CURRICULUM VITAE

MICHAEL E. HODGSON
3 April 2024

PRESENT EMPLOYMENT

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EDUCATION

Ph.D. *University of South Carolina, Columbia, South Carolina*, 1984-87.

M.S.   *University of South Carolina, Columbia, South Carolina*, 1981-83.
       University of Georgia, Athens, Georgia, 1981.
       (14 quarter hours course work in MA Program, Geography)

B.A.   *University of Tennessee, Knoxville, Tennessee*, 1974-80.
       (Geography with secondary emphasis in Computer Science)

PROFESSIONAL EXPERIENCE

2022 – pres. Distinguished Professor Emeritus at the Department of Geography, University of South Carolina.

2006 – 2021. Professor at the Department of Geography, University of South Carolina.

2017-2019   Visiting Professor, STeDe Masters Program, Department of History, Geography and Antiquity Sciences, University of Padova, Italy

2018   Visiting Professor, Plant Diversity and Botany Program, University of Padova, Italy

2014, 2015   Visiting Professor, Department of GeoInformatics, University of Salzburg, Austria

1996- 2006   Associate Professor at the Department of Geography, University of South Carolina.

1994-1996   Team Leader and Research Staff Member, Computational Physics and Engineering Division, Oak Ridge National Laboratory.

1987-1994   Assistant Professor at the Department of Geography, University of Colorado at Boulder.

3 April 2024

M.E. Hodgson

1981-1987   Research/Teaching assistant for the Geography Department, and programmer/analyst for the Social and Behavioral Sciences Laboratory, University of South Carolina, Columbia.

1981-1981   Research/Teaching assistant in the Geography Department, University of Georgia, Athens.

1980-1981   Geographer/programmer with Henningson, Durham & Richardson, Knoxville, Tennessee.

1977-1980   Research assistant in the Resource Analysis Group, Oak Ridge National Laboratories, Oak Ridge, Tennessee.

TEACHING EXPERIENCE

University of South Carolina-Columbia, Department of Geography:
Introduction to Drones for Airborne Spatial Data (285) (*new course*): Spring 2019, 2020, 2021
Lidargrammetric and Photogrammetric Digital Surface Mapping (552) (*new course*): Spring 2010, 2012, 2016, 2018, 2019, 2021
GIS Databases and Their Use (565): Spring 2011, 2013, 2017 (*new course*)
Introduction to Geographic Information Systems (363): Spring and Fall 1997-2022
GIS-Based Modeling (564): (*new course*) Fall 1997-2003, Spring 2004, Fall 2006-2022, Spring 2023
Seminar in Geographic Information Systems (763): Spring 1997 – 2002, Fall 2003-2005, Spring 2007-2009
Advanced Seminar in Geographic Information Systems (863): Fall 1996, 1999, 2002, Spring 2006, Spring 2015
Air Photo Interpretation (345): Fall 1986.
Computer Cartography (555): Spring 1986 (co-taught).

University of Salzburg, Austria, Department of Geoinformatics:
Analysis and Modeling, LiDAR: Summer Semester 2014
PhD Seminar: Summer Semester 2015

University of Padova, Italy, Department of History, Geography and Antiquity Sciences:
Territorial Development & GIS, Sustainable Territorial Development International Masters: November/December 2017, 2018, 2019.
Advanced GIS for Local Development, Local Development Master Program: January 2020, January 2022.
GIS science e Sistemi a Pilotaggio Remoto (12-hrs course lectures on "GIS for Dispute Resolution"), November 2016, 2017, 2018, 2019
Advanced GIS Analysis: December 2015

University of Padova, Italy, Department of Geosciences:
GIS-Based Modeling of Environmental Change (4-hrs course lectures, Department of Geosciences), December 2016

University of Padova, Italy, Department of Biology:
GIScience approaches for Monitoring Vegetation Change (6-hrs course lectures, Plant Diversity and Geobotany course), May/June 2018

University of Colorado-Boulder, Department of Geography:
Geographic Interpretation of Aerial Photography (3093): Fall 1990-94.
Remote Sensing of Environment (4093/5093): Fall 1988.
Mapping from Remotely Sensed Imagery (4083/5083): Spring 1993, 1994. (*new course*)
Introduction to Geographical Information Systems (4103/5103): Fall 1987-93.
Seminar in GIS (5113): Spring 1991. (*new course*)
Cartography II (404): Spring 1988, Fall 1989.
Computer Cartography (406/506): Spring 1988-92.

University of North Carolina-Greensboro, Department of Geography:
Remote Sensing (423-51): Summer 1986.

GRADUATE STUDENT COMMITTEES

Ph.D. Committee Chair (*all completed degree)
Loey Knapp*, 1994 (GIS-Task Analysis and Visualization), Chief Information Officer, U. of Montana
Xingong Li*, 2000 (GIS Modeling of Vector Fields), Professor at U. Kansas
Edwin Chow*, 2005 (GIS/Remote Sensing Hydrology), Professor at Texas State U.
Bandana Kar*, 2008 (GIS, Remote Sensing, and Hazards), Group Leader, Oak Ridge National Laboratory.
Leanne Sulewski*, 2013 (GIS Modeling of Energy Infrastructure Risk), Research Scientist, National Geospatial Intelligence Agency
Shufan Liu*, 2014 (GIScience and Remote Sensing), Software Engineer, Microsoft
Chris Gillam*, 2016 (GISci and Archaeology), Adjunct Faculty, Winthrop University

Ph.D. Committee Member (graduation year)

Joe Boardman (Geology, 1989)	Mark Serreze (1989)	Jim Maslanik (1988)
Joe Zamudio (Geology, 1992)	Antonio Lara (1991)	Tom Sever (Anthropology, 1990)
Joy Mast (1993)	Don Cline (1996)	Jeff Colby (1995)
Michael Scott (1994)	Debbie Thomas (1999)	Fang Qiu (2000)
Steve Schill (2001)	Rick Bunch (2000)	Brendan Lane (Math, 2001)
Mark Jackson (2001)	Karen Gaines (2003)	Joann Renhaack (GIINT)
Genny Healy (Geology)	Jim Scurry (2003)	Tony Fillippi (2003)
George Raber (2003)	Jason Tullis (2003)	David Vaughn (2004)
Chris Emrich (2005)	Jeff Vincent (2006)	Don Field (2007)
Maria Garcia Quijano (2006)	Charlie Zhang (2006)	Melanie Gall (2007)
Jungho Im (2006)	Kamrul Huda (Civil Eng.)	Jinyoung Rhee (2007)
Courtney Russell (2008)	Zhongwu Wang (2008)	Josh McDuffie (2009)
Todd Patterson (2009)	Ke Liao (2011)	Jenn Webb (2010)
Kimberly Meitzen (2011)	Subhajit Ghoshal (2011)	Eric Tate (2011)
Yi Chang (2012)	Zhenyu Liu (2011, Syracuse)	Nate Kettle (2012)
Alpen Olmsted (2014, C.S.)	Lisa Randle (2018, Anthr.)	Caglar Koylu (2014)

Larianne Collins (2014)   Youliang Qiu   Hu Wang (2014)
Bhaktiar F-Zadeh (2014, Salzburg, AT) Jin Hai (2017)   Qian Fan (2021)
Chen-Ling Hung (2018)   Junyu Lu (2018)   Yuan Huang
Xi Zhu (2018)   Huixuan Li (2021)   Xiao Huang (2020)
Christopher Krause (2021)   Yuqin Jiang (2022)   Grayson Morgan (2022)
Andre Coleman (2022, U. Utah) Huan Ning (in progress)

MA/MS Committee Chair (graduation year)
George Allen (1988)   Wendy Haubert (1989)   Renuka Ellis (1989)
Sara Wold (1989)   Jeff Colby (1989)   Jon Barbour (1990)
Don Cline (1992)   Mathilde Nel (1993)   John Carron (1993)
Masatoshi Chiba (1999)   Yongjun Lei (1999)   Katie Field (2000)
Melinda Young (2000)   Scott Pezanowski (2002) Edwin Chow (2002)
Tom Toland (2002)   Bridget Beesley (2002) Linda LeVay (2002)
Apurva Goyal (2003)   Yvette Greene (2004)   Jitka Kotelenska (2005)
Tommy Bramble (2006)   Jianwu Chen (2006)   Aaron Myers (2006)
Elijah Evans (2008)   Erica Pfistra-Altschul (2014) Chris Witt (2017)
Aysegul Yenaras (2017)   Grayson Morgan (2020) Alan Rickenbaker (2020)
Rohit Nepali (2021, U Padova)

MA/MS Committee Member (graduation year)
Axel Schweiger (1988)   Kathy Gard (1989)   Lize Nel (1992)
Jay Gardner   Sofian Saidin (1993)   Steve Schill (1997)
Mark Bramer (1997)   Tony Filippi (1998)   James Burd (1998)
Rich Bunch (1998)   Alison Cundall (1997) Na Liu (1999)
Paul Putnam (2000)   Chris Locke (1999)   Jarrett Laughlin (2001)
George Raber (2001)   Laura Schmidt (2001)   Matt Wellslager (2001)
Jan Mojzisek (2002)   David DosReis (2003)   Chris Robinson (2002)
Tara Koman (2003)   Joel Copeland (2003)   Steven Long (2003)
Kevin Riordan (2003)   Curtis Wursten (2003) Steve Jones (2003)
Brian Fitsgerald (2003)   Melanie Baker (2004)   Angela Nelson (2005)
Jonathan Buffaloe (2003)   Marshall McGee (2005) Joe Dickerson (2005)
Matt Schmidtlein (2005)   Chris Saylor (2005)   Feng Zhao (2006)
Linna Li (2006)   Andrew Edmunds (2006) Mari Stensvold (2006)
Christina Finch (2006)   Reggie McCarn (2008)   Michael Morgan (2009)
James Hibbert (2007)   Chris Burton (2007)   Christine Eggers (2007)
Heather Landry (2008)   Lindsey Barnes (2008) Ginni Melton (2008)
Mary Megison (2008)   Justin Roberson (2008) Mike Morgan (2009)
Jiayu Wang (2010)   Dan Morath (2010)   Joel Mathwig (2012)
Michael DuBois (2013)   Sara Flecher (2013)   Bill Soohoo (2015)
Sumi Selvaraj (2016)   Yuqin Jiang (2017)   Darrell Watson
Meghan Woods (2016)   Chris King (2017)   Tyler Dearman (2018)
Huan Ning (2019)   Bri Ferguson (2020)   Tracy Whelen (2020)
Logan Lee (2020)   Derek Matchette (2022) Ben Aland (2023)
Lily Hutchens (2023)   Gabriel Faton (in progress)

PUBLICATIONS

Books/Monographs

Palm, R. and M.E. Hodgson, 1993. *Natural Hazards in Puerto Rico: Experience, Attitudes and Behavior of Homeowners* (IBS, University of Colorado: Boulder, CO), 150 p.

Palm, R.I. and M.E. Hodgson, 1992. *After a California Earthquake: Attitude and Behavior Change*. (Chicago Press: Chicago, IL), 130 p.

Palm, R.I., M.E. Hodgson, D. Blanchard, and D. Lyons, 1990. *Earthquake Insurance in California: Environmental Policy and Individual Decision-Making*. (Westview Press: Boulder, CO), 161 p.

Chapters in Books

Piovan, S.E. and M.E. Hodgson. 2020. Military-engineered floods as defense from the enemy: a brief review and case study from WWI in Northern Italy, *Ecosystems Services in Floodplains*, edited by D. Canzian and E. Novello. (Padova University Press, Padova, Italy), pp. 105-115, ISBN 978-88-6938-183-6.

Hodgson, M.E., B. A. Davis, D. Accardo, H. Xu, K. Beidel, S.E. Piovan, 2015. Application of Mobile Data Capture with Imagery Support, *Time Sensitive Remote Sensing*; Chris Lippitt and Doug Stow, editors (Springer-Verlag), pp. 55-75.

Hodgson, M.E., S.E. Battersby, B.A. Davis, S. Liu, and L. Sulewski, 2013. Geospatial Data Collection/Use in Disaster Response: A United States Nationwide Survey of State Agencies, *Cartography from Pole to Pole,* M.F. Buchroithner, N. Prichtel, and D. Burghardt, editors; (Springer-Verlag), pp. 407-419.

Hodgson, M.E., B.A. Davis, and J. Kotelenska, 2010. Remote sensing and GIS data/information in the emergency response/recovery phase, *Geotechnical Contributions to Urban Hazard and Disaster Analysis* P.S. Showalter and Y.Lu, editors; (Springer-Verlag), DOI 10 10.1007/978-90-481-2238-7, pp. 327-354.

Jensen, J.R., and M.E. Hodgson, 2006. Remote Sensing of Natural and Man-made Hazards and Disasters, chapter 8 in *Manual of Remote Sensing (*American Society for Photogrammetry and Remote Sensing, Bethesda: MD*)*, pp. 401-429.

Jensen, J.R., M.E. Hodgson, J.A. Tullis and G.T. Raber, 2004, Remote Sensing of Impervious Surfaces and Building Infrastructure, Using Geospatial Technologies in Urban Environments (R.R. Jensen, J. Gatrell and D.D. McLane, editors), New York, NY: Springer-Verlag, Inc., pp 5-21.

J.R. Jensen and M.E. Hodgson, 2004. Remote Sensing of Selected Biophysical and Urban/Suburban Phenomena, *Geography and Technology*, edited by S. Brunn, S. Cutter, and J. Harrington (Kluwer: Netherlands), pp. 109-154.

D.S.K. Thomas, S. L. Cutter, M. Hodgson, M. Gutekunst, S. Jones, 2003. Use of Spatial Data and Geographic Technologies in Response to the September 11th Terrorist Attack on the World

Trade Center, *Beyond September 11th: An Account of Post-Disaster Research*, Publication #39 (NHRAIC, University of Colorado), pp. 147-162.

M.E. Hodgson and S.L. Cutter, 2002. Mapping and the Spatial Analysis of Hazardscapes in *American Hazardscapes: The Regionalization of Hazards and Disasters*, ed. by S. L. Cutter. Washington D.C., Joseph Henry Press, pp 37-60.

Contributing Author, 1989. Remote Sensing, *Geography in America*. (Merrill Press: Columbus, Ohio), pp. 747-775.

Jensen, J.R. and M.E. Hodgson, 1986. Appendix A: The SENSOR Digital Image Processing Programs, in *Introductory Digital Image Processing: A Remote Sensing Perspective*. (Prentice-Hall, Inc.: Englewood Cliffs, N.J.), pp. 272-363.

Jensen, J.R., M.E. Hodgson, and H.E. Mackey. 1986. Remote Sensing Forest Biomass for Loblolly Pine Using High Resolution Airborne Remote Sensor Data, Chapter 30, in *The Forest Alternative for Treatment and Utilization of Municipal and Industrial Wastes*. (University of Washington Press: Seattle), pp. 324-334.

Refereed Journal Articles

Morgan, G.R., D.R. Morgan, C. Wang, M.E. Hodgson, and S.R. Schill, 2023. The Dynamic Nature of Wrack: An Investigation Into Wrack Movement and Impacts on Coastal Marshes Using sUAS, *Drones*, 7(8): 535. https://doi.org/10.3390/drones7080535

Sella-Villa, D. and Hodgson, M.E., 2023. Active Sensors and the Privacy Problems They Pose, *University of Missouri – Kansas City Law Review*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4346211

Piovan, S.E., Hodgson, M.E., Mozzi, P., Porter, D., and Hall, B., 2023. LiDAR-Change Based Mapping of Sediment Movement from an Extreme Rainfall Event. *GIScience and Remote Sensing*, 60 (1), https://doi.org/10.1080/15481603.2023.2227394

English, C., Kitzhaber, Z., Sanim, K.R.I., Vitzilaios, N., Hodgson, M.E., Richardson, T., Myrick, M., 2023. Filter Fluorometer Calibration Without the Fluorometer, *Applied Spectroscopy*. https://doi.org/10.1177/00037028231181593

Sanim, K.R.I., English, C., Kitzhaber, Z., Kalaitzakis, M., Vitzilaios, N.I., Myrick, M.L., Hodgson, M.E., Richardson, T.L., 2023. Autonomous UAS-based Water Fluorescence Mapping and Targeted Sampling, *Journal of Intelligent & Robotic Systems*, https://doi.org/10.1007/s10846-023-01880-9

English, C.; Kitzhaber, Z.; Sanim, K.R.I.; Kalaitzakis, M.; Kosaraju, B.; Pinckney, J.L.; Hodgson, M.E.; Vitzilaios, N.I.; Richardson, T.L.; Myrick, M.L, 2022. Chlorophyll Fluorometer for Intelligent Water Sampling by a Small Uncrewed Aircraft System (sUAS), *Applied Spectroscopy*. https://doi.org/10.1177/00037028221126748

Kitzhaber, Z.; English, C.; Sanim, K.R.I.; Kalaitzakis, M.; Kosaraju, B.; Hodgson, M.E.;

Vitzilaios, N.I.; Richardson, T.L.; Myrick, M.L, 2022. Fluorometer Control and Readout with an Arduino Nano 33 BLE Sense, *Applied Spectroscopy*. https://doi.org/10.1177/00037028221128800

Hodgson, M.E.; Vitzilaios, N.I.; Myrick, M.L.; Richardson, T.L.; Duggan, M.; Sanim, K.R.I.; Kalaitzakis, M.; Kosaraju, B.; English, C.; Kitzhaber, Z. 2022. Mission Planning for Low Altitude Aerial Drones during Water Sampling, *Drones*. 6: 209, https://doi.org/10.3390/drones6080209

Peroni, F., S.E. Pappalardo, F. Facchinelli, E. Crescini, M. Munafo, M.E. Hodgson, M.D. Marchi, 2022. How to Map Soil Sealing, Land Take and Impervious Surfaces? A Systematic Review, *Environmental Research Letters*, 17, https://doi.org/10.1088/1748-9326/ac6887.

Ning, H., and Z. Li, C. Wang, M.E. Hodgson, X. Huang, X. Li., 2022. Converting Street View Images to Land Cover Maps for Surveying: A Case Study on Sidewalk Network Extraction for the Wheelchair Users, *Computers, Environment, and Urban Systems,* 95: 101808, https://doi.org/10.1016/j.compenvurbsys.2022.101808.

Morgan, G., and M.E. Hodgson, C. Wang, S. Schill, 2022. Unmanned Aerial Remote Sensing of Coastal Vegetation: A Review, *Annals of GIS*. https://doi.org/10.1080/19475683.2022.2026476.

Li, H., C. Wang, Y. Cui, M.E. Hodgson, 2021. Mapping Salt Marsh Along Coastal South Carolina Using U-net, *ISPRS Journal of Photogrammetry and Remote Sensing*. 179: 121-132, https://doi.org/10.1016/j.isprsjprs.2021.07.011

Li, Z., X.Huang, X. Ye, Y. Jiang, M. Yago, H. Ning, M.E. Hodgson, X. Li., 2021. Measuring Global Multi-Scale Place Connectivity using Geotagged Social Media Data, *Nature Communications Scientific Reports*, 11(14694), https://doi.org/10.1038/S41598-021-94300-7

Jiang, Y., D. Guo, Z. Li, and M.E. Hodgson, 2021. A Novel Big Data Approach to Measure and Visualize Urban Accessibility, *Computational Urban Science*, 1(10): https://dx.doi.org/10.1007/S43762-021-00010-1

Wang, C and G. Morgan, M.E. Hodgson, 2021. sUAS for 3D Tree Surveying: Comparative Experiments on a Closed-Canopy Earthen Dam, *Forests*, 21: 659, https://dx.doi.org/10.3390/f12060659.

Hodgson, M.E. and D. Sella-Villa, 2021. State-level Statutes Governing Unmanned Aerial Vehicle Use for Academic/Research in the USA, 42(14), *International Journal of Remote Sensing*, 42(14): 5370-5399, https://dx.doi.org/10.1080/01431161.2021.1916121.

Hodgson, M.E. and S.E. Piovan, 2021. An Indoor Landscape for Instruction of 3-D Aerial Drone Imagery, *Journal of Geography in Higher Education,* https://doi.org/10.1080/03098265.2021.1900084.

Morgan, G. and M.E. Hodgson, 2021. A Post Classification Change Detection Model with Confidences in High Resolution Multi-Date sUAS Imagery in Coastal South Carolina.

International Journal of Remote Sensing, 42(11): 4309-4336, http://dx.doi.org/10.1080/01431161.2021.1890266.

Hodgson, M.E. and G. Morgan, 2021. Modeling Sensitivity of Topographic Change with sUAS Imagery, *Geomorphology*, 375(15), https://doi.org/10.1016/j.geomorph.2020.107563.

Hodgson, M.E., 2020. On the Accuracy of Low-Cost Dual-Frequency GNSS Network Receivers and Reference Data, *GIScience & Remote Sensing*, 57 (7): 907-923, https://doi.org/10.1080/15481603.2020.1822588.

Piovan, S.E., M. Filippini, M.E. Hodgson, 2020. Loss of Wetlands in the Southern Venetian Plain: a Geo-Historical Perspective. *Bollettino dell'Associazione Italiana di Cartografia,*168: 29-48, http://hdl.handle.net/10077/30963.

Morgan, G., M.E. Hodgson, S. Wang, 2020. Using sUAS-derived Point Cloud to Supplement LiDAR Returns for Improved Canopy Height Model on Earthen Dams, *Papers in Applied Geography*, 6(4): 436-448, https://doi.org/10.1080/23754931.2020.1831946.

Derakhshan, S., M.E. Hodgson, and S.L. Cutter, 2020. Vulnerability of Populations Exposed to Seismic Risk in the State of Oklahoma. *Applied Geography*, 124, https://doi.org/10.1016/j.apgeog.2020.102295, *online 2 October 2020.*

Ning, H., Z. Li, M.E. Hodgson, C. Wang, 2020. Prototyping a Social Media Flooding Photo Screening System Based on Deep Learning, *International Journal of Geographic Information*, 9(2): 104, https://doi.org/10.3390/ijgi9020104.

Merschdorf, H., M.E. Hodgson, T. Blaschke, 2020. Modeling Quality of Urban Life Using a Geospatial Approach, *Urban Science*, 4(1), 5, https://doi.org/10.3390/urbansci4010005.

Hung, J., A. James, and M.E. Hodgson, 2018. An Automated Algorithm for Mapping Building Impervious Areas from Airborne LiDAR Point-Cloud Data for Flood Hydrology, *GIScience & Remote Sensing*, https://doi.org/10.1080/15481603.2018.1452588.

Xu, Haiqing, M.E. Hodgson, S. Piovan, D. Tufford, 2018. The Potential of Using LiDAR and CIR Aerial Imagery for Palustrine Wetland Typology and Change, *GIScience & Remote Sensing*, 55: 477-501, https://dx.doi.org/10.1080/15481603.2017.1412145.

Piovan, S.E., E. Maugeri, S. Luconi, M.E. Hodgson, 2018. "I Percorsi delle armate del generale Sherman attraverso le aree umid del South Carolina," *Bulletin of the Association of Italian Cartographers*, pp. 108-122, https://DOI: 10.13137/2282-572X/.

Contreras, D., T. Blaschke, M.E. Hodgson, 2017. Lack of Spatial Resilience in a Recovery Process: The Case of L'Aquila, Italy, *Technological Forecasting & Social change*, 121:76-128, https://doi.org/10.1016/j.techfore.2016.12.010.

Li, Z., M.E. Hodgson, W. Li., 2017. A General-purpose Framework for Parallel Processing of Large-scale LiDAR Data, *International Journal of Digital Earth,* 10, 1-22, https://dx.doi.org/10.1080/17538947.2016.1269842.

Liu, S. and M.E. Hodgson, 2016. Satellite Image Acquisition Collection Modeling for Large Area Hazard Emergency Response, *ISPRS Journal of Photogrammetry and Remote Sensing,* https://dx.doi.org/10.1016/j.isprsjprs.2016.04.007, 118:13-21.

Shook, E., M.E. Hodgson, S.Wang, B.Behzad, K.Soltani, A.L. Hiscox, and J. Ajayakumar, 2016. Parallel Cartographic Modeling: A Methodology for Parallelizing Spatial Data Processing, *International Journal of Geographical Information Science,* https://dx.doi.org/10.1080/13658816.2016.1172714.

Piovan, S. and M.E. Hodgson, 2016. How Many Carolina bays? An analysis of Carolina bays from USGS topographic maps at different scales, *Cartography and Geographic Information Science*, https://dx.doi.org/10.1080/15230406.2016.1162670.

Hodgson, M.E., A. McCombs, A. Hiscox, 2015. Sensitivity of Flux Footprint Modelling to Geographic Resolutions and Autocorrelation, *GI-Forum Journal for Geographic Information Science*. 1: 90-93.

Im, J., Z. Lu, J. Rhee, and M.E. Hodgson, 2014. Building Type Classification Using Spatial and Landscape Attributes Derived from LiDAR Remote Sensing Data, *Landscape and Urban Planning,* 130:134-148, https://doi.org/10.1016/j.landurbplan.2014.07.005.

Liu, S. and M.E. Hodgson, 2013. Optimizing Large Area Coverage from Multiple Satellite-Sensors, *GIScience & Remote Sensing*. 50(6): 652-666, https://doi.org/10.1080/15481603.2013.866782.

Battersby, S.E., M.E. Hodgson, and J. Wang, 2012. Spatial resolution imagery requirements for identifying structure damage in a hurricane disaster: A cognitive approach, *Photogrammetric Engineering and Remote Sensing* 78(6): 625-635.

Kar, B., and M.E. Hodgson, 2012. A Process Oriented Areal Interpolation Technique: A Coastal County Example, *Cartography and Geographical Information Science.* 39(1): 3-16, https://doi.org/10.1559/152304063913.

Kar, B., and M.E. Hodgson, 2012. Observational Scale and Modeled Potential Residential Loss from a Storm Surge, *GIScience & Remote Sensing*, 49(2):202-227.

James, L. A., M.E. Hodgson, S. Ghoshal, M.M. Latiolais, 2012. Geomorphic Change Detection Using Historic Maps and DEM Differencing: The Temporal Dimension of Geospatial Analysis, *Geomorphology*, 137(1): 181-198, https://doi.org/10.1016/j.geomorph.2010.10.039.

Hodgson, M.E. and B.A. Davis, Y. Cheng, J. Miller, 2010. Modeling Remote Sensing Satellite Collection Opportunity Likelihood for Hurricane Disaster Response, *Cartography and Geographical Information Science.* 37(1): 7-15, https://doi.org/10.1559/152304010790588061.

Chow, T.E. and M.E. Hodgson, 2009. Effects of Lidar Post-Spacing and DEM Resolution to Mean Slope Estimation, *International Journal of Geographical Information Science*, 23(10): 1277-1295, https://doi.org/10.1080/13658810802344127.

Jensen, J.R., and M.E. Hodgson, M. G-Q Quijano, J. Im, and J. Tullis, 2009. A Remote Sensing and GIS-assisted Spatial Decision Support System for Hazardous Waste Site Monitoring, *Photogrammetric Engineering and Remote Sensing*. 75(2): 169-177, https://doi.org/10.14358/PERS.75.2.169.

Im, J. and M.E. Hodgson, 2009. Characteristics of Search Spaces for Identifying Optimum Thresholds in Change Detection Studies, *GIScience & Remote Sensing*, 46(3): 249-272, https://doi.org/10.2747/1548-1603.46.3.249.

Im, J., J.R. Jensen, and M.E. Hodgson, 2008. Object-based Land Cover Classification Using High Posting Density LIDAR Data, *GIScience & Remote Sensing* 45(2): 209-228, https://doi.org/10.2747/1548-1603.45.2.209.

García Quijano, M., J.R. Jensen, M.E. Hodgson, B. C. Hadley, J.B. Gladden, 2008. Significance of Altitude and Posting-density on LIDAR-derived Elevation Accuracy on Hazardous Waste Sites, *Photogrammetric Engineering and Remote Sensing*, 74(9): 1137-1146, v https://doi.org/10.14358/PERS.73.9.1137

Hodgson, M.E. and B. Kar, 2008. Modeling the Potential Swath Coverage of Nadir and Off-Nadir Pointing Remote Sensing Satellite-Sensor Systems, *Cartography and Geographical Information Science*, 35(3): 147-156, /doi.org/10.1559/152304008.

Im, J., J.R. Jensen, and M.E. Hodgson, 2008. Optimizing the binary discriminant function in change detection applications, *Remote Sensing of Environment*, 112:2761-2776, https://doi.org/10.1016/j.rse.2008.01.007.

Kar, B. and M.E. Hodgson, 2008. A GIS-based model to determine site suitability of emergency evacuation shelters, *Transactions in GIS*, 12(2): 227-248, https://doi.org/10.1111/j.1467-9671.2008.01097.x.

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<u>Battersby</u>, S.E., M.E. Hodgson, B.A. Davis, S. Liu, K. Beidel, E. Pfister-Altschul, Q. Fan.

"Development of a Web-Based System to Track Airborne and Satellite Assets to Obtain Imagery for Emergency Response and Recovery," August 27, 2013, presented at the *International meetings of International Cartographic Association Conference (ICC) 2013*, Dresden, Germany. [Invited]

Hodgson, M.E, S.E. Battersby, B.A. Davis, S. Liu, L. Sulewski. "Geospatial Technology Use in Disaster Response: A Nationwide State and County Survey," April 10, 2013, presented at the *Annual Meetings of the Association of American Geographers*, Los Angeles.

Hodgson, M.E. "New Trends in GSIcience for Disasters," March 27, 2013, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Baltimore, MD. [Invited]

Hodgson, M.E., S. Battersby, B. Davis, S. Liu. "Tracking Satellite and Airborne Remote Sensing Assets for Emergency Response," March 26, 2013, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Baltimore, MD.

Hodgson, M.E. and A. Hiscox, S. Wang, B. Behzad, S. Flecher, Y. Liu, and A. Padmanabhan, "Cartographic Modeling Language Approach for CyberGIS: A Demonstration with Footprint Models," presented at the *First International Conference on Space, Time, and CyberGIS*, August 7, 2012 in Urbana, IL. [Invited]

Hodgson, M.E. and A. Hiscox, S. Wang, B. Behzad, S. Flecher, K. Soltani, Y. Liu, and A. Padmanabhan, "A Parallelized Cartographic Modeling Language (CML)-Based Solution for Footprint Models," presented at the *First International Conference on Space, Time, and CyberGIS*, August 8, 2012 in Urbana, IL. (oral presentation and poster presentation) [Invited]

Battersby, S, M.E. Hodgson, B. Davis, S. Liu, and L. Sulewski, "Challenges in Collecting, Using, and Representing Geospatial Data for Emergency Response" presented at the *Annual Meetings of the AutoCarto 2012 International Research Symposium*, September 17, 2012, Columbus, OH.

Battersby, S, M.E. Hodgson, B. Davis, S. Liu, and L. Sulewski, "A Survey of State/County EOCs Offices: Emerging Technologies to Enhance Rapid Data Collection, Distribution, and Response" 2012, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing,* Sacramento, CA.

Hodgson, M.E., S. Battersby, B. Davis, S. Liu, and L. Sulewski, "A Survey of State/County EOCs Offices: What and When do They Need Geospatial Data/Imagery in the Disaster Response?" 2012, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Sacramento, CA.

Hodgson, M.E. and D. Buell, "Mobile Geospatial Situational Awareness for Field and Command Staff During the Emergency Response Phase," February 27, 2012, presented at the *Annual Meetings of the Association of American Geographers,* New York, NY.

Hodgson, M.E. and D. Buell. "Pictometry Mobile Implementation Project at USC," *Pictometry User's Group Meeting,* February 23, 2012, Columbia, SC.   [Invited]

Hodgson, M.E. and D. Buell. "LiDAR Data – What you Get and How to Use it," *GISArc 2012*, February 7, 2012, Charleston, SC. [Invited]

Hodgson, M.E. and K. Hunt, "LiDAR-Based Characterization of Small Gullies Under Forest Canopy," May 4, 2011, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Milwaukee, WI.

Battersby, S. and M.E. Hodgson, J. Wang, "Resolution Requirements for Post-Disaster Imagery: A Cognitive Evaluation," May 5, 2011, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Milwaukee, WI.

Lu, Z. and J. Im, M.E. Hodgson, "Building Type Classification Using Spatial Attributes Derived from LiDAR Remote Sensing Data," May 4, 2011, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Milwaukee, WI.

Liu, S. and M.E. Hodgson, "Modeling the Optimal Remote Sensing Satellite Collection Opportunities for Large Disaster Areas," May 3, 2011, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Milwaukee, WI.

Hodgson, M.E., and J.R. Jensen, Yi. Chang, D. Morgan, "Modeling Sea Level Rise Impacts from High Resolution LiDAR and Image Sources," March 14, 2011, presented at the *Annual Meetings of the Association of American Geographers*, Seattle, WA.

Hodgson, M.E. "Optimal Tasking of Remote Sensing Satellites for Emergency Response", in Workshop "Remote Sensing Techniques for Improved Earthquake Warning, Monitoring, and Response", January 26, 2011, Monterey, CA. [Invited]

Hodgson, M.E. and J.R. Jensen, "Airborne and Terrestrial LiDAR Technology for Assessing Topography," October 16, 2010, presented at the *41st International Binghamton Geomorphology Symposium*, Columbia, SC. [Invited]

Hodgson, M.E., J.R. Jensen, and S. Cutter, "Development of Remote Sensing-assisted Natural and Technological Hazards Decision Support Systems," July 7, 2010, presented at the *Principal Investigators Meeting for NASA ROSES Natural Hazards Program*, Washington, DC. [Invited]

B. P. Sigrist and M.E. Hodgson, "An Automated Approach for Modeling Stream Position and Type in South Carolina from Lidar-based Data," April 30, 2010, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, San Diego, CA.

Hodgson, M.E. "Improved Remote Sensing Mission Tasking and Image Acquisition for Emergency Response," panel discussion/presentation, April 28, 2010, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing,* San Diego, CA. [Invited]

M.E. Hodgson, S. Liu, I. Kramer, and B. Sigrist. "A Satellite-Sensor-Band Database Accessible Programmatically Using Web Services," April 29, 2010, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, San Diego, CA.

J.R.Jensen, M.E. Hodgson, I. Kramer, S. Liu, B. Sigrist, B. Davis, "Identifying the Spatial and Spectral Resolution Requirements Associated with the Department of Homeland Securities Hurricane and Flood Information Collection Plan Essential Elements of Information (EEI)," April 28, 2010, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing,* San Diego, CA.

Hodgson, M.E. "Functional Relationship Between Attitudes, Behavior, Experience and the Hazard Location," April 14, 2010, presented at the *Annual Meetings of the Association for American Geographers*, Washington, DC.

Hodgson, M.E. "Fundamentals of LiDAR and Applications," April 9, 2009, *Newberry Chapter of Professional Land Surveyors*, Prosperity, SC. [Invited]

Hodgson, M.E. and B. Kar. "Line Definition and Generalization at the Process Scale: A Hurricane Coastline Example," March 25, 2009, presented at the *Annual Meetings of the Association for American Geographers*, Las Vegas, NV.

Kar, B. and M.E. Hodgson. "Generalization of Coast Boundary: Comparison of Generalization Techniques," March 11, 2009, presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Baltimore, MD

Hodgson, M.E. and E. Chow, March 13, 2009, "Lidar Data Post-Spacing and Scaling Relationships with Hydrologic Parameters," presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Baltimore, MD.

Hodgson, M.E. "GIScience Approaches in the Disaster Response and Recovery Phases of the Hazard Cycle Points," December 5, 2008, *University of North Carolina-Charlotte*, Charlotte, NC. [Invited]

Andris, C., M.E. Hodgson, B.A. Davis, and Y. Cheng. "Adding Historical Image Collections and Future Plans to the Remote Sensing Hazard Guidance System," May 2, 2008, *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Portland, OR. [Invited]

Hodgson, M.E., "Validation of Lidar Points Using Crossvalidation versus Reference Points," May 1, 2008, *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Portland, OR.

Andris, C. and M.E. Hodgson, "Adding Historical Image Collections and Future Plans to the Remote Sensing Hazard Guidance System," May 2, 2008, *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Portland, OR.

Hodgson, M.E. and B. Kar, "Mapping the Potential Swath Coverage of a Remote Sensing Satellite-Sensor Combination," November 19, 2007, *Southeastern Division of the Association of American Geographers*, Charleston, SC.

Hodgson, M.E., B.A. Davis, and Y. Cheng. "A Remote Sensing Hazard Guidance System in

Support of Hazard and Emergency Management Operations," March 6, 2007, *GeoTools 2007 Annual Conference*, Myrtle Beach, SC.

Hodgson, M.E., J.R. Jensen, M.G-Quijano, L. Lapine. "Overall and Temporal Variability in Horizontal Accuracy of Lidar Data," *Annual Meetings of the Association for Photogrammetry and Remote Sensing*, Tampa, FL, May 10, 2007

Hodgson, M.E., B. Davis, B. Kar, Y. Cheng. "How Many People Live Near the 'Coast'? as a Measure of Risk," *Annual Meetings of the Association of American Geographers*, San Francisco, CA, April 19, 2007

Hodgson, M.E. (Panelist) for Session titled "GIScience and Disaster Management: Research prospects and challenges," April 20, 2007, *Annual Meetings of the Association of American Geographers*, San Francisco, CA. [Invited]

Hodgson, M.E., B. Davis, B. Kar, Y. Cheng. "A Remote Sensing Hazard Guidance System," *Coastal GeoTools 2007*, Myrtle Beach, SC, March 6, 2007

Hodgson, M.E., "A Remote Sensing Hazard Guidance System in Support of Hazard and Emergency Management Operations," January 23, 2007, *South Carolina Arc Users Group*, Charleston, SC, SC. [Invited]

Hodgson, M.E., "Assessment of LIDAR Mapping Approaches for Topographic Mapping: Empirical Evidence," October 18, 2006, *National Research Council Committee Meeting on Floodplain Mapping Technologies*, Washington, DC. [Invited]

Hodgson, M.E., B. Davis, B. Kar, Y. Cheng. "Satellite Collection Opportunities for Natural Disaster," *Annual Meetings of the Association for Photogrammetry and Remote Sensing*, Reno, NV, May 5, 2006.

Hodgson, M.E., B. Davis, B. Kar, Y. Cheng. "Probability of Satellite Image Collections Over Disaster Areas," *Annual Meetings of the Association of American Geographers*, Denver, CO, March 9, 2006.

Hodgson, M.E., "Geospatial Data Approaches During Phases of the Disaster Cycle: State EOC Perspectives," *Subcommittee on Disaster Reduction*, Washington, DC., March 1, 2006. [Invited]

Mitchell, J. T., Edmonds, A., McCarn, R., Hodgson, M., and S. L. Cutter. "Evacuation Behavior in Response to the Graniteville, South Carolina Chlorine Spill." *Applied Geography Conference*, Washington DC, November 4, 2005.

Hodgson, M.E., panel session titled "A Survey of GIScience Approaches in State-Level Emergency Operations Centers", presented at the *Geospatial Information for Disaster Management Workshop (NRC Committee on Planning for Catastrophe)*, Washington, DC, Oct 5, 2005. [Invited]

Hodgson, M.E., panel session titled "A Survey of GIScience Approaches in State-Level Emergency Operations Centers", presented at the *Annual Hazards Research and Applications*

Workshop, Denver, CO, July 12, 2005. [Invited]

Hodgson, M.E., B. Davis, L. Shirley, K. Remington, J. Kotelenska, Y. Cheng. "A Remote Sensing Hazard Guidance System," *ESRI User Conference*, Baltimore, MD July 10, 2005.

Hodgson, M.E., B. Davis, J. Kotelenska, Y. Cheng. "A Remote Sensing Hazard Guidance System," *Annual Meetings of the Association of American Geographers*, Denver, CO, April 5, 2005

Hodgson, M.E., B. Davis, J. Kotelenska, Y. Cheng. "A Remote Sensing Hazard Guidance System," *Annual Meetings of the Association for Photogrammetry and Remote Sensing*, Baltimore, MD March 10, 2005.

Hodgson, M.E., B. Davis, and J. Kotelenska. "A Survey of GIS and Remote Sensing in State-Level Hazard Offices," *Annual Meetings of the Association for Photogrammetry and Remote Sensing*, Denver, CO, May 9, 2004.

Hodgson, M.E., B. Davis, and J. Kotelenska. "A Survey of GIS and Remote Sensing in State-Level Hazard Offices," *Annual Meetings of the Association of American Geographers*, Philadelphia, PA, March 9, 2004.

Gaines, K.F., T.E. Chow, M. A. Wilson, and M.E. Hodgson. "A Spatially Explicit Exposure Model to Estimate Contaminant Exposure in Wildlife," *11th Annual Conference of the Wildlife Society*, Calgary, Canada. September 18-22, 2004.

Hodgson, M.E., panel session titled "GISscience and Hazards", presented at the *Annual Hazards Research and Applications Workshop*, Denver, CO, July 14, 2004. [Invited]

Hodgson, M.E. "Remote Sensing Challenges?," *Annual Meetings of the Southeastern Association of American Geographers*, Charlotte, NC, November 25, 2003. [Invited]

Hodgson, M.E. and P. Bresnahan, "Modeling Lidar Error Using an Error Budget Model," (oral presentation) T*errain Data Conference organized by MAPPS and the American Society for Photogrammetry and Remote Sensing*, Charleston, SC, October 30, 2003.

Hodgson, M.E. and T. Edwin Chow, "Comparison of Interpolation Methods for Mapping Surface Slope from Airborne LIDAR Data," (oral presentation) *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Anchorage, AK, May 8, 2003.

Hodgson, M.E., "The Use of GIScience Approaches in Phases of the Hazard Cycle," invited presentation to the *Kocaeli '99 International Conference on Earthquake Hazards*, Istanbul, Turkey, January 16, 2003. [Invited]

Hodgson, M.E., J. Jensen, J. Tullis, B. Hadley, C. Robinson, K. Riordan, G. Raber, R. Archer, and P. Bresnahan, "The Use of LIDAR and Optical Remote Sensing Data for Mapping Parcel Level Permeability," *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Washington, DC, April 25, 2002.

Hodgson, M.E., and P. Bresnahan, "Accuracy of Airborne LIDAR Derived-Elevation by Land Cover Type," *Annual Meetings of the Association of American Geographers*, Los Angeles, March 20, 2002.

Hodgson, M.E., and P. Bresnahan, "Evaluation of Airborne LIDAR Derived-Elevation in a County-Wide Mapping Effort," *South Carolina Mapping Advisory Committee Meeting*, Greenville, SC, February 6, 2002. [Invited]

Hodgson, M.E., and P. Bresnahan, "Richland County Elevation Data Program QA Project – Field Verified Data," *Richland County Stormwater Management Engineering, Surveying, and Policy Seminar*, Columbia, SC, September 6, 2001. [Invited]

Hodgson, M.E. and R. Lloyd, "The Order of Image Classification: A Cognitive Perspective," *Annual Meetings of the Association of American Geographers*, New York, NY, February 28, 2001.

Hodgson, M.E., and P. Bresnahan, "Evaluation of Airborne LIDAR Derived-Elevation in a County-Wide Mapping Effort," *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, St. Louis, MO, April 25, 2001.

Hodgson, M.E., B. Lloyd, and R. Bunch, "A Justification for Ordering Information Extraction Steps: A Cognitive Perspective," *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Washington, DC, May 24, 2000.

Hodgson, M.E. and R. Lloyd, "Contextual Information and Experience in Remote Sensing Information Extraction: A Cognitive Perspective," *Annual Meetings of the Southeastern Division of the Association of American Geographers*, Chapel Hill, NC, November 20, 2000.

Hodgson, M.E., "On the Treatment of Space in Environmental Justice Research," *Annual Meetings of the Association of American Geographers*, Pittsburgh, PA, April 6, 2000.

Hodgson, M.E. and X. Li, "Modeling Directionally Dependent Cost in a GIS-Based Environment," *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, Portland, OR, May 20, 1999.

Hodgson, M.E., "Poverty and Environmental Inequity: A GIS-Based Field Approach," *Annual Meetings of the Society for Risk Analysis*, Atlanta, GA, December 7, 1999

M.E. Hodgson and X. Li, "Modeling Directionally Dependent 'Cost'" in a GIS-Based Environment", to be presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, April, 1999.

M.E. Hodgson, "Geographic Sampling Resolution and Environmental Impact Area in Environmental Equity Research," to be presented at the *Annual Meetings of the Association of American Geographers*, April, 1999.

M.E. Hodgson, X. Li, Y. Cheng, J. Smyre, and R.C. Durfee, "A Model for Uncertainty in Transportation Feature Extraction from Remotely Sensed Imagery", *Annual Meetings of the*

American Society for Photogrammetry and Remote Sensing, April, 1998.

M.E. Hodgson and C. Dorn, "A Family of Surface Orientation Modeling Applications and Their Solutions Using Cartographic Modeling Language", *Annual Meetings of the Association of American Geographers*, April, 1998.

Dorn, C. and M.E. Hodgson, "Effects of Landscape Cover and Terrain Form on the Spatial Distribution of Error Within USGS Digital Elevation Models", *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, April, 1998.

Hodgson, M.E. "Remotely Sensed Markers for Natural Hazards Forces," *Annual Meetings of the Southeastern Association of American Geographers*, Birmingham, AL, November 25, 1997. [Invited]

Hodgson, M.E. "Planning for Image Acquisition After a Hurricane: A Rapid Response Context," *GIS/LIS Meetings*, Cincinnati, OH, October, 1997.

Hodgson, M.E., Organizer and Chair of session titled "Remote Sensing and Its Application to Environmental Hazards", *Annual Hazards Research and Applications Workshop*, Denver, CO, July 13, 1997.

Hodgson, M.E. "Planning for Image Acquisition After a Hurricane: A Rapid Response Context," presented at the *Annual Meetings of the Association of American Geographers*, April, 1997.

Hodgson, M.E., "Rule-Based Approaches for Image Classification: A Review," presented at the *Annual Meetings of the American Society for Photogrammetry and Remote Sensing*, April, 1997.

Hodgson, M.E. and L. Wood, plenary session titled "The Use of National Technical Means Data for Seagrass Mapping", presented at the *Annual Coastal Change Analysis Program (C-CAP) Workshop*, Charleston, SC, February 13, 1997. [Invited]

Hodgson, M.E., R.C. Durfee, Y. Cheng, J. Smyre, B. Hargrove, and P. Coleman. "GIS and Remote Sensing for Evaluating NPL Sites: A Modification of the CERCLA 120 (h) Review Process," presented at the *Annual Meetings of GIS/LIS*, Denver, CO, November, 1996.

Hodgson, M.E., plenary session titled "What are the Realities of GIS Use in Hazards Mitigation?", presented at the *Annual Hazards Research and Applications Workshop*, Denver, CO, July 1996. [Invited]

Hodgson, M.E., "Hurricane Windfield Modeling: A GIS-Assisted Approach," presented at the *Annual Meetings of the AAG*, Charlotte, NC, April 12, 1996.

Hodgson, M.E. "Remote Sensing/GIS Supercomputing Research at Oak Ridge National Laboratory," *Commercial Applications of Remote Sensing Supercomputing Workshop*, Maui High Performance Computing Center, HI, 1996. [Invited]

Hodgson, M.E. "GIS and Parallel Supercomputers Applications", Department of Geography,

University of South Carolina, February, 1996. [Invited]

Hodgson, M.E., Y-Cheng, R.C. Durfee, "GIS Supercomputing Applications at ORNL," presented at the *Annual Meetings of GIS/LIS*, Nashville, TN, November, 1995.

Hodgson, M.E., 1994. "Geographic Window Size and Visual Image Classification Accuracy: An Experimental Approach," presented at the *Annual Meetings of ASPRS/ACSM*, Reno, NV.

Shelley, B., M.E. Hodgson, L. Norman, and B.A. Davis, 1994. "A Framework for User Modification of a Knowledge-Based Image Classifier," *1993 ASPRS-ACSM Annual Convention*.

Hodgson, M.E., 1994. "What Size Geographic Window for Image Classification?" presented at the *Annual Meetings of the AAG*.

Hodgson, M.E., B. Shelley, L. Norman and B. Davis, 1994. "A Framework for User Modification of a Knowledge-Based Image Classifier," to be presented at the *Annual Meetings of ASPRS/ACSM*, Reno, NV.

Hodgson, M.E. Panel discussion on "NSF Laboratory and Equipment Grants: Part II," *Annual Meetings of AAG*, San Francisco March, 1994. [Invited]

Hodgson, M.E. "Geographic Knowledge and Hazards," *Department of Geography, University of North Carolina*, February 25, 1994.   [Invited]

Hodgson, M.E. "Human Cognition of Remotely Sensed Imagery," *Department of Geography, East Carolina University*, February 3, 1994. [Invited]

Hodgson, M.E., 1993. "Multiple Models in Feature Extraction," at the *Annual Meetings of ASPRS/ACSM*, New Orleans, LA.

Hodgson, M.E., 1992. "Merits of Visual Interpretation for Digital Image Mapping," at the *Annual Meetings of the AAG*, San Diego, CA.

Hodgson, M.E. "Reflections on Visual Image Classification Logic," *ERDAS User's Group Meeting*, ERDAS, Inc, Atlanta, GA, presented October 18, 1992. [Invited]

Hodgson, M.E., 1992. "Sensitivity of Spatial Interpolation Models to Parameter Variation," at the *Annual Meetings of ASPRS/ACSM*, March.

Hodgson, M.E. and R.I. Palm, 1991. "Attitudes and Response to Earthquake Hazards: The Impacts of the Loma Prieta Earthquake in California," at the *URISA Annual Conference* in San Francisco, CA.

Hodgson, M.E., 1991. "Characteristics of the Window for Neighborhood Analysis of Nominal Data," at the *Annual Meetings of ASPRS/ACSM*, Baltimore, MD.

Hodgson, M.E. "Living with Earthquake Risk: California and Puerto Rico Case Studies," *Department of Geography, University of Oregon*, presented December 5, 1991. [Invited]

Hodgson, M.E., 1990. "Error in Manual Digitizing of Cartographic Point Features," at the *Annual Meetings of AAG*, Toronto, CA.

Hodgson, M.E. and B.E. Alexander, 1990. "Use of Historic Maps in GIS Analyses," at the *Annual Meetings of ASPRS/ACSM*, Denver, CO.

Hodgson, M.E. and B.A. Davis, 1990. "A Comparative Analysis of Grid-Based Encoding Schemes Used in a GIS," at the *Annual Meetings of ASPRS/ACSM*, Denver, CO.

Hodgson, M.E. "Earthquake Insurance in California," with R. Palm, *Department of Geography, University of Geography Colloquia*, November 16, 1990. [Invited]

Hodgson, M.E. "The Decision to Purchase Earthquake Insurance in California," with Risa Palm, presentation at the *U.S. Geological Survey*, Golden, CO. [Invited]

Hodgson, M.E. "The Use of GIS in Global Change," presented at *The University Symposium on Global Change*, September 14, 1990, (Boulder, CO). [Invited]

Hodgson, M.E. "Relative Error in GIS Analysis," presented at the *Department of Geography, University of Wisconsin*, March 8, 1990, (Madison, WI). [Invited]

Hodgson, M.E. "Remote Sensing and GIS Research at the University of Colorado," presented at the *Regional Seminar on land Management information Technologies*, February 8, 1990, (Lincoln, NB). [Invited]

Hodgson, M.E., 1989. "Implementing a Dichotomous Interpretation Key in a Simple Rule-Based Classifier," at the *Annual Meetings of ASPRS/ACSM*, Baltimore, MD.

Hodgson, M.E., R.W. Plews, 1989. "Graphical Depiction of the N-Dimensional Location of Cluster Means," at the *Annual Meetings of ASPRS/ACSM*, Baltimore, MD.

Hodgson, M.E., L.A. Barrett, and R.W. Plews, 1989. "Cartographic Data Capture Using CAD," at the *Annual Meetings of Auto/Carto-9 Symposium*, Baltimore, MD.

Hodgson, M.E. "Development and Applications of GIS at the University of Colorado," *ASPRS/ACSM Statewide GIS Conference*, September 8, 1989, (Ft. Collins, CO). [Invited]

Hodgson, M.E., 1988. "Monitoring Wood Stork Foraging Habitat with Remote Sensing and Geographic Information Systems," at the *Rocky Mountain Division of the AAG*, Colorado Springs, CO.

Hodgson, M.E., 1988. "Reducing the Computational Requirements of the Minimum Distance Classifier," at the *Annual Meetings of the AAG*, Phoenix, AZ.

Hodgson, M.E., J.R. Jensen, J. Pinder, and H.E. Mackey, 1988. "Vegetation Mapping Using High Resolution MSS Data: Canopy Reflectance and Shadow Problems Encountered and Possible Solutions," at the *Annual Meetings of ASPRS/ACSM*, St. Louis, MO.

Davis, B.A. and M.E. Hodgson, 1988. "Variation of Surface Water Spectral Response As a Function of in situ Sampling Technique," at the *Annual Meetings of ASPRS*, St. Louis, MO.

Hodgson, M.E. "Mapping Pine Biomass with High Resolution Imagery," February 24, 1988, *UC-Boulder: Department of Geography*. [Invited]

Hodgson, M.E. and J.R. Jensen. "Interrelationships Between Spatial Resolution and Per-Pixel Classifiers for Extracting Information Classes, Part 2: The Natural Environment," at the *Annual Meetings of ASPRS/ACSM*, Baltimore, MD, 1987.

Hodgson, M.E. "Mapping Inland Wetlands Using High Resolution Remotely Sensed Data," *UNC-Greensboro: Department of Geography,* March 4, 1987. [Invited]

Hodgson, M.E. and R.E. Lloyd. "Cognitive and Statistical Approaches to Texture," at the *Annual Meetings of ASPRS*, Washington, D.C., 1986

Jensen, J.R. and M.E. Hodgson. "Remote Sensing of Endangered Species Foraging Habitats: A Wood Stork Example," at the *Annual Meetings of ASPRS*, Washington, D.C., 1986.

Hodgson, M.E.. "Constructing Shaded Maps with the DIME Topological Structure: An Alternative to the Polygon Approach," at the *Annual Meetings of AUTO-CARTO 7*, Washington, D.C., 1985

Hodgson, M.E.. "Constructing Shaded Maps with the DIME Topological Structure: An Alternative to the Polygon Approach," at the Annual Meetings of AUTO-CARTO 7, Washington, D.C., 1985.

POSTER PRESENTATIONS

Hodgson, M.E., S.E. Piovan, P. Mozzi, D. Porter, B. Hall, 2019. "Modeling Overland Sediment Movement on the South Carolina Training Center from an Extreme Hazardous Rainfall Event," to be presented at the *13th International Conference on Military Geosciences*, June 24-28, 2019 in Padova, Italy.

Hodgson, M.E., S.E. Piovan, H. Xu, J. Kupfer, C. Long, T. Creed, 2016. "A Model for Forecasting Transportation-Related Wetland Impacts," presented at the *GI-Forum 2016*, July 6, 2016 in Salzburg, Austria.

Piovan, S.E. and M.E. Hodgson, 2016. "How Many Carolina Bays? A New GIScience-based Approach Estimation from Historic Topographic Maps," presented at the *GI-Forum 2016*, July 6, 2016 in Salzburg, Austria.

Hodgson, M.E and A. Hiscox, S. Wang, B. Behzad, S. Flecher, Y. Liu, and A. Padmanabhan, "Cartographic Modeling Language Approach for CyberGIS: A Demonstration with Footprint Models," presented at the *First International Conference on Space, Time, and CyberGIS*, August 7, 2012 in Urbana, IL.

Hodgson, M.E. and A. Hiscox, S. Wang, B. Behzad, S. Flecher, Y. Liu, and A. Padmanabhan, "Cartographic Modeling Language Approach for CyberGIS: A Demonstration with Footprint Models," presented at the *First International Conference on Space, Time, and CyberGIS*, August 7, 2012 in Urbana, IL.

Hodgson, M.E. "Modeling Satellite Remote Sensing Collection Opportunities During Disasters," *4ᵗʰ International Conference on Cartography and GIS*, June 18, 2012, Albena, Bulgaria, pp. 110-118.

FUNDED GRANTS and CONTRACTS

T.L. Richardson, C.Benitez-Nelson, M.E. Hodgson, M.L. Myrick, L.Pennington-Gray, J.L. Pinckney, S.D. Richardson, N. Vitzilaios, USC Center for Clean Water and Ecosystem Health, University of South Carolina, 7/1/2023 – 6/30/2027, $1,988,973.

Myrick, M.L., N.I. Vitzilaios, M.E. Hodgson, and T.L. Richardson, "Drone-Based Screening and Triggered Sampling of Water," Office of Research, University of South Carolina, 7/1/21 – 9/30/21, $99,836.

Hodgson, M.E. and S. Wang, "Aerial Drones for Mapping Geographic Landscapes at Fine Spatial Scales," College of Arts and Sciences, University of South Carolina, 2/8/18 – 12/31/18, $16,793.

Porter, D. and Hodgson, M.E., "Assessing the Impacts of the October 2015 Meterological Event on the topography and road network of the McCrady Training Center," South Carolina Army National Guard, 4/1/16 – 6/30/17, $20,000.

Hodgson, M.E., "ArchSite IIC: Transition of Web-Based Archaeological & Historical Sites Geodata," South Carolina Department of Archives and History, 5/1/16 – 8/31/16, $36,100.

Hodgson, M.E. and Charlotte J. Ector, "A Viewshed Model for Analyzing Community Awareness of Nazi Internment Camp Activities," Magellan Scholar Program/USC, 4/15/15 – 11/30/15, $2,950.

Canzian, D., et al. Ecosystem services nella bassa pianura dell'Adige e del Bacchiglione dal medioevo all'età contemporanea, 1/1/2015-12/31/2016, 59,500 euro. (I am a listed as a collaborator on the project in the GIScience portion; no funds.)

Hodgson, M.E., "ArchSite IIB: Research and Support for Web-Based Archaeological & Historical Sites Geodata," South Carolina Department of Archives and History, 1/1/15 – 7/31/15, $48,100.

Hodgson, M.E. and J. Kupfer, "A Geospatial Wetlands Mitigation Forecasting Model," M.E. South Carolina Department of Transportation, 2/8/13 – 12/31/16, $402,822.

Hodgson, M.E., "Tracking Airborne and Satellite Remote Sensing Collection Assets for

Emergency Response Phase: Phase II," Department of Homeland Security, 9/30/13 – 9/30/15, $299,711.

Hodgson, M.E., "Mobile Geospatial Situational Awareness for Field and Command Staff During the Emergency Response Phase – Transition," Department of Homeland Security, 1/31/2014-5/31/2014, $34,136.

Hodgson, M.E., "ArchSite II: An Web-Based System for Collecting and Publishing Archaeological and Historic Site Information," South Carolina Department of Archives and History, 6/15/13 – 6/15/14, $54,499.

Hodgson, M.E., and D. Buell, Supplemental request for "Mobile Geospatial Situational Awareness for Field and Command Staff During the Emergency Response Phase – Maturation," Department of Homeland Security, 12/1/12 – 9/31/13, $99,877.

Hodgson, M.E., Participating Agreement Between USC-Geography and US-Forest Service, USDA/USFS, 8/8/2012 – 8//2014, $27,400.

Hodgson, M.E. and S. Battersby, "Prospectus for Retooling GEOG 105 Digital Earth to meet Information Literacy and Analytical Reasoning & Problem Solving," USC College of Arts and Science, 1/1/12 – 8/1/11, $10,000.

Hodgson, M.E. and S. Battersby, "Tracking Airborne and Satellite Remote Sensing Collection Assets for Emergency Response Phase," Department of Homeland Security, 9/1/11 – 8/31/13, $241,277.

Hodgson, M.E. and D. Buell, "Mobile Geospatial Situational Awareness for Field and Command Staff During the Emergency Response Phase," Department of Homeland Security, 9/1/11 – 6/30/12, $99,257.

Hodgson, M.E. and S. Battersby, "The Use of Geospatial and Remotely Sensed Data and Technology in State and Representative Federal/Local Level Hazard Related Offices," NASA/DHS, 12/10 – 12/11, $87,666.

Hodgson, M.E., "Predicting the Impacts of Sea Level Rise in Beaufort County, SC Using Improved LIDAR-derived Digital Elevation Models, Digital Aerial Photography, Salinity Intrusion Modeling, and Sea Level Rise Scenarios," Beaufort County, 4/10 – 6/10, $4,995.

James, A. and M. E. Hodgson, "Establishing NHD/WBD Stewardship Program and developing a protocol for creating local resolution NHD data for South Carolina USGS, 7/1/09-6/30/09, $25,000.

Hodgson, M.E., "Incorporation of Essential Elements of Information (EEI) in the Remote Sensing Hazard Guidance System (RSHGS) – Flood Hazards," University of Mississippi, 5/09 – 4/10, $124,763.

Hodgson, M.E., "Incorporation of Essential Elements of Information (EEI) in the Remote Sensing Hazard Guidance System (RSHGS)," University of Mississippi, 7/08 – 12/08, $42,994.

Battersby, S. and M.E. Hodgson, "A cognitive assessment of post-disaster imagery requirements," University of South Carolina ROP proposal, 8/08 – 8/09, $9,200.

Co-Principal Investigator (with Gary La Free, University of Maryland; Arie Kruglanski, University of Maryland' Jonathan Wilkenfeld, University of Maryland; Linda Bourque, University of California Los Angeles; Clarke McCauley, University of Pennsylvania; and Kathleen Tierney, University of Colorado), Center of Excellence for the Study of Terrorism and Responses to Terrorism (START), Department of Homeland Security, $12,000,000. USC Research Team: W. Piegorsch, J. Rose, A. Bowman, M. Tompkins, D. Cowen, M. Hodgson, M. deCastro, D. Guo, and F. Hardisty, $1,000,000, 2005-08 (Hodgson portion $35,000).

Jensen, J., M.E. Hodgson, D. Cowen, S. Cutter, J. Gladden, T. Slonecker, Y. Cheng, B. Davis, "Development of Remote Sensing-assisted Natural and Technological Hazards Decision Support Systems," NASA, 10/04 – 10/08, $2,094,230 (Hodgson portion $550,000).

Hodgson, M.E., "Spatial Data Needs and the Use of GIS and Remote Sensing in State-Level Hazard-Related Offices," NASA, 9/04 – 6/05, $33,050.

Hodgson, M.E., "GIS and Remote Sensing Characterization of South Carolina Bottomland Forests," The Nature Conservancy, 1/15/2003-6/30/2003, $18,418.

Hodgson, M.E., "GIS-Based Modeling of Potential Contaminant Exposure," 5/1/2003 – 6/1/2005, Savannah River Ecology Lab, $16,340

Hodgson, M.E., "Database Development, GIS Application and Assessments", Richland County, South Carolina, 8/15/2001 – 6/31/2002, $36,074.

Hodgson, M.E., "GIS/Remote Sensing Contract with Richland County", M.E. Hodgson, Richland County, South Carolina, 8/15/2000 – 6/31/2001, $29,979

Hodgson, M.E. and B. Lloyd, "Undergraduate Research for Searching on Remotely Sensed Imagery," M.E. Hodgson and B. Lloyd, National Science Foundation, 1/00 – 12/00, $10,000.

"Searching on Remotely Sensed Imagery," National Science Foundation, 9/99 - 12/00, $63,144.

Cowen, D., J.Jensen, and M.E. Hodgson, "State-of-Knowledge on GIS Databases and Land Use/Cover Patterns: South Carolina," Sea Grant Consortium (LU-CES Program), 9/97-8/98, $24,981.

Hodgson, M.E., "Models for Image Registration/Rectification Uncertainty and Information Extraction Uncertainty", subcontract to Oak Ridge National Laboratory, 8/97-8/98, $44,300.

Cutter, S., M.E. Hodgson, K. Dow, "Subsidized Inequities: The Spatial Patterning of Environmental Risks and Federally-Assisted Housing," Housing and Urban Development, 9/97 - 8/98, $50,000.

Hodgson, M.E. and L. Wood, "The Use of National Technical Means in Monitoring Seagrass

Habitat," NOAA/NESDIS, 6/95 - 2/96, $67,000.

Hodgson, M.E., R.C. Durfee, S. McClain, and M. Tortolani, "Geographic Visualization and Communications System for Transportation Networks," DOE: 9/94 - 10/95, $200,000.

Hodgson, M.E., Y. Cheng, and P. Coleman, "Solutions to Massive Spatial Interpolation Problems Using Parallel Processing and Heuristic Searching Algorithms," ORNL, parallel processing computing resources: 9/94-3/95.

Hodgson, M.E., "Geographic Information Systems Modeling of Hurricane Wind Induced Landscape Impacts," National Biological Survey, $35,000: 6/94-12/96.

Hodgson, M.E., "Expert Image Classification System Utilizing Innovative Knowledge Engineering," ERDAS, Inc., $152,884 (portion of $500,000 grant from NASA): 8/92-7/95.

Hodgson, M.E., M. Kumler, K. Erickson, and T. Veblen, "Expanded Undergraduate Geographic Information Processing Laboratory," CU-Instructional Computing Working Group, $154,794 requested: awarded $75,000 in capital equipment.

Hodgson, M.E., T. Veblen, K. Erickson, and M. Kumler, "Expansion of Geographic Information Processing Laboratory," CU-Instructional Computing Working Group, $33,600 in capital equipment.

Hodgson, M.E., K. Erickson, "Automation in Introductory Geographic Information Processing Curriculum," $82,325 in capital equipment/software; National Science Foundation/University of Colorado: 8/92-7/95.

Palm, R. and M.E. Hodgson, "Multiple Hazard Preparedness: The Response to Hurricane Hugo in Puerto Rico," National Science Foundation, $164,975: 1/91-2/92.

Palm, R.I. and M. E. Hodgson, "Research Experience for Undergraduates," supplemental request for current NSF grant, $5,000; National Science Foundation.

Hodgson, M.E., "Metropolitan Geocoding/Mapping Software," funded by CU-Instructional Computer Working Group. $1,242: 6/90-12/90.

Palm, R.I. and M.E. Hodgson, "The Purchase of Earthquake Insurance in California: the Impact of the Loma Prieta Earthquake," National Science Foundation, $139,000: 1/90-2/92.

Hodgson, M.E., "Comparative Analysis of Grid-Based Encoding Schemes for Use in a Geographic Information System," NASA, $19,720: 9/1/88 - 9/1/89.

Hodgson, M.E., D. Greenland. "Geographic Information Processing Equipment," (CO-PI), funded by the University of Colorado-Council on Teaching. $12,987 in capital equipment: 1/1/88 - 12/31/88.

OTHER LITERATURE

Hodgson, M.E., Y. Cheng, P. Coleman, and R.C. Durfee, 1995. "GIS Computational Burdens: Solutions with Heuristic Algorithms and Parallel Processing," *GeoInfo Systems*. 4: 28-37.

Hodgson, M.E. and B. Shelley, 1994. "Removing the Topographic Effect in Remotely Sensed Imagery," *ERDAS Monitor*. 6(1): 4-6.

Hodgson, M.E. and R.I. Palm, 1992. "Attitude and Response to Earthquake Hazards: A GIS Design for Analyzing Risk Assessment," *GeoInfo Systems*. 2(7):40-51.

Hodgson, M.E. "Response to Integration of Remote Sensing/GIS," *1994 International Sourcebook, GIS World.*

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Cartography and Geographic Information Society (CAGIS)
Association of American Geographers (AAG)
Southeastern Division of the AAG (SEDAAG)
Italian Cartographic Association (AIC)

CERTIFICATES: Aerial Drones

- Federal Aviation Administration, Certified Remote Pilot/Part 107 Certificate
- Federal Aviation Administration, Recreational UAS Safety Test (TRUST) and Certificate
- European Union Aviation Safety Agency, Certificate for A1/A3 Open Category for Aerial Drones in the European Union

SERVICE

University of South Carolina
Chair, ad hoc Task Force on Unmanned Aerial Systems, Provost Office, 2015-2017.
Director of Graduate Studies, Department of Geography: May 2010 – May 2013.
Director, USC/USGIF Geospatial Intelligence Certificate Program, Fall 2018 – Fall 2021.
Chair, Departmental Peer Teaching Review Committee: Fall 2016 – Spring 2018
Chair, Remote Sensing Search Committee: Fall 2012 - Spring 2013
Chair, Senior Remote Sensing Search Committee: Fall 2011 - Spring 2012
Chair, GIScience Search Committee: Fall 2006
Chair, Departmental Committee on Graduate Admissions: AY 2008-2009
Chair, Departmental Committee on Curricula and Courses: AY 2006-2007; 2014-16, 2018.-21
Chair, Visiting Instructor (GIS) Search Committee, Spring 1998.
Chair, Computer Policy Committee, Department of Geography, AY 1997-1998.
Ombudsman, Department of Geography: AY 2006-2010
Delegate to the University Committee on Geographical Information Science (UCGIS), AY 2001-2008.
Departmental Publicity Coordinator, AY 2003-2006
Departmental Representative to University Faculty Senate: AY 1998-2000.
Member, Departmental Chair's Advisory Committee, 2018-2019

Member, ad hoc Committee on E150 Funds, Spring 2018

Member, Visiting Scholars Review Committee, Provost Office, Spring 2017-2019

Member, Tenure and Promotion Committee, 2013-2021

Member, Post-Tenure Review Committee, 2015-2017, 2021

Member, Tenure and Promotion, Department of Statistics: 2010-2011

Point-of-Contact, USC Campus GIS Program: 2008-2009.

Member, University Graduate Council: 2011 – 2014.

Member, Fellowship Awards Committee, University of South Carolina Graduate Council, 8/15/11 – 8/14/13

Member, Departmental Committee on Graduate Admissions: AY 2006-2008

Member, GIScience Search Committee: Fall 2007

Member, University Committee on Curricula and Courses: AY 2000-2002.

Member, Departmental Committee on Curricula and Courses: AY 2004-2005.

Member, PhD Admission to Candidacy Exam (ACE), Fall 2005, 2007-2008.

Member, Departmental Masters Comprehensive Committee (MACE): Fall, Spring 1996-1997.

Faculty Advisor, Geography Graduate Student Association (GGSA): 2010 – present.

Advisor, Geography Graduate Student Association: 2011 – present

University of Colorado

Supervisor of Staff Cartographer: Academic years 1987-93.

Member, Graduate Masters Committee: Fall 1994.

Member, Graduate Student Research and Creative Work Awards Committee: Spring 1991-94.

Member, Departmental Personnel Committee: Academic year 1992-93.

Member, Departmental Graduate Committee: Academic years 1990-92.

Member, Undergraduate Committee: Academic years 1988-90, 1993-1994

Professional

Editorial Board Member, *Geographical Information Science & Remote Sensing*, 2004 – present

Editorial Board Member, *The Southeastern Geographer*, 2011 – 2018

Editorial Advisory Board Member, *Cartography and Geographical Information Science*, 2003 – 2020

Associate Editor, *Photogrammetric Engineering & Remote Sensing*: 1993-1999.

Guest Associate Editor, *Natural Hazards Review*, 2008

Co-editor, Special Remote Sensing, GIS and Hazards issue of *Photogrammetric Engineering & Remote Sensing*, October, 1998.

Co-editor, Special GIS issue of *Photogrammetric Engineering & Remote Sensing*, November

Member, Program Review Committee, GI-Forum 2016 - 2023 Conferences, Salzburg, Austria.

Co-Chair, Joint ASPRS-CAGIS Fall Conference 2013 on "Imaging and Mapping for Disaster Management". San Antonio, Texas: October 2013.

Panel Chair, Science Drivers for and Application of CyberGIS, NSF CyberGIS Project, Oak Ridge National Laboratory, September 29, 2011.

Member, UCGIS Research Awards Committee 2010.

Invited member, Workshop Lessons Learned from GIScience Data in Hurricane Katrina, 2007

Chair, Committee on Education and Professional Practice, ASPRS, 2004 - 2006

3 April 2024

M.E. Hodgson

Organizer and Moderator (with T. Cova, R. Platt, and B. Kar): GIScience and Hazards sessions at the Annual Meetings of the Association of American Geographers (AAG), 2000 – 2017

Book Editor, *Cartography and Geographical Information Science*: 2000 – 2002. Southeastern Division of Association of American Geographers, State Representative: 1998-1999.

1992 and 1993.

Member, Technical Advisory Committee, *CoastWatch Change Analysis Program*, NOAA-National Marine Fisheries Service, 1991-94.

Member, External Review Panel, *Cumulative Effects of Multiple Stressors on Coastal Ecosystems*, NOAA Coastal Ocean Program, 1994.

Member, Panel for ERDAS IMAGINE 8.1 Software Review, August 16, 1993.

Member, Awards Committee of Remote Sensing Specialty Group - AAG, 1993-1994.

Member, Awards Committee (ESRI Scientific Paper) - ASPRS, 1995.

Member, Honors Awards Committee - ASPRS, 1995.

Manuscript Reviewer for:
Annals of the Association of American Geographers
Anthropocene
BMS Engineering
Canadian Journal of Remote Sensing
Cartography and Geographic Information Science
Computers and Geosciences
Computers, Environment and Urban Systems
Drones
Earth Surface Processes and Landforms
Environmental Hazards
Environmental Modeling and Software
Environmental Research Letters
Environmental Science and Policy
Estuaries
Forests
Geocarto International
Geographical Analysis
Geographical Review
Geography Compass Review
GI-Forum Journal
GIScience and Remote Sensing
Great Plains Research
International Journal of Applied Earth Observation
International Journal of Digital Earth
International Journal of Disaster Risk Reduction
International Journal of Geo-Information
International Journal of Geographical Information Systems
International Journal of Remote Sensing
Journal of Applied Geography
Journal of Flood Risk Management
Journal of Geography in Higher Education

Journal of Geomorphology
Journal of Marine Science and Engineering
Journal of Unmanned Aerial Vehicles
Journal of Vegetation Science
Natural Hazards
Papers of the Applied Geography Conference
Photogrammetric Engineering & Remote Sensing
Physical Geography
PLOS One
Remote Sensing
Remote Sensing Applications: Society and Environment
Remote Sensing of Environment
Scientific Reports
Southeastern Geographer
The Professional Geographer
Transactions in GIS
Urban Geography
Urban Affairs
Wetlands
Wetlands Ecology and Management

Proposal Reviewer for:
Panel Member, NSF Doctoral Dissertation Research Improvement (DDRI)
    Panel Review, December 2011, April 2012, December 2012, April 2013
Panel Member, NASA Land Use and Land Cover Change Program,
    September 2011
Panel Member, NSF/USDA Disaster Resilience for Rural Communities,
    April 2010
Panel Member, NASA ROSES Decision Making: Gulf of Mexico Program,
    March 2-3, 2009
Panel Member, NASA ROSES Feasibility Studies Program, December
    2008/April 2009
Panel Member, NASA ROSES Disaster Management Program, October 2008
National PERISHIP Awards – Dissertation Fellowship (Spring 2008)
Louisiana Sea Grant Program, 2007
University of Mississippi EIGS Program, 2003
NOAA - Coastal Ocean Program:
    Cumulative Effects of Multiple Stressors on Coastal Ecosystems: 1994
    CoastWatch Change Analysis Program: 1992-94
    Estuarine Habitat Program: 1992-93
National Science Foundation:
    Division of Biological and Critical Systems Program
    Geography Program; Geography and Spatial Sciences Program
    Instrumentation and Laboratory Improvement Program
Fullbright Fellowship (Romania)
Swiss National Science Foundation
National Geographic Society
National PERISHIP Awards

National Fish and Wildlife Foundation
Earth Observation Satellite Company (EOSAT) — 1994 and 1997
NASA (Stennis) - Hyperspectral Proposal Reviews (July 1998)
Radarsat Program (MTPE) - Solid Earth and Natural Hazards (EOS-1) - Hyperspectral
  Proposal Reviews (July 1999)
Environmental Protection Agency MRLC 2000 Proposal Reviews (1999)

University Reviewer Service – Faculty Promotion
Texas State University, for Full Professor (2020)
University of Salzburg, Austria (habilitation review), for Associate Professor (2019)
University of Padova, Italy, for Associate Professor (2017)
Ulsan National Institute of Science and Technology, South Korea, for Tenure of Associate
  Professor (2017)
New Mexico State University, for Associate Professor (2016)
State University of New York, for Associate Professor (2012)
Louisiana State University, for Full Professor (2012)
University of Utah, for Full Professor (2011)
East Carolina University, for Full Professor (2010)
Brigham Young University, for Full Professor (2008)
Brigham Young University, for Associate Professor (2006)
Florida Atlantic University, for Associate Professor (2008)
University of California – Los Angeles, for Associate Professor (2007)
University of North Carolina- Greensboro, for Associate Professor (2006)

CONSULTANTSHIPS

Project reviewer for University of Mississippi Enterprise for Innovative Geospatial Solutions (EIGS) Program. August 2005.

Proposal reviewer for University of Mississippi Enterprise for Innovative Geospatial Solutions (EIGS) Program. August 2003.

Proposal reviewer for NASA Hyperspectral Proposal Review Program, 1998, 1999.

Consultant to Oak Ridge National Laboratory, Oak Ridge, TN. February, 1997 - 1998.

Book reviewer for proposed GIS texts from John Wiley and Sons, Prentice-Hall, West Publishing, and computer cartography text from Prentice-Hall.

Proposal reviewer for NASA Earth Observation Commercial Applications Program, 1995, 1997.

Collaborator on Small Business Innovative Research (SBIR) grant from NASA, Inc. to ERDAS, Inc. "Expert Classification Logic for Remotely Sensed Imagery." 8/91-5/94; 9/96.

Proposal reviewer for EOSAT Grant Program to select 30 proposals with total funds of $663,000.

HONORS and AWARDS

2014, Presidential Citation, Certificate of Appreciation for Meritorious Service, March 2014. American Society for Photogrammetry and Remote Sensing.

2010, 1st Place ESRI Award for Best Scientific Paper in Geographic Information Systems – American Society for Photogrammetry and Remote Sensing, April 2010. (John R. Jensen, Michael E. Hodgson, Maria Garcia-Quijano, Jungho Im, and Jason A. Tullis for "A Remote Sensing and GIS-assisted Spatial Decision Support System for Hazardous Waste Site Monitoring," *PE&RS*, 75 (2), 169-177.

2010, 1st Place John I. Davidson President's Award for Practical Paper – American Society for Photogrammetry and Remote Sensing, April 2010. (John R. Jensen, Michael E. Hodgson, Maria Garcia-Quijano, Jungho Im, and Jason A. Tullis for "A Remote Sensing and GIS-assisted Spatial Decision Support System for Hazardous Waste Site Monitoring," *PE&RS*, 75 (2), 169-177.

2001, 2nd Place Award for Best Scientific Paper in Geographic Information Systems – American Society for Photogrammetry and Remote Sensing, April 26, 2001.

1999, Certificate of Appreciation for Meritorious Service, Presidential Citation, American Society of Photogrammetry and Remote Sensing

1994. Certificate of Appreciation for Meritorious Service, American Society of Photogrammetry and Remote Sensing

1993, Certificate of Appreciation for Meritorious Service, American Society of Photogrammetry and Remote Sensing

PATENT APPLICATIONS

Myrick, M.L., N. Vitzilaios, M. Hodgson, B. A. Davis, "Spectroscopy Combining Base Stations and Unmanned Aerial Vehicles." Pub No. US 2023/0280270 A1, publication date September 7, 2023.