

ADAM D. GRIFFITH

Education

Ph.D. Geography September 2018

University of North Carolina at Charlotte, Charlotte, NC

Dissertation: Planning for coastal resilience: the intersection of theory and practice

Advisor: Dr. Wei-Ning Xiang

M.S. Biology May 2008

Western Carolina University, Cullowhee, NC

Thesis: Chemical and physical characterization of rivercane (*Arundinaria gigantea*) soils in western North Carolina

Advisors: Dr. Katherine Mathews and Dr. Robert S. Young

B.S. Biology May 1999

Roanoke College, Salem, VA

Minor in Environmental Science

Professional Experience

Program Director – RTCAR 2020

EBCI Cooperative Extension, Cherokee, NC

- Responsible for review and approval of grant applications in collaboration with Cherokee Preservation Foundation (CPF)
- Maintain all aspects of RTCAR program including social media communication, website design, editing, and coding, adherence to all NC State and CPF policies
- Extensive coordination and collaboration with RTCAR partner organizations and public speaking engagements at the local, regional, and national levels

Program Assistant – RTCAR 2019

EBCI Cooperative Extension, Cherokee, NC

- Trained with outgoing RTCAR Director on all aspects of RTCAR leadership: grant cycles, communication, partner organizations, policies, timelines, and budgets
- Created 15 year spatial and temporal program review for RTCAR past grants

Graduate Assistant 2014 - 2018

University of North Carolina at Charlotte, Charlotte, NC

- GIS Intern - Information Technology Services** 2017
City of Asheville, Asheville, NC
- Created spatial database of facilities maintained by the City of Asheville
 - Deployed and created web maps from manually stitched historical aerial images
- GIS Intern - Stormwater Services** 2016
City of Asheville, Asheville, NC
- Updated stormwater GIS database using ArcGIS 10.2 and ArcSDE
- Young Leader in Climate Change Fellow** 2015
NPS and USGS – Indiana Dunes National Lakeshore, Porter, IN
- Assessed sensitivity of five National Parks to climate change by acquiring, processing, and analyzing satellite imagery
 - Developed a measure of resilience to climate change in R based on sensitivity of primary productivity to fluctuations in weather and climate in five National Parks
- Coastal Research Scientist and Adjunct Professor of Biology** 2008 - 2014
Western Carolina University, Cullowhee, NC
- Developed and supervised Rivercane Restoration Project using over 100 volunteers to restore culturally important species at campus of Cherokee Central Schools
 - Launched non-profit Beachcare.org in 2008 via an exclusive partnership
 - Created over 100 pages of original web content to developers for new non-profit
- Co-Founder and Director of Science and Coastal Environments** 2010 - 2013
Public Lab, Boston, MA
- Worked collaboratively with 6 other co-founders to secure a \$500,000 grant from the John S. and James L. Knight Foundation to start the Public Laboratory, an international citizen science non-profit organization
 - Led coastal, urban, and rural research for citizen science groups in the U.S. and Mexico
- Kayak Instructor and Nantahala River Head Guide** 2002 - 2006
Nantahala Outdoor Center, Bryson City, NC
- Managed daily operations and staff of 50+ for largest rafting company in the eastern US and taught whitewater kayaking for a US premier kayaking school
- 6th Grade Science Teacher at W.I. Stevenson Middle School** 1999 - 2002
Houston Independent School District, Houston, TX
- Created lesson plans, prepared labs, and evaluated work for over 150 students.
 - Organized and acquired funding for over ten field trips.
 - Coordinated school science fair for 100+ students and accompanied 20+ students to district and city-wide science fairs for two years.
 - Coached boy's soccer team to city semi-finals two years in a row.

Teach for America Corps Member

1999-2001

Houston, TX

- Selected to Teach for America, which places recent college graduates into urban and rural Title I public schools to close the achievement gap between the rich and poor
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Publications:

Hohl, A., **Griffith, A.D.**, Eppes, M., & Delmelle, E. (2018). Computationally Enabled 4D Visualizations Facilitate the Detection of Rock Fracture Patterns from Acoustic Emissions. *Rock Mechanics and Rock Engineering*.

Desjardins, M., Hohl, A., **Griffith, A.D.**, and Delmelle, E. (2018). A space-time parallel framework for fine-scale visualization of pollen concentrations across the Eastern United States. *International Journal of Geographic Information Science*.

Griffith, A.D., Coburn, A., & Young, R.S. (2014). Hurricane Sandy: did beach nourishment save New Jersey? In Farmer, E.C. and Bennington, J.B. (Eds.) Sandy Elsevier special publication. Elsevier.

Tanner, B.R., Kinner, D.A., **Griffith, A.D.**, Young, R.S. & Sorrell, L.M (2011). Presence of *Arundinaria gigantea* (river cane) on numerous non-wetland sites suggests improper ecological classification of the species. *Wetlands Ecology and Management*. 19(6): 521-532.

Coburn, A.S., **Griffith, A.D.** & Young, R.S. (2010). Inventory of coastal engineering projects in coastal national parks. Natural Resource Technical Report NPS/NRPC/GRD/NRTR—2010/373. National Park Service, Fort Collins, Colorado.

Griffith, A.D., Kinner, D.A., Tanner, B.R., Moore, A., Mathews, K.G. & Young, R.S. (2009). Nutrient and physical soil characteristics of rivercane (*Arundinaria gigantea*) stands, western North Carolina. *Castanea*. 74(3).

Griffith, A.D., McDowell, K., & Young, R.S. (2007). Rivercane restoration project: recovering an ecologically and culturally significant species (North Carolina). *Ecological Restoration*. 25, 144-145.

Published Abstracts and Conference Proceedings:

Desjardins, M. R., Hohl, A., **Griffith, A.D.**, & Delmelle, E. (2017). Fine-scale visualization of pollen concentrations across the Eastern United States: A space-time parallel approach. Proceedings of the 2017 International Conference on GeoComputation.

Young, R., Stancheva, M., Stanchev, H., Palazov, A., Peek, K., Coburn, A., & **Griffith, A.D.** Adapting to Sea Level Rise and Storms: Missed Opportunities and Continuing Development (case studies from USA and Bulgaria). *Geophysical Research Abstracts*, Vol. 16, 11723.

Griffith, A.D., Dosemagen, S., & Warren, J. (2012) Complete data lifecycles and citizen science via The Public Laboratory. *Geophysical Research Abstracts*, Vol. 14, 13733.

Griffith, A.D. & Young, R. (2012) Observations of coastal systems using low-cost, high resolution, balloon and kite based aerial imagery. *Geophysical Research Abstracts*, Vol. 14, 13732.

Young, R., & **Griffith, A.D.** (2009). Documenting the global impacts of beach sand mining. *Geophysical Research Abstracts*, Vol. 11, p. 11593.

Awards and Honors:

Graduate Assistant Support Plan, UNC Charlotte (\$19,000 yearly for 4 years) 2014
Support package used to attract top graduate students

Graduate Student Paper Competition – 1st Place – WCU 2006

Graduate Student Assistance, WCU (\$18,000 yearly for 3 years) 2005
Support package used to attract top graduate students

Grants:

Knight Foundation: Knight News Challenge (\$500,000) 2011 - 2014
The Public Lab – Wrote grant with 6 others to launch our citizen science non-profit

Invited Talks and Workshops:

Changes in Asheville land values: trouble for low-income residents. February 2018.
Asheville Area Habitat for Humanity Board of Directors, Asheville, NC.

Google Earth Engine for monitoring environmental change. November, 2017. USFS –
Southern Research Station, Asheville, NC.

Remote Sensing Potpourri for 1000. September 2017. Mountain Regional GIS Alliance,
Asheville, NC.

Balloon Mapping and MapKnitter. April 2013. 50 participants. Roanoke College, Salem, VA.

Balloon Mapping with Isaac Dickson Elementary and the City of Asheville. March 2013. 50 participants. Riverside Cemetery, Asheville, NC.

Balloon Mapping in Riparian Corridors. August 2012. 12 participants. Bentonville, VA.

MapMaking for Geologists. March 2012. 40 participants. Asheville, NC.

Balloon Mapping with Habitat for Humanity. March 2012. 17 participants. Asheville, NC.

Balloon Mapping and MapKnitter: February 2012. 11 undergraduate participants. Warren Wilson College, Swannanoa, NC.

Balloon Mapping and Online Cartography: October 2011. 35 undergraduate participants. Mexico City, Mexico.

Balloon Mapping and MapKnitter: September 2011. 300 participants. Mexico City, Mexico.

Balloon Mapping and Online Cartography: September 2011. 40 participants. Puebla, Mexico.

Balloon Mapping and Image Classification: July 2011. 9 undergraduate participants. University of South Carolina at Beaufort, Beaufort, SC.

Balloon Mapping and MapKnitter: June 2011. 100 participants. Massachusetts Institute of Technology, Boston, MA.

Service:

Organizer GIS Day at UNC Charlotte	2016
Reviewer Southeastern Geology	2012
Journal of Coastal Research	2013
President Graduate Student Association, WCU	2006 – 2007
Search Committee Member Student Representative for Dean of College of Arts and Science Search, WCU	2007
Volunteer Asheville Area Habitat for Humanity	2010 – present

Conference Presentations:

- Griffith, A.D.** (2018). Coastal resilience as a four letter word. Annual Meeting of the American Association of Geographers (AAG). New Orleans, LA.
- Griffith, A.D.** (2016). Resilience of plant primary productivity to climate variability in U.S. Great Lakes National Parks. Annual Meeting of the American Association of Geographers (AAG). San Francisco, CA, USA.
- Griffith, A.D.,** Staton, J., & Morgan, D. (2016). The Rising Sea: Goodbye Hilton Head Island. Annual Meeting of the Southeastern Division of the American Association of Geographers (SEDAAG). Columbia, SC.
- Griffith, A.D.** (2015). Spatial agent-based modeling of coastal land ownership changes in North Carolina and South Carolina. Annual Meeting of the American Association of Geographers (AAG). Chicago, IL.
- Griffith, A.D.,** Coburn, A., Peek, K. & Young, R. (2013) Hurricane Sandy: Did beach nourishment save New Jersey? Annual Meeting of the Geological Society of America. Denver, CO.
- Griffith, A.D.,** Krake, H., Monteith, C., & Young, R.S. (2012) Restoration of the ultimate riparian buffer species, rivercane (*Arundinaria gigantea*), on the Oconaluftee River floodplain, Cherokee, NC. Annual Meeting of the Geological Society of America. Charlotte, NC.
- Griffith, A.D.,** Young, R.S., Staton, J., & Morgan, D. (2012) Examining the physical and economic impacts of sea-level rise at the community level: Hilton Head Island, SC. Annual Meeting of the Geological Society of America. Charlotte, NC.
- Griffith, A.D.,** Young, R.S., Staton, J., & Morgan, D. (2011) Potential impacts of sea level rise on Hilton Head, SC. Annual Meeting of the Geological Society of America. Minneapolis, MN.
- Griffith, A.D. &** Long, S. (2011). Balloon Mapping and Neogeographies. TelMexHub Conference. Mexico City, Mexico.
- Griffith, A.D.,** Dosemagen, S., Barry, E., and Percifield, L. (2011). Map Making with Balloon Aerial Photography. Knight News Challenge Conference. Boston, MA.
- Griffith, A.D.,** Tanner, B., Kinner, D.A., & Young, R.S. (2010) Restoration of *Arundinaria gigantea* (rivercane) to the Oconaluftee River floodplain, Cherokee, NC. Annual Meeting of the Geological Society of America. Denver, CO.

Griffith, A.D., Young, R.S., & Pilkey, O.H. (2009) The global extent of beach sand mining. Annual Meeting of the Geological Society of America. Portland, OR.

Griffith, A.D., Kinner, D.A., McDowell, K., Tanner, B., & Young, R.S. (2007) Soil characterization for rivercane (*Arundinaria gigantea* (Walter) Muhl.) restoration in western NC. Annual Meeting of the Geological Society of America. Denver, CO.

Campus and Departmental Talks:

Fire and Flood: Google Earth Engine for disaster monitoring and geographic analysis. January 2017. Center for Applied GIS, UNC Charlotte, Charlotte, NC.

Geographic Information Systems: Performance enhancing drugs for my career. January 2017. Center for Applied GIS, UNC Charlotte, Charlotte, NC.

MapMaking for Geologists. February 2013. 40 participants. Western Carolina University, Cullowhee, NC.

MapMaking for Biologists. September, 2012. 8 participants. Western Carolina University, Cullowhee, NC.

Balloon Mapping and Georeferencing Aerial Images: September 2011. 10 undergraduate participants. Western Carolina University, Cullowhee, NC.

Balloon Mapping and Georeferencing Aerial Images: September 2010. 15 undergraduate participants. Western Carolina University, Cullowhee, NC.

Teaching Experience:

University of North Carolina at Charlotte:

2017 Instructor of record:

- Introduced undergraduate and graduate students to advanced GIS techniques in GIS for Non-Majors

2014 – 2017 Teaching Assistant:

- Conducted and graded labs for Spatial Thinking and Geography and Spatial Modeling for Social and Economical Applications
- Co-developed course and lab content for Spatial Thinking

Western Carolina University:

2009 – 2013 Instructor of record:

- Taught principles of biology to majors and non-majors in Biology 140 (three times) and 105 (one time), respectively
- Had student evaluations above departmental average every time

Nantahala Outdoor Center:

2002 – 2007 Kayak instructor and rafting instructor

Houston Independent School District:

1999 – 2002 Middle School Science Teacher

Media Coverage:

Uhler, A. “Houston has to decide whether to rethink its development strategy.” *Marketplace, National Public Radio*. 8 SEP 2017.

McKie, S. “River cane: Important Cherokee cultural staple.” *Cherokee One Feather* [Cherokee, NC], 22 MAY 2012.

Holland, J. “Sand for Sale.” *National Geographic*. MAY 2011.

Fretwell, S. “Rivercane could stand tall again.” *The State* [South Carolina], 21 AUG 2011.

Kesselring, M. “Rivercane transplanting underway.” *Macon County News* [Franklin, NC], 17 MAR 2011.

Staff. “Help restore the Cherokees’ rivercane” *Smokey Mountain News*_[WNC] 16 FEB 2011.

Blogs Authored:

Gore-Tex.com/blog – Authored eight articles in 2016 and 2017

PBS IdeaLab – 15 MAR 2013 How Public Lab Creates Memorable Fieldtrips for Students.

Opensource.com – 18 JUL 2013 – “Students map their university campus with MapKnitter”

PBS IdeaLab – 22 MAY 2012 – “Public Lab's Keys to Developing Low-Cost Science Tools”

PBS IdeaLab – 16 NOV 2011 – “Public Lab's 'Barnraising' Focuses on DIY Infrared Camera Development” with Mathew Lippincott

Coastalcare.org Dec 2012 Beach of the Month – “Faroe Islands”

Coastalcare.org June 2010 Beach of the Month – “Isle Grand Terre, Louisiana” with Rob Young

Coastalcare.org May 2009 Beach of the Month – “Elwha beach near Port Angeles, WA”
with Rob Young

American Whitewater – 6 JUN 2008 –“Rivercane on the Cheoah”

Professional Memberships and Certifications:

Association of American Geographers	2014 - present
Southeastern Chapter of the Association of American Geographers	2015 - 2018
Geological Society of America	2006 - 2014
Association of Southeastern Biologists	2005 – 2009
Tri-Beta Biological Honor Society (Roanoke College)	1997 - 1999
Omicron Delta Kappa Honor Society (Roanoke College)	1997 inductee
Provisionally Certified Teacher in Texas in Secondary Science	2001
Commercial Driver’s License (Class B with P endorsement)	2002 – present

Skills:

Python, R, Linux (shell scripts), ENVI, ArcGIS 10.X, MS Office Suite, HTML, QGIS,
JSON, Google Earth Engine, ArcGIS Server, ArcGIS Online, GitHub