

CAROLYN S. FISH

cfish11@uoregon.edu • carolynfish.com

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Department of Geography
1251 University of Oregon
Eugene, OR 97403-1251

EDUCATION

Doctor of Philosophy in Geography, 2014-2018

The Pennsylvania State University (Penn State)

Dissertation Title: The cartography of climate change in United States media

Advisor: Dr. Cynthia A. Brewer

Master of Science in Geography, 2008-2010

Michigan State University

Thesis Title: Change detection in animated choropleth maps

Bachelor of Science in Geography (GIScience concentration), 2005-2008

The Pennsylvania State University

Graduated with Distinction

PROFESSIONAL EXPERIENCE

Academic Positions

- 2018-present *Assistant Professor*
Department of Geography, University of Oregon, Eugene, OR
- 2019-2021 *Early-Career Innovator Program Fellow*
National Center for Atmospheric Research (NCAR), Boulder, CO
- 2014-2018 *Graduate Fellow, Instructor, Teaching Assistant, and Research Assistant*
The Pennsylvania State University, University Park, PA
- 2008-2010 *Teaching Assistant*
Michigan State University, East Lansing, MI

Professional Positions (Non-Academic)

- 2011-2014 *Cartographic Product Engineer*
Esri, Redlands, CA
- 2010 *GIS Data Collection Manager*
Remote Sensing and GIS, Michigan State University, East Lansing, MI

PUBLICATIONS

Peer-Reviewed Publications

- 2020 **Fish, C.S.** (Accepted) Cartographic content analysis of compelling climate change communication. *Cartography and Geographic Information Science*. DOI: 10.1080/15230406.2020.1774421

- 2020 **Fish, C.** (2020) Storytelling for making cartographic design decisions for climate change communication. *Cartographica: The International Journal for Geographic Information and Geovisualization*. 55(2), pp. 69–84. DOI: 10.3138/cart-2019-0019
- 2019 de Sherbinin, A., A. Bukvic, G. Rohat, M. Gall, B. McCusker, B. Preston, A. Apotsos, **C. Fish**, S. Kienberger, P. Muhonda, O. Wilhelmi, D. Macharia, W. Shubert, R. Sliuzas, B. Tomaszewski, S. Zhang. (2019). Climate Vulnerability Mapping: A Systematic Review and Future Prospects. *WIREs Climate Change*. 10(5), 1-23. DOI: 10.1002/wcc.600
- 2018 **Fish, C.S.** (2018). Spatiotemporal Representation. *The Geographic Information Science & Technology Body of Knowledge* (4th Quarter 2018 Edition), John P. Wilson (Ed.). DOI: 10.22224/gistbok/2018.4.6.
- 2017 Griffin, A.L., T. White, **C.S. Fish**, B. Tomio, H. Huang, C. Robbi-Sluter, J.V. Meza Bravo, S.I. Fabrikant, S. Bleisch, M. Yamada, and P. Picanço (2017). Designing across map use contexts: A research agenda. *International Journal of Cartography*. 3(sup1), 90-114. DOI:10.1080/23729333.2017.1315988.
- 2016 **Fish, C.S.** and K. Calvert (2016). Analysis of interactive solar energy web maps for urban energy sustainability. *Cartographic Perspectives*. 85, 5-22. DOI: 10.14714/CP85.1372*
*won *Cartographic Perspectives* Student Paper Competition
- 2016 **Fish, C. S.** and N.B. Piekielek (2016). Targeting disciplines for GIS outreach using bibliometric analysis. *Journal of Maps and Geography Libraries*. 12(3), 258–280. DOI: 10.1080/15420353.2016.1221870.
- 2013 Schaeztl, R. J., H. Enander, M.D. Luehmann, D.P. Lusch, **C. Fish**, M. Bigsby, M. Steigmeyer, J. Guasco, C. Forgacs, and A. Pollyea (2013). Mapping the physiography of Michigan with GIS. *Physical Geography*. 34(1): 2-39. DOI: 10.1080/02723646.2013.778531.
- 2011 **Fish, C.**, K.P. Goldsberry, and S. Battersby (2011). Change blindness in animated choropleth maps: An empirical study. *Cartography and Geographic Information Science*. 38(4): 350-362. DOI: 10.1559/15230406384350.

Manuscripts Under Review

Fish, C.S. (Under Review). Elements of Vivid Cartography. *The Cartographic Journal*.

Work in Progress

Fish, C.S. and M. Garrison. Building Empathy for Coastal Communities Through Storytelling Maps. To be submitted to *Cartography and Geographic Information Science*.

Fish, C.S. and A.L. Griffin. Measuring emotional responses to climate change framing and maps through facial emotion recognition software. To be submitted to *Nature Climate Change*.

Fish, C.S., Garrison, M., and Douglass, N. Modern Methods in Cartography. To be submitted to *The Cartographic Journal*.

Fish, C.S. Who is telling the story of climate change with maps? The surprising cartographic silence of the far right. To be submitted to *Cartography and Geographic Information Science*.

Peer-Reviewed Extended Abstracts

- 2019 **Fish, C.S.** and A.L. Griffin. *Emotional responses to climate change map framing using facial emotion recognition technology*. Proceedings of the 28th International Cartographic Conference. Tokyo, Japan. July 2019.

- 2018 **Fish, C.S.** *Evaluating emotional responses to framing of climate change maps with facial emotion recognition technology*. 10th International Conference on Geographic Information Science. Melbourne, VIC, Australia. August 29, 2018.
- Fish, C.S.** *Animation in the age of the animated gif: The changing dynamics of dynamics in geovisual analytics*. Workshop at the 10th International Conference on Geographic Information Science. Melbourne, VIC, Australia. August 28th, 2018.
- 2017 **Fish, C.S.** *A content analysis of climate change maps in the United States news media*. Proceedings of the 28th International Cartographic Conference. Washington, DC. July 2-7, 2017
- 2017 Griffin, A.L., T. White, **C.S. Fish**, B. Tomio, H. Huang, C. Robbi-Sluter, J.V. Meza Bravo, S.I. Fabrikant, S. Bleisch, M. Yamada, and P. Picanço. *Designing across map use contexts*. Proceedings of the 28th International Cartographic Conference. Washington, DC. July 2-7, 2017.
- 2015 **Fish, C.S.** and K. Calvert. *Understanding map design for energy policy, planning, and technology implementation*. The 27th Annual Meeting of the International Cartographic Association. Rio de Janeiro, Brazil. August 25, 2015.
- 2010 Goldsberry, K. and **C. Fish**. *Legibility of transitions in dynamic geovisual displays: Determining the influence of change blindness in geovisual analytics*. The 6th Meeting of GIScience. Zurich, Switzerland. September 15, 2010.
- 2009 **Fish, C.** and K. Goldsberry. *Evaluating the influence of tweening on human change perception in animated choropleth maps*. The 24th Annual Meeting of the International Cartographic Association. Santiago, Chile. November 18, 2009.

Book Chapters

- 2020 Hauthal, E., D. Burghardt, D., **C. Fish**, A.L.Griffin. (2020) "Sentiment Analysis" In (Kobayashi) *International Encyclopedia of Human Geography*, Second Edition: Elsevier. Pp. 169-177. <https://doi.org/10.1016/B978-0-08-102295-5.10593-1>
- 2015 **Fish, C.** and C.A. Brewer. (2015) "GIS as a Tool for Map Production" In: (Monmonier) *The History of Cartography Project*, Volume 6: University of Chicago Press; Chicago, Illinois. Pp. 504-509. https://www.press.uchicago.edu/books/HOC/HOC_V6/HOC_VOLUME6_G.pdf

Proceedings and Other Publications (Not Peer-Reviewed)

- 2017 **Fish, C.S.** and A.L. Griffin. (2017). *Emotional responses to climate change maps*. Proceedings of the 28th International Cartographic Conference, Pre-conference Workshop on Maps and Emotion. Washington, DC. July 1-2, 2017.
- 2015 **Fish, C.S.** 2015. *Cartographic challenges in animated mapping*. Proceedings of the 27th International Cartographic Conference, Pre-conference Workshop on Envisioning the Future of Cartographic Research. Curitiba, Brazil. August 21, 2015.
- 2015 Abbott, L., A. Barrett, S. Eissler, **C.S. Fish**, L. Goldberg, S. Mainzer, and M. Olsen. (2015). *Community perceptions of local foods: A mixed methods approach in State College, PA*. University Park, PA: Hamer Center for Community Design.

GRANTS AND FELLOWSHIPS

- 2019 **National Center for Atmospheric Research (NCAR) Innovators Program sponsored by the National Science Foundation (NSF)** for the project titled "Map storytelling to build empathy for coastal communities" \$235,000.

- 2017 **National Science Foundation (NSF) Doctoral Dissertation Research Improvement Award (DDRI).** Co-PI with C.A. Brewer for “*Doctoral dissertation research: Cartographic design for public communication of environmental information*” \$15,986.
- Evelyn L. Pruitt National Fellowship for Dissertation Research,** Society of Woman Geographers for “*Cartographic design for mass communication*” \$11,000.
- NASA Pennsylvania Space Grant Consortium, Graduate Fellowship** \$5,000.
- United States Geospatial Intelligence Foundation Doctoral Scholarship** \$5,000.
- United States National Committee of the International Cartographic Association National Science Foundation Young Scholar Conference Grant** for “*A content analysis of climate change maps in the United States news media*” \$1,000.
- Cartography and Geographic Information Society (CaGIS) Doctoral Scholarship** \$1,500.
- 2015 **United States National Committee of the International Cartographic Association National Science Foundation Young Scholar Conference Grant** for “*Understanding map design for energy policy, planning, and technology implementation*” \$1,800.
- 2014-15 **Penn State College of Earth and Mineral Sciences FEGR Top-up Award** \$5,000.
- 2009 **United States National Committee of the International Cartographic Association National Science Foundation Young Scholar Conference Grant** for “*Are you blind to change: Evaluating the influence of tweening on human change perception in animated choropleth maps*” \$1,800.
- 2008 **Association of American Geographers, Cartography Specialty Group Master’s Thesis Research Grant** for “*Evaluating the influence of tweening on human change perception in animated choropleth maps*” \$150.
- 2006-08 **Penn State College of Earth and Mineral Sciences Matthew J. Wilson Honors Scholarship** \$4,000.

PRESENTATIONS AND INVITED LECTURES

Invited Talks

- 2018 **Fish, C.S. (presenter).** *Cartographic design for mass communication.* Society of Woman Geographers Meeting, Washington, DC, April 28, 2018.
- 2017 **Fish, C.S. (presenter).** *Cartographic design for climate change vulnerability mapping.* National Socio-Environmental Synthesis Center (SESYNC) Pursuit on Climate Vulnerability Mapping Workshop May 8-10, 2017, Annapolis, MD, May 9, 2017.
- Fish, C.S. (presenter).** *Emotion, framing, climate change, and maps.* United States Military Academy at West Point. West Point, NY, April 27, 2017.
- 2014 **Fish, C.S. (presenter).** *Designing point symbols.* University of Kentucky MapShop Workshop for the New Maps+ Online Digital Mapping Initiative. Lexington, KY, October 13th 2014.
- Wilson, M., C.S. **Fish, (panelist),** A. Woodruff, J. Czaplowski, and M. Foster. *Professional cartography.* Geography 109: Digital Mapping, University of Kentucky. Lexington, KY, October 14th, 2014.
- 2012 **Fish, C. (presenter),** L. Rosenshein Bennett, and L. Scott. *Visualizing space-time cluster analysis.* Esri Useful Maps and Apps Presentation Series. Redlands, CA, October 30, 2012
- 2009 **Fish, C. (presenter)** and K. Goldsberry. *Quantifying the influence of tweening in animated maps.* Michigan State Geography Department Colloquia Series. East Lansing, MI, March, 2009.

Fish, C. (presenter) and K. Goldsberry. *Change blindness and animated choropleth maps*. Michigan State Geography Department Colloquia Series. East Lansing, MI, October 2, 2009.

Conference Presentations

- 2020 **Fish, C.S. (presenter)**. *Who is telling the story of climate change with maps? The surprising cartographic silence of the far right*. 115th Meeting of the American Association of Geographers, Denver, CO. (cancelled)
- 2019 **Fish, C. S. (presenter)**. *Vivid Maps of Climate Change: Do They Make a Difference?* 114th Meeting of American Association of Geographers, Washington, DC, April 3-7, 2019.
- 2018 **Fish, C.S. (presenter)**. *Vivid Persuasion in Maps*. 2018 North American Cartographic Information Society (NACIS) Conference, Norfolk, VA, October 18, 2018.
- Fish, C.S. (presenter)**. *Vivid maps: Climate change cartographic communication*. 113th Meeting of the American Association of Geographers, New Orleans, LA, April 10-14, 2018.
- 2017 **Fish, C.S. (presenter)**. *Climate change, maps, and the media*. 2017 North American Cartographic Information Society (NACIS) Conference, Montreal, Canada, October 10-13, 2017.
- Fish, C.S. (presenter)** and A.L. Griffin. *Emotional responses to climate change maps*. 112th Annual Meeting of the American Association of Geographers, Boston, MA, April 5 – 9, 2017.
- 2016 **Fish, C.S. (presenter)** and K. Calvert. *A content analysis study of interactive online solar energy maps*. 111th Annual Meeting of the Association of American Geographers, San Francisco, CA, March 30, 2016.
- *Awarded Best Paper in the American Association of Geographers Cartography Specialty Group Honors Student Paper Competition
- Fish, C.S. (presenter)** and K. Calvert. *Assessment of solar energy web maps*. 2016 No Boundaries Conference, University Park, PA, February 20, 2016.
- 2015 Robinson, A. C. (presenter), **C.S. Fish**, and S. Quinn. *Visualizing geographic patterns in MOOC data*. 2015 Esri Education GIS Conference. San Diego, CA, July 18-21, 2015.
- Calvert, K., J. Brownson, **C.S. Fish (panelist)**, D. Renne, J. Rannalli, and D. Lingfors. *Panel: Mapping solar energy futures: Emerging trends in geospatial decision-support*. Solar 2015: American Solar Energy Society (ASES) Conference, State College, PA, July 29, 2015.
- Fish, C.S. (presenter)** and K. Calvert. *Web-based renewable energy map design evaluation*. 110th Annual Meeting of the Association of American Geographers, Chicago, IL, April 21-25, 2015.
- Fish, C.S. (presenter)**, P. Stephens, and M. Mathason. *Web-based renewable energy map design evaluation*. 2015 No Boundaries Conference, University Park, PA, April 11, 2015.
- 2014 **Fish, C.** and K. Goldsberry. *Are you blind to change? Evaluating the influence of tweening on human change perception in animated choropleth maps*. 2014 North American Cartographic Information Society (NACIS) Conference, Pittsburgh, PA, October 8-11, 2014. (poster)
- 2013 **Fish, C. (presenter)**. *Basemaps*. 2013 Esri International Users Conference, San Diego, CA, July 8-12, 2013
- Fish, C. (presenter)**. *Military Aspects of Weather*. 2013 Esri International Users Conference, San Diego, CA, July 8-12, 2013
- Fish, C.,** N. Campos, and M. Funk. **(all authors were presenters)**. *ArcGIS for the Military: Managing the operational factors*. 2013 Esri International Users Conference, San Diego, CA, July 8-12, 2013

- Fish, C.** and M. Funk. **(all authors were presenters)**. *ArcGIS for the Military: Analyzing the operational environment*. 2013 Esri International Users Conference, San Diego, CA, July 8-12, 2013
- Fish, C.** and M. Funk. **(all authors were presenters)**. *ArcGIS for the Military: analyzing the operational environment*. 2013 Esri Federal GIS Conference, Washington, DC, February 25-27, 2013.
- Fish, C.S. (presenter)**. *Designing and testing point symbols*. 2013 North American Cartographic Information Society (NACIS) Conference, Greenville, SC, October 9-11, 2013.
- 2012 **Fish, C.** and B. Conklin. **(all authors were presenters)**. *Creating basemaps for the defense and intelligence communities*. 2012 Esri Federal GIS Conference, Washington, DC, February 22-24, 2012.
- Fish, C.** and B. Conklin. **(all authors were presenters)**. *Exploring the ArcGIS Defense and Intelligence Resources*. 2012 Esri Federal GIS Conference, Washington, DC, February 22-24, 2012.
- Fish, C.S. (presenter)**, L. Rosenshein Bennett, and L. Scott. *Visualizing space-time cluster analysis*. 2012 North American Cartographic Information Society (NACIS) Conference, Portland, OR, October 17-19, 2012.
- 2011 Buckley, A. (presenter), K. Field, and **C.S. Fish**. *Methods for space time visualization: Take 3*. 2011 North American Cartographic Information Society (NACIS) Conference. Madison, WI, October 12-14, 2011.
- Goldsberry, K. (presenter) and **C.S. Fish**. *Space-time legibility: Using design to mitigate geovisual failures*. 107th Annual Meeting of the Association of American Geographers, Seattle, WA, April 12-16, 2011.
- 2010 **Fish, C.S. (presenter)** and K. Goldsberry. *Animated choropleth maps and human change detection*. The 106th Annual Meeting of the Association of American Geographers, Washington, DC, April 14-18, 2010.
- Goldsberry, K. (presenter) and **C.S. Fish**. *Change We Can Perceive In: Change legibility in dynamic displays of geographic information*. 106th Annual Meeting of the Association of American Geographers, Washington, DC, April 14-18, 2010.
- 2009 **Fish, C.S. (presenter)** and K. Goldsberry. *The effects of smooth transitions in animated choropleth maps on human change detection*. 2009 North American Cartographic Information Society (NACIS) Conference. Sacramento, CA, October 7-10, 2009.
- Fish, C.S. (presenter)** and K. Goldsberry. *Quantifying the influence of tweening in animated maps*. 105th Annual Meeting of the Association of American Geographers, Las Vegas, NV, March 22-28, 2009.
- 2008 Roth, R.E. (presenter), M. Stryker, **C. Fish**, D. Schoch, and C.A. Brewer. *ScaleMaster.org: Multi-scale mapping made easy*. 2008 North American Cartographic Information Society (NACIS) Conference. Missoula, MT, October 8-11, 2008.
- Allen, M., **C. Fish**, and S. Herb. **(all authors were presenters)**. *The cultural and literary map of Pennsylvania*. 104th Annual Meeting of the Association of American Geographers, Boston, MA, April 15-19, 2008.

Workshop (attendance and presentations)

- 2019 National Science Foundation Landscape Carbon Sequestration for Atmospheric Recovery (LCSAR) Workshop, Portland, Oregon
- 2017 Critical GIS Workshop, McGill University, Montreal, Canada

- 2017 National Socio-Environmental Synthesis Center (SESYNC) Workshop on Climate Change Vulnerability Mapping, Annapolis, MD **with presentation** on “Cartographic Design for Climate Change Vulnerability Mapping”
- 2016 International Cartographic Association (ICA) Workshop with Commissions on Visual Analytics, Usability, and Map Design in San Francisco, California
- 2015 ICA Workshop with Commissions on Visual Analytics, Usability, and Map Design in Curitiba, Brazil **with presentation** of white paper on “Cartographic Challenges in Animated Mapping”

AWARDS

External

- 2017 **Best Paper, Cartographic Perspectives Journal Student Paper Competition** for the paper entitled *An analysis of interactive solar energy web maps for urban energy sustainability*.
- 2016 **Best Paper, Association of American Geographers Cartography Specialty Group Paper Competition** for the paper entitled *A content analysis study of interactive online solar energy maps*.
Gamma Theta Upsilon Travel Award for travel to the Association of American Geographers meeting for the presentation of *A content analysis study of interactive online solar energy maps*.
- 2015 **North American Cartographic Information Society Student Travel Grant** for organization of Practical Cartography Day and attendance at the annual meeting.
State of the Map United States Conference Scholarship for conference travel and attendance.
Free and Open Source Software for Geospatial (FOSS-4G) North American Conference Scholarship for conference travel and attendance.
- 2014 **Elaine Bosowski Second Place Map Graduate Level Award** for a graduate student map or poster displayed at the annual meeting of the Pennsylvania Geographic Society.
North American Cartographic Information Society Student Travel Grant for the presentation of *Are you blind to change? Evaluating the influence of tweening on human change perception in animated choropleth maps*.
- 2010 **North American Cartographic Information Society Member Travel Grant** for attendance at the annual meeting.
- 2009 **GIS and GIScience Specialty Group of the Association of American Geographers Travel Award** for travel to the International Cartographic Conference (ICC 2009) for the presentation of *Evaluating the influence of tweening on human change perception in animated choropleth maps*.

Internal

- 2018 **New Junior Faculty Research Award** for supporting new research at the University of Oregon.
- 2017 **Outstanding Graduate Teaching Assistant Award** for excellence in teaching in the Department of Geography at Penn State.
Nancy Brown Community Service Award for excellence in service to the Department of Geography at Penn State and the community.
Penn State Geography Academic Enrichment Research Award for dissertation research expenses.
- 2016 **Penn State Geography Academic Enrichment Research Award** for dissertation research expenses.

- E. Willard Miller Ph.D. Paper Competition Second Place** for the paper entitled *A content analysis study of interactive online solar energy maps*.
- 2009 **Graduate Office Fellowship, Michigan State University, Department of Geography** for master's thesis research expenses.
- Michigan State University, Department of Geography Travel Grant** for travel to the International Cartographic Conference (ICC 2009) for the presentation of *Evaluating the influence of tweening on human change perception in animated choropleth maps*.
- Michigan State, Graduate School Travel Grant** for travel to the Association of American Geographers Conference for the presentation of *Quantifying the influence of tweening in animated maps*.
- Michigan State, College of Social Science Travel Grant** for travel to the Association of American Geographers Conference for the presentation of *Quantifying the influence of tweening in animated maps*.
- Michigan State, Council of Graduate Students Travel Grant** for travel to the Association of American Geographers Conference for the presentation of *Quantifying the influence of tweening in animated maps*.
- Robert Thomas/Gamma Theta Upsilon Michigan State Travel Grant** for travel to the Association of American Geographers Conference for the presentation of *Quantifying the influence of tweening in animated maps*.
- 2008 **Penn State Department of Geography, Jeff Gockley Memorial Award** for academic excellence in the GIScience concentration.
- 2005-08 **Dean's List**, Penn State University, College of Earth and Mineral Sciences.

TEACHING AND MENTORSHIP

Course Instructor

GEOG 481	GIScience I (4 offerings)	Oregon
GEOG 498	Geospatial Project Design	Oregon
GEOG 181	Our Digital Earth	Oregon
GEOG 160	Mapping Our Changing World (Web) (2 offerings)	Penn State
GEOG 430	Human Use of the Environment (Web)	Penn State
GEOG 206	Physical Geography (Web)	Michigan State

Graduate Student Advisees

Nathaniel Douglass	Master of Science in Geography	Oregon
Michala Garrison	Master of Science in Geography NCAR Innovator Student Fellow (2019-21)	Oregon

Graduate Student Committee Member

Schyler Reis	PhD in ESSP/Geography	Oregon
Justin Meinke	PhD in Geography	Oregon
Bill Limpisathian	PhD in Geography	Oregon
Michael Madden	Master of Science in Environmental Studies	Oregon

Undergraduate Research Assistants

Peter Ryan	Bachelor of Science in Geography	Penn State
Han Yu	Bachelor of Science in Geography	Penn State
Julia Higson	Bachelor of Science in Geography/Anthropology	Penn State

Nicole Rivera	Bachelor of Science in Geography	Penn State
Sophie Najjar	Bachelor of Arts in Geography/Visual Arts	Penn State
Patrick Stevens	Bachelor of Science in Geography	Penn State

Teaching Assistant

GEOG 363	Geographic Information Systems	Penn State
GEOG 361	Cartography: Maps and Map Construction	Penn State
GEO 423	Map Design (2 offerings)	Michigan State
GEO 426	Thematic Cartography (2 offerings)	Michigan State

SERVICE

Scholarly Affiliations

- American Association of Geographers (AAG)
- Cartography and Geographic Information Society (CaGIS)
- Cartography Specialty Group of the American Association of Geographers (CSG-AAG)
- Gamma Tau Upsilon, Geography Honors Society (GTU)
- Phi Beta Kappa, Lambda Chapter of Pennsylvania
- North American Cartographic Information Society (NACIS)
- Society of Woman Geographers (SWG)
- Supporting Women in Geography (SWIG)

Reviewer

- 2019- *Geographical Analysis* (1)
- 2019- *Cartographic Perspectives* (1)
- 2019- Geographic Information Science & Technology Body of Knowledge (1)
- 2018 International Cartography Conference 2019 (3)
- 2018- *ISPRS International Journal of Geo-Information* (1)
- 2018- *IEEE Transactions on Visualization and Computer Graphics* (1)
- 2018- *The Cartographic Journal* (2)
- 2016- *International Journal of Geographic Information Science* (1)
- 2015- *Renewable & Sustainable Energy Reviews* (1)
- 2013- *Cartography and Geographic Information Science* (5)

Disciplinary Service

- 2020-2021 **Past-Chair:** Cartography Specialty Group of the AAG
- 2020-2021 **Committee Chair:** Diversity and Inclusion of the Cartography Specialty Group of the AAG
- 2019-2020 **Chair:** Cartography Specialty Group of the AAG
- 2019-2020 **Program Committee Chair:** Cartography Specialty Group of the AAG
- 2020 **Session Chair:** AAG 2020 Convergence research in climate science (cancelled)
- 2020 **Session Chair:** AAG 2020, Election Mapping (cancelled)
- 2020 **Session Chair:** AAG 2020, Storytelling and Map Design (cancelled)
- 2018-2019 **Vice Chair:** Cartography Specialty Group of the AAG
- 2018 **Session Organizer:** AAG 2018, Mapping Climate Change (2 sessions)
- 2017 **Session Chair:** ICC 2017, Cartographic Representation in Geovisual Analytics
- 2014-2016 **Conference Organizer:** NACIS Practical Cartography Days (2015-2016)
- 2016 **Session Chair:** NACIS 2016, Mapping in the City
- 2016 **Session Organizer:** AAG Grant Writing Panel for SWIG
- 2012- 2013 **Board Member:** Cartography and Geographic Information Society (CAGIS)
- 2012 **Session Chair:** AutoCarto 2012, Geospatial Modeling Session
- 2010 **Session Chair:** NACIS 2010, Practical Solutions & Applications for Mapmakers
- 2009- 2010 **Student Director:** Cartography Specialty Group, AAG

University Service

2019 IT Steering Committee: Research Domain Subcommittee, University of Oregon (UO)

Departmental Service

2020 **Peer Reviewer of Teaching:** Kendra Chritz
 2019-2020 **Committee Member:** Remote Sensing Search Committee, UO
 2018-2020 **Committee Member:** Information Technology Committee, UO
 2018-2020 **Committee Member:** Scholarships, Fellowships, and Awards Committee, UO
 2018 **Organizer:** Supporting Young Women in Geography, mapping activity, Penn State
 2017 **Organizer:** Mapathon, Puerto Rico following Hurricane Maria, Penn State
 2017 **Session Chair:** Critical Conference, Penn State
 2015-2016 **President:** Graduate Students in the Penn State Department of Geography
 2015-2016 **President:** Supporting Women in Geography at Penn State
 2016 **Presenter:** Supporting Young Women in Geography Day, GIS activity, Penn State
 2015 **Organizer/Moderator:** no)Boundaries *Communicating Your Discipline* Panel, Penn State
 2015 **Presenter:** Supporting Young Women in Geography Day, GIS activity, Penn State
 2011- 2013 **Organizer:** Esri Useful Maps and Apps Presentation Series, Esri
 2009- 2010 **Co-President:** Geography Graduate Group, Michigan State
 2009- 2010 **Department Steward:** Graduate Employees Union, Michigan State
 2009 **Graduate Assistant:** Geography Graduate Student Orientation, Michigan State
 2009 **Social Coordinator:** Geography Graduate Group, Michigan State
 2008 **Secretary:** Geography Graduate Group, Michigan State
 2007- 2008 **Undergraduate Representative:** Supporting Women in Geography, Penn State

Community Service

2018 **Volunteer:** ENVISION workshop, geography activity, University Park, PA.
 2017 **Volunteer:** ExplorationU, cartography activity, Milesburg, PA
 2017 **Volunteer:** HauntedU, geosciences activity, University Park, PA
 2015-2016 **Organizer:** Maptime State College, State College, PA
 2011- 2013 **Volunteer:** Court Appointed Special Advocate for Foster Children (CASA), Redlands, CA
 2005- 2008 **Volunteer:** Penn State Philanthropic Dance Marathon, University Park, PA
 2005- 2007 **Volunteer/Tutor:** Stormbreak Group Home for Foster Children, State College, PA
 2005 **Volunteer:** Habitat for Humanity, Penn State Chapter, Augusta, GA

ADDITIONAL TRAINING

2016 *Visiting Student*
 School of Physical Environmental and Mathematical Sciences, University of New South
 Wales, Canberra Campus, Australia
 2013 *Scrummaster Certification*
 Scrum Alliance, Westminster, CO