

Sterling D. Quinn, Ph. D.

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Curriculum vitae (revised 2 February 2024)

Professional experience

2016–present Central Washington University

Associate Professor, Department of Geography (2021–present)

Assistant Professor, Department of Geography (2016–2021)

GIS Program Director (2018–present)

Faculty affiliations with the Cultural and Environmental Resource Management graduate program and El Centro Latinx for Latino and Latin American Studies

2009–2018 The Pennsylvania State University

Part-time instructor, John A. Dutton e-Education Institute, College of Earth and Mineral Sciences

2005–2013 Esri, Inc.

GIS software product engineer working on ArcGIS Server, ArcGIS Online and related web GIS programs

Supplemental experience

2022 Universidad Nacional de Colombia

Visiting lecturer for intensive course *Digital Mapping and Society*, offered in the Geomatics program, College of Agrarian Sciences, Bogotá campus

Education (degrees earned)

- 2016 Doctor of Philosophy in Geography, Penn State University
Doctoral Committee: Alan M. MacEachren (chair), Anthony C. Robinson, Clio Andris, Guoray Cai
Dissertation Title: *A geovisual analysis of social influence in OpenStreetMap construction*
- 2009 Master of Geographic Information Systems, Penn State University
- 2005 Bachelor of Science in Geographic Information Systems, Brigham Young University

Supplemental education and training

- 2017 Certificate of College Teaching and Learning in Hispanic-Serving Institutions, ESCALA Educational Services
- 2015 Summer Doctoral Programme at Oxford Internet Institute, University of Oxford

Peer-reviewed journal publications

da Silva, R.G.P., Lima, C.L., **Quinn, S.**, Afelt, A., Laques, A.-E., & Saito, C.H. (2023). Urban Green Spaces in Brazil: Challenges and Opportunities in the Context of the COVID-19 Pandemic. *Studia Ecologiae et Bioethicae*, 21(1), 69–88.

Quinn, S., & Condon, D. (2022). Inclusion of Latino-oriented local businesses in popular online maps: An empirical study in the Inland Northwest of the United States. *The Journal of Community Informatics*, 18(2), 84-114.

Quinn, S. (2022). What can we see from the road? Applications of a cumulative viewshed analysis on a US state highway network. *Geographica Helvetica*, 77(2), 165-178.

Quinn, S. (2020). Geographies of Empty Spaces on Print and Digital Reference Maps: A Study of Washington State. *Cartographic Perspectives*, (95), 24-41.

Robinson, A. C., Anderson, C., & **Quinn, S.** (2020) Evaluating geovisualization for spatial learning analytics, *International Journal of Cartography*, 6(3), 331-349.

Quinn, S. (2019). Free and open source GIS in South America: political inroads and local advocacy. *International Journal of Geographical Information Science*, 34(3), 464-483.

Quinn, S., & Alvarez León, L. (2019). Every single street? Rethinking full coverage across street-level imagery platforms. *Transactions in GIS*, 23(6), 1251-1272.

Alvarez León, L., & **Quinn, S.** (2018). The value of crowdsourced street-level imagery: examining the shifting property regimes of OpenStreetCam and Mapillary. *GeoJournal*, 84(2), 395-414.

Robinson, A. C., & **Quinn, S.** (2018). A brute force method for spatially-enhanced multivariate facet analysis. *Computers, Environment and Urban Systems*, 69, 28-38.

Quinn, S., & MacEachren, A. (2018). A geovisual analytics exploration of the OpenStreetMap crowd. *Cartography and Geographic Information Science*, 45(2), 140-155.

Quinn, S., and Tucker, D. (2017). How geopolitical conflict shapes the mass-produced online map. *First Monday*, (22)11.

Quinn, S. (2017). Using small cities to understand the crowd behind OpenStreetMap. *GeoJournal*, 82(3), 455-473.

Quinn, S. (2016). A geolinguistic approach for comprehending local influence in OpenStreetMap. *Cartographica: The International Journal for Geographic Information and Geovisualization*, 51(2), 67-83.

Quinn, S., and Yapa, L. (2016). OpenStreetMap and food security: A case study in the city of Philadelphia, *The Professional Geographer*, (68)2, 271-280.

Nelson, J., **Quinn, S.**, Swedberg, B., Chu, W., and MacEachren, A. (2015). Geovisual Analytics Approach to Exploring Public Political Discourse in Twitter, *ISPRS International Journal of Geo-Information*, 4(1), 337-366.

Quinn, S., and Gahegan, M. (2010). A predictive model for frequently viewed tiles in a web map. *Transactions in GIS*, 14(2), 193-216.

Peer-reviewed chapters in published volumes

Alvarez León, L., & **Quinn, S.** (2019). Street-level imagery. *The Geographic Information Science & Technology Body of Knowledge* (4th Quarter 2019 Edition), John P. Wilson (ed.).

Quinn, S. (2018). Web GIS. *The Geographic Information Science & Technology Body of Knowledge* (1st Quarter 2018 Edition), John P. Wilson (ed.).

Editorially-reviewed chapters and articles

Hickey, R., **Quinn, S.**, and Schag, G. (2019) Go Beyond ArcGIS's Standard Slope Tool with Python Customization. *Directions Magazine*.
<https://www.directionsmag.com/article/8937>

Quinn, S., & Bull, F. (2019). Understanding Threats to Crowdsourced Geographic Data Quality Through a Study of OpenStreetMap Contributor Bans. In N. Valcik (Ed.), *Geospatial Information System Use in Public Organizations: How and Why GIS Should Be Used by the Public Sector*. CRC Press, Boca Raton, FL.

Refereed conference papers / abstracts

Quinn, S. (2021). Using Free and Open Source Software to Teach University GIS Courses Online: Lessons Learned during a Pandemic. Presented at FOSS4G 2021, Buenos Aires, Argentina. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, 46, 127-131.

Quinn, S., and Robinson, A. C. (2015). Mapping student engagement in a massive open online course (MOOC). Presented at International Cartographic Conference 2015, Rio de Janeiro, Brazil.

Quinn, S. (2014). Comparing VGI contributions across political units using geovisual analytics. Presented at GIScience 2014, Vienna, Austria. (Extended abstract)

Quinn, S. (2014). Open Web Mapping: An educational resource for creating online maps using free and open source software. Presented at FOSS4G 2014 (academic track), Portland, Oregon, USA.

Publications containing maps that I made or contributed to

Jastremski, N. A., Henebry-DeLeon, L., Lubinski, P. M., & Klyve, D. (2021). Highland vs. lowland craniometry in Andean South America: An Ecuadorian case study. *Journal of Archaeological Science: Reports*, 35, 102758.

Emmett, C. F. (2015). Pious Merchants as Missionaries and the Diffusion of Religions in Indonesia. In *The Changing World Religion Map* (pp. 1189-1205). Springer, Dordrecht.

Plewe, B. (2005). Heber Valley Camp, 1: 9,000. *Cartographic Perspectives*, (52), 87-88.

Non-refereed conference presentations (presenter other than myself marked with *)

Quinn, S., & Condon, D. (2023). How Well Do Online Maps Include Latino-oriented Local Businesses? Presented at the annual meeting of the American Association of Geographers 2023, Denver, Colorado, USA.

Quinn, S. (2021). Using Visibility Analysis on a Transportation Network to Inform Cartographic Selection. Presented at the annual meeting of the American Association of Geographers 2021, Seattle, Washington, USA (virtual conference format).

Quinn, S. & Alvarez León, L. (2020). Street-level imagery in Latin America: Motives, risks, and possibilities. Presented at the Conference of Latin American Geographers 2020, Antigua, Guatemala.

Quinn, S. & Alvarez León, L. (2019). When the Google car stops and turns around: Interpreting the geographies of street-level imagery. Presented at the Association of Washington Geographers Spring 2019 Meeting, Ellensburg, Washington, USA.

Quinn, S. (2019). Geospatial FOSS Advocacy: What North America can learn from South America. Presented at FOSS4G-NA 2019, San Diego, California, USA.

Quinn, S. & Alvarez León, L. F. A. (2018). The value and production of crowdsourced street-level imagery: Examining Mapillary and OpenStreetCam. Presented at the annual meeting of the American Association of Geographers 2018, New Orleans, Louisiana, USA.

Quinn, S. (2017). ¿Quién mapeó la Argentina? Una exploración del archivo histórico de OpenStreetMap para comprender el conjunto de contribuyentes activos en el país. Presented at FOSS4G+State of the Map Argentina 2017, Buenos Aires, Argentina.

Quinn, S. and Tucker, D. A. (2017). Geopolitical conflict and elusive ground truth in online maps. Presented at the annual meeting of the American Association of Geographers 2017, Boston, Massachusetts, USA.

Quinn, S. (2016). Learning about the crowd behind OpenStreetMap through interactive visualization of the project history. Presented at State of the Map US 2016, Seattle, Washington, USA.

Quinn, S. (2016). Using geovisual analytics to understand contributor behavior in a crowdsourced map. The 1st Symposium on Research Methodologies in the Big Data Era, University Park, Pennsylvania, USA.

Quinn, S. (2016). Revealing the crowd behind OpenStreetMap using geovisual analytics. Presented at the annual meeting of the American Association of Geographers 2016, San Francisco, California, USA.

Quinn, S. (2015). Crossroads: Dissecting the construction of OpenStreetMap in a small mid American city. Presented at State of the Map US 2015, New York, New York, USA.

Quinn, S. (2015). Computing and visualizing nonlocal influence in OpenStreetMap: An analysis of South America. Presented at the Annual Meeting of the Association of American Geographers 2015, Chicago, Illinois, USA.

Quinn, S. (2014). The state of OpenStreetMap in South America. Presented at State of the Map 2014, Buenos Aires, Argentina.

Nelson, J.*, **Quinn, S.**, Swedberg, B., Chu, W., Houchen, M., Bodnar, T., and MacEachren, A. (2014). SPoTvis: A geovisual analytics tool for discovering multi-scale spatial patterns in tweets surrounding the 2013 US government shutdown. Presented at North American Cartographic Information Society Annual Meeting 2014, Pittsburgh, Pennsylvania, USA.

Quinn, S. (2014). Capturing local knowledge of urban food resources using OpenStreetMap. Presented at State of the Map US 2014, Washington, DC, USA.

Quinn, S., and Yapa, L. (2014). OpenStreetMap and enabling agency in food security. Presented at the Annual Meeting of the Association of American Geographers 2014, Tampa, Florida, USA.

Quinn, S. (2009). A predictive model for frequently-viewed tiles in a web map. Presented at the Annual Meeting of the Association of American Geographers 2009, Las Vegas, Nevada, USA.

Invited panelist

The Power of YouthMappers: Shining a Light on the Movement. Annual Meeting of the American Association of Geographer 2023, Denver, Colorado, USA.

Doing geography: Teaching with Webmaps in the lower division classroom. Annual Meeting of the American Association of Geographers 2017, Boston, Massachusetts, USA.

Coding and app development in geography and GIS education. Annual Meeting of the American Association of Geographers 2016, San Francisco, California, USA.

Online GIS and mapping tools: Advances and challenges of putting the power of GIS into the hands of non-geographers. Annual Meeting of the Association of American Geographers 2014, Tampa, Florida, USA.

What can "The Cloud" do for my 2-year Undergraduate Program? Annual Meeting of the Association of American Geographers 2012, New York, New York, USA.

Teaching experience (* denotes a team-taught class)

Courses taught at Central Washington University

GEOG 101: World Regional Geography

GEOG 111: The Power of Maps

GEOG 301: Introduction to GIS and Maps

GEOG 303: GIS and Data Management

GEOG 370: Geography of South America

GEOG 404: GIS Analysis

GEOG 411: GIS Programming
GEOG 417: Workplace GIS
GEOG 485: Topics in GIS and Remote Sensing
GEOG 494: Applied GIS Project
GEOG 496/596: Individual Study
CERM 501: Introduction to Cultural and Environmental Resource Management*
REM 506: Resource Management Colloquium
REM 522: Resource Analysis*

Courses taught at Penn State University

GEOG 160: Mapping our Changing World
GEOG 485: GIS Programming and Automation
GEOG 494: Research Project in Geography
GEOG 585: Open Web Mapping
GEOG 863: GIS Mashups for Geospatial Professionals
GEOG 865: Cloud and Server GIS

Course taught as visiting lecturer at Universidad Nacional de Colombia
Digital Mapping and Society

Teaching assistantships

Courses TA'd at Penn State University
Geog 126: Economic Geography

Courses TA'd at Brigham Young University
Geog 217: Programming for Geographers I
Geog 317: Programming for Geographers II

Graduate theses chaired

Hibdon, S. *Investigating the Spatial and Statistical Dimensions of Mortuary Choice in the Historical-Period Old City Cemetery in Roslyn, Washington*. Masters thesis in Cultural and Environmental Resource Management, Central Washington University. (2020)

Honors and awards

First place, Best Student Paper Competition – The 1st Symposium on Research Methodologies in the Big Data Era, University Park, Pennsylvania, USA. (2016)

GeoForAll Global Educator of the Year Award – Selected by the OSGeo Foundation for work authoring and teaching "Open Web Mapping" course (2015)

E. Willard Miller Award for best cartographic entry – Selected by Penn State Department of Geography for the "Philly Fresh Food Map" (2015)

Graduated Magna Cum Laude – Brigham Young University (2005)

Valedictorian – Brigham Young University Department of Geography (2005)

Grants and scholarships

International Studies and Programs Advisory Committee Grant - Awarded by Central Washington University Office of International Studies and Programs to assist with travel to Colombia for professional learning and networking – \$700 USD (2022)

Faculty early career grant – Awarded by Central Washington University College of the Sciences as a one-course teaching release to focus on research and authoring (2019)

Summer Undergraduate Research Experience (SURE) faculty mentor grant - Awarded by Central Washington University College of the Sciences to mentor an undergraduate student in a research project during the summer term - \$5370 USD including student and faculty award (2018)

International Studies and Programs Advisory Committee Grant - Awarded by Central Washington University Office of International Studies and Programs to assist with attendance at FOSS4G+State of the Map Argentina – \$700 USD (2017)

Erickson Fund in Geography academic enrichment funds – Awarded by Penn State Department of Geography to assist with attendance at Oxford Internet Institute Summer Doctoral Programme - \$500 USD (2015)

Travel grant to attend International Cartographic Conference in Rio de Janeiro – Awarded by US National Committee of the International Cartographic Association – \$1800 USD (2015)

Graduate Student Travel Grant to attend State of the Map 2014 in Buenos Aires – Awarded by Penn State University Office of Global Programs – \$500 USD (2014)

Scholarship to attend State of the Map US 2014 in Washington, DC – Awarded by OpenStreetMap US – \$500 USD (2014)

Gordon B. Hinckley Presidential Scholarship – Awarded by Brigham Young University – Four years of full undergraduate tuition plus living stipend (2000–2005)

Academic board and committee service at present institution (CWU)

Dean of Libraries Search Committee (2023–present)

El Centro Latinx for Latino and Latin American Studies Advisory Committee (2023–present)

GIS Program Director (2018–present)

High School Equivalency and College Assistance Migrant Program Advisory Board (2018–present)

Geography Scholarship Committee (2016–present)

Geography Club faculty advisor (2016–present)

Summer Undergraduate Research Experience Grant Review Committee, College of the Sciences (2023)

Library Advisory Council (member 2020–2023, chair of council for 2021)

Integrated Energy Management Faculty Advisory Committee (2019–2022)

Diversity and Inclusivity Committee, College of the Sciences (2018–2019)

Geography Curriculum Committee (2017–2018)

Academic board and committee service at previous institutions

Graduate Program and Curriculum Committee, Penn State Department of Geography (2015–2016)

Helped coordinate Penn State Department of Geography graduate student mentoring program for undergraduate research assistants, and mentored two of my own students (2014–2015)

Treasurer of Penn State Department of Geography graduate student organization (2014–2015)

Student mentoring activities and community partnerships

Mentored various students in creating GIS and maps of the Roslyn, WA historical cemeteries, in partnership with the Roslyn, Ronald, Cle Elum Heritage Club (2022–2023)

Mentored undergraduate student Courtney Feeney in creating a map of Helen McCabe Memorial State Park for the Kittitas Environmental Education Network (2023)

Mentored undergraduate student Edith Ramos in creating a trail and campus map of the Chamela Biological Research Station in Jalisco, Mexico (2020)

Mentored graduate student Beth Macinko in performing a bicycle “level of traffic stress” assessment for the City of Ellensburg, Washington (2018)

Mentored undergraduate student Jason Bradshaw in creating an interactive map of sustainability initiatives on CWU campus for the university website (2018)

Mentored undergraduate student Hannah Lackaff in creating maps of alternative transportation options for CWU sustainability efforts: *Biking Around CWU* and *Central Transit Routes Near CWU Campus* (2018)

Organized and directed OpenStreetMap map-a-thons at Penn State University and Central Washington University for various causes as requested by the Humanitarian OpenStreetMap Team (2013–present)

Peer reviewer service

Cartographic Perspectives

Cartographica

Cartography and Geographic Information Science

Computational Urban Science

Environment and Planning B

Environment, Development, and Sustainability

First Monday

GeoJournal

GIS&T Body of Knowledge

IEEE Visual Analytics Science and Technology (VAST) papers

International Journal of Geographic Information Science

ISPRS International Journal of Geo-Information

Journal of Community Informatics

Journal of Latin American Geography

Journal of Spatial Science

Kartographische Nachrichten: Journal of Cartography and Geographic Information

Land Use Policy

New Media and Society

PLOS One

Spatial Cognition and Computation

Transactions in GIS

Student research assistantships

Graduate Research Assistant working on online curriculum development and geovisual analytics projects, Dr. Anthony C. Robinson, Penn State University (2013–2016)

Graduate Researcher working on data visualizations of agricultural development initiatives, Dr. Karl Zimmerer, Penn State University (2015)

Undergraduate Research Assistant working on contracted cartography projects, Dr. Brandon Plewe and BYU Mapping Center, Brigham Young University (2004–2005)

Academic and professional memberships

North American Cartographic Information Society (2019–present)

OpenStreetMap Foundation (2015–present)

American Association of Geographers (2013–present)

Gamma Theta Upsilon (2005–present)

Community service

Friends of Brooks Library, Board of Directors member (2023–present)

Volunteer English teacher at La Casa Hogar community center summer classes, Yakima, WA (2017–present)

Volunteer grocery distribution assistant and Spanish translator at FISH Community Food Bank, Ellensburg, WA (2020–2021)

Technical skills

Digital mapping and spatial analysis using ArcGIS Pro, ArcMap, QGIS, GeoDa, and OpenStreetMap

Cloud-based GIS and mapping with ArcGIS Online, ArcGIS Field Maps, Mapbox, and CARTO Builder

Web mapping and programming using ArcGIS Enterprise, GeoServer, OGC-compliant web services, OpenLayers, Leaflet, the ArcGIS API for JavaScript, and the Google Maps API

Programming in Python, R, JavaScript, and Microsoft .NET languages (C# and Visual Basic .NET)

Cloud computing using Amazon Web Services (including the Amazon Elastic Compute Cloud, or EC2)

Database design and SQL queries with PostgreSQL and the PostGIS extension

Language experience

English with native fluency

Spanish at the level of reading academic literature, understanding conference presentations, composing business e-mails, and lecturing in the classroom

Portuguese (Brazil) at the level of reading academic literature, understanding conference presentations, composing business e-mails with the aid of a dictionary, and conversing informally about academic topics. Certified at the “Upper Intermediate” level through the Brazilian Ministry of Education’s Celpe-Bras exam (2022).