

# Cody C. Mason, Ph.D.

Curriculum Vitae, November 2023

## Associate Professor

University of West Georgia, Geology Program  
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## Education

Ph.D. Geosciences, Virginia Tech (advisor Brian W. Romans) 2017

B.S. Geology, Fort Lewis College, 2011

## Professional Experience

2023 – Present: Associate Professor, University of West Georgia

2018 – 2022: Assistant Professor, University of West Georgia

2017 – 2018: Postdoctoral Researcher, Virginia Tech

2015 – 2016: Statoil Summer Intern, Austin Texas

2013 – 2016: Teaching Assistant, Virginia Tech

2012 – 2015: Research Assistant, Virginia Tech

2011: NAGT/USGS Summer Intern, Lakewood Colorado

## Teaching

Oceanography (online)

Coastal Geology (spring term)

Sedimentation and Stratigraphy with Laboratory (fall terms)

Physical Geology Lecture and Laboratory (fall/spring terms)

Historical Geology Lecture and Laboratory (fall/spring terms)

Independent Research Topics (ongoing undergraduate research)

Regional Applications of Field Geology (2019)

Sedimentary Petrology (fall term 2018)

Appalachian Geology Seminar (spring term 2017, Virginia Tech)

## Research Interests

Sedimentology and stratigraphy of alluvial, fluvial, and marine environments, sediment provenance, source-to-sink analyses, bedrock and detrital geo-thermochronology, sedimentary geochemical proxies for surface processes including cosmogenic radionuclides, and study of microplastic pollution in sedimentary environments.

My recent projects have included the mentorship and direction of undergraduates in field and/or laboratory-based research in the following geographic areas: the Paleo-Mississippi River, the Amazon River-Fan system, the Paleo-Colorado River system, the Panamint

Valley/Mountains, and the Savannah River and adjacent coastal areas in the southeastern U.S.

### Peer-Reviewed Publications

9. Wu, C., Sun, X., J., Li G., Huang, L., Jiao, H., Li, Z., Jian, X., **Mason, C.**, and Rodríguez-López., 2023. Cretaceous mountain building processes triggered the aridification and drainage evolution in east Asia. *GSA Bulletin*.
8. **Mason, C.C.**, Romans, B.W., Patterson, M.O., Stockli, D.F., and Fildani, A., 2022. Cycles of Andean mountain building archived in the Amazon Fan. *Nature Communications* 13, 6983 <https://doi.org/10.1038/s41467-022-34561-6>
7. Spotila, J.A., Mason, C.C., Valentino, J.A., and Cochran, W.J., 2020. Constraints on rock uplift in the eastern Transverse Ranges and northern Peninsular Ranges and implications for kinematics of the San Andreas fault in the Coachella Valley, California, USA. *Geosphere* 16 (3): 723–750. doi: <https://doi.org/10.1130/GES02160.1>
6. Brugger, K.A.; Ruleman, C.A.; Caffee, M.W.; Mason, C.C., 2019. Climate during the Last Glacial Maximum in the Northern Sawatch Range, Colorado, USA. *Quaternary* 2, 36. <https://doi.org/10.3390/quat2040036>
5. **Mason, C.C.**, Romans, B.W., Stockli, D.F., Mapes, R.W., Fildani, A., 2019. Detrital zircons reveal sea-level and hydroclimate controls on Amazon River to deep-sea fan sediment transfer. *GEOLOGY*, 47, 1–5. <https://doi.org/10.1130/G45852.1>
4. Fildani, A., Hessler, A.M., **Mason, C.C.**, Mckay, M.P., Stockli, D.F., 2018. Late Pleistocene glacial transitions in North America altered major river drainages, as revealed by deep-sea sediment. *Scientific Reports* 8, 13839. <https://doi.org/10.1038/s41598-018-32268-7>
3. **Mason, C.C.**, Cody C. Mason, Brian W. Romans, 2018. Climate-driven unsteady denudation and sediment flux in a high-relief unglaciated catchment–fan using <sup>26</sup>Al and <sup>10</sup>Be: Panamint Valley, California. *Earth and Planetary Science Letters*, 492, 130-143, <https://doi.org/10.1016/j.epsl.2018.03.056>
2. **Mason, C.C.**, Spotila, J. A., Axen, G., Dorsey, R. J., Luther, A., & Stockli, D. F., 2017. Two-phase exhumation of the Santa Rosa Mountains: Low- and high-angle normal faulting during initiation and evolution of the southern San Andreas Fault system. *Tectonics*, 36, 2863– 2881. <https://doi.org/10.1002/2017TC004498>
1. **Mason, C.C.**, Cody C. Mason, Andrea Fildani, Thomas Gerber, Michael D. Blum, Julian D. Clark, Mason Dykstra, 2017. Climatic and anthropogenic influences on sediment mixing in the Mississippi source-to-sink system using detrital zircons: Late Pleistocene to recent, *Earth and Planetary Science Letters*, 466, 70-79, <https://doi.org/10.1016/j.epsl.2017.03.001>

### Select Accepted Abstracts (\*denotes student advisee)

15. **Mason, C.C.**, Hessler, A.H., Romans, B.W., and Fildani, A., 2022. Constraints on silicate weathering during the Middle to Late Pleistocene in the Amazon Basin: insights from the Amazon deep-sea fan. AGU Annual Fall Meeting, Chicago, Illinois.
14. \**Worthan, M.*, **Mason, C.C.**, \**Johnson, M.*, and Hidy, A., 2022. Spatial patterns of <sup>10</sup>Be-based catchment wide denudation in the western Panamint Mountains, California. Joint Southeastern North Central Section Geological Society of America Spring Meeting.

13. \**Benitez-Nelson, N., Lang, K.A., Thomson, K.A., Mason, C.C.* (2021). Concentration, transportation, and deposition of microplastics along the Savannah River, Georgia (USA). AGU Annual Fall Meeting, New Orleans, Louisiana.
12. \**Mayer, C.K., Mason, C.C., Romans, B.W., and Fildani, A.,* 2021. Detrital zircon U-Pb and fission track double dating from the Amazon fan records early Phanerozoic to Cenozoic tectonic events and recent exhumation rates of the Andes. Annual Geological Society of America Southeastern Section Meeting, 1 – 2 April [virtual], University of Auburn, Alabama.
11. **Mason, C.C.,** Johnstone, S., Patterson, M.O., Romans, B.W., Stockli, D.F., and Fildani, A., 2020. Timescales of episodic tectonic denudation using detrital zircon double dating in the Amazon River to fan system. Geological Society of America Annual Meeting
10. \**Johnson, M., Mason, C.C.,* 2020. Investigating erosion of the Panamint mountains using cosmogenic nuclides in sediment. Scholars' Day Undergraduate Research Conference, University of West Georgia, Carrollton, Georgia. [Note: This conference was canceled due to public health concerns related to COVID-19.]
9. \**Speessen, J.M., Mason, C.C.,* 2020. Stratigraphic correlation and signal propagation across sedimentary system segments using U-Pb detrital zircon geochronology: insights from the late Pleistocene Mississippi River and deep-sea fan. Scholars' Day Undergraduate Research Conference, University of West Georgia, Carrollton, Georgia. [Note: This conference was canceled due to public health concerns related to COVID-19.]
8. Parent, A., Romans, B., **Mason, C.,** Stockli, DF., 2020. Passive margin sedimentation during the early drift phase of the U.S. mid-Atlantic: perspectives from U-Pb detrital zircon geochronology. Geological Society of America Annual Meeting.
7. Parent, A., Romans, B., **Mason, C.,** Stockli, DF., 2020. Evolution of sediment dispersal systems during the early drift phase of U.S. Atlantic margin development: insights from detrital zircon U-Pb geochronology. Geological Society of America Joint Southeastern Northeastern Section Meeting.
6. **Mason, C.,** Romans, B., Fildani, A., and Stockli, DF., 2019. A deep-sea record of South American tectonics and surface processes: insights from detrital zircon double dating from the Amazon submarine fan. Geological Society of America Annual Meeting, Phoenix, Arizona, USA.
5. Romans, B., Auchter, N., Johnstone, S., **Mason, C.,** and Hubbard, SM., 2019. Effects of Intrabasinal Recycling on the Preservation of Tectonic and Climate Signals Determined from Provenance Analysis. AGU Fall Meeting.
4. McKay, M., Hessler, A., **Mason, C.,** Stockli, DF., and Fildani, A., 2018. North America major river drainages modified at Late Pleistocene glacial transitions: a tale from deep-sea sediment. Geological Society of America Annual Meeting, Indianapolis, Indiana, USA.
3. **Mason, CC.,** and Romans, BW., 2015. Quantifying Sediment Supply in Stratigraphy Using Cosmogenic Nuclides: Insights From the Pleasant Canyon Complex, Panamint Mountains, California. AAPG Annual Convention and Exhibition.
2. Ruleman, CA., Goehring, BM., **Mason, CC.,** and Lundstrom SC., 2013. Late Pleistocene glacial maximum and deglaciation of the northern Sawatch Range, Mount Massive, Colorado. Geological Society of America, Abstracts with Programs 45, 551.

1. **Mason, CC.**, Ruleman, CA., and Kenny, R, 2011. Rate and timing of deglaciation using <sup>10</sup>Be cosmogenic nuclide surface exposure dating, Mt Massive Wilderness, Colorado, USA. Geological Society of America Annual Meeting and Exposition, 65.

### **Invited Speaking Engagements**

2023: Atlanta Geological Society: "Sediment provenance techniques and their applications to large rivers of North and South America"

2021: Simon Fraser University ARISE Research Seminar, "From catchment-fans to continent-scale sediment routing systems: Insights from detrital geochronology" [Virtual Presentation]

2020: Geological Society of America National Meeting, "Timescales of episodic tectonic denudation using detrital zircon double dating in the Amazon River to fan system" [Virtual Presentation]

2019: University of Mississippi, "A world in a grain of sand: detrital geochronology of the largest sediment routing systems of the Americas"

2019: Tulane University, "A world in a grain of sand: detrital geochronology of the largest sediment routing systems of the Americas"

2017: Fort Lewis College, "Graduate Research and Graduate Student Life"

### **Undergraduate Independent Study Advisees** (University of West Georgia)

2023-2024 Ana Dos Santos, Conrad Dearing

2022-2023 Georgia Waddell, Matthew Worthan

2021-2022 Matthew Worthan

2020-2021 Cole Mayer, Matthew Johnson

2019-2020 Jourdan M. Speessen, Jack Heltzer, G. Paul Miles II

2018-2019 Steven Whatley

### **Synergistic Activities**

- 2017-present, Peer Reviewer: Geology, Earth and Planetary Science Letters, JGR Earth Surface, Geosphere, Earth Surface Dynamics, Geological Journal, Basin Research
- 2016-2023, Convener or Co-chair for a total of \*six technical sessions: Geological Society of America National Meeting (2020; [virtual]), Geological Society of America Annual Meeting (2019; Phoenix, AZ), American Geophysical Union Annual Fall Meetings (2017; New Orleans, LA & 2018; Washington D.C.), Geological Society of America Southeastern Section Meeting (2018; Charleston, SC). \*Note, one session at AGU 2023 was merged, and I stepped back to allow early career faculty to convene.
- 2019, NSF funded Sed Strabo workshop participant, Salt Lake City Utah
- 2019, NAGT Early Career Workshop participant, College Park, Maryland
- 2019, proposal reviewer for Deutsche Forschungsgemeinschaft (German Research Foundation)
- Presenter: 2016 Friends of the Pleistocene Pacific Cell field trip. Panamint Valley, California

### **Memberships in Learned Societies**

Geological Society of America (GSA)

American Geophysical Union (AGU)  
Society for Sedimentary Geology (SEPM)  
National Association of Geoscience Teachers (NAGT)

**Grants and Awards**

2023-24: Professional Development Award \$1,000. Paleo-Colorado River Field Research. Student Research Assistant Program (SRAP): \$1,550. Investigating sediment-source areas in the Pliocene Paleo-Colorado River using sediment provenance techniques.

2020: University of West Georgia Faculty Research Grant: \$3,175. How fast do mountains erode? A case study from the Panamint Mountains, California.

2018: Subaward from Virginia Tech: \$43,000. Source-to-Sink Dynamics of Large Sediment Routing Systems With and Without Continental Ice Sheets: Value of Detrital Zircons for Sediment Routing System Characterization and Prediction.