Brief Curriculum Vitae: J.M. Shawn Hutchinson, PhD, GISP
Department of Geography & Geospatial Sciences, 1002 Seaton Hall, Kansas State University
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Professional Preparation

Ph.D., Geography, 2000; Kansas State University, Manhattan, Kansas
Certified GIS Professional (GISP), 2013-Present; GIS Certification Institute (#50908)
M.A., Geography, 1997; Kansas State University, Manhattan, Kansas
B.S., Wildlife Biology, 1990; Colorado State University, Fort Collins, Colorado

Appointments

Professor, Department of Geography, Kansas State University; 2018-Present.
Associate Professor, Department of Geography, Kansas State University; 2007 – 2018.
Visiting Researcher, Laboratoire de Télédétection et de Gestion des Territoires, Université de Toulouse, Ecole d'Ingénieurs de Purpan, Toulouse, France (September 2009 – May 2010)
Assistant Professor, Department of Geography, Kansas State University; 2002 – 2007.
Director, Geographic Information Systems Spatial Analysis Laboratory (GISSAL), Department of Geography, Kansas State University; 2002 – Present.
Visiting Assistant Professor, Department of Geography, Kansas State University; 2001 – 2002.
Visiting Assistant Professor, Department of Biological & Agricultural Engineering, Kansas State University; 2000 –2001.

Fields of Interest and Expertise

Environmental assessment and monitoring, grassland vegetation phenology, military training land sustainability, agricultural biosecurity, water resources, biogeography, GIScience, remote sensing, cartography and visualization, North America, U.S. Great Plains, France.

Selected Publications

Peterson, B. A., J.M. Shawn Hutchinson, B. Gurung, J.A. Beeco, S.J. Anderson, and D. Joyce. 2023. Exploring spatial patterns of overflights at Great Smoky Mountains National Park. Natural Resource Report NPS/GRSM/NRR—2023/2518. National Park Service, Fort Collins, Colorado. doi.org/10.36967/2299255

Tavakol, A., K.R. McDonough, V. Rahmani, S.L. Hutchinson, and J.M.S. Hutchinson. 2021. The soil moisture data bank: The ground-based, model-based, and satellite-based soil moisture data. *Remote Sensing Applications: Society and Environment* 24:100649. doi.org/10.1016/j.rsase.2021.100649.

McDonough, K.R., S.L. Hutchinson, and J.M.S. Hutchinson. 2020. Declining soil moisture threatens water availability in the U.S. Great Plains. *Transactions of the American Society of Agricultural Engineers* 63(5):1147-1156. doi.org/10.13031/trans.13773

Muche, M., S.L. Hutchinson, J.M.S. Hutchinson, and J.M. Johnston. 2019. Phenology-adjusted dynamic curve number for improved hydrologic modeling. *Journal of Environmental Management* 235:403-413. doi.org/10.1016/j.jenvman.2018.12.115

Sullins, D.S., D.A. Haukos, J.M. Lautenback, J.D. Lautenbach, S.G.Robinson, M.B. Rice, B.K. Sandercock, J.D. Kraft, R.T. Plumb, J.H. Reitz, J.M. Shawn Hutchinson, and C.A. Hagen. 2019. Strategic conservation for lesser prairie chickens among landscapes of varying anthropogenic influence. *Biological Conservation* 238:108313. doi.org/10.1016/j.biocon.2019.108213

Rijal, S., G. Wang, P.B. Woodford, H.R. Howard, J.M.S. Hutchinson, S.L. Hutchinson, J. Schoof, T.J. Oyana, R. Li, and L.O. Park. 2018. Detection of gullies in Fort Riley military installation using LiDAR derived high resolution DEM. *Journal of Terramechanics* 77:15-22. doi:10.1016/j.jterra.2018.02.001

McDonough, K.R., S.L. Hutchinson, J.M.S. Hutchinson, J.L. Case, and V. Rahmani. 2018. Validation and assessment of SPoRT-LIS surface soil moisture estimates for water resources management applications at the basin scale. *Journal of Hydrology* 566:43-54. doi.org/10.1016/j.jhydrol.2018.09.007

McDonough, K., S.L. Hutchinson, T. Moore, and J.M.S. Hutchinson. 2017. Analysis of trends in ecosystem services research. *Ecosystem Services* 25:82-88. doi.org/10.1016/j.ecoser.2017.03.022).

Jacquin, A., M. Goulard, J.M.S. Hutchinson, T. Devienne, and S.L. Hutchinson. 2016. A statistical approach for predicting grassland degradation in disturbance-driven landscapes. *Journal of Environmental Protection* 7(6) :912-925. doi.org/10.4236/jep.2016.76081

Hutchinson, J.M.S., A. Jacquin, S.L. Hutchinson, and J. Verbesselt. 2015. Monitoring vegetation change and dynamics on U.S. Army training lands using satellite image time series analysis. *Journal of Environmental Management* 150:355-366. doi.org/10.1016/j.jenvman.2014.08.002

Rahmani, V., Hutchinson, S.L., Hutchinson, J.M.S., and Anandhi, A. 2014. Extreme daily rainfall event distribution patterns in Kansas. *Journal of Hydrologic Engineering* 19(4):707-716. doi.org/10.1061/(ASCE)HE.1943-5584.0000839

Sutrave, S., C. Scoglio, S.A. Isard, J.M.S. Hutchinson, and K.A. Garrett. 2012. Identifying highly connected counties compensates for resource limitations when evaluating national spread of an invasive pathogen. *PLoS ONE* 7(6):e37793.doi:10.1371/journal.pone.0037793.

Tuppad, P., K.R. Douglas-Mankin, J.K. Koellier, J.M.S. Hutchinson. 2010. SWAT discharge response to spatial rainfall variability in a Kansas watershed. *Transactions of the ASABE* 53(1):65-74. doi.org/10.13031/2013.29503

Margosian, M.L., K.A. Garrett, J.M.S. Hutchinson, and K.A. With. 2009. Connectivity of the American agricultural landscape: Assessing the national risk of crop pest and disease spread. *BioScience* 59(2): 141-151. doi.org/ https://doi.org/10.1525/bio.2009.59.2.7

Goodin, D.G., D.E., Koch, R.D., Owen, J.M.S. Hutchinson, and C.B. Jonsson. 2006. Land cover associated with hantavirus presence in Paraguay. *Global Ecology and Biogeography* 15:519-527.

Hutchinson, J.M.S. 2003. Estimating near surface soil moisture using active microwave satellite imagery and optical sensor inputs. *Transactions of the American Society of Agricultural Engineers* 46(2):225-236. doi.org/10.13031/2013.12972

Selected Extramural Grants and Contracts

Featherstone, Allen, Nina Lilja, Dena Bunnel, Stacy Hutchinson, Antonina Broyaka, Romulo Lollato, Shawn Thiele, Kelsey Andersen Onofre, Ganga Hettiarachchi, Daran Rudnick, Jonathan Aguilar, Lawrence Davis, J.M. Shawn Hutchinson, Daniel Flippo, Richard Llewelyn. 2024. Harvest Activity Support for Ukraine. Chemonics International Inc. and U.S. Agency for International Development. $10,462,908.

Peterson, B., J.M.S. Hutchinson, and R. Sharp. 2021. Using ADS-B Data to Understand Overflight Travel Patterns at National Park Units. U.S. Department of Interior, National Park Service, $149,382.

Temme, A. and J.M.S. Hutchinson. 2019. Disaggregating SSURGO Soil Maps across Large Areas using Existing Qualitative Knowledge and Modern Data Sources. Soil Science Collaborative Research Proposals USDA-NRCS-NHQ-SOIL-19-GEN0010134, $206,975.

Andresen, D., S. Brown, J.M.S. Hutchinson, E. Vasserman. 2013. CC-NIE Network Infrastructure: KGAP: Bridging the Gap in Network Flexibility and Performance for Genomics and Data-Intensive Research at Kansas State University. Division of Advanced Computing Infrastructure (ACI), National Science Foundation, $499,113.

Hutchinson, S.L. and J.M.S. Hutchinson. 2008. Fort Riley Range and Training Land Assessment Program. Fort Riley Integrated Training Area Management Program and U.S. Geological Survey, $1,200,000.

Jonsson, C.B., L. Allen, Y. Chu, R. Owens, D.G. Goodin, J.M.S. Hutchinson, E. Pontelli, D. Ranjan, S. Tran, M. Almiron. 2003. The Impact of Rapid Anthropogenic Land Cover Change in the Chaco and Interior Atlantic Forest in Paraguay on Hantavirus Ecology. National Institutes of Health, $1,857,996.

Selected Papers and Posters Presented at Scientific Meetings

Hutchinson, J.M.S. and H. Onuoha. 2018. Time Series Analysis of Phenometrics and Long-Term Grassland Trends across the Great Plains Ecoregion using Moderate Resolution Satellite Imagery. 3rd Joint European Association of Remote Sensing Laboratories (EARSeL) and NASA LULC Change Workshop, Chania, Crete, Greece, July 9-12.

Hutchinson, S.L., K.R. McDonough, and J.M.S. Hutchinson. 2018. Large Scale Soil Moisture Trend Analysis in the Missouri and Arkansas-Red-White River Basins. 3rd Joint European Association of Remote Sensing Laboratories (EARSeL) and NASA LULC Change Workshop, Chania, Crete, Greece, July 9-12.

Hutchinson, S.L. J.M.S. Hutchinson, and M. Muche. Phenology-adjusted Dynamic Curve Numbers for Improved Hydrologic Modeling. EcoSummit 2016: Ecological Sustainability – Engineering Change, Montpellier, France, August 29-September 1, 2016.

Honors

Ronald N. Gaches Teaching Award, College of Arts & Sciences, Kansas State University; 2018.
Team Member, ESRI Special Achievement in GIS (SAG) Award; 2005

Selected Professional Activities

Director, Institute for Digital Agriculture and Advanced Analytics, Kansas State University; 2023-Present
Director, Undergraduate and Graduate Certificates in GIS and GIScience, Kansas State University; 2002-Present.
Director, Natural Resources and Environmental Sciences Secondary Major, 2013-Present.
Chair of Regional Councilors, American Association of Geographers, 2016-2017.
Regional Councilor Great Plains/Rocky Mountain Division, American Association of Geographers; 2014-2017.
Chair, Great Plains/Rocky Mountain Division, Association of American Geographers; 2013-2014

Graduate Advisees

J. Aber (PhD, 2012), A. Braget (MA, 2017), W. Breitkreutz (MA, 2006), T. Brown (MA, 2004), T. Davis (MA, 2005), M. Dulin (MA, 2009), Z. Eddy (MA, 2011), A. Fischer (MA, 2018; PhD, 2024), M. Pegg (MS, expected 2026), I. Okonye (MS, expected 2025), H. Onuoha (PhD, 2022), B. Pockrandt (MA, 2014), J. Radunzel (PhD, 2024), B. Stansberry (MA, 2005), T. Vought (MA, 2006), D. Williams (MA, 2016).