**EDUCATION**

**Master of Science in Geographic and Cartographic Sciences, 2014-2015 (expected)**

*George Mason University*, Fairfax, VA

Thesis: Validating VGI Data Quality in Local Crowdsourced Accessibility Mapping Applications: a George Mason University Case Study

Current GPA: 3.91

**Bachelor of Arts in Geography (Minor in GIS), 2012-2014**

*George Mason University***,** Fairfax, VA

GPA: 3.89

*Franklin & Marshall College*, Lancaster, PA

Student from 2009-2011

**WORK EXPERIENCE**

**Graduate Research and Teaching Assistant**, Department of Geography and Geoinformation Science,   
George Mason University; 2014 – Present

* + Current development and moderation of a system using volunteered geographic information (VGI) of GMU's Fairfax campus and surrounding neighborhoods, which uses geo-crowdsourcing as a means of obtaining information about accessibility issues and transient obstacles, geared toward the mobility- and visually-impaired
  + Provided training and guidance for a team of moderators who maintain quality control for the geocrowdsourcing testbed
  + Creation and implementation of training tools for the team of moderators, to ensure the best possible quality control
  + Creation of several visualization tools and graphics using Adobe Illustrator, Photoshop, and ArcGIS
  + Editing and maintenance of training materials to enhance participation to GMU’s geocrowdsourcing project
  + Use of ArcGIS to digitize and create a routing network to aid pedestrian routing throughout GMU's Fairfax Campus, and surrounding parts of Fairfax City and Fairfax County
  + Received the College of Science Dean's Award for presenting a research poster on the project at the Spring 2014 College of Science Research Colloquium at George Mason University in the Earth Sciences category

**Head Swim Coach and Pool Operator**, Greenbriar Pool Club; 2008 – 2015

* + Responsible for leading Greenbriar Swim Team, a Northern Virginia Swim League (NVSL) team of 130 swimmers, ages 4 to 18, while also instructing and supervising 9 assistant coaches
  + Duties include designing and executing three practices daily, providing weekly one-on-one feedback for swimmers as well as for parents, and designing and strategizing weekly meet line-ups to maximize winning potential, while creating a team-oriented atmosphere that is encouraging for young athletes
  + In 2013, lead Greenbriar to win NVSL Division 7’s Sportsmanship Award.

**Research Assistant**, Department of Geography and Geoinformation Science, George Mason University; January 2013 – May 2013

* + Aided a professor in development of the curriculum for a newly implemented online Geographic Information Systems course (GGS 311), primarily experimenting with open source GIS
  + Responsible for creating labs for the professor to distribute to the class

**Substitute Teacher**, Fairfax County Public Schools; 2012 – 2014

**Assistant Lead Swim Coach**, Herndon Aquatic Club, USA Swimming; 2011-2013

* + Designed workouts for young athletes, ages 6-13, emphasizing on stroke technique and speed, and provided swimmer and parent feedback on swimmer progress.

**Instructional Assistant**, Fairfax County Public Schools; 2011-2012

* + Served as a teacher’s assistant at Sleepy Hollow Elementary School, assisting students with learning disabilities and autism, monitoring students in the classroom setting and collecting observational data, and utilizing applied behavioral techniques (ABA).

**Athletics Building Manager**, Franklin & Marshall College; 2009-2011

* + Served in the athletics department, responsible for clerical work, maintaining athletic facilities, and supervising other student workers in the athletic buildings.

**Assistant Swim Coach**, Fox Mill Estates Swim Team; (2008 – 2010)

* + Assisted in leading Fox Mill Estates, a Northern Virginia Swim League (NVSL) team of 120 swimmers, ages 4 to 18
* Aided in leading team to win NVSL Division 10 in 2010

**Lifeguard**, Splash Aquatic; 2006-2008

* + Responsible for creating and enforcing a safe pool facility.

**HONORS AND AWARDS**

**Stipend**  ($3163.50) – six-credit tuition stipend as a Graduate Research Assistant, George Mason University Department of Geography and Geoinformation Science (Fall 2015)

**Travel Grant** ($1800) – to attend and present research at the International Cartographic Conference in Rio de Janeiro, Brazil, funded by the U.S. National Committee, National Science Foundation (August 2015)

**Stipend**  ($3163.50) – six-credit tuition stipend as a Graduate Research Assistant, George Mason University Department of Geography and Geoinformation Science (Summer 2015)

**Science Slam Second Place Finisher** ($150) – George Mason University (April 2015)

**Best Graduate Map** ($250) – GIS day mapping competition to create a shuttle map for George Mason University (November 2014)

**Stipend** ($8058.75) – fifteen-credit tuition stipend as a Graduate Research Assistant, George Mason University Department of Geography and Geoinformation Science (2014-2015)

**Alice C. Andrews Award: Outstanding Senior in Geography** ($500) – Department of Geography and Geoinformation Science, George Mason University (May 2014)

**College of Science Deans Award** – George Mason University (April 2014)

**Research Poster Competition Winner** ($500) – George Mason University (November 2013)

**Deans List** – George Mason University (Fall 2012, Spring 2013, Fall 2013, Spring 2014)

**PEER-REVIEWED PUBLICATIONS AND TECHNICAL REPORTS**

**Rice, Rebecca M**., Aburizaiza, Ahmad O., Rice, Matthew T., Qin, Han. (2015) “Position Validation in Crowdsourced Accessibility Mapping”, Cartographica (in press)

**Rice, Rebecca M.** (2015) “Ensuring the Quality of Volunteered Geographic Information: A Social Approach”, Kartographische Nachrichten

Qin, Han, Ahmad O. Aburizaiza, **Rebecca M. Rice**, Fabiana Paez, Matthew T. Rice (2015) “Obstacle Characterization in a Geocrowdsourced Accessibility System”, ISPRS Annals (in press).

Qin, Han, **Rebecca M. Rice**, Sven Fuhrmann, Matthew T. Rice, Kevin M. Curtin, Eric Ong (2015) “Geocrowdsourcing and Accessibility for Dynamic Environments”, GeoJournal , Editor-in-Chief: Daniel Sui (accepted, in press) DOI:10.1007/s10708-015-9659-x

Fayne, Jessica V., Sven Fuhrmann, Matthew T. Rice, **Rebecca M. Rice**. (2015) “Exploring Alternative Map Products to Enhance Transportation Option Awareness”, Cartography and Geographic Information Science, ed. Nicholas Chrisman., 42:4 (in press).  DOI: 10.1080/15230406.2015.1053826

Rice, Matthew T., Paez, Fabiana I., **Rice, Rebecca M**., Ong, Eric W., Qin, Han, Seitz, Christopher R., Fayne, Jessica V., Curtin, Kevin M., Fuhrmann, Sven, Pfoser, Dieter, Medina, Richard M. (2014) “Quality Assessment and Accessibility Applications of Crowdsourced Geospatial Data: A report on the development and extension of the George Mason University (GMU) Geocrowdsourcing Testbed”, pp. 1-91. BAA: #AA10-4733, Contract: # W9132V-11-P-0011, “Assessing the Value of Neo-Geographic Information”. September 2014 <http://www.dtic.mil/dtic/tr/fulltext/u2/a615952.pdf>

**ACTIVITIES AND SOCIETIES**

**George Mason University (2012 – Present)**

* American Society of Photogrammetry and Remote Sensing
* Phi Beta Kappa
* Gamma Theta Upsilon Geographic Honor Society
* Tau Sigma Honor Society
* Sigma Xi Honor Society
* Bloomsbury Honor Society

**Franklin & Marshall College (2009 – 2011)**

* Women’s Intercollegiate Swim Team
* National Society for Leadership and Success: Alpha Sigma Pi Chapter
  + Community Service Chair
* WFNM Radio DJ
* Putting it Together in the Community
* F&M Cares

**PROFESSIONAL AFFILIATIONS**

*Association of American Geographers (AAG)*

* Since November, 2014

*Cartography and Geoinformation Science (CaGIS)*

* Since November, 2014

**INVITED LECTURES, PRESENTATIONS, AND TRAININGS**

“Position Validation in Crowdsourced Accessibility Mapping,” accepted paper presented at the International Cartographic Conference (ICC) in Rio de Janeiro, Brazil (August 27, 2015).

“Validating VGI Data Quality in Local Crowdsourced Accessibility Mapping Applications: a George Mason University Case Study,” presented in defense of masters thesis to committee (Matthew T. Rice, Kevin M. Curtin, and Dieter Pfoser) at George Mason University, Fairfax, VA (June 19, 2015).

“Validating the Position of Geocrowdsourced Information,” invited presentation of research for Provost-sponsored Round Table Discussion focusing on Smart Cities, at George Mason University, Fairfax, VA (June 8, 2015).

“Every Day I’m Crowdsourcin’ (Geographic Knowledge),” selected to present as a finalist at George Mason University’s Science Slam Grand Slam, Fairfax, VA (May 1, 2015).

“Evaluating the Social Approach to VGI Quality Assessment,” presented at the Association for American Geographers (AAG) Meeting in Chicago, IL (April 22, 2015).

“Every Day I’m Crowdsourcin’ (Geographic Knowledge),” selected to present at George Mason University’s Science Slam competition, Fairfax, VA (April 3, 2015). Awarded second place.

“Assessing the Value of Neo-Geographic Information / Crowdsourced Geospatial Data: Phase 4 Planning Meeting,” with Matthew T. Rice, Douglas R. Caldwell, Sven Fuhrmann, Dieter Pfoser, Han Qin, and Eric Ong, GMU-ERDC Phase 4 Planning and Technical Meeting at George Mason University, Fairfax, VA (March 27, 2015).

“Moderator Training for Evaluating Geocrowdsourced Data Quality,” training presentation for incoming project staff at George Mason University, Fairfax, VA (February 27, 2015).

“Geocrowdsourcing to Support Pedestrian Routing,” outreach presentation to spread project awareness at George Mason University, Fairfax, VA (February 27, 2015).

“Validating VGI Data Quality in Crowdsourced Accessibility Map Applications: A George Mason University Case Study,” presented to propose thesis topic to committee, with Matthew T. Rice (committee director), Kevin M. Curtin, and Dieter Pfoser, at George Mason University, Fairfax, VA (February 12, 2015).

“Geocrowdsourcing to Enhance Pedestrian Accessibility,” outreach presentation at George Mason University’s American Society for Photogrammetry and Remote Sensing (ASPRS) meeting, Fairfax, VA (November 12, 2014).

“Geocrowdsourcing to Enhance Pedestrian Accessibility,” outreach presentation at George Mason University’s American Society for Photogrammetry and Remote Sensing (ASPRS) meeting, Fairfax, VA (October 29, 2014).

“Assessing the Value of Neo-Geographic Information / Crowdsourced Geospatial Data: Phase 4 Planning Meeting,” with Matthew T. Rice, Douglas R. Caldwell, Sven Fuhrmann, Dieter Pfoser, Han Qin, and Eric Ong, GMU-ERDC Phase 4 Planning and Technical Meeting at George Mason University, Fairfax, VA (October 27, 2014).

“Assessing the Value of Neo-Geographic Information / Crowdsourced Geospatial Data: Phase 3,” with Matthew T. Rice, Douglas R. Caldwell, Richard Medina, and Han Qin, GMU-ERDC Quarterly Interim Progress Review at George Mason University, Fairfax, VA (June 30, 2014).

“Geocrowdsourcing to Enhance Pedestrian Accessibility,” poster presented at George Mason University’s College of Science Undergraduate Research Colloquium, Fairfax, VA (April 24, 2014). Won College of Science Dean’s Award.

“Assessing the Value of Neo-Geographic Information / Crowdsourced Geospatial Data: Project Technical Meeting for Phase 3,” with Matthew T. Rice, Douglas R. Caldwell, Richard Medina, Fabiana Paez, Han Qin, and Eric Ong, GMU-ERDC Quarterly Interim Progress Review at George Mason University, Fairfax, VA (March 20, 2014).

“The 2004 Indian Ocean Tsunami and its Ecological Impacts,” poster presented at George Mason University’s GIS Day, Fairfax, VA (November 21, 2013). Awarded “Overall Best Poster & Presentation.”

**TEACHING ASSISTANT**

GGS 415 – Seminar in Geography (Spring 2015)

GGS 311 – Intro to GIS (Fall 2014, Spring 2015, Summer 2015)

**VOLUNTEER EXPERIENCE**

* GMU Mapathon (March 2015)
* Swim for Health (July 2014)
* Putting it Together in the Community at Franklin & Marshall College (2009-2010)
* Special Olympics Swim Meet Volunteer (2008-2009)

**SKILLS, CERTIFICATIONS, AND QUALIFICATIONS**

* Highly proficient in GIS software, including ArcGIS and QGIS, Adobe Creative Suite (particularly Illustrator and Photoshop), HTML, Statistical Analysis Software (SPSS), online mapping tools (CartoDB, Leaflet, ArcGIS Online), Microsoft Office (Excel, Powerpoint, Word).
* Proficient with SQL, PostgreSQL, PostGIS, R, Matlab, Python, ERDAS Software.
* Certified in CPR / First Aid and Lifesavings (expires 05/2016)
* Certified Pool Operator (expires 05/2018)