

**Kathleen Marie Baker**  
**UPDATED CURRICULUM VITAE**

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Western Michigan University  
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**EDUCATION**

Ph.D., 2002, Geography, Michigan State University, East Lansing, Michigan  
Dissertation: *Spatial and temporal modeling of microclimate for risk assessment and management of potato late blight (Phytophthora infestans) in Michigan*  
M.A., 1998, Geography, Western Michigan University, Kalamazoo, Michigan  
Thesis: *Statistical analysis of the agricultural distribution of the genus Cucurbita in the Eastern Broadleaf Province*  
B.S., 1995, Earth Science, Central Michigan University, Mt. Pleasant, Michigan  
Honors Thesis: *Frost protection from small protective coverings*

**EMPLOYMENT**

2017-present Director, Health Data Research, Analysis and Mapping (HDREAM) Center,  
Western Michigan University  
2016-present Director, W.E. Upjohn Center for the Study of Geographical Change  
Department of Geography, Western Michigan University  
2013-2017 Associate Director, Health Data Research, Analysis and Mapping (HDREAM)  
Center, Western Michigan University  
2010-present Associate Professor, Department of Geography, Western Michigan University  
2004-2010 Assistant Professor, Department of Geography, Western Michigan University  
2002-2004 Assistant Professor, Department of Earth and Resource Science, University of  
Michigan – Flint, Flint, MI  
1999-2002 Research Assistant, Department of Plant Pathology, Michigan State University,  
East Lansing, MI  
1998-1999 Research Assistant, Department of Geography, Michigan State University  
1998-1999 Research Assistant, Digital Sources Center, Michigan State University  
1997-1998 Lecturer, Natural Sciences, Glen Oaks Community College, Centreville, MI

**PROFESSIONAL RECOGNITION**

**PUBLICATIONS**

**Post-Tenure Peer-Reviewed Journal Publications**

Ayon, B., Owusu, C., and **K.M. Baker**. 2018. Optimizing equity and efficiency in multi-modal access to core sexually transmitted infection zones. *Health & Transport* (under review).

MacQuillan, E., **Baker, K.M.**, Paul, R., and A. Curtis. 2018. Using GIS techniques to explore gestational diabetes in Michigan mothers. *Maternal and Child Health Journal* (under review).

Day, A., Curtis, A., Paul, R., Shi, C., **Baker, K.**, Quist, L., and T. Cadet. 2018. A longitudinal cohort study of youth entering foster care in Michigan: Timeliness of annual preventive dental health screenings. *Journal for the Society for Social Work and Research* (under review).

Smith, J.D., Gill, S.A., **Baker, K.M.**, and M.J. Vonhof. 2017. Prevalence and diversity of avian *Haemosporida* infecting songbirds in southwest Michigan. *Parasitology Research* (under final revision).

Carter, D.L., Docherty, K.M., Gill, S.A., **Baker, K.M.**, Teachout, J.N., and M.J. Vonhof. 2017. Antibiotic resistant bacteria are widespread in songbirds across rural and urban environments. *Science of the Total Environment* (under revision).

Owusu, C., **Baker, K.M.**, Back, Y., Paul, R., and A. Curtis. 2018. Modelling individual vulnerability to sexually transmitted infections to optimize intervention strategies: Results from a retrospective data analysis in Kalamazoo County, Michigan. *Sexually Transmitted Infections* (Accepted 12/12/2017. In press.).

Paul, R., Lim, C.Y., Curtis, A.B., Maiti, T., **Baker, K.M.**, Mantilla, L.B., and E.L. MacQuillan. 2018. Assessing the association of diabetes self-management education centers with age-adjusted diabetes rates across U.S.: A spatial cluster analysis approach. *Journal of Spatial and Spatio-Temporal Epidemiology* (Accepted 11/27/17. In press.).

Gill, S.A., Grabarczyk, E.E., **Baker, K.M.**, Naghshineh, K., and M.J. Vonhof. 2017. Decomposing an urban soundscape to reveal patterns and drivers of variation in anthropogenic noise. *Science of the Total Environment* 599-600 pp. 1191-1201. (impact factor: 4.9)

**Baker, K.M.** 2016. This terrific sense of geography: Spatial thinking in Thomas Merton's journals. *The Merton Annual* 29, pp. 72-79.

Kothari, C., Paul, R., Dormitorio, B., Ospina, F., James, A., Lenz, D., **Baker, K.**, Curtis, A., and J. Wiley. 2016. The interplay of race, socioeconomic status and neighborhood residence upon birth outcomes in a high black infant mortality community. *SSM - Population Health* 2, 859–867. DOI: <http://dx.doi.org/10.1016/j.ssmph.2016.09.011>

MacQuillan, E.L., Curtis, A.B., **Baker, K.M.**, Paul, R., and Y.O. Back. 2016. Using GIS mapping to target public health interventions: Examining birth outcomes across GIS techniques. *Journal of Community Health* 41, pp. 1-6. DOI:10.1007/s10900-016-0298-z (impact factor: 1.716)

Roehsner, P., and **K.M. Baker**. 2016. Sustainable system design for gridded, spatio-temporal, agroecosystem forecasting models. *Journal of Agricultural Informatics* 7(2):1-10. DOI: 10.17700/jai.2016.7.2.269

**Baker, K.M.**, and H. Petcovic. 2016. Sensitivity to landscape features: A spatial analysis of field geoscientists on the move. *Journal of Geoscience Education* 64:3, pp. 242-253. DOI: <http://dx.doi.org/10.5408/15-110.1>

**Baker, K.**, Johnson, A.C., Callahan, C.N., and H. Petcovic. 2015. Use of cartographic images by expert and novice field geologists in planning fieldwork routes. *Cartography and Geographic Information Science* Online Publication: DOI: 10.1080/15230406.2015.1072735 (impact factor: 2.391)

**Baker, K.**, Roehsner, P., Lake, T., Rivet, D., Benston, S., Bommersbach, B., and W. Kirk. 2014. Point-trained models in a grid environment: Transforming a potato late blight risk forecast for use

with the National Digital Forecast Database. *Computers and Electronics in Agriculture* 105:1-8. DOI: 10.1016/j.compag.2014.04.002 (impact factor: 2.201)

**Baker, K.M.**, Lake, T., Benston, S.F., Trenary, R., Wharton, P., Duynslager, L., and W. Kirk. 2014. Improved weather-based late blight risk management: Comparing models with a ten year forecast archive. *Journal of Agricultural Science (Cambridge)*. DOI: <http://dx.doi.org/10.1017/S0021859614000112> (impact factor; 1.291)

**Baker, K.M.**, Atalay, A., Bronick, C., and B. Whitehead. 2013. Elemental analysis of soil phosphorus neighborhoods using SEM, spectral mapping, and GIS. *Journal of Environmental Science and Engineering* 2(8A):494-505.

**Baker, K.M.**, Petcovic, H., Wisniewska, M., and J. Libarkin. 2012. Spatial signatures of mapping expertise among field geologists. *Cartography and Geographic Information Systems* 39(3): 119-132. DOI: 10.1559/15230406393119 (impact factor: 2.391) (Times cited: 2, based on the ISI Web of Science Citation Index; 9, based on Google Scholar; 5, on Research Gate).

Hambrick, D.Z., J. Libarkin, H.L. Petcovic, **K.M. Baker**, J. Elkins, C.N. Callahan, S.P. Turner, T.A. Rench, N.D. LaDue. 2011. A test of the circumvention-of-limits hypothesis in scientific problem solving: The case of geological bedrock mapping. *Journal of Experimental Psychology: General*, Oct 17, 2011. DOI: 10.1037/a0025927 (impact factor: 4.070) (Times cited: 24, based on the ISI Web of Science Citation Index; 39, based on Google Scholar; 37 on Research Gate).

**Baker, K.M.**, and C. E. Whately. 2010. Vascular plant survey of privately owned wetlands, Pavilion Township, Kalamazoo County, Michigan. *The Michigan Botanist* 49(3): 85-98.

#### **Post-Tenure Peer Reviewed Proceeding Publications**

Petcovic, H., **K M Baker**, C N Callahan, Z Hambrick, J C Libarkin, S P Turner, T A Rench, and N Ladue. 2014. The role of visuospatial ability in developing mental models during geologic mapping. AAPG Hedberg Conference - 3D Structural Geologic Interpretation: Earth, Mind, and Machine, At Reno, NV, USA

**Baker, K.M.**, Lake, T., Roehsner, P., and K. Schrantz. 2012. Forecasting disease with 10-year optimized models: Moving toward new digital datasets. The First International Conference on Agro-geoinformatics 2-4 Aug, Shanghai, China.

**Baker, K.M.**, and R. Nogueira. 2012. Climate variability and the daily agroecosystem forecasting accuracy plateau. The First International Conference on Agro-geoinformatics 2-4 Aug, Shanghai, China.

Bondapalati, K., Stein, J., and **Baker, K.M.** 2012. Neural network model to predict Deoxynivalenol (DON) in barley using historic and forecasted weather conditions. The First International Conference on Agro-geoinformatics 2-4 Aug, Shanghai, China.

**Baker, K.M.**, Simms, E., and H.L. Petcovic. 2011. Expertise as a predictor of time use during geologic field research. *International Association for Time Use Research Conference*, 31 Jul-4 Aug, Oxford, England.

**Baker, K.M.**, Williams, J, Lake, T.L., and W.W. Kirk. 2011. The role of climate normals in crop specific weather forecasts. In E. Gelb and K. Charvat (Eds.), EFITA/WCCA'11: Papers presented

at the 8th European Federation for Information Technology in Agriculture, Food and the Environment / World Congress on Computers in Agriculture (pp.493-498). Prague, Czech Republic: Czech Center for Science and Society.

### **Pre-Tenure Peer-Reviewed Publications**

Petcovic, H., Libarkin, J., and **Baker, K.M.** 2009. An empirical methodology for investigating geocognition in the field. *Journal of Geoscience Education- Special Issue: Research on Thinking and Learning in the Geosciences* 57(4): 316-328.

**Baker, K.M.**, and Lemberg, D. 2008. *Fraxinus* in a Great Lakes urban street tree community, Kalamazoo, Michigan. *The Michigan Botanist* 49(4):105-115.

Wharton, P.S., Kirk, W.W., **Baker, K.M.** and Duynslager L. 2008. A web-based interactive system for risk management of *Phytophthora infestans* in potato canopies in Michigan. *Computers and Electronics in Agriculture* 61:136-148.

**Baker, K.M.**, and Kirk, W.W. 2007. Comparative analysis of models integrating synoptic forecast data into potato late blight risk estimate systems. *Computers and Electronics in Agriculture* 57: 23-32.

**Baker, K.M.**, Kirk, W.W., and Andresen, J.A. 2005. Climatic trends and potato late blight risk in the Upper Great Lakes region. *Horticultural Technology* 15(3):510-518.

**Baker, K.M.**, Kirk, W.W., Andresen, J.A., and Stein, J.M. 2004. A problem case study: Influence of climatic trends on late blight epidemiology in potatoes. *Acta horticulturae* 638:37-42.

Kirk, W.W., Felcher, K. J., Douches, D.S., Stein, J.M., **Baker, K.M.**, and Hammerschmidt, R. 2001. Combining host plant resistance with managed fungicide applications to control of potato late blight (*Phytophthora infestans*). I. Influence of rate of application of residual contact fungicides. *Plant Disease* 85, 10:1113-18.

Kirk, W.W., **Baker, K.M.**, Niemira B.A., and Stein, J.M. 2000. Epidemiology and chemical control of *Phytophthora infestans* in potato canopies following point source inoculation. *American Journal of Potato Research* 77:405-406.

**Baker, K.M.**, and Aron, R. 1997. Frost protection from small protective coverings. *The Geographical Bulletin*, 39(1):29-32.

### **Book Chapter**

**Baker, K.M.**, Wharton, P., Stein, J., Paz, J., and W.W. Kirk. 2009. Chapter 9: Building true forecasts into crop disease management systems. In: *Agriculture Research and Technology*, Nova Science Publishers.

### **Pre-Tenure Peer-reviewed Proceedings Publications**

Smith, J., **Baker, K.M.**, and R. Trenary. 2009. Mining derived weather forecast variables for crop disease risk prediction. In *Proceedings of the World Congress of Computers in Agriculture*, 22-24 Jun, Reno, NV.

**Baker, K.M.**, Zaslavsky, I., and B. Plale. 2009. Towards cyberinfrastructure for multi-regional crop disease early warning systems. In *Proceedings of the World Congress of Computers in Agriculture*, 22-24 Jun, Reno, NV.

**Baker, K.M.** 2008. Regional variability in crop specific synoptic forecasts. In *Proceedings of the World Congress of Computers in Agriculture*, 24-27 Aug, Tokyo (Atsugi), Japan.

**Baker, K.M.**, Kirk, W.W., and P. Wharton. 2007. Inclusion of synoptic weather forecast models in decision support systems for agriculture. In *Proceedings of the International Congress on Modeling and Simulation for Land, Water & Environmental Management: Integrated Systems for Sustainability (MODSIM07)*, 10-13 Dec, Christchurch, New Zealand.

**Baker, K.M.**, and C. Bronick. 2006. GIS analysis of phosphorus in X-ray dispersive spectral maps. In Starrett, S.K., Hong, J.J., Lyon, W.G., eds. *Environmental Science and Technology, Vol. II*, American Science Press, Houston.

**Baker, K.M.** 2006. Implementation of crop disease risk forecasts that rely on neural networks and medium-range numerical weather prediction model output. *Computers in Agriculture and Natural Resources: Proceedings of the 4<sup>th</sup> World Congress*, 24-26 July 2006, Orlando, Florida., USA. Publisher: American Society of Agricultural and Biological Engineers.

**Baker, K.M.** 2005. Semantic problem definition in ambiguously defined agricultural data. *Proceedings of the First International Conference on GeoSpatial Semantics*, 29-30 November, Mexico City, Mexico.

**Baker, K.M.**, Zaslavsky, I., Rasmussen, T., and Tolo, B. 2002. XML-based self-mapping of ALS (Lou Gehrig's Disease) patients for environmental analysis and community building. *Proceedings of GeoHealth*, 3-5 December 2002, Wellington, New Zealand.

**Baker, K.M.**, Kirk, W.W., Andresen, J.A., and Stein, J.M. 2002. A problem case study: Influence of climatic trends on late blight epidemiology in potatoes. *Proceedings of the International Society of Horticultural Science* 2-8 August 2002, Toronto, Canada.

**Baker, K.M.**, Kirk, W.W., Stein, J.M., and J.A. Andresen. 2000. Crop disease mitigation: Daily risk modeling for Michigan potato growers. *Proceedings of the 4<sup>th</sup> International Conference on Integrating Geographic Information Systems and Environmental Modeling (GIS/EM4)*, 2-8 September 2000, Banff, Alberta, Canada.

**Baker, K.M.** 2000. Statistical modeling of agricultural distributions with GIS: A regional case study of the genus *Cucurbita*. *Proceedings of the 9<sup>th</sup> International Symposium on Spatial Data Handling*, 10-12 August, Beijing, China.

### **Other Publications**

Libarkin, J., **Baker, K.**, Hambrick, Z., and H. Petcovic. 2011. Practical lessons from research on field cognition and behavior. In *the Trenches* (a publication of the National Association of Geoscience Teachers).

Kirk, W., Duynslager, L., Wharton, P., and **K. Baker**. 2011. Updates to the Five-Day Potato Late Blight Forecast, Twitter-Page for Michigan for 2011. Newsline (a publication of the Michigan Potato Industry Commission).

Wharton, P.S., Kirk, W.W., Duynslager, L., and **K.M. Baker**. 2006. Late blight risk management in the digital age. *Newsline* (a publication of the Michigan Potato Industry Commission), Sept 2006.

**Baker, K.M.**, Kirk, W.W., Andresen, J.A., and J.M. Stein. 2000. In-canopy weather monitoring network for late blight risk management. *MSU Vegetable Advisory Team Alert* 15(3).

**Baker, K.**, Kirk, W., Andresen, J., and J. Stein. 2000. Weather Watch: In-canopy weather monitoring network provides growers more realistic late blight risk information. *Spudman Magazine*, 38(5):18.

W.W. Kirk, R. S. Schafer, J.M. Stein, R. S. Shaw and **K. M. Baker**. 1999. Chemical control of potato late blight 1999. *Michigan State University Experimental Station Annual Report*, 31:113 – 129.

Zaslavsky, I., and **Baker, K.M.** 1998. The experimental web-based interactive environment in distance teaching of GIS and geographic data handling. *Proceedings of the 1998 ACSM Annual Convention and Exhibition*, 1-5 March, Baltimore, MD.

## **GRANTS AND CONTRACTS RECIEVED**

**Baker, K.** Transportation Research Center for Livable Communities, Kalamazoo, MI. Public vs Private Transportation Network Accessibility and Maternal-Infant Health Outcomes Across the Urban-Rural Boundary in Kalamazoo County, Michigan. Funded. \$78,977. Study Period 08/17-08/18.

**Baker, K.** County Government, Charlotte County, FL. Charlotte County Community Data Project. Funded. \$95,001. Study Period 07/17-07/18.

**Baker, K.** Wolverine Pipeline Company. Kalamazoo, MI. Historic Alignment Sheet Contract. Funded. \$17,000. Study Period 04/17-10/17.

**Baker, K.** Charter Township of Oshtemo. Kalamazoo, MI. Natural Resource Planning. Funded. \$8,600. Study Period 10/16-03/17.

**Baker, K.** Forest Preserve District of Will County, Illinois. Georeferencing Will County. Funded. \$12,500. Study Period 09/16-12/16.

Curtis, A., **Baker, K.**, and R. Paul. Public Policy Associates (subcontract to W.K. Kellogg Foundation). WKKF BC Vision Data Monitoring Project. Funded. \$96,713. Study Period 07/16-07/17.

Curtis, A., and **K. Baker**. Blue Cross Blue Shield of Michigan Foundation. Developing a Template for a University Community Data Driven Health & Human Resources Interactive Website. Funded. \$49,179. Study Period 01/16-01/18.

Curtis, A., **Baker, K.**, and R. Paul. Battle Creek Community Foundation. University-Community Data-Driven Health & Human Resource Interactive Website Project. Funded. \$24,821. Study Period 08/15-09/15.

Curtis, A., Paul, R., and **K. Baker** in conjunction with Blue Cross Blue Shield of Michigan Foundation and Wayne State University. Assessing the Physical Health of Foster Care Youth. Funded. \$75,000. Study Period 7/15-6/16.

Gill, Sharon, **Baker, K.**, and M. Vonhof. Eppley Foundation for Research. Conserving soundscapes at local preserves: a pilot program. Funded. \$24,994. Study Period 3/15-3/16.

Curtis, A., **Baker, K.**, and R. Paul. Statistical and Mapping Analysis of Geographic Trends in Michigan Medicaid Service Utilization. Funded. \$99,547. Study Period 1/15-9/15.

Curtis, A., Paul, R., and **K. Baker**. Wayne State University subcontract. Health Care Service Utilization of Older Foster Youth Enrolled in Michigan's Medicaid Program. Funded. \$10,000. Study Period 5/14-6/14. Consultant.

Curtis, A., **Baker, K.**, and R. Paul. State of Michigan. Geographic Trends in Michigan Medicaid Service Utilization. Funded. \$49,928. Study Period 1/14-9/14.

Curtis, A., **Baker, K.**, and R. Paul. Western Michigan University/Kellogg Foundation. Combining Community Resources and Existing Data to Conduct Mapping and Spatial Analyses to Reduce Racial/Ethnic Inequities in Maternal and Child Health: Calhoun and Kalamazoo Counties Demonstration Project. Funded. \$135,927. Study Period 5/13-6/14.

**Baker, K.**, Paz, J., Stein, J., Wharton, P., Kirk, W., and D. Todey. 2008. Synoptic weather forecasting and web-based information delivery systems for managing crop disease risk in multiple regions of the U.S. USDA CSREES FQPA RAMP (\$1,181,632).

Petcovic, H., and **K. Baker**. 2008. Collaborative Research: Learning across the Expert-Novice Continuum: Cognition in the Geosciences. NSF REESE (\$470,050).

**Baker, K.**, and C. E. Whately. 2008. A Vascular Plant Survey of a Privately Owned Wetland in Pavilion Township. Hanes Trust (\$9,200).

Kirk, W., **Baker, K.**, Wharton, P., and Dunyslager, L. 2007. Managing late blight of potato in the North Central Region by combining weather based disease risk management systems with web-based and traditional information delivery systems. North Central Integrated Pest Management Center - USDA, IPM Enhancement Grants Program. Co-PI with MSU (\$56,608).

Lemberg, D., and **K. Baker**. 2006. Street Tree Replacement. Hanes Trust (\$6,900).

**Baker, K.** 2003. City of Flint Fire Emergency Response Geospatial Database and Web-Interface for Environmental Hazard Assessment. UM-F Research Excellence Fund (PI, \$22,320).

## RESEARCH PRESENTATIONS

### Conference Presentations

Petcovic, H., Callahan, C., and K.M. Baker. 2017. How do they know where to go? Expert versus novice reasoning and navigation during bedrock geologic mapping, Geological Society of America Annual Meeting, 22-25 October, Seattle, WA.

Steuer, S., Bair, S., Heslinger, M.C., and **K.M. Baker**. 2017. The monastic gazetteer project: Networks of the past and scholarly networking in the future. Mid-American Medieval Association, 16 Sept, Kansas City, MO.

Pinto, K., and **K.M. Baker**. 2017. Geodatabases design for medieval Islamic maps. International Congress of Medieval Studies, 23-25 May, Kalamazoo, MI.

**Baker, K.M.**, and L.M. DeChano. 2017. Learned sensitivity to landscape features: GIS training and fieldwork route planning. AAG Annual Meeting, 4-9 April, Boston, MA.

Anim-Preko, S., **Baker, K.M.**, Paul, R., and A.B. Curtis. 2017. State-wide patterns in diabetes screening service utilization: Medicaid, Blue Care Network and Blue Cross Blue Shield of Michigan. AAG Annual Meeting, 4-9 April, Boston, MA.

Paul, R., Neelon, B., Curtis, A.B., **Baker, K.**, and S. Zhang. 2016. Characterizing long range spatial and temporal dependencies in small area estimation with applications to birthweight and gestational age data. American Public Health Association, Oct 29-Nov 2, Denver, CO.

Paul, R., Curtis, A.B., Day, A., Shi, C., and **K. Baker**. 2016. Longitudinal and spatial analysis of time between two consecutive dental and two consecutive well child visits for foster care youths. American Public Health Association, Oct 29-Nov 2, Denver, CO.

Kothari, C.L., Paul, R., Dormitorio, B., Ospina, F., James, A., Lenz, D., **Baker, K.**, Curtis, A.B., and J. Wiley. 2016. Interplay of race, socioeconomic status and neighborhood upon birth outcomes. American Public Health Association, Oct 29-Nov 2, Denver, CO.

**Baker, K.**, Ebenstein, A., Paul, R., and A.B. Curtis. 2016. Local urbanization classifiers for adapting kernel density bandwidths at the sub-county level. American Public Health Association, Oct 29-Nov 2, Denver, CO.

**Baker, K.**, Owusu, C., Paul, R., and A.B. Curtis. 2016. Visualizing maternal and child health inequities across an urban-rural boundary. American Public Health Association, Oct 29-Nov 2, Denver, CO.

Curtis, A.B., Owusu, C., Back, Y., MacQuillan, E., and **K. Baker**. 2016. Role of repeating chlamydia and gonorrhea infections: Using mapping to target interventions in outbreak. American Public Health Association, Oct 29-Nov 2, Denver, CO.

Callahan, C.N., Petcovic, H., and **K. Baker**. 2016. Do actions speak louder than words? Comparing audio and video records of reasoning in the field. Geological Society of America National Meeting, 25-28 Sept., Denver, CO.

Owusu, C., **Baker, K.M.**, Curtis, B. A., Paul, R., & Back, Y. 2016. Mapping core transmission areas of single and repeating chlamydia and gonorrhea cases for planning STI interventions in an urban-rural county (2012 – 2014). 34th Annual Kalamazoo Community Medical and Health Sciences Research Day, May 4, Kalamazoo, MI.

Anim-Preko S., Curtis B.A., **Baker K.M.**, Paul R., and Kwasnik M. 2016 State-wide patterns in diabetes screening service utilization: Comparing Medicaid and Blue Cross Blue Shield of Michigan. Poster Presentation given at the Western Michigan Medical School Research Day, May 4, Kalamazoo, MI.

Owusu, C., Curtis, B.A., **Baker, K.M.**, Paul, R., & Back, Y. 2016. Visualizing maternal and child health across an urban-rural boundary: adapting KDE bandwidths at the sub-county level. American Geographers (AAG) March 29 – April 2, San Francisco, CA.



Anim-Preko S., Curtis B.A., **Baker K.M.**, Paul R., and Kwasnik M. 2015. Spatial patterns in Medicaid funded disease screening rates across Michigan: The role of health plans. American Public Health Association (APHA), Oct 31-Nov 1, 2015. Chicago, IL.

Curtis, B. A., Owusu, C., **Baker, K.M.**, Paul, R., & Back, Y. 2015. Targeting interventions for youth and pregnant women with chlamydia using multilevel modeling and mapping spatial-temporal trends in Kalamazoo County. American Public Health Association (APHA), Oct 31-Nov 1, 2015. Chicago, IL.

Owusu, C., **Baker, K.M.**, Curtis, B. A., Paul, R., & Back, Y. 2015. Spatial and temporal patterns of chlamydia in Kalamazoo County using GIS ring map visualization technique. East Lakes Division of American Association of Geographers, Kent, Ohio, October 9 -11, 2015.

**Baker, K.M.**, Paul, R., Curtis, A., and S. Zhang. 2015. Joint modeling of spatial-longitudinal binary and count data on Michigan Medicaid diabetes care service. Association of American Geographers, 21-25 April, Chicago, IL.

Kothari,C.L., Paul, R., Wiley,J., Hanneken, J., **Baker, K.**, Lenz, D., Dormitorio, B., James, A., and A. Curtis. 2014. The relationship of socioeconomic and racial factors, both individual and community-level, to infant birthweight. American Public Health Association, 15-19 Nov, New Orleans, LA.

Paul, R., **Baker, K.**, Vanderveen, V., Griffin-Stover, A., and A. Curtis. 2014. Investigating connectivity of interventions for poor birth outcomes through network interpolation. American Public Health Association, 15-19 Nov, New Orleans, LA.

**Baker, K.**, Roehsner, P., and W. Kirk. 2014. Transforming potato late blight point forecasts for use with the National Digital Forecast Database. North American Late Blight Symposium, 8-9 Aug, Minneapolis, MN, USA.

**Baker, K.M.**, Lake, T., Kirk, W., and Wharton, P. 2014. Ten-year forecast archives: New training of late blight risk management models. North American Late Blight Symposium, 8-9 Aug, Minneapolis, MN, USA.

VanderVeen, V., Dormitorio, B.P., **Baker, K.**, Paul, R., Curtis, A.B., Griffin, A., Kothari, C.L., and A. Wendt. 2014. Raising Awareness of Patterns in Health Outcomes: Disparities in Poor Birth Outcomes in Southwest Michigan. 1<sup>st</sup> Summer Conference on Livable Communities, 15 July, Kalamazoo, MI.

LaDue, N., Petcovic, H., Libarkin, J., Hambrick, D.Z., & **Baker, K.** 2014. Visuospatial ability and geologic mapping: Experts and novices in the field. 2014 Structure and Tectonics Forum, Golden, CO.

Callahan, C. N., Petcovic, H. L., Libarkin, J. C., & **Baker, K. M.** (October, 2013). What would Chamberlin think? Experts map without multiple working hypotheses. Geological Society of America National Meeting, Denver, CO.

Petcovic, H. L., **Baker, K. M.**, Callahan, C. N., Hambrick, D. Z., Libarkin, J. L., Elkins, J., Turner, S. P., Rench, T. A., and LaDue, N. 2013. The role of visuospatial ability in developing mental models during geologic mapping. American Association of Petroleum Geologists Hedberg

Research Conference *3D Structural Geologic Interpretation: Earth, Mind, and Machine* Abstract Volume.

Kothari, C.L., Paul, R., Wiley, J., Hanneken, J., **Baker, K.**, Lenz, D., Dormitorio, B., James, A., and A. Curtis. 2013. The relationship of socioeconomic and racial factors, both individual and community-level, to infant birthweight. 15<sup>th</sup> International Medical Geography Symposium, 8 July, East Lansing, MI. (Also presented at 32<sup>nd</sup> Annual Kalamazoo Community Medical and Health Sciences Research Day, 13 May 2014, Kalamazoo, MI.)

Curtis, A., C. Brooks, R. Paul, **K. Baker**, R. Chowdhary and C. Kothari. 2014. Mapping the relationship between diabetes prevalence and self-management education access: Geographic clusters of need in the United States. 15<sup>th</sup> International Medical Geography Symposium, 8 July, East Lansing, MI.

Nogueira, R., and **K. Baker**. 2013. Tropical cyclone events and late season disease risk triggers: The case of late blight in the eastern US. AAG Annual Meeting, 9-13 April, Los Angeles, CA.

Roehsner, P., and **K. Baker**. 2013. Data storage alternatives for a gridded crop disease risk forecasting system. AAG Annual Meeting, 9-13 April, Los Angeles, CA.

Callahan, C. N., Petcovic, H. L., and **Baker, K. M.** 2013. How a geologist can get led astray: A video log study examining how errors in observations and interpretations yield errors in geologic maps. *Geological Society of America Abstracts with Programs* 45(4), 70. [GSA Best Graduate Student Oral Presentation Award]

Petcovic, H. L., **Baker, K. M.**, and Callahan, C. N. 2013. The role of mental models in navigation: The case of geologic mapping. *Proceedings of the 2013 Association of American Geographers Annual Meeting*, Los Angeles, CA.

**Baker, K. M.**, and Petcovic, H. L. 2013. Expert sensitivity to landscape features: Field researchers on paper and in practice. *Proceedings of the 2013 Association of American Geographers Annual Meeting*, Los Angeles, CA.

Callahan, C. N., Petcovic, H. L., **Baker, K. M.**, & Barnard, G. J. 2013. Constraining uncertainty in the process of geologic mapping. *Proceedings of the 2013 Association of American Geographers Annual Meeting*, Los Angeles, CA.

Barnard, G., **Baker, K. M.**, Petcovic, H. L., & Callahan, C. N. 2013. Locational confusion among novices: Quantifying misplacement of field strategies. *Proceedings of the 2013 Association of American Geographers Annual Meeting*, Los Angeles, CA.

**Baker, K.M.**, Lake, T., Roehsner, P., and K. Schrantz. 2012. Forecasting disease with 10-year optimized models: Moving toward new digital datasets. The First International Conference on Agro-geoinformatics 2-4 Aug, Shanghai, China.

**Baker, K.M.**, and R. Nogueira. 2012. Multi-decadal variability and the daily agroecosystem forecasting accuracy plateau. The First International Conference on Agro-geoinformatics 2-4 Aug, Shanghai, China.

Bondapalati, K., Stein, J., and **Baker, K.M.** 2012. Neural network model to predict Deoxynivalenol (DON) in barley using historic and forecasted weather conditions. The First International Conference on Agro-geoinformatics 2-4 Aug, Shanghai, China.

**Baker, K.M.**, and H.L. Petcovic. 2012. Spatial signatures of mapping expertise among field geologists. AAG Annual Meeting, 24-28 Feb, New York, NY.

Petcovic, H. L., Libarkin, J. C., Hambrick, D. Z., **Baker, K. M.**, Elkins, J. T., Callahan, C. N., Turner, S. P., Rench, T., and LaDue, N. December, 2011. Novice to expert cognition during bedrock geologic mapping. Abstract ED13C-0837 presented at the 2011 International Fall Meeting, American Geophysical Union, San Francisco, CA.

Johnson, A.C., **Baker, K.M.**, and H.L. Petcovic. 2012. Novice and experienced mapping strategies in proposing field routes during bedrock mapping. AAG Annual Meeting, 24-28 Feb, New York, NY.

Johnson, A.C., **Baker, K.M.**, Petcovic, H.L. 2011. Expert-novice strategies in proposing field routes during bedrock mapping. GSA Annual Meeting, 9-12 October, Minneapolis, MN.

**Baker, K.M.**, Simms, E., and H.L. Petcovic. 2011. Expertise as a predictor of time use during geologic field research. International Association for time Use Research Conference, 31 Jul-4 Aug, Oxford, England.

**Baker, K.M.**, Williams, J, Lake, T.L., and W.W. Kirk. 2011. The role of climate normals in crop specific weather forecasts. World Congress on Computers in Agriculture. Prague, Czech Republic: Czech Center for Science and Society.

Callahan, C.N., Petcovic, H.L., and **Baker, K.M.** 2010. Getting the inside track: head-mounted cameras give new perspective on process of bedrock mapping. Geological Society of America, 31 Oct, Denver, CO.

Madle, B.F., **Baker, K.M.**, and H. Petcovic. 2011. Spatial strategies in geologic field mapping. Association of American Geographers, 12-16 April, Seattle, WA.

Rivet, D., and **K.M. Baker**. 2011. Non-parametric interpolation in weather-based disease forecasting systems. Association of American Geographers, 12-16 April, Seattle, WA.

**Baker, K.M.**, Benston, S., Schultze, S., and Rivet, D. 2010. Forecast accuracy in crop disease early warning systems. AAG Annual Meeting, 14-18 April, Washington, DC.

Hoch, C and **K. Baker**. 2010. Impacts of El Nino Southern Oscillation phases on Fusarium head blight disease of wheat. AAG Annual Meeting, 14-18 April, Washington, DC.

Wisniewska, M.K., **Baker, K.M.**, Petcovic, H.L., and Callahan, C.N. 2010. Field mapping strategies of novice and expert geologists. AAG Annual Meeting, 14-18 April, Washington, DC.

**Baker, K.M.**, Wisniewska, M.K., Petcovic, H.L., and Libarkin, J.C. 2009. Characterizing space-time signatures of novices and experts in geologic field mapping. Geological Society of America, 18-21 Oct, Portland, OR.

Callahan, C.N., Petcovic, H.L., **Baker, K.M.**, and Libarkin, J.C. 2009. Tracking expert and novice geocognition during field mapping. Geological Society of America, 18-21 Oct, Portland, OR.

Petcovic, H.L., and Libarkin, J.C., Hambrick, D.Z., **Baker, K.M.**, Callahan, C.N., Rench, T.A., Turner, S.P., and Wisniewska, M.K. 2009. Geology expertise: Evidence from field and laboratory geocognition research. Geological Society of America, 18-21 Oct, Portland, OR.

**Baker, K.M.**, Wharton, P., Kirk, W.W., and B. Plale. 2009. Late blight forecasting as a test case for multi-regional, multi-scale forecasting cyberinfrastructure. Potato Association of America, 9-13 Aug, Fredericton, NB, Canada.

**Baker, K.M.**, Stein, J., Wharton, P., Paz, J., Kirk, W., and B. Plale. 2009. Cyberinfrastructure challenges to multi-regional, multi-scale weather forecasting for crop disease early warning systems. American Phytopathological Association, 1-5 Aug, Portland, OR.

**Baker, K.M.**, Zaslavsky, I., and B. Plale. 2009. Towards cyberinfrastructure for multi-regional crop disease early warning systems. World Congress of Computers in Agriculture, 22-24 Jun, Reno, NV.

Smith, J., **Baker, K.M.**, and R. Trenary. 2009. Mining derived weather forecast variables for crop disease risk prediction. World Congress of Computers in Agriculture, 22-24 Jun, Reno, NV.

**Baker, K.M.** 2009. Climate change and the demand for true agricultural disease forecasts. AAG Annual Meeting, 22-27 March, Las Vegas, NV.

**Baker, K.M.**, Hoch, C.L., and I. Zaslavsky. 2008. Towards cyberinfrastructure for multi-scale crop disease early warning systems. International Conference on High Performance Computing, Networking, Storage and Analysis (SC'08), 15-21 November, Austin, TX.

Fretz, J., **Baker, K.M.**, and D. Lemberg. 2008. Composition of tree communities in natural and urban areas of southwest Michigan. ELDAAG/CAGONT Joint Meeting, 18-19 October, St. Catharines, ON.

Wisniewska, M., and **Baker, K.M.** 2008. Accuracy assessment of a neural network model for crop specific risk prediction. ELDAAG/CAGONT Joint Meeting, 18-19 October, St. Catharines, ON.

**Baker, K.M.**, Petcovic, H., and J. Libarkin. 2008. Spatial analysis as a mechanism for evaluation of student conceptions. ELDAAG/CAGONT Joint Meeting, 18-19 October, St. Catharines, ON.

Libarkin, J., Petcovic, H., **Baker, K.M.**, and Hambrick, Z. 2008. Laboratory and field experiments to investigate spatial cognition in expert and novice geoscientists. International Collaborative Workshop on Spatial Cognition and Learning, 15-19 Sept, Freiburg, Germany.

**Baker, K.M.** 2008. Regional variability in crop specific synoptic forecasts. World Congress of Computers in Agriculture, 24-27 Aug, Tokyo (Atsugi), Japan.

**Baker, K.M.** 2008. Modeling crop disease risk using state-wide weather forecasts: Spatial and temporal error patterns. AAG Annual Meeting, 15-19 April, Boston, MA.

**Baker, K.M.,** Kirk, W.W., and P. Wharton. 2007. Inclusion of synoptic weather forecast models in decision support systems for agriculture. International Congress on Modelling and Simulation, 10-13 December, Christchurch, New Zealand.

**Baker, K.M.,** Libarkin, J.C., and H. Petcovic. 2007. Geologic mapping strategies of novices and experts as evidenced through GPS track and map analysis. The Geologic Society of America Annual Meeting, 28-31 October, Denver, CO.

Libarkin, J.C., Petcovic, H., and **K.M. Baker.** 2007. Analysis of student conceptions of global earthquake and volcano occurrence. The Geologic Society of America Annual Meeting, 28-31 October, Denver, CO.

Petcovic, H., Libarkin, J.C., and **K.M. Baker.** 2007. Behavioral cognitive processes of novices and experts during field mapping activities. The Geologic Society of America Annual Meeting, 28-31 October, Denver, CO.

**Baker, K.M.,** and D. Lemberg. 2007. Fraxinus in a Great Lakes urban street tree community, Kalamazoo, Michigan. East Lakes AAG Annual Meeting, 20 October, East Lansing, MI.

**Baker, K.M.,** Kirk, W.W., and P. Wharton. 2007. A neural network approach to using synoptic forecasts in a statewide potato late blight expert system. The American Phytopathological Society and Society of Nematologists 2007 APS/SON Joint Meeting, 28 July – 1 Aug, San Diego, CA.

**Baker, K.M.,** Kirk, W.W., and P. Wharton. 2007. Using synoptic weather forecasts in late blight risk estimation models. The Potato Association of America 91st Annual Meeting, 12-16 August, Idaho Falls, ID.

Atalay, A., Bronick C., and **K.M. Baker.** 2006. Applications of electron microscopy, ArcGIS Spatial Analyst and MINTEQA2 model to predict phosphate minerals in river sediments. Annual International Conference on Contaminated Soils, Sediments and Water, 16-19 October, Amherst, MA.

**Baker, K.M.,** and C. Bronick. 2006. GIS analysis of phosphorus in X-ray dispersive spectral maps. International Conference on Environmental Science and Technology, 18-22 August, Houston, TX.

**Baker, K.M.** 2006. Nano-GIS: Mapping phosphorus on the surface of soil particles. East Lakes AAG Annual Meeting, 21 October, Toledo, OH.

Gleason, T., and **Baker, K.** Identifying At-Risk Populations in the Kalamazoo River Floodplain for Emergency Management. East Lakes Division Association of American Geographers, Oct 20-21, Toledo, OH.

**Baker, K.M.** 2006. Implementation of crop disease risk forecasts that rely on neural networks and medium-range numerical weather prediction model output. World Congress Computers in Agriculture, 24-26 July 2006, Orlando, Florida.

**Baker, K.M.** 2006. Neighborhood analysis of elements associated with phosphorus in scanning electron microscopy. AAG Annual Meeting, 6-9 March, Chicago, IL.

**Baker, K.M.** 2005. Semantic problem definition in ambiguously defined agricultural data. International Conference on GeoSpatial Semantics, 29-30 November, Mexico City, Mexico.

**Baker, K.M.** 2005. Incorporating medium range weather forecast data into crop disease risk systems. East Lakes AAG Annual Meeting, 22 October, Bowling Green, OH.

**Baker, K.M.** 2005. Accuracy and suitability of medium range weather forecasts for agricultural disease risk prediction. AAG Annual Meeting, Denver, CO.

**Baker, K.M.**, and R. Repic. 2004. Online Interactive Visualization of a Fire Emergency Response Geospatial Database for Hazard Assessment. AAG Annual Meeting, Philadelphia, PA.

**Baker, K.M.**, Rasmussen, T.H., and I. Zaslavsky. 2003. XML-based Visualization of Terminally Ill Patients Through Self-Mapping. East Lakes/West Lakes AAG, 18 October, Kalamazoo, Michigan.

**Baker, K.M.**, Zaslavsky, I., Rasmussen, T.H., and B. Tolo. 2002. XML-based Self-Mapping of ALS (Lou Gehrig's disease) Patients for Environmental Analysis and Community Building." GeoHealth, 3-5 December, Wellington, New Zealand.

**Baker, K.M.** 2000. Statistical Modeling of Agricultural Distributions with GIS: A regional case study of the genus Cucurbita. Ninth International Symposium on Spatial Data Handling, 10-12 August, Beijing, China.

**Baker, K.M.**, Kirk, W.W., and J.A. Andresen. 2000. Microclimate Dependent Modeling of Regional Potato Late Blight Risk. Potato Association of America Annual Meeting, 23-27 July, Colorado Springs, CO.

**Baker, K.M.**, Andresen, J.A., and W.W. Kirk. 2000. Regional Risk Modeling of Microclimate Dependent Vegetable and Fruit Diseases. Association of American Geographers Annual Meeting, 4-8 April, Pittsburgh, PA.

**Baker, K.M.** 1998. Spatial Analysis of Agricultural Cucurbita sp. Varieties in the Eastern Broadleaf Province. East Lakes Regional Meeting of the Association of American Geographers, 30-31 October, Columbus, OH.

**Baker, K.M.**, and I. Zaslavsky. 1998. Web-Based Interactive Environment in Distance Teaching of Technology-Intensive Geography Courses. Association of American Geographers Annual Meeting, 31 March - 3 April, Boston, MA.

Zaslavsky, I., and **K.M. Baker**. 1998. The Experimental Web-Based Interactive Environment in Distance Teaching of GIS and Geographic Data Handling. American Congress of Surveying and Mapping Annual Conference and Exhibition, 1-5 March, Baltimore, MD.

**Baker, K.M.**, and R.H. Aron. 1995. Frost Protection from Small Protective Coverings. East Lakes Regional Meeting of the Association of American Geographers, October, Columbus, OH.

### **Invited Presentations**

Curtis, A., Owusu, C., & **Baker, K.M.** (2016). Update on distribution of sexually transmitted infections in Kalamazoo County. Kalamazoo County Health & Community Services STD Taskforce, April 18, 2017.

**Baker, K.M.**, and H. Petcovic. 2017. Cartographic Image in Planning Fieldwork Routes. United States Geological Survey – National Geospatial Technical Operations Center. Webinar, January 12.

**Baker, K.**, and J. Bell. 2016. Geospatial Applications for Natural Feature Preservation. Educational seminar to the Charter Township of Oshtemo, MI.

**Baker, K.M.**, and H. Petcovic. 2016. Cartographic Image in Planning Fieldwork Routes. International Map Industry Association Annual Meeting. 30 Nov-Dec 2 San Diego, CA.

**Baker, K.M.** 2016. HDReAM: An Introduction. Southwest Michigan GIS User Group Meeting. August 17. W.E. Upjohn Center for the Study of Geographical Change, Kalamazoo, MI.

**Baker, K.M.** 2016. Putting historical maps to work: Scanning and Georeferencing. Southwest Michigan GIS User Group Meeting. August 17. W.E. Upjohn Center for the Study of Geographical Change, Kalamazoo, MI.

Owusu, C., & **Baker, K.M.** 2016. Spatial distribution of STI in Kalamazoo County. Kalamazoo County Health & Community Services STD nurses staff meeting, April 5, 2016.

Paul, R., Curtis, A., and **K. Baker.** 2016. Spatial and Spatio-Temporal Statistical Methods in Health Policy Decisions Great Lakes Symposium, Center for Aging Research. 26 Feb. Kalamazoo, MI.

**Baker, K.M.** 2014. Transforming a point-trained model to work with the National Digital Forecast Database: ten years of improving a late blight model. Department of Geography Seminar Series. Sept 26. Michigan State University, East Lansing, MI.

Curtis, A., Bartels, R., and **K. Baker.** 2014. 2011-2013 Michigan County Medicaid Data. 30 July. Michigan Department of Community Health, Lansing, MI.

**Baker, K.,** Bartels, R., and A. Curtis. 2014. GIS Training Session: Cartography & Queries for MI County Data. 30 July. Michigan Department of Community Health, Lansing, MI.

**Baker, K.M.** 2014. Transforming a point-trained model to work with the National Digital Forecast Database: ten years of improving a late blight model. Weather and IPM Workshop. April 29. Michigan State University, East Lansing, MI.

**Baker, K.M.** 2010. Forecasting crop disease risk using mesoscale weather forecasts. Microsoft Environmental Research Workshop. July 14. Redmond, Washington.

**Baker, K.M.** 2009. Cyberinfrastructure challenges to regional weather forecasting for disease-warning systems. Midwest Weather Working Group. Oct 7, Indianapolis, IN.

**Baker, K.M.** 2009. Panelist: Challenges of Adopting Cloud Technologies. GeoCloud Workshop. Sept 18, Indianapolis, IN.

Hilker, K.W., **Baker, K.M.,** and Lemberg, D. 2007. Kalamazoo Street Tree Replacement Project. Spatial Technology Gallery. Association of American Geographers, Apr 17-21, San Francisco, CA.

**Baker, K.** 2005. Conception and Use of Weather-based IPM System. Weather-based Integrated Pest and Crop Management Conference, 17 Oct, East Lansing, MI.

**Baker, K.** 2003. Online Spatial Database Technologies for A.L.S. Mapping. West Michigan A.L.S. Association Board of Directors. 16 Sept, Grand Rapids, MI.

**Baker, K.,** Kirk, W., Stein, J., and Andresen, J. 2001. Microclimate Estimation and Prediction in Modeling Regional Potato Late Blight Risk. MSU Seminar on Monitoring and Use of Weather Information for Integrated Crop Management. 7 Mar, East Lansing, MI.

**Baker, K.,** Kirk, W., Andresen, J., and J. Stein. 2000. Potato Diseases Prediction. Great Lakes Vegetable Growers Convention and Farm Market Program, 18-20 January, Grand Rapids, MI.

**Baker, K.M.,** and W.W. Kirk. 1999. Managed Fungicide Applications to Control Potato Late blight in Relation to Disease Severity Values. Michigan Plant Coalition, 29 July, East Lansing, MI.

## **PROFESSIONAL COMPETENCE**

### **COURSES TAUGHT**

#### **Western Michigan University**

GEOG 1050: Physical Geography (Area VII - General Education)  
GEOG 3010: Fundamentals of Geographic Information Systems (GIS)  
GEOG 4240/6200: Biogeography  
GEOG 4670/6670: Programming and Project Management  
GEOG 5010: Introduction to Geographic Information Systems (GIS)  
GEOG 5690: Geodatabases and Workflows  
GEOG 6690: Advanced GIS Seminar

#### **University of Michigan – Flint**

ENV 100 – Environmental Geography  
ENV 289 – Web Mapping  
GEO 150 – Physical Geography I  
GEO 372 – Biogeography  
GEO 382 – Plant Geography  
RPL 360 – Analytic Methods in Resource Planning  
RPL 370 – Geographic Information Systems I  
RPL 371 – Geographic Information Systems II

#### **Glen Oaks Community College**

NSG 142 – Physical Geography

## **PROFESSIONAL DEVELOPMENT**

### **Sabbatical Leaves**

2017-2018 Cartographic geodatabases across contexts: Creation, archive, delivery and decision support

2010-2011 Synoptic weather forecasting and web-based information delivery systems for managing crop disease risk in multiple regions of the U.S.

### **Certification**

Certified Geographic Information Systems Professional (GISP), Certification Number 00056775, GIS Certification Institute, May 2007, updated May 2012.

### **Professional Development/Workshop Participation**



- 2010 Midwest Weather Working Group. Aug 7, Charlotte, NC. Improving Observing Networking Coordination: A Cyberinformatics Forum. 17-18 May, National Center for Atmospheric Research, Boulder, CO. Hosted and funded by NSF.
- 2009 Midwest Weather Working Group. Oct 7, Indianapolis, IN.  
Cloud Computing and Collaborative Technologies in the Geosciences. 17-18 September, Indianapolis, IN.
- 2008 Cyberinfrastructure for Environmental Observations, Analysis, and Forecasting: A Cyberinformatics Forum. 5-7 May, National Center for Atmospheric Research, Boulder, CO. Hosted and funded by National Center for Atmospheric Research and National Science Foundation.
- 2007 Cyberinfrastructure in the Geosciences. 13-17 Aug, San Diego Supercomputer Center, San Diego, CA. Funded by National Science Foundation.
- 2006 Microsoft eScience Workshop. 13-15 Oct, Johns Hopkins University, Baltimore, MD. Funded by Microsoft.
- Unidata Users Workshop. Expanding the Use of Models as Educational Tools in the Atmospheric & Related Sciences. 9-14 July, UCAR, Boulder, CO. Funded by NSF.
- 2005 ESRI Education and Users Conference. 25-29 July, San Deigo, CA.
- 2003 Service Learning in Environmental Studies. 28-29 March, St. John's University, Collegeville, MN.

**M.A. in Geography, Thesis/Project Director (by graduation date)**

<b>Year</b>	<b>Student Name</b>	<b>Thesis Title</b>
2017	Lauryn Jainrattanasarat	Prenatal Care of Foster Youths Across Michigan Counties
	Stephen Anim-Preko	State-wide patterns in diabetes screening service utilization: Medicaid, Blue Care Network and Blue Cross Blue Shield of Michigan.
2016	Claudio Owusu	Targeting Interventions to Reduce Chlamydia-Related Disparities in Kalamazoo County using GIS and Statistical Analysis
	Katelyn Hillmeyer	An Intra-Site Spatial Analysis of Fort St. Joseph (20BE23) in Niles, MI
2015	Jon Eric Rasmussen	The Foundation of Cistercian Monasteries in France 1098- 1789: An Historical GIS Evaluation
2014	Nathaniel Fuller	Michigan's Clay Bluffs: The Description and Comparison of an Erosion-Dependent Natural Community
2013	Allison Kohley	Change and continuity : Euro-American and Native American settlement patterns in the St. Joseph River Valley

	Paul Roehsner	Data storage alternatives for a gridded crop disease risk forecasting system
2011	Douglas Rivet	Non-parametric interpolation and weather research forecast models for potato late blight risk forecasting
2010	Nina Consolatti	An Application of GIS Analysis for Evaluation of Public School Building Location Change in Southwest Michigan 1990-2000
	Theresa Heller	Woodlawn Preserve: Area History and Management Strategies
	Bruce Pahl	Social factors involved in determining best use areas for vetiver grass in rural Panama
	Susan Benston	Using GIS to describe and understand archaeological site distribution: Mapping Fort Saint Joseph
	Cassandra Hoch	Impacts of El Nino Southern Oscillation phases on <i>Fusarium</i> head blight disease of wheat
	Stuart Eddy	The Net Environmental Benefit Analysis Process: Experiences on the Great Lakes and Upper Mississippi River
2009	James Langerveld	Using partnership and a low cost structure to successfully restore wetland on a military base in Michigan
2008	Nikkia Mittan	Edge Habitat in West Michigan: Analysis of Turkey Habitat
	C. Elizabeth Whately	Habitat suitability modeling for Lake Huron tansy in Michigan
	Malinda VanSledright,	Documents aguaje palm swamp area and conditions in the Peruvian Amazon
2006	Zachary Newton	Relationship between landcover and cloud-to-ground lightning strikes in Kalamazoo County, Michigan
2004	Janice Fulford	Detecting and mapping the Michigan vegetation tension zone using ecological indicators

**M.A. in Geography, Thesis/Project Committee (by graduation date)**

2016	Hasan, Md Mehedi	Redistribution of the Chicago's Divvy Bike-Share Stations Using Linear Optimization Model: An Equity Perspective
2016	Merrill, Zachary	The Perceptions of Michigan Hunters Regarding Wolves ( <i>Canis Lupus</i> ) and the Idea of a Wolf-Hunt as a Management Option
2015	Karatas, Fatma Ulku	Estimating Sediment and Nutrient Loading in the Davis Creek Watershed Using Soil and Water Assessment Tool (SWAT)

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| 2015 | Sataer,<br>Guzhaliayi            | Spatial Patterns of Drought Persistence in Xinjiang (A.R), China   |
| 2014 | Bartels, Rudy                    | A Climatological Study of Drought in Southern Michigan   |
| 2014 | Bommersbach,<br>Bryan            | Predictive Modeling in the Search for Vertebrate Fossils: Geographic Object Based Image Analysis (GEOBIA) in the Eocene of Wyoming   |
| 2014 | Crawford,<br>Ross                | Restoring Heterogeneous Salmonid Habitat in a Threatened Watershed in the Humid Northeast Using Large Woody Debris and Riparian Vegetation Management, and Accounting for Future Changes |
| 2014 | Santa Maria,<br>Anne             | Managing Dispersed Recreation in the Allegheny National Forest   |
| 2013 | Diop, Sokhna<br>Helene,          | GIS-Based Flood Analysis for Adequate Flood Mitigation in an Unplanned Urban Area; The Case of Pikine Dagoudane in Dakar County, Senegal   |
| 2013 | Olanipekun,<br>Abolaji<br>Samson | The Effectiveness of the New Town Policy in Managing Growth and Congestion in Mega Cities: A Case Study of Lagos, Nigeria New Town Policy  |
| 2013 | Schrantz, Karl<br>P.,            | Location and Competitive Strategy in Retail: The Case of GameStop in Michigan  |
| 2013 | Toth, Ariana<br>M.,              | Economic autonomy of the Miskitu women of the North Atlantic Autonomous Region, Nicaragua : do current development policies apply to matrifocal societies? / by Ariana M. Toth.          |
| 2012 | Blackwood,<br>Paul.              | Understanding flight delays at U.S. airports in 2010, using Chicago O'Hare International Airport as a case study / Paul Blackwood.   |
| 2012 | Kanclerz,<br>Lucas.              | Understanding wildfire hazard vulnerability of residents in Teton County, Wyoming / Lucas Kanclerz.  |
| 2012 | Polk, Adam J.,                   | Agriculture, influence, and instability under the Ancien Régime : 1708-1789 / by Adam J. Polk.   |

2012	Serfas, Daniel Henry,	Assessing the impacts of dams on nutrient and sediment loading in the Kalamazoo River using the Soil and Water Assessment Tool (SWAT) / by Daniel Henry Serfas.
2012	Szell, Andrea B.	Attitudes and perceptions of local residents and tourists toward the protected area of Retezat National Park, Romania / Andrea Blanka Szell.
2011	Crescentini, Enzo.	Foreign direct investment in Italy 2000-2010 : spatial patterns and implications / Enzo Crescentini.
2011	Ecklu, Grace Akpene.	Implementing a street and property identification system : a case study of Accra, Ghana / by Grace Akpene Ecklu.
2010	DeLong, Cari.	Changes in forest tree composition at Asylum Lake Preserve, Kalamazoo, Michigan, under pressures of global climate change / by Cari DeLong.
2009	Sparks, Kelly Marie.	Spatial patterns of no child left behind : a geography of schools in need of improvement in Michigan / by Kelly Marie Sparks.
2009	Temkow, Margaret-Rose M.	Sustainable residential landscapes designed to improve human well-being : planning for quality of life with front yard gardens and the backyard oasis / by Margaret-Rose M. Temkow.
2008	Chen, Junfang.	Analysis of spatial distribution of hazardous wastes in SEMCOG region, Michigan / by Junfang Chen.
2008	Fisseha, Filmon Tsegay.	Distribution of fluoride in groundwater in selected villages in Northern Red Sea and Anseba regions of Eritrea / by Filmon Tsegay Fisseha.
2008	Gutowsky, Michael Scott.	Comparative analysis of the 1876 and 2000 U.S. Presidential Elections / by Michael Scott Gutowsky.
2008	Chen, Junfang.	Analysis of spatial distribution of hazardous wastes in SEMCOG region, Michigan / by Junfang Chen.
2008	Fisseha, Filmon Tsegay.	Distribution of fluoride in groundwater in selected villages in Northern Red Sea and Anseba regions of Eritrea / by Filmon Tsegay Fisseha.
2008	Gutowsky, Michael Scott.	Comparative analysis of the 1876 and 2000 U.S. Presidential Elections / by Michael Scott Gutowsky.

2007	Wesel, Jessica Marie.	Educating fourth grade students in Michigan about gray wolves (Canis Lupus) using a teaching trunk / by Jessica Marie Wesel.
2006	Kovach, Melissa M.	Statistical analysis of the distribution of road salt in blueberry farm soils of Van Buren County, Michigan / by Melissa M. Kovach.
2006	Maas, Jacob Andrew.	Spatial analysis of nitrate contamination of groundwater in Dodge County, Wisconsin / by Jacob Andrew Maas.
2006	Miller, Ryan P.	Analysis of factors affecting zebra mussel (dreissena polymorpha) abundance in Gull Lake, Michigan / by Ryan P. Miller.
2006	Noor, Amatun.	Using geographic information systems to assess risk for elevated blood lead levels in children in Kalamazoo County, Michigan / by Amatun Noor.

**Ph.D., Dissertation Committee (by graduation date)**

2019 (expected)	Grabarczyk, Erin	<u>Program: Biological Sciences</u> Fitness consequences of song patterns in a house wren community
Sp 2018 (expected)	Nurjannah	<u>Program: Interdisciplinary Health Sciences</u> The Development of Model to Examine Diabetes Burden by School District to Inform School-based Diabetes Risk Program Planning and Evaluation
Sp 2018 (expected)	Johnson, Leonard	<u>Program: Statistics</u> Denoising Large Neuroimage MRI Data Using Spatial Random Effect Models
2017	MacQuillan, Elizabeth	<u>Program: Interdisciplinary Health Sciences</u> Birth Record Analysis of Gestational Diabetes: Applications for Intervention Planning
2016	McNutt, Robert	<u>Program: Statistics</u> Bivariate Negative Binomial Hurdle with Random Spatial Effects
2013	Callahan, Caitlin	<u>Program: Science Education</u> An Embodied Perspective on Expertise in Solving the Problem of Making a Geologic Map
2012	Jelsema, Casey	<u>Program: Statistics</u> Estimation and Inference for multivariate Spatial Mixed Effects Models

2010	Guo, Wen	<u>Program: Chemistry</u> Designing Molecular and Nanoscale Materials for Environmental Chemistry Processes
2010	Weakley, Kevin	<u>Program: Science Education</u> The Effects of an Inquiry-Based Earth Science Course on the Spatial Thinking of Pre-Service Elementary Teacher Education Students

### **Undergraduate Research**

2017	Paige Bailey (Internship) Ryan Foster (Internship) Alexander Franchi (Internship) Anastasia Gedda-Shaheen (Internship) Claire Gilbert (Internship) Michael Hayosh (Internship) Jodie Lynch (Internship) Kaitlin Wagner (Internship) Anne Volpe (Internship)
2016	Jason Bell (Internship) Tyler Jennings (Internship) Gerrit Anderson (Internship)
2015	Samuel Fonseca (International Internship)
2014	Johnathan Kennedy (USDA)
2013	David Gold (USDA) Andrew Johnson (NSF) Johnathan Kennedy (USDA) Thomas Lake (USDA) Gerianne Barnard (NSF)
2011	Paul Roehsner (USDA) Andrew Johnson (NSF) Thomas Lake (USDA) Bryan Madle (NSF) Joshua Williams (USDA)
2010	Magdalena Wisniewska (NSF) Joshua Williams (USDA) Bryan Madle (NSF)
2009	Jason Smith (USDA)
2008	Whitney Alrick (MSU/WMU Science Education) Magdalena Wisniewska (USDA)
2007	Kenneth Hilker (Hanes Fund) Jeremy Bell (USDA)

## **PROFESSIONAL SERVICE**

### **SERVICE TO WMU AND DEPARTMENT OF GEOGRAPHY**

2017-2018	Director – W.E. Upjohn Center for the Study of Geographical Change Director – Health Data Analysis, Research and Mapping Center
2016-17	Director – W.E. Upjohn Center for the Study of Geographical Change Associate Director – Health Data Analysis, Research and Mapping Center Geography Department Executive Committee University FRACAA Review Committee
2015-16	Director – W.E. Upjohn Center for the Study of Geographical Change Associate Director – Health Data Analysis, Research and Mapping Center Geography Department Executive Committee University FRACAA Review Committee
2014-15	Associate Director – Health Data Analysis, Research and Mapping Center Geography Department Executive Committee University FRACAA Review Committee Geography Department PhD Taskforce
2013-14	Associate Director – Health Data Analysis, Research and Mapping Center Geography Department Graduate Advisor Geography Department Department Curriculum Committee Geography Department PhD Taskforce
2012-13	Geography Department Graduate Advisor Geography Department Department Curriculum Committee Geography Department PhD Taskforce Geography Department Scherer Committee
2011-12	Geography Department Graduate Advisor Geography Department Department Curriculum Committee
2009-10	Geography Department Department Assessment Committee
2008-09	Geography Department Department Curriculum Committee
2007-08	Geography Department Lucia Harrison Endowment Committee, Chair Geography Department Curriculum Committee
2006-07	Geography Department Lucia Harrison Endowment Committee Geography Department Search Committee: Tourism Faculty Hire
2005-06	Geography Department Lucia Harrison Endowment Committee

Geography Department Environmental and Resource Management Review Team  
Geography Department Search Committee: New Chair

2004-05

Geography Department Environmental and Resource Management Review Team  
Geography Department Search Committee: New Chair  
Geography Department Curriculum Committee