25 Ph.D. committees and more than 20 M.S. committees at the University of Oklahoma, South Dakota State University, and the University of Georgia.

4. SERVICE

Technical Training Developed

- Introduction to R for Disease Surveillance and Outbreak Forecasting (4-Day Workshop). Presented to attendees from Ethiopian NGOs, public health agencies, and universities. October 22-26, 2018. Bahir Dar University, Bahir Dar, Ethiopia.
- Introduction to R for Disease Surveillance and Outbreak Forecasting (4-Day Workshop). Presented to attendees from SDSU along with Ethiopian NGOs, public health agencies, and universities. August 7-10, 2017. South Dakota State University, Brookings SD.
- Geospatial Data Analysis Using R (5-Day Workshop). Presented to students and faculty of the Institute of Geographic Sciences and Natural Resources Research. May 19-20 and 23-25, 2017. Chinese Academy of Sciences, Beijing, China.
- Statistical Modeling of Time Series Data Using R (5-Day Workshop). Presented to staff at the USGS Center for Earth Resources Observation and Science (EROS). August 2012. Sioux Falls, SD.
- Geographic Information Science for Climate and Health Applications, with Introduction to QGIS (2-Day Workshop). Presented to attendees from Ethiopian NGOs, public health agencies, and universities. September 4-5, 2012. Bahir Dar, Ethiopia.
- Spatial Statistical Analysis of Remote Sensing Data Using R (9-Day Workshop). Presented to staff at the USGS Center for Earth Resources Observation and Science (EROS). January-April 2007. Sioux Falls, SD.

Symposia/Workshops Organized

- GeoHealth Session on Global Hotspots Related to Environmental Change and Health Impacts, American Geophysical Union Fall Meeting, December 13, 2022. Chicago, IL.
- Union Session on Earth Science Data Access and Integration at the Nexus of Science, Policy, and Society, American Geophysical Union Fall Meeting, December 12, 2019. San Francisco, CA.
- West Africa Forest Degradation Data System (WAFORDD) Workshop. Attended by representatives of Ghanaian universities, government agencies, and NGOs. September 30-October 3, 2019. Centre for Remote Sensing and Geographic Information Services (CERSGIS), University of Ghana, Accra.
- West Africa Stakeholder Workshop on Remote Sensing Applications. Attended by representatives of Ghanaian universities, government agencies and NGOs. February 14-16, 2018. Centre for Remote Sensing and Geographic Information Services (CERSGIS), University of Ghana, Accra.
- Epidemic Prognosis Integrating Disease and Environmental Monitoring for Integrated Assessment (EPIDEMIA) System Steering Committee Meeting. Attended by representatives of SDSU and Ethiopian NGOs, public health agencies, and universities. July 25-29, 2016. Brookings SD.
- Epidemic Prognosis Integrating Disease and Environmental Monitoring for Integrated Assessment (EPIDEMIA) System Evaluation Workshop. Attended by representatives of NGOs, public health agencies, universities, and international development organizations. February 15-16 2016. Bahir Dar, Ethiopia.
- Symposium on Interconnections between Global Change and Global Health, American Society of Tropical Medicine and Hygiene Annual Meeting. October 28, 2015. Philadelphia, PA.

- Epidemic Prognosis Integrating Disease and Environmental Monitoring for Integrated Assessment (EPIDEMIA) System Evaluation Workshop. Attended by representatives of NGOs, public health agencies, universities, and international development organizations. March 5-6, 2015. Bahir Dar, Ethiopia.
- Epidemic Prognosis Integrating Disease and Environmental Monitoring for Integrated Assessment (EPIDEMIA) System Co-Design Workshop. Attended by representatives of SDSU and Ethiopian NGOs, public health agencies, and universities. July 7-11, 2014. Brookings SD.
- Symposium on Environmental Modelling of Human Health Effects from Global to Local Scales, International Congress on Environmental Modelling and Software. June 17, 2014. San Diego, CA. Co-organized with Stefan Reis and Massimo Vieno.
- Symposium on Remote Sensing for Forecasting and Mapping Mosquito-Borne Disease Risk, URISA GIS in Public Health Conference. June 28 2011. Atlanta, GA.
- Application of Satellite Remote Sensing and GIS for Malaria Epidemic Early Warning. Attended by representatives of NGOs, public health agencies, universities, and international development organizations. August 17, 2011. Bahir Dar, Ethiopia.
- Satellite Remote Sensing for Monitoring Malaria Risk. Attended by representatives of NGOs, public health agencies, universities, and international development organizations. July 1, 2010. Addis Ababa, Ethiopia.
- Symposium on the landscape ecology of infectious disease supported by NIH/NIAID, Annual Meeting of the United States Regional Association of the International Association for Landscape Ecology (US-IALE). April 7 2008. Madison, WI.
- Visualizing Future Landscapes under Alternative Land Use Scenarios. Attended by invitees from various U.S. universities and government agencies. September 15-16, Athens, GA. Supported by the USDA Cooperative State Research, Education, and Extension Service (CSREES).
- Program Chair for Southern Forestry GIS Conference. December 16-17 2004. Athens, Ga.
- Best Management Practices for Fuel Reduction in the Southeastern United States. Attended by invitees from various U.S. universities and government agencies. June 29-30 2004. Athens, GA. Supported by the USDA/USDI Joint Fire Sciences Program.

Departmental Service

University of Oklahoma

- OU DGES Faculty Search Committee Chair (2022-)
- OU DGES Graduate Committee (2018-present)
- OU DGES Faculty Search Committee Chair (2020-2021)
- OU DGES Faculty Search Committee Member (2021-)

South Dakota State University

- GSCE Faculty Search Committee Member (2017)
- GSCE Assistant Research Professor Search Committee Member (2013)
- GSCE Faculty Search Committee Member (2012-2013)
- GSCE Research Coordinator Search Committee Chair (2011)
- GSCE Assistant Research Professor Search Committee Chair (2011)
- GSCE Research Coordinator Search Committee Member (2010)
- GSCE Faculty Search Chair Committee (2009-2010)

Wildlife and Fisheries Faculty Search Committee Member (2008)

University of Georgia

WSFR Lands Committee (2004-2005)

WSFR Teaching Effectiveness Committee (2001-2005)

GIS/RS Faculty Position Search Committee (2004)

GIS/RS Faculty Position Search Committee (2001-2002)

WSFR Graduate Student Symposium Judge (2002, 2003)

University Service

OVPR Search Committee – Executive Director, Integrative Life Science Institute (2022-)

OU Graduate Council Representative for the College of Atmospheric and Geographic Science (2021-)

OU Research Council (2021-)

OU Postdoctoral Stimulus Program, Review Committee. (2021)

Mergler/Bullard Dissertation Completion Fellowship, Review Committee. (2021)

Reader and Evaluator for the OU Provost’s Dissertation Award (2020)

SDSU Geospatial Science and Engineering PhD Graduate Program Coordinator (2011-2018)

SDSU Vice-President for Research and Economic Development Search Committee Member (2017)

SDSU Strategic Planning Leadership Team (2017)

Graduate Council Representative for the College of Agriculture and Biological Sciences (2014-2017)

SDSU Campus Planning and Design Committee (2010-2012)

SDSU Geospatial Science and Engineering PhD Admissions Coordinator (2005-2011)

Professional Service

Peer Review Panels

CDC National Center for Emerging and Zoonotic Infections, Special Emphasis Panel. March 17-18, 2022. Teleconference.

Research Corporation for Science Advancement SciLog Workshop Facilitator and Proposal Reviewer. September 30-October 1 and October 27, 2021. Teleconference.

NIH Special Emphasis Panel - Infections Diseases and Microbiology Integrated Review Group. March 23, 2020. Teleconference.

NIH Community Influences on Health Behavior Study Section, Healthcare Delivery and Methodologies Integrated Review Group. February 16-17, 2017. Teleconference.

NIH Pulmonary, Cardiovascular, and Musculoskeletal Epidemiology Study Section, Member Conflicts Panel. March 15, 2016. Teleconference.

NIH Infectious Diseases, Reproductive Health, Asthma, and Pulmonary Conditions Study Section, Member Conflicts Panel. July 2, 2015. Teleconference.

NIH Collaboration on Climate Sensitive Diseases and Health Effects Special Emphasis Panel, April 22, 2014. Teleconference.

NIH Infectious Diseases, Reproductive Health, Asthma, and Pulmonary Conditions Study Section. June 25-26, 2013. Silver Spring, MD.

NIH Infectious Diseases, Reproductive Health, Asthma, and Pulmonary Conditions Study Section. February 16-17, 2012. San Francisco, CA.
NIH Infectious Diseases, Reproductive Health, Asthma, and Pulmonary Conditions Study Section. June 6-7, 2011. Washington DC.
NIH Climate Change and Health Special Peer Review Panel, March 1, 2011. Washington DC
NIH/NIAID Vector Biology Study Section. October 6, 2010. Washington, DC. Mail Reviewer.
NIH Vector Biology Study Section. June 6, 2008. Washington DC.
USDA/USDI Joint Fire Science Program, February 4-6, 2008, Boise, ID.
USGS Biological Resource Discipline Global Climate Change Research Program, November 4-6, 2003. Reston, VA.

Proposal Reviews

2022, NSF Division of Environmental Biology
2022, Wellcome Trust Digital Technology Development Awards in Climate Sensitive Infectious Disease Modelling
2020. French National Research Agency – ANR (1 proposal)
2020. Elrha, Research for Health in Humanitarian Crises – R2HC (1 proposal)
2016. NASA Postdoctoral Fellowships (3 proposals).
2016. NASA Earth System Science Fellowships (3 proposals).
2016. Wellcome Trust Training Fellowship in Public Health and Tropical Medicine.
2015. Mitacs Accelerate Proposal, Canada.
2015. Medical Research Council, United Kingdom.
2015. Canada First Research Excellence Fund, Government of Canada.
2014. NSF Geography and Spatial Science Program.
2012. Maine Agricultural and Forest Experiment Station.
2011. NSF Geography and Spatial Sciences Program.
2010. NSF Geography and Spatial Sciences Program.
2010. Belgian Science Policy Office, Support to the Exploitation and Research of Earth Observation Data (STEREO II).
2010. Republic of Ireland, Health Research Board.
2009. NIH/NIAID ARRA Challenge Grants in Health and Science Research.
2008. NSF Division of Environmental Biology, Population and Evolutionary Processes Cluster.
2006. Royal Society of New Zealand, Marsden Fund
2005. USDA National Research Initiative Managed Ecosystems Program.
2005. USDA CSREES Small Business Innovation Research Program.
2004. USDA National Research Initiative Managed Ecosystems Program.

External Reviewer for Tenure and Promotion

Provided eighteen assessments of individuals at universities, research centers, and government research organizations from 2010-2021.

Other Professional Service

2022-present, Member, Ambassador Award Selection Committee, American Geophysical Union.
2018-present, Member, Annual Meeting Program Committee, American Society of Tropical Medicine and Hygiene.

2019-2021, Co-Chair of Communications, Engagement, & Outreach Committee, American Geophysical Union GeoHealth Section.
2016-2018, Member, Board of Directors, International Environmental Modelling and Software Society.
2016-2019, Member, NASA SERVIR Applied Sciences Team.
2015-2018. Nominating Committee Member, US Regional Association of the International Association for Landscape Ecology.
2014-2016. Member, NASA Earth Science Data Systems Working Group – Data Recipes.
2009-2011. Executive Board Member (Councilor-at-Large), US Regional Association of the International Association for Landscape Ecology.
2009. Subject matter expert on vegetation trends and disturbance processes. Red Tree Vole Endangered Species Listing Advisory Panel. Meeting held in Portland, OR. August 25-26.

Editorial Boards

Associate Editor, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 2018-present.
Associate Editor, *Ecology/Ecological Monographs*, 2007-2017.

Manuscript Reviews

From 2001-present, more than 200 manuscript reviews for the following journals:

American Journal of Epidemiology; American Journal of Public Health; American Journal of Tropical Medicine and Hygiene; Annals of Epidemiology; Austral Ecology; Biogeosciences; Bioscience; Canadian Journal of Forest Research; Canadian Journal of Remote Sensing; Conservation Biology; Infection, Disease, & Health; Ecography; EcoHealth; Ecological Applications; Ecological Modelling; Ecological Monographs; Ecology; Ecosystems; Environmental Health Perspectives; Environmental Modelling & Software; Environmental Research Letters; Fire Ecology; Forest Ecology and Management; Forest Science; GeoHealth; Global Change Biology; Health Security; International Journal of Biometeorology; International Journal of Climatology; International Journal of Health Geographics; International Journal of Remote Sensing; International Journal of Wildland Fire; ISPRS International Journal of Geo-Information; Journal of Climate; Journal of Environmental Management; Journal of Insect Science; Journal of Vector Ecology; Journal of Vegetation Science; Landscape and Urban Planning; Landscape Ecology; Malaria Journal; Nature Communications; Nature Reports; Oxford Climate Encyclopedia; Parasites & Vectors; Proceedings of the National Academy of Sciences; PLOS Neglected Tropical Diseases; PLOS One; Regional Environmental Change; Remote Sensing; Remote Sensing of Environment; Trends in Parasitology; Tropical Medicine and International Health; Vector-Borne and Zoonotic Diseases; Urban Climate; Water Resources Research; Zoonoses and Public Health.

Professional Societies

American Geophysical Union
American Meteorological Society
American Society of Tropical Medicine and Hygiene
International Environmental Modelling and Software Society