

# **Sterling D. Quinn, Ph. D.**

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Curriculum vitae (revised 24 July, 2018)

## **Professional experience**

Assistant Professor, Department of Geography, Central Washington University (2016 - present)

Part-time instructor, John A. Dutton e-Education Institute, College of Earth and Mineral Sciences, Penn State University (2009 – present)

GIS software product engineer, Esri Inc. (2005–2013)

## **Education**

Doctor of Philosophy in Geography, Penn State University (2016)

Doctoral Committee: Alan M. MacEachren (chair), Anthony C. Robinson, Clio Andris, Guoray Cai

Dissertation Title: *A geovisual analysis of social influence in OpenStreetMap construction*

Extracurricular study: Summer Doctoral Programme at Oxford Internet Institute, University of Oxford (2015)

Master of Geographic Information Systems, Penn State University (2009)

Bachelor of Science in Geographic Information Systems, Brigham Young University (2005)

## **Teaching experience**

Resident courses taught at Central Washington University

Geog 301: Introduction to GIS and Maps

Geog 303: GIS and Data Management

Geog 404: GIS Analysis

Geog 485: Topics in GIS and Remote Sensing

Geog 494: Applied GIS Project  
Geog 496: Individual Study

Resident courses taught at Penn State University  
Geog 160: Mapping our Changing World  
Geog 494: Research Project in Geography

Online courses taught at Penn State University  
Geog 485: GIS Programming and Automation  
Geog 585: Open Web Mapping  
Geog 863: GIS Mashups for Geospatial Professionals  
Geog 865: Cloud and Server GIS

### Peer-reviewed journal publications

León, L. F. A., & **Quinn, S.** (2018). The value of crowdsourced street-level imagery: examining the shifting property regimes of OpenStreetCam and Mapillary. *GeoJournal*. <https://doi.org/10.1007/s10708-018-9865-4>.

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

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

**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

**Quinn, S.** (2018). Web GIS. *The Geographic Information Science & Technology Body of Knowledge* (1st Quarter 2018 Edition), John P. Wilson (ed). DOI: 10.22224/gistbok/2018.1.11

## Refereed conference papers / abstracts

**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.

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

**Quinn, S.** & 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 1<sup>st</sup> 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.

## **Research experience**

Research Assistant, Dr. Anthony C. Robinson, Penn State University (2013–2016)

Graduate Researcher working with Bioversity International (2015)

Research Assistant, Dr. Brandon Plewe and BYU Mapping Center, Brigham Young University (2004–2005)

## **Honors and awards**

First place, Best Student Paper Competition – The 1<sup>st</sup> Symposium on Research Methodologies in the Big Data Era (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**

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 and professional service**

Member of Diversity and Inclusivity Committee for Central Washington University College of the Sciences (2018 - present)

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)

Member of Curriculum Committee for Central Washington University Department of Geography (2017–present)

Geography Club faculty advisor for Central Washington University Department of Geography (2016–present)

Member of Scholarship Committee for Central Washington University Department of Geography (2016–2017)

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

Initiated and taught a series of GIS coding workshops for students in the Penn State Department of Geography (2015)

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

Served as treasurer of Penn State Department of Geography graduate student organization (2014–2015)

Organized and directed OpenStreetMap map-a-thons at Penn State for humanitarian mapping following Typhoon Haiyan (2013), the West Africa Ebola outbreak (2014), and the Nepal earthquake (2015).

### **Peer reviewer service (with number of articles reviewed)**

Transactions in GIS (4)

Cartography and Geographic Information Science (3)

Cartographica (2)

GeoJournal (1)

IEEE Visual Analytics Science and Technology (VAST) papers (1)

International Journal of Geographic Information Science (1)

ISPRS International Journal of Geo-Information (1)

Kartographische Nachrichten: Journal of Cartography and Geographic Information (1)

New Media and Society (1)

Spatial Cognition and Computation (1)

### **Teaching assistantships**

Resident courses TA'd at Penn State University

Geog 126: Economic Geography

Resident courses TA'd at Brigham Young University

Geog 217: Programming for Geographers I

Geog 317: Programming for Geographers II

## **Invited panelist**

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.

## **Academic and professional memberships**

OpenStreetMap Foundation (2015–present)  
American Association of Geographers (2013–present)  
Gamma Theta Upsilon (2005-present)

## **Technical skills**

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

Cloud-based GIS and mapping with ArcGIS Online, 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 fluent level of reading, listening, writing, and speaking

Portuguese at basic to intermediate level. Can read and write with dictionary.