

# Matthew Haffner

ASSISTANT PROFESSOR · DEPARTMENT OF GEOGRAPHY AND ANTHROPOLOGY · UNIVERSITY OF WISCONSIN - EAU CLAIRE

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Academic interests: GIScience and Systems, Digital Geographies, Urban Geography

## Professional Employment

<b>Assistant Professor</b> , Dept. of Geography and Anthropology, University of Wisconsin - Eau Claire	2018+
<b>Graduate Research Assistant</b> , Dept. of Geography, Oklahoma State University	2016-2018
<b>Programmer</b> , Dept. of Plant and Soil Sciences, Oklahoma State University	2015
<b>Graduate Teaching Assistant</b> , Dept. of Geography, Oklahoma State University	2012-2016
<b>Transportation Intern</b> , Association of Central Oklahoma Governments	2013

## Education

<b>Oklahoma State University</b> DOCTOR OF PHILOSOPHY IN GEOGRAPHY	Stillwater, Oklahoma Aug. 2014 - May 2018
<ul style="list-style-type: none"><li>• Dissertation: Assessing the validity of location-based social media in the study of spatial processes</li><li>• Comprehensive exam areas: GIScience, Urban Geography, the GeoWeb</li><li>• Co-advisors: G. Allen Finchum, Adam J. Mathews</li></ul>	
<b>Oklahoma State University</b> MASTER OF SCIENCE IN GEOGRAPHY	Stillwater, Oklahoma Aug. 2012 - July 2014
<ul style="list-style-type: none"><li>• Thesis: Measuring social interaction potential in Oklahoma City and Tulsa</li><li>• Advisor: Hongbo Yu</li></ul>	
<b>Pittsburg State University</b> BACHELOR OF SCIENCE IN SECONDARY EDUCATION	Pittsburg, Kansas Aug. 2007 - May 2012
<ul style="list-style-type: none"><li>• Majors: Geography and Mathematics</li></ul>	

## Publications

### PEER-REVIEWED JOURNAL ARTICLES

- **Haffner, M.** A place-based analysis of #BlackLivesMatter and counter-protest content on Twitter. *GeoJournal*: 1-24. **2018**.
- **Haffner, M.** A spatial analysis of non-English Twitter activity in Houston, TX. *Transactions in GIS* 22(4): 913-929. <https://onlinelibrary.wiley.com/doi/abs/10.1111/tgis.12335>. **2018**.
- **Haffner, M.**, A. J. Mathews., E. Fekete, and G. A. Finchum. Location-based social media behavior and perception: Views of university students. *Geographical Review* 108(2):203-224. doi:10.1111/gere.12250. **2017**.
- Mathews, A. J., **M. Haffner**, and E. Ellis. GIS-based modeling of tornado siren sound propagation: Refining spatial extent and coverage estimations. *International Journal of Disaster Risk Reduction* 23:36-44. doi:10.1016/j.ijdrr.2017.04.004. **2017**.

## PEER-REVIEWED JOURNAL ARTICLES (UNDER REVIEW)

- **Haffner, M.** and J. C. Comer. An interactive point pattern analysis web application and teaching exercise. *Journal of Geography in Higher Education*. Submitted Feb. 2019.
- Fekete, E. and **Haffner, M.** Twitter and Academic Geography: A look at #AAG2018. *Professional Geographer*. Revisions submitted Jan. 2019.

## BOOK CHAPTERS

- **Haffner, M.** Twitter. In *Handbook on Geographies of the Internet*, B. Warf (ed.). Cheltenham, UK: Edward Elgar Publishing Limited. 2019.

## MAPS

- **Haffner, M.** Location of Greenwood Historic District within Tulsa's contemporary food desert. In *Resilience, Environmental Justice, and the City*. Eds. B. H. Caniglia, M. Vallee, and B. Frank. pp. 84. 2017.

## Professional Conference Presentations

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- **Haffner, M.\*** and Comer, J. C. An interactive point pattern analysis web application and teaching exercise. *West Lakes Division of the American Association of Geographers Annual Meeting*. La Crosse, Wisconsin. Poster presentation. November 2018.
- Comer, J. C.\* and **Haffner, M.** An interactive point pattern analysis web application and teaching exercise. *Southwest American Association of Geographers Annual Meeting*. Manhattan, Kansas. Paper presentation. October 2018.
- **Haffner, M.\*** A spatial analysis of non-English Twitter activity in Houston, Texas. *American Association of Geographers Annual Meeting*. New Orleans, Louisiana. Paper presentation. April 2018.
- Finchum, G. A.\* **Haffner, M.** How good is Twitter data: Comparing phone usage patterns using social media vs. calculated home location. *American Association of Geographers Annual Meeting*. New Orleans, Louisiana. Poster presentation. April 2018.
- **Haffner, M.\***, A. J. Mathews, E. Fekete, G. A. Finchum. Location-based social media behavior and perception: Views of university students. *Southwest American Association of Geographers Annual Meeting*. Huntsville, Texas. Paper presentation. November 2017.
- **Haffner, M.\*** The development of shp2nosql: Command line tools for spatial data and NoSQL databases. *American Association of Geographers Annual Meeting*. Boston, Massachusetts. Paper presentation. April 2017.
- **Haffner, M.\***, A. J. Mathews., E. Ellis. GIS-based modeling of tornado siren sound propagation in Stillwater, Oklahoma. *Southwest American Association of Geographers Annual Meeting*. Denton, Texas. Poster presentation. November 2016.
- **Haffner, M.\***, A. J. Mathews. A multi-dimensional topology for crowd-sourced geographic information. *NSF Workshop on Geospatial Data Science in the Era of Big Data and CyberGIS*. Urbana, Illinois. Paper presentation. July 2016.

- G. A. Finchum\*, **M. Haffner**, A. J. Mathews, E. Fekete. Analyzing smartphone usage patterns at colleges with strong gender differences using social media. *Association of American Geographers Annual Meeting*. San Francisco, California. Poster presentation. April **2016**.
- **Haffner, M.\*** Conquering big spatial data: Towards a new philosophy in geographic information science. *Oklahoma State University Research Symposium*. Poster presentation. February **2016**.
- Ochsner, T. E.\*, J. Dong, **M. Haffner**, A. Patrignani, J. C. Patton. Developing an operational system for daily 800-m resolution soil moisture estimates across Oklahoma. *American Geophysical Union Fall Meeting*. San Francisco, California. Paper presentation. December **2015**.
- Patton, J. C.\*, T. E. Ochsner, A. Patrignani, J. Dong, **M. Haffner**. Towards a high resolution soil moisture map of Oklahoma. *American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America Annual Meeting*. Minneapolis, Minnesota. Poster presentation. November **2015**.
- **Haffner, M.\***, H. Yu. Measuring social interaction potential in Oklahoma City and Tulsa. *Association of American Geographers Annual Meeting*. Chicago, Illinois. Paper presentation. April **2015**.
- Finchum, G. A.\*, **M. Haffner**. Using Twitter data to analyze mobile device usage patterns in urban areas. *Association of American Geographers Annual Meeting*. Chicago, Illinois. Poster presentation. April **2015**.
- **Haffner, M.\*** Using ArcGIS, Python, and R to measure social interaction potential in Tulsa and Oklahoma City. *Oklahoma South Central Arc User Group Meeting*. Moore, Oklahoma. Technical presentation. September **2014**.
- **Haffner, M.\*** Measuring social interaction potential in Tulsa and Oklahoma City: A case study. *Oklahoma State University Research Symposium*. Stillwater, Oklahoma. Paper presentation. April **2014**.

\* Presenting author

## Teaching Experience

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### COURSES TAUGHT AS INSTRUCTOR OF RECORD

#### University of Wisconsin - Eau Claire

*Eau Claire, Wisconsin*  
June 2018 - present

- **GEOG-335** *Geographic Information Systems I* (online)
- **GEOG-337** *Geographic Information Systems II*
- **GEOG-435** *Geographic Information Systems III*
- **GEOG-111** *Human Geography*

#### Oklahoma State University

*Stillwater, Oklahoma*  
Aug. 2012 - Dec. 2015

- **GEOG-1113** *Introduction to Cultural Geography* (lecture)
- **GEOG-1114** *Introduction to Physical Geography* (lecture)
- **GEOG-1114** *Introduction to Physical Geography* (laboratory)

#### Neosho County Community College

*Pittsburg, Kansas*  
Aug. 2011 - Dec. 2011

- **MATH-112** *Intermediate Algebra*

### COURSES TAUGHT AS TEMPORARY INSTRUCTOR

## Oklahoma State University

Stillwater, Oklahoma

Multiple dates

- **GEOG-4383** *Introduction to GIS Programming*
- **GEOG-3333** *Spatial Analysis*
- **GEOG-3123** *Urban Geography*
- **GEOG-2344** *Digital Tools for Environmental Exploration*
- **GEOG-5343** *Advanced GIS: Resource Management Applications*

## St. Mary's Colgan High School

Pittsburg, Kansas

Jan. 2011 - May. 2011

- *Algebra II (as student teacher)*
- *Geometry (as student teacher)*
- *Algebra III (as substitute)*
- *Calculus (as substitute)*

## Invited Lectures

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- Maintaining graduate student life. In *GEOG-5001 - Professional Development in Geography*. Oklahoma State University. November **2017**, November **2016**.
- Big data, spatial data science, and volunteered geographic information. In *GEOG-2344 - Digital Tools for Environmental Exploration*. Oklahoma State University. September **2017**.
- High performance computing in the social sciences. In *MATH-2910 - High Performance Computing*. Oklahoma State University. March **2016**.
- The emergence of urban segregation in the United States. In *GEOG-1113 - Introduction to Cultural Geography*. Oklahoma State University. March **2016**.
- GIS programming with PostgreSQL and PostGIS. In *GEOG-4383 - Introduction to GIS Programming*. Oklahoma State University. March **2016**.
- Volunteered geographic information, Twitter, and big data. In *GEOG-2344 - Digital Tools for Environmental Exploration*. Oklahoma State University. January **2016**, November **2015**.

## Honors & Awards

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2017	<b>Norris Conference Travel Scholarship (\$550)</b>	Department of Geography, OSU
2017	<b>Jerry Croft Award in Geography Education (\$1500)</b>	Department of Geography, OSU
2016	<b>Norris Conference Travel Scholarship (\$350)</b>	Department of Geography, OSU
2016	<b>Spring Featured Researcher</b>	High Performance Computing Center, OSU
2015	<b>Research Materials Grant (\$200)</b>	GPSGA, OSU
2015	<b>Most Outstanding First Year PhD Student (\$2000)</b>	Department of Geography, OSU
2015	<b>Susan Shaull Medal for Excellence in Teaching (\$500)</b>	Department of Geography, OSU
2015	<b>Top Tier Graduate Fellowship (\$7500)</b>	Graduate College, OSU
2014	<b>SCAUG Regional Scholarship (\$1500)</b>	South Central Arc User Group
2014	<b>Norris Conference Travel Scholarship (\$500)</b>	Department of Geography, OSU
2013	<b>OKSCAUG Scholarship (\$500)</b>	Oklahoma South Central Arc User Group
2013	<b>Three Minute Thesis Competition Finalist</b>	Graduate College, OSU
2013	<b>Most Outstanding First Year Master's Student (\$1000)</b>	Department of Geography, OSU

## Professional Memberships

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American Geographical Society	<i>Apr. 2017 - Present</i>
American Association of Geographers	<i>Nov. 2014 - Present</i>
Gamma Theta Upsilon (Geography Honor Society)	<i>May 2013 - Present</i>
OSU Forum of Geography Graduate Students	<i>Aug. 2012 - May 2018</i>
Fellowship of Christian Graduate Students	<i>Aug. 2013 - May 2015</i>

## Professional & University Service

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- **Manuscript reviewer.** *Professional Geographer* (2018, 2019), *Geographical Review* (2018), *International Journal of Applied Geospatial Research* (2018).
- **Search committee member.** *Critical nature - society geographer position.* University of Wisconsin - Eau Claire. September - December **2018**.
- **Alternate Member.** *OSU Student University Technology Services Fee Committee (UTSF).* Oklahoma State University. November **2017** - present.
- **Secretary.** *Gamma Theta Upsilon (Geography Honor Society).* Oklahoma State University. August **2017** - present.
- **President.** *Forum of Geography Graduate Students.* Oklahoma State University. August **2016** - February **2018**.
- **Co-organizer.** *Forum of Geography Graduate Students invited colloquium presentations.* Stillwater, Oklahoma. Department of Geography Colloquia. August **2016** - present.
- **Co-organizer.** *Open source software in geography: Theories, developments, and pathways toward openness.* AAG Annual Meeting. Boston, Massachusetts. Paper Session. April **2017**.
- **Co-organizer.** *Open source software in geography: Theories, developments, and pathways toward openness.* AAG Annual Meeting. Boston, Massachusetts. Panel Session. April **2017**.
- **Co-organizer.** *Securing positions in academia.* Forum of Geography Graduate Students Special Sessions. Stillwater, Oklahoma. Three Part Lecture Series. January **2017**.
- **President.** *OSU Fellowship of Christian Graduate Students.* Oklahoma State University. August **2013** - May **2015**.
- **Treasurer.** *Forum of Geography Graduate Students.* Oklahoma State University. August **2012** - July **2013**.

## Technical Skills

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<b>Desktop GIS</b>	R (various libraries), PostGIS, ArcPy, QGIS, MATLAB Mapping Toolbox, ArcGIS
<b>Web GIS</b>	GeoServer, OpenLayers 3, Leaflet
<b>Databases/NoSQL systems</b>	ElasticSearch, PostgreSQL, MongoDB, MS SQL Server
<b>Languages</b>	Bash, R, Python, Emacs Lisp, LaTeX, SQL, MATLAB, C#, HTML, CSS, SAS
<b>Shells</b>	Zsh, Bash, Eshell
<b>Operating systems</b>	Manjaro, CentOS, Raspbian, Debian, Ubuntu, Fedora, OS X, Windows
<b>Web Frameworks</b>	Hugo, Shiny, Jekyll, Microsoft .NET
<b>Tools</b>	Emacs (Spacemacs), Vim, Git, Docker, RStudio, Microsoft Visual Studio
<b>APIs</b>	OSM Nominatim, Twitter, Flickr, Zillow
<b>Presentation software</b>	remark.js, reveal.js, LibreOffice Impress, MS PowerPoint
<b>Certifications</b>	Base SAS Programming for SAS 9
<b>Graphics editing</b>	Inkscape, Adobe Illustrator
<b>Miscellaneous</b>	RStudio Server, Linode, High Performance Computing