

CURRICULUM VITAE – SARAH W.M. GEORGE

Department of Geological Sciences, Jackson School of Geosciences
University of Texas at Austin, Austin, TX 78712 USA
email: swmgeorge@utexas.edu
(832) 518-6981

EDUCATION

- Ph.D., Geosciences, University of Texas at Austin** **2019**
Advisor: Dr. Brian Horton
Basin evolution, deformation, and magmatism during variable tectonic regimes in the region linking the Central and Northern Andes
- B.A. (with honors), Geosciences, Wellesley College** **2014**
Advisor: Dr. David Hawkins
Honors Thesis: *Distinguishing proximal and distal sources of sandstone by combining U-Pb age, and geochemical signatures of detrital zircon populations: An example from the Permian Brushy Canyon Formation, West Texas.*
-

PROFESSIONAL EXPERIENCE

- NSF Fellow** **Sept 2015- Sept 2018**
University of Texas at Austin, Austin, TX
- Geosciences Intern** **May 2015- July 2015**
Chevron, Houston, TX
- NSF Research Experience for Undergraduates** **May 2013- Aug 2013**
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- South Texas Production Operations Summer Student** **May 2012- Aug 2012**
Swift Energy Company, Houston, TX
- Land Department Summer Student** **May 2011- Aug 2011**
Swift Energy Company, Houston, TX
-

TEACHING EXPERIENCE

- Instructor** **Summer 2019**
Indiana University; field camp
- Teaching Assistant** **Spring 2019**
University of Texas at Austin; Introduction to Field Methods
- Instructor** **Summer 2018**
GeoFORCE; 12th Grade Summer Academy

Teaching Assistant <i>University of Texas at Austin; field camp</i>	Summer 2018
Assistant Instructor <i>Indiana University; field camp</i>	Summer 2017
Teaching Assistant <i>University of Texas at Austin; field camp</i>	Summer 2016
Teaching Assistant <i>University of Texas at Austin; Introduction to Field Methods</i>	Spring 2014
Teaching Assistant <i>University of Texas at Austin; Sedimentary Rocks</i>	Fall 2014
Tutor <i>Wellesley College; Department of Geosciences</i>	Fall 2012- Spring 2014

HONORS AND AWARDS

Outstanding Student Presentation Award (<i>OSPA</i>), American Geophysical Union	2019
National Science Foundation Graduate Research Fellowship	2015- 2018
Endowed Presidential Scholarship, University of Texas	2018
Independent Study Fellowship, University of Texas	2018
Geological Society of America South Central Student Travel Grant	2018
2nd Place Late Career PhD Poster, Jackson School of Geosciences Symposium	2018
Graduate Admission & Support Committee Analytical Funds	2018
Charles A. & June R.P. Ross Research Grant from GSA	2017
William R. Muehlberger Field Geology Fund Grant, Jackson School of Geosciences	2017
Society for Sedimentary Geology Student Research Grant	2016
Gordon I. Atwater Memorial Grant from AAPG	2016
Robert K. DeFord Field Scholarship, Jackson School of Geosciences	2016
Best Early Career Graduate Poster, Jackson School of Geosciences Symposium	2016
Student Research Grant from Society for Sedimentary Geology	2015
Garth W. Caylor Memorial Grant from AAPG	2015
Geological Society of America Graduate Student Research Grant	2015
Anadarko Petroleum Merit Scholarship for Indiana University field camp	2014
Cum Laude and Departmental Honors from Wellesley College	2014
Inducted to Sigma Xi Research Society	2014
Margaret D. Thompson Award, Wellesley College	2014
Geological Society of America Travel Grant	2013
Sarah F. Langer Award, Wellesley College	2012

PROFESSIONAL AFFILIATIONS

American Geophysical Union, Geological Society of America, Society for Sedimentary Geology

LANGUAGE

English (fluent); Spanish (conversational with a working geologic vocabulary)

FIELD WORK**Ph.D. Fieldwork****Sept- Oct 2017***Andes, Ecuador*

Measured over 5,000 meters of section, conducted clast counts and paleocurrent measurements, and collected carbonate nodules for paleoclimate reconstructions in Cuenca and Quingeo Basins.

Ph.D. Fieldwork**July- Aug 2016***Andes, Northern Peru*

Collected structural data and samples for a balanced cross-section. Sampled for U-Pb geochronology in the Santiago Basin.

Ph.D. Fieldwork**Sept 2015***Andes, Ecuador*

Two-week reconnaissance field season. Regional sampling across the Eastern Cordillera for (U-Th)/He thermochronology and targeted sampling for U-Pb detrital zircon geochronology in Cenozoic hinterland basins.

Ph.D. Fieldwork**June- July 2015***Bagua Basin, Northern Peru*

Collected structural data and samples for (U-Th)/He thermochronology for a ~150 km cross-section through the Marañon Fold Thrust belt, the Eastern Cordillera and into the Subandean zone. Measured section, conducted clast counts, and sampled for U-Pb detrital zircon geochronology within the Bagua Basin.

Ph.D. Fieldwork**June 2014***Andes, Northern Peru*

Two-week reconnaissance field season. Regional (U-Th)/He thermochronology sampling in the Eastern Cordillera as well as regional Mesozoic U-Pb detrital zircon geochronology sampling.

Undergraduate Honors Thesis Fieldwork**March 2013***Manitou Springs, CO*

Collected samples for U-Pb zircon geochronology.

FIELD & SHORT COURSES**GSA Structural and Stratigraphic Concepts Applied to Basin Exploration****Fall 2018****NSF Frontiers in Earth Science Development Course****Summer 2015***Southern Peru*

Two-week short course with 10 students and 11 professors. Traveled from the Altiplano (~4300 m) to the Amazon Basin (~500 m) studying the interactions between geology, climate, and biology.

Indiana University Geologic Field Camp**Summer 2014***Cardwell, MT*

Six-week field camp focused on structural mapping. Mapped 10 areas including shortening related (Sevier and Laramide) and extensional structures. Course: G429c.

OUTREACH AND SERVICE

Convened AGU Session (T019: Fold-Thrust Belts Through the Eyes of Their Foreland Basins: The Sedimentary Record of Hinterland Tectonics, Surface Processes, and Basin Evolution)	Fall 2018
Sedimentology Search Committee, Student Representative	Fall 2018- Present
Organizing Lithosphere and Deep Earth Seminar at UT Austin	Fall 2018- Present
Task force on harassment in higher education, Student Representative	Fall 2018
Co-advising research of undergraduate J. Hirtz	Spring 2018- Present
Geological Society of America, Annual Program Committee	Summer 2017- Present
Geological Society of America, Student Advisory Committee	Summer 2017- Present
GeoFORCE Mentor	Fall 2014- Spring 2019
Thinkery21 Adult Science Outreach Events, Volunteer	Fall 2016- Fall 2018
Scientist in Residence, UT Environmental Science Institute	Spring 2018
GirlStart After School Program, STEM Teacher	Spring 2017- Fall 2018
Graduate Student Executive Committee, Vice President	Fall 2016- Spring 2017
Geoscience Leadership Organization for Women, Graduate Student Liaison	Fall 2016- Spring 2017
University of Texas Research Committee, Graduate Student Representative	Fall 2015
Mission Hill After School Program Volunteer	Fall 2011- Spring 2013
Team Impact Volunteer	Fall 2013- Spring 2014

CERTIFICATIONS

Inclusive Classrooms Leadership Certification, University of Texas **Spring 2018**

PEER REVIEWED MANUSCRIPTS (**in prep*= fully drafted and undergoing edits; [∇]undergraduate student)

George, S.W.M., Horton, B.K., Vallejo, C., Jackson, L.J., and Gutierrez, E.G., **in prep*, Tracking punctuated Andean magmatism on an accretionary margin: Insights from zircon Hf isotopes in the northern Andes.

Moreno, F., **George, S.W.M.**, Garzione, C., Carlotto, V., Horton, B.K., Williams, L., **in prep*, Bagua Basin: an archive of the Cenozoic tectonic evolution of the northern Peruvian Andes.

[∇]Hirtz, J., Capaldi, T.N., **George, S.W.M.**, Horton, B.K., Stockli, D.F., and Mohrig, D., **in prep*, Detrital zircon signal propagation in modern eolian environments: Investigating a modern foreland dune field in Argentina.

George, S.W.M., Davis, S., Fernandez, R., Manríquez, L., Leppe, M., Horton, B.K., Clarke, J., *in review*, Chronology of deposition and unconformity development across the Cretaceous-Paleogene boundary, Magallanes-Austral Basin, Patagonian Andes, *in* Folguera, A., eds., *Patagonian Basins*, Journal of South American Earth Sciences.

George, S.W.M., Horton, B.K., Jackson, L.J., Moreno, F., Carlotto, V., and Garzione, C., *in press*, Sediment provenance variations during contrasting Mesozoic-early Cenozoic tectonic regimes of the northern Peruvian Andes and Santiago-Marañón foreland basin, *in* Horton, B.K., and

Folguera, A., eds., *Andean Tectonics*, Elsevier.

Gutierrez, E.G., Horton, B.K., Vallejo, C., Jackson, L.J., and **George, S.W.M.**, *in press*, Provenance and geochronological insights into Late Cretaceous-Cenozoic foreland basin development in the Subandean Zone and Oriente Basin of Ecuador, *in* Horton, B.K., and Folguera, A., eds., *Andean Tectonics*, Elsevier.

ABSTRACTS (▽undergraduate student)

Horton, B.K., Jackson, L.J., Capaldi, T.N., Butler, K.L., **George, S.W.M.**, Gutierrez, E.G., Mackaman-Lofland, C., 2019, Tracking sediments from source to sink in the Andean orogenic belt and foreland basin system: AAPG Annual Convention, Abstracts with Programs.

Horton, B.K., Capaldi, T.N., Butler, K.L., Mackaman-Lofland, C., **George, S.W.M.**, Jackson, L.J., 2019, Broken foreland basins and the influence of flat slab subduction, crustal inheritance, climate, and erosion: European Geophysical Union General Assembly.

George, S.W.M., Horton, B.K., and Vallejo, C., 2018, Hinterland basin evolution of Cuenca Basin, Ecuador: Insights into the Miocene basin and magmatic evolution of the Northern Andes: American Geophysical Union Fall Meeting.

Horton, B.K., Butler, K.L., Capaldi, T.N., **George, S.W.M.**, Jackson, L.J., and Mackaman-Lofland, C., 2018, Broken foreland basins and their connections to flat-slab subduction, crustal inheritance, climate, and erosional dynamics: American Geophysical Union Fall Meeting.

George, S.W.M., Horton, B., Vallejo, C., Jackson, L., Gutierrez, E., 2018, Jurassic to Miocene magmatic evolution of the northern Andes: A hafnium isotope perspective: Geological Society of America Abstracts with Programs. Vol. 50, No. 6.

George, S.W.M., Ellins, K., Eriksson, S., 2018, Photographs and sketches in tandem: a multifaceted approach to focusing the untrained eye: Geological Society of America Abstracts with Programs. Vol. 50, No. 6.

▽Hirtz, J., Capaldi, T., **George, S.W.M.**, Stockli, D., Horton, B., Mohrig, D., 2018, Tracking detrital zircons and sediment mixing in modern eolian systems: Example from the Andean broken foreland basin of Argentina: Geological Society of America Abstracts with Programs. Vol. 50, No. 6.

Thomas, D., Ellins, K., Campos, D., **George, S.W.M.**, Goldfarb, E., Kim, W., Kotowski, A., McCall, L., Wright, V., 2018, Student exploration of geoscience careers through challenge-based field learning in GeoFORCE and STEMFORCE 12th grade summer academies: Geological Society of America Abstracts with Programs. Vol. 50, No. 6.

Ellins, K., Thomas, D., Campos, D., **George, S.W.M.**, Goldfarb, E., Kim, W., Kotowski, A., McCall, L., Soltis, N., Stocks, E., Wright, V., 2018, Using the STAR legacy cycle to promote student-centered field learning in GeoFORCE and STEMFORCE 12th grade summer academies: Geological Society of America Abstracts with Programs. Vol. 50, No. 6.

▽Coholich, M., ▽Lee, H., ▽Moi, M., Ellins, K., Campos, D., **George, S.W.M.**, Hash, J., Goldfarb, E., Kim, W., Oefinger, L., 2018, Our experience as undergraduate instructors for the GeoFORCE 12th grade central Texas academy: Geological Society of America Abstracts with Programs. Vol. 50, No. 6.

George, S.W.M., Horton, B., and Breecker, D., 2018, Testing Models of Orogenic Development in Ecuador: Multi-proxy Provenance Analysis of the Hinterland Cuenca Basin: Jackson School of Geosciences Symposium, February 3, 2018.

George, S.W.M., Horton, B., Vallejo, C., and Nogales, V., 2017, Provenance of Miocene Hinterland

- Basins in Ecuador: Implications for the Growth of Topographic Barriers in the Northern Andes: American Geophysical Union Fall Meeting
- George, S.W.M.**, Horton, B., 2017, Provenance of Miocene hinterland basins in Ecuador: Implications for topographic barriers linking the Central and Northern Andes: Jornadas en la Ciencias de la Tierra VIII, Quito, Ecuador, May 9, 2017.
- Moreno, F., Garzione, C., **George, S.W.M.**, and Williams, L., 2017, Bagua Basin: an Archive of the Tectonic Evolution of the Northern Peruvian Andes: AGU Fall Meeting.
- George, S.W.M.**, 2017, Synthesizing datasets on the uplift of the northern Andes: Impact on biodiversity?: Oral presentation, Jackson School of Geosciences Soft Rock Symposium, March 6, 2017.
- George, S.W.M.**, Horton, B., Gutierrez, E., and Jackson, L., 2017, Miocene basin evolution in Ecuador: Implications for the growth of topographic barriers linking the Northern and Central Andes: Jackson School of Geosciences Symposium, February 4, 2017.
- George, S.W.M.**, Horton, B., Moreno, F., and Jackson, L., 2016, Basin evolution in northern Peru: Implications for the growth of topographic barriers linking the Central and Northern Andes: Jackson School of Geosciences Symposium, February 6, 2016.
- George, S.W.M.**, Jackson, L., and Horton, B., 2015, Detrital Provenance Record of the Pre-Andean To Modern Tectonics in the Northern Andes: Examples from Peru, Ecuador, and Colombia: American Geophysical Union Fall Meeting.
- Moreno, F., **George, S.W.M.**, Williams, L., Horton, B., and Garzione, C., 2015, Depositional Record of the Bagua Basin, Northern Peru: Implications for Climate and Tectonic Evolution of Tropical South America: American Geophysical Union Fall Meeting.
- George, S.W.M.**, Christie-Blick, N., Hemming, S., Anders, M., Tremblay, M., and Renik, B., 2013, Post-9.5 Ma tilting of the Dublin Hills: Mechanisms of crustal extension in the Death Valley region, eastern California: Geological Society of America Abstracts with Programs, v. 45, no. 7, p. 822.
- Cantine, M., Sanchez, T., **George, S.W.M.**, and Hawkins, D., 2013, Age Distribution and Composition of Detrital Zircons in the Permian Brushy Canyon Formation, Delaware Basin, West Texas: Geological Society of America Abstracts with Programs, v. 45, no. 5, p. 39.
- Kwon, J., **George, S.W.M.**, and Haines, D., 2013, Investigation of reductive amination of halogenated isatins: American Chemical Society National Meeting, p. 142.
- George, S.W.M.**, Cantine, M., and Brabander, D., 2012, Geochemical Leaching of Alkaline Batteries: Implications for Landfill Disposal and Remediation of Lead Contaminated Compost: Geological Society of America Abstracts with Programs, v. 44, no. 7, p. 608.

INVITED PRESENTATIONS

- George, S.W.M.**, Building a continuous Andes: Using the sedimentary record to reconstruct Andean evolution. Texas State University, San Marcos, TX, February 20, 2019.
- George, S.W.M.**, Capaldi, T., Making mountains: implications for earthquake and volcanic hazards, biodiversity, and petroleum basin development. Coalition for National Science Funding Exhibition, Washington D.C., May 16, 2017.
- George, S.W.M.**, Moreno, F., Horton, B., Jackson, L., Garzione, C., Basin evolution in northern Peru: Implications for the growth of topographic barriers linking the Central and Northern Andes. Landmark Innovation Forum and Expo, Houston, TX, August 25, 2016.