

# Gabriela Shirkey

*PhD. Student* / @inthisclimate

shirkeyg@msu.edu | 517-604-1438  
Manly Miles Building, Rm 202,  
East Lansing, MI 48823

**MICHIGAN STATE**  
UNIVERSITY

## **Dual Degree Straight-to-PhD**

*Michigan State University, East Lansing, MI*

Sept. 2017–Present

Department of Geography, Environment, and Spatial Science  
Environmental Science and Public Policy

## **BS, Scientific and Technical Communication**

Dec. 2013

### **Minor, Spanish**

*Michigan Technological University, Houghton, MI*

Department of Humanities

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## Research Statement & Experience

I aim to connect biogeochemical measurements with socioeconomics to explore human-nature relationships, particularly on landscapes through land management, in a geographic approach.

## **Graduate Research Assistant**

Sept. 2017–Present

*Michigan State University, East Lansing, MI*

Landscape Ecology and Ecosystem Science Lab

- Collect and map social/environmental data using biometric sampling and census material
- Survey and interview 100+ landowners regarding management practices
- Integrate geographic and ecosystem concepts within life cycle assessment
- Build and maintain six eddy covariance flux towers to monitor carbon flux real-time
- Conduct spatial analysis of land cover, management, and emissions of CO<sub>2</sub>-eq

## **Lab Manager**

Jan. 2015–Sept. 2017

*Michigan State University, East Lansing, MI*

Landscape Ecology and Ecosystem Science Lab

- Edit manuscripts, proposals and reviews for English language and journal requirements
- Construct and maintain the lab website ([www.lees.geo.msu.edu](http://www.lees.geo.msu.edu))
- Plan and/or lead lab data collection, field work, and travel both domestically and internationally

## **Research Assistant**

May–Dec. 2013

*Michigan Technological University, Houghton, MI*

- Survey non-industrial, private landowners with semi-structured interviews
- Independently coordinate survey invitations and maintain database of participants
- Evaluate results through transcription software HyperRESEARCH and publish results

## Publications

1. John, R., Chen, J., Giannico, V., Park, H., Xiao, J., **Shirkey, G.**, ... & Qi, J. (2018). Grassland canopy cover and aboveground biomass in Mongolia and Inner Mongolia: Spatiotemporal estimates and controlling factors. *Remote Sensing of Environment*, 213, 34-48.
2. Sat Gungor, B., Chen, J., Wu, S. R., Zhou, P., & **Shirkey, G.** (2018). Does Plant Knowledge within Urban Forests and Parks Directly Influence Visitor Pro-Environmental Behaviors. *Forests*, 9(4), 171.
3. Zheng, F., Stoy, P.C., Luo, Y., Chen, J., Sun, J., Montagnani, L., Wohlfahrt, G., Rahman, A.F., Rambal, S., Bernhofer, C., Wang, J., **Shirkey, G.**, and Niu, S. (2017). Climate controls over the net carbon uptake period and amplitude of net ecosystem production in temperate and boreal ecosystems. *Agricultural and Forest Meteorology*, 243, 9-18. DOI: 10.1016/j.agrformet.2017.05.009.
4. Fan, Y., Chen, J., **Shirkey, G.**, John, R., Wu, S.R, Park, H., Shao, C. (2016). Applications of Structural Equation Modeling (SEM) in Ecological Studies: An Updated Review. *Ecological Processes*, 5:19.
5. Lind-Riehl, J., Jeltema, S., Morrison, M., **Shirkey, G.**, Mayer, A., Rouleau, M., Winkler, R. (2015). Family legacies and community networks shape private forest management in the western Upper Peninsula of Michigan (USA). *Land Use Policy*, 45: 95–102.

## Poster Presentations

1. **Shirkey, G.**, Reed, D., Abraha, M., Peterson, K., Sciusco, P., Watson, K., Cooper, L., Chen, J., Dahlin, K. (2018). Transposing Socioeconomic and Qualitative Research into a Historical, Landscape-scale Assessment of Carbon Stock in Agricultural-Forestland. *American Geophysical Union (AGU) fall meeting*. Washington D.C., MD. 12/14/18.
2. **Shirkey, G.**, Sciusco, P., John, R., Reed, David., O'Brien, K., Lei, C., Cooper, L., Chen, J. (2018). Integrating historical land cover and land management in Michigan's Kalamazoo Watershed: a story of carbon flux impact. *Great Lakes Bioenergy Center Annual Science Meeting*. Geneva, WI. 5/7-9/18.
3. **Shirkey, G.**, Sciusco, P., John, R., Reed, David., O'Brien, K., Lei, C., Cooper, L., Chen, J. (2018). Integrating historical land cover and land management in Michigan's Kalamazoo Watershed: a story of carbon flux impact. Fate of the Earth Symposium. Environmental Science and Policy Program, Michigan State University, MI. 3/24/18.
4. **Shirkey, G.** (2018). Implementing an agricultural Life Cycle Assessment (LCA) at the regional scale in southwest Michigan. *Global Change and Agroecosystems: Challenges and Opportunities*. Michigan State University, East Lansing, MI. 1/15/18.
5. **Shirkey, G.**, Chen, J., John, R., Park, H., Liang, M., and Giannico, V. (2017). Contributions of tree mortality to C accumulation in an oak savanna system: a decadal summary. *Association of American Geographers (AAG)*. Boston, MA. 4/7/17.

## Professional Development Workshops and Conferences

- NEON Surface Atmosphere Exchange Workshop. American Geophysical Union Fall meeting. Washington, D.C., MD. 12/11/18.
- American Geophysical Union (AGU) fall meeting session organizer. “Land Management in the Earth System: Measurements and Models”. Washington, D.C., MD. 12/14/18.
- Great Lakes Bioenergy Center Annual Science Meeting. Geneva, WI. 5/7-9/18.
- MSU Dialogues, diversity training on the topic of race. Office for Inclusion and Intercultural Initiatives, Michigan State University, MI. (spring 2018)
- Fate of the Earth Symposium, Environmental Science and Policy Program. Michigan State University, MI. 3/24/18.
- LCLUC Synthesis Workshop: Ecosystem-Society Interactions on a Changing Mongolian Plateau. University of Michigan. 5/11–13/16.
- Future Earth Synthesis Workshop. Michigan State University, Center for Global Change and Earth Observations. 3/16/15.
- Regional Leadership Development Conference. Society of Hispanic Professional Engineers. Dayton, OH. 3/7–10/13.
- Society of Hispanic Professional Engineers National Conference. Dallas, TX. 11/14–18/12.

## Awards & Recognition

- National Science Foundation Graduate Research Fellowship (NSF GRFP). Awardee. 2019.
- Corey-Thompson Award. 2019. College of Social Science, Michigan State University
- Research Scholars Award. 2019. College of Social Science, Michigan State University.
- Environmental Science and Public Policy (ESPP) Summer Fellowship. 2019. Michigan State University.
- Environmental Science and Public Policy (ESPP) Doctoral Recruiting Fellowship. 2018. Michigan State University.
- “Women in STEM”. 2018. *The Anchor Magazine*. National Sorority Alpha Sigma Tau.
- Academic Achievement Graduate Assistantship (AAGA). 2017. Michigan State University.
- Sustainable Engineering Proposal Design, 2<sup>nd</sup> place. 2013. Society of Hispanic Professional Engineers.
- Academic Enhancement Award. 2012. Michigan Technological University Alumni Association.

## Qualifications & Memberships

*Languages:* English (native), Spanish (conversational)

*Technical Skills:* R, Python, Google Earth Engine, HTML, CSS, JavaScript, ArcGIS, Adobe Creative Suite, WordPress, Hootsuite

*Professional Memberships:*

- American Geophysical Union (AGU): 2018-Present.
- American Association of Geographers (AAG): 2016-Present
- Ecological Society of America (ESA): 2016-Present
- Supporting Women in Geography (SWIG), MSU Chapter: 2017-Present. *Positions held:* Vice President, President
- Alpha Sigma Tau National Sorority: 2011-Present. *Positions held:* Communications, Recruitment Chair
- Society for Hispanic Professional Engineers (SHPE): 2012-2015. *Positions held:* Vice President, Secretary

## Outreach & Engagement

- Girls in Math + Science, youth outreach, Michigan State University: 2017, 2018
- SciFest, volunteer workshop, Michigan State University: 2017, 2018
- Michigan Inland Lakes Partnership, communications and marketing volunteer: 2016
- Huron River Watershed Council, communications and marketing volunteer: 2014-2016
- Noche de Ciencias, Society of Hispanic Professional Engineers (SHPE) youth outreach in Grand Rapids and Detroit public schools: 2012-2014