TIMOTHY J. PRESTBY

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EDUCATION

The Pennsylvania State University   2025
Doctor of Philosophy, Geography
Dissertation: "Evaluating Trust in Cartographic Representations:
Theory, Methods, and Design"
Advisor: Dr. Anthony C. Robinson

                                                                                           2022
The Pennsylvania State University
Master of Science, Geography
Thesis: "The Design of COVID-19 Story Maps in Data Journalism"
Advisor: Dr. Anthony C. Robinson

The University of Wisconsin–Madison
Bachelor of Science, Honors Cartography and GIS | Graduated with Distinction   2020
Certificate in Environmental Studies
Thesis: "Understanding Neighborhood Isolation"
Advisors: Dr. Song Gao & Dr. Robert E. Roth

APPOINTMENTS

Assistant Professor of Applied GIS   2025–
Geography Unit, James Madison University

RESEARCH EXPERIENCES

NSF Graduate Research Fellow   2022 – 2025
Department of Geography, Penn State
Advisor: Dr. Anthony C. Robinson, Professor of Geography

Graduate Research Assistant   2020 – 2022
Department of Geography, Penn State
"Beescape Nexgen" (USDA)
PI: Dr. Christina Grozinger, Professor of Entomology

PUBLICATIONS

Refereed Journal Articles

Prestby, T.J., Jang, E., Pacheco, A. (in review). Seeing Isn't Always Believing: The Effects of Misinformation Modality and Debunking on Message Credibility and Memory Recall. *International Journal of Cartography*.

Prestby, T.J., Greatrex, H. (in review). The Impact of Data Reliability and Semantic Color Congruence on Trusting and Reading Visualizations. *Information Visualization*.

Case, N., **Prestby, T.J.**, Gartner, G. (2025). "Does this map do what I want?": Elements of trust in maps. *Cartographic Perspectives*, (105). https://doi.org/10.14714/CP105.1899

Prestby, T.J. (2025). Situating Trust in Cartography: Conceptions of Trust and Trustworthiness in Maps. *Cartographic Perspectives*, (106). https://doi.org/10.14714/CP106.1903

Prestby, T.J. (2024). Measuring Trust in Maps: development and evaluation of the MAPTRUST scale. *International Journal of Geographic Information Science*. https://doi.org/10.1080/13658816.2024.2370076

Prestby, T.J. (2023). Trust in maps: what we know and need to know. *Cartography and Geographic Information Science*. https://doi.org/10.1080/15230406.2023.2281306

Prestby, T.J., Robinson, A.C., McLaughlin, D., Dudas, P.M., & Grozinger, C.M. (2023). Characterizing user needs for Beescape: A spatial decision support tool focused on pollinator health. *Journal of Environmental Management*, 325, 116416. https://doi.org/10.1016/j.jenvman.2022.116416

Hart, D.A., **Prestby, T.**, & Roth, R.E. (2022). Design and Evaluation of Coastal Web Atlases: Best Practices and Future Opportunities for Map Representation, Interaction, and Usability. *Coastal Management*, 50(6), 514-548. https://doi.org/10.1080/08920753.2022.2126271

Prestby, T. (2022). Design Techniques for COVID-19 Story Maps: A Quantitative Content Analysis. *Cartography and Geographic Information Science*, 1-20. https://doi.org/10.1080/15230406.2022.2102077

Song, Z., Roth, R.E., Houtman, L., **Prestby, T.**, Iverson, A., & Gao, S. (2022). Visual Storytelling with Maps: An Empirical Study on Story Map Themes and Narrative Elements, Visual Storytelling Genres and Tropes, and Individual Audience Differences. *Cartographic Perspectives*, (100), 10-44. https://doi.org/10.14714/CP100.1759

Bley, K., Caldwell, K., Kelly, M., Loyd, J., Roth, R.E., Anderson, T.M., Bonds, A., Plevin, J., Madison, D., Sims, T., Spencer, C., Archuleta, C., Ellner, Z., McDowell, T., Nestel, C., Noterman, E., Smith, N., Velednitsky, S., Underwood, N., Darlington, R., Gao, Y., George, A., Miller, L., **Prestby, T.**, & Vongkusolkit, J. (2021). A Design Challenge for Transforming Justice. *GeoHumanities*. https://doi.org/10.1080/2373566X.2021.1986100

Robinson, A.C., Peeler, J., **Prestby, T.**, Goslee, S. C., Anton, K., & Grozinger, C. M. (2021). Beescape: Characterizing user needs for environmental decision support in beekeeping. *Ecological Informatics*. https://doi.org/10.1016/j.ecoinf.2021.101366

Li, B., Gao, S., Liang, Y., Kang, Y., **Prestby, T.**, Gao, Y., & Xiao, R. (2020). Estimation of regional economic development indicator from transportation network analytics. *Scientific reports*, 10(1), 1-15. https://doi.org/10.1038/s41598-020-59505-2

Prestby, T., App, J., Kang, Y., & Gao, S. (2020). Understanding neighborhood isolation through spatial interaction network analysis using location big data. *Environment and Planning A: Economy and Space*, 52(6), 1027-1031. https://doi.org/10.1177/0308518X19891911

Book Chapters

Roth, R.E., Sack, C.M., Baldrica-Franklin, G., Chen, Y., Donohue, R., Houtman, L., **Prestby, T.**, Tolochko, R., & Underwood, N. (2021) Web Mapping: A Workbook for Interactive Cartography and Visualization on the Open Web (Version 0.2). *University of Wisconsin Cartography Laboratory*. http://doi.org/10.5281/zenodo.4685763

Gao, S., Li, M., Rao, J., Mai, G., **Prestby, T.**, Marks, J., & Hu, Y. (2021). Automatic urban road network extraction from massive GPS trajectories of taxis. *Handbook of Big Geospatial Data*, 261. https://doi.org/10.1007/978-3-030-55462-0_11

Refereed Conference Abstracts

Prestby, T. (2023). In Maps We Trust. *Abstracts of the ICA*, 6, 206. https://doi.org/10.5194/ica-abs-6-206-2023

Robinson, A.C., **Prestby, T.J.**, McLaughlin, D., Houtman, L., Dudas, P., and Grozinger, C. (2023). Geovisualization for Pollinator Decision Support with Beescape NexGen. *Abstracts of the ICA*, 6, 212. https://doi.org/10.5194/ica-abs-6-212-2023

Prestby, T. (2022). Content Analysis of COVID-19 Cartographic Journalism. *Abstracts of the ICA*, 5, 65. https://doi.org/10.5194/ica-abs-5-65-2022

Robinson, A.C., **Prestby, T.J.**, McLaughlin, D., Dudas, P., & Grozinger, C. (2022). Evaluating User Needs for Geovisualization of Pollinator Health and Ecosystems. *Abstracts of the ICA*, 5, 157. https://doi.org/10.5194/ica-abs-5-157-2022

Prestby, T. (2021). Characterizing Storytelling in COVID-19 Cartographic Journalism. *Abstracts of the ICA*, 3, 245. https://doi.org/10.5194/ica-abs-3-245-2021

Roth, R.E., Sack, C.M., Baldrica-Franklin, G., Chen, Y., Donohue, R., Houtman, L., **Prestby, T.**, Tolochko, R., and Underwood, N. (2021). Introducing Web Mapping: A Workbook for Interactive Cartography and Visualization on the Open Web. *Abstracts of the ICA*, 3, 254. https://doi.org/10.5194/ica-abs-3-254-2021

PRESENTATIONS

Invited Talks

Prestby, T.J. (2025). An Incomplete Truth: Maps, Misinformation, and Trust. *NASA Earth to Sky, Science in Your Pocket*. July 18.

Prestby, T.J. (2025). Seeing is Believing? Understanding the Science of Trust and Deception in Maps. *International School on Visualization*. April 1.

Prestby, T.J. (2025). Improving Map-based Communication and Decision-making through User Studies, Education, and Practice. *School of Integrated Sciences at James Madison University*. January 27.

Prestby, T.J. (2023). Trust in Maps: what we know and what we need to know. *Department of Geography and Earth Sciences at UNC Charlotte*. October 17.

Conference Presentations

*presenter on co-authored work

Prestby, T.J. (2025). The Effects of Satellite Maps and Ground Images in Online News on Credibility and Recall. *No Boundaries Symposium*. State College, PA: May 3.

Prestby, T.J. (2025). The Impact of Design on Map Trust: A Study of Color Semantics and Uncertainty Representation. *American Association of Geographers Annual Meeting*. Ddetroit, MI: March 27.

Prestby, T.J. (2024). Measuring Trust in Maps: Introducing the MAPTRUST Scale. *North American Cartographic Information Society Annual Conference*. Tacoma, WA: October 18.

Prestby, T.J. (2024). Trust in Maps: Applying the MAPTRUST Scale to Study Cartographic Design. *Viral Movements Symposium*. State College, PA: May 15.

Prestby, T.J. (2024). Conceptualizing Trust in Cartography. *American Association of Geographers Annual Meeting*. Honolulu, HI: April 18.

Prestby, T.J. (2024). An Empirical Study on How Color Congruence and Uncertainty Affect Map Trust. *Penn State Geography Miller Masterclass*. State College, PA: March 14.

Birkenholtz, T., **Prestby, T.J.**, Houtman, L. (2024). Placing Wetlands in the Watershed: Situating Millbrook Marsh, Pennsylvania in the Chesapeake Bay Watershed. *Delaware Wetlands Conference*. Wilmington, DE: February 6.

Prestby, T.J. (2023). To Trust or Not to Trust Maps, That Is the Question. *North American Cartographic Information Society Annual Conference*. Pittsburgh, PA: October 12.

Robinson, A.C., **Prestby, T.J.**, McLaughlin, D., Houtman, L., Dudas, P., and Grozinger, C. (2023). Geovisualization for Pollinator Decision Support with Beescape NexGen. *International Cartography Conference*. Cape Town, South Africa: August 16.

Prestby, T.J. (2023). In Maps We Trust. *International Cartography Conference*. Cape Town, South Africa: August 15.

Prestby, T.J. (2023). The Intersection of AI, Trust, and Cartography. *Pre-conference Workshop on MapAI, International Cartography Conference*. Stellenbosch, South Africa: August 12.

Song, Z., Roth, R.E., Houtman, L., **Prestby, T.J.**, Iverson, A., & Gao, S. (2022). Visual Storytelling with Maps: Update and Outlook from an Empirical Study. *AutoCarto*. Redlands, CA: November 3.

Prestby, T.J. (2022). Surveying the Design of Story Maps in Digital Journalism. *North American Cartographic Information Society Annual Conference*. Minneapolis, MN: October 20.

Prestby, T.J. (2022). Design Techniques for COVID-19 Story Maps: A Quantitative Content Analysis. *EuroCarto*. Vienna, Austria: September 21.

Robinson, A.C., **Prestby, T.J.**, McLaughlin, D., Dudas, P., & Grozinger, C. (2022). Evaluating User Needs for Geovisualization of Pollinator Health and Ecosystems. *EuroCarto*. Vienna, Austria: September 21.

Prestby, T.J. (2021). Characterizing Storytelling in COVID-19 Cartographic Journalism. *International Cartography Conference*. Florence, Italy: December 16.

Prestby, T.J. (2021). Mapping Multiscale Pollinator Big Data. *Center for Pollinator Research Symposium*. State College, PA: November 16.

Roth, R.E., Sack, C.M., Baldrica-Franklin, G., Chen, Y., Donohue, R., Houtman, L., **Prestby, T.J.**, Tolochko, R., & Underwood, N. (2021). Introducing "Web Mapping: A Workbook for Interactive Cartography and Visualization on the Open Web". *North American Cartographic Information Society Annual Conference*. Oklahoma City, OK: October 14.

Hart, D.A., **Prestby, T.J.**, & Roth, R.E. (2021). Design and Evaluation of Coastal Web Atlases: Best Practices and Future Opportunities for Map Representation, Interaction, and Usability. *CoastGIS*. Virtual: September 16.

Hart, D.A., **Prestby, T.J.**, & Roth, R.E. (2021). Enhancing the Wisconsin Coastal Atlas as a Resource to Support Adaptive Coastal Management. *International Coastal Atlas Network Steering Meeting*. Virtual: September 27.

Hart, D.A., **Prestby, T.J.***, & Roth, R.E. (2020). Designing Coastal Web Atlases: Best Practices and Future Directions. *Social Coast Forum*. Charleston, SC: February 6.

Prestby, T.J., Gao, S., Liang, Y., Kang, Y., & Li, B. (2019). Linking Traffic Volume to Economic Development Index Using Big Data and Gravity Models. *American Association of Geographers Annual Meeting*. Washington, DC: April 4.

Panels

Prestby, T. (2023). "Advancing GIS Careers" *GISalon Webinar*, GISphere.

FELLOWSHIPS, GRANTS, AND AWARDS

Fellowships

Graduate Research Fellowship. *NSF*.	2022 – 2025
Hilldale Undergraduate Research Fellowship. *UW–Madison*.	2019 – 2020

Grants

Student Travel Grant. *North American Cartographic Information Society **(NACIS)***.	2024
Graduate Enrichment Research Grant. *Department of Geography, Penn State*.	2023
Student Travel Grant. *NACIS*.	2023
Student Travel Grant. *NACIS*.	2022
Student Travel Grant. *NACIS*.	2021

Graduate Research Enrichment Grant. *Department of Geography, Penn State.*   2021

Student Travel Grant. *NACIS.*   2020

Bromley Research Travel Grant. *L & S Honors Program, UW–Madison.*   2019

Student Travel Grant. *NACIS.*   2019

Cartography Awards

David Woodward Award for Best Digital Map, Honorable Mention.   2021
*Cartography and Geographic Information Society **(CaGIS)**.*

Arthur Robinson Award for Best Print Map, Honorable Mention. *CaGIS.*   2021

Barbara Bartz Petchenik Cartographic Excellence Award.   2019
Department of Geography, UW–Madison.

Keynote's Choice Award. *Wisconsin Land Information Association **(WLIA)**.*   2019

Thematic Map Award, First Place. *WLIA.*   2019

Awards

Cartography and GIS Doctoral Scholarship Award. *CaGIS.*   2024

Young Scientist Award. *International Cartographic Association **(ICA)**.*   2023

Early Career Scholar Award. *U.S. National Committee to the ICA.*   2023

Young Scientist Award. *ICA.*   2022

Outstanding Graduate Research Assistant Award.   2022
Department of Geography, Penn State.

Young Scientist Award. *ICA.*   2021

Early Career Scholar Award. *U.S. National Committee to the ICA.*   2021

Geospatial Intelligence Scholarship. *US Geospatial Intelligence Foundation.*   2021

Damon Anderson Memorial Scholarship. *WLIA.*   2021

FEGR Top-up Award, *Penn State College of Earth and Mineral Sciences.*	2020
Olmstead Award for Excellence in Cartography. *Department of Geography, UW–Madison.*	2020
Jerome Kohn Geographic Excellence Award. *Department of Geography, UW–Madison.*	2019
Phi Beta Kappa. *UW–Madison.*	2019
William F. Vilas Merit Scholarship. *UW–Madison.*	2018
College of Letters and Sciences Dean's List. *UW–Madison.*	2018 – 2020
Community Environmental Scholar. *UW–Madison.*	2017 – 2018
College of Agriculture and Life Sciences Dean's List. *UW–Madison.*	2016 – 2018

TEACHING EXPERIENCES

Instructor   Fall 2024, Spring 2025
Department of Geography, Penn State
Geography 361: Cartography—Maps and Map Construction

Teaching Assistant   Fall 2023
Department of Geography, Penn State
Geography 361: Cartography—Maps and Map Construction

SERVICE

Leadership Roles

Student Director, *AAG Cartography Specialty Group.*	2024 – 2025
Editorial Board, *Cartography and Geographic Information Science.*	2024 – Present
Editorial Board, *Journal of Maps.*	2022 – 2025

Peer Reviewer

IEEE Transactions in Visualization and Computer Graphics	2025 – Present

Preventing Chronic Disease.	2024 – Present
GeoHumanities.	2024 – Present
Cartographica.	2024 – Present
The Cartographic Journal.	2024 – Present
International Journal of Geographic Information Science.	2023 – Present
International Journal of Cartography.	2023 – Present
International Journal of Human-Computer Interaction.	2022 – Present
Cartography and Geographic Information Science.	2021 – Present

Conference Session Organization

Putting the Human Back in Cartography: Methods and Theories. (2024). *American Association of Geographers Annual Meeting* (**AAG**). Honolulu, HI: April 18. Sponsored by the Cartography Specialty Group. Co-organized with Jack Swab.

INSTITUTIONAL SERVICE

Undergraduate Student Mentor	2024 – 2025
GeoGraphics Lab, Penn State	
President, Supporting Women in Geography	2021 – 2023
Department of Geography, Penn State.	
Graduate Coordinator, Undergraduate Research Opportunities Connection	2021 – 2022
Department of Geography, Penn State.	

PROFESSIONAL EXPERIENCE

Cartographer	2023 – 2025
Penn State GeoGraphics Lab	
Cartography Intern	2021
Cartography Team, Apple Maps	

PROFESSIONAL MEMBERSHIPS

Member, Cartography and Geographic Information Society   2024 – Present

Member, ICA—Commission on Ethics   2023 – Present

Member, Cartography Specialty Group of the AAG   2019 – Present

Member, NACIS   2019 – Present