

---

|           |                |  |
|-----------|----------------|--|
| POSITIONS | 2023 – present | <b>Assistant Professor</b><br>Earth, Ocean & Atmospheric Science.<br>Florida State University, Tallahassee FL. USA.  |
|           | 2021 - 2023    | <b>Donnelly Postdoctoral Fellow</b><br>Yale Institute for Biospheric Studies<br>Yale University, New Haven, CT. USA. |

---

|           |      |  |
|-----------|------|--|
| EDUCATION | 2021 | <b>Massachusetts Institute of Technology, PhD</b><br>Department of Earth, Atmospheric & Planetary<br>Science<br>Thesis Advisor: J. Taylor Perron |
|           | 2015 | <b>Rice University, BS</b><br>Department of Earth Science<br>Distinction in Research and Creative Work   |

---

|        |             |   |
|--------|-------------|---|
| AWARDS | 2021        | Donnelly Postdoctoral Environmental Fellowship<br>(Yale)      |
|        | 2019        | Excellence in Teaching Award (MIT)                            |
|        | 2019        | Graduate Woman of Excellence Award (MIT)                      |
|        | 2018        | Hugh Hampton Young Fellowship (MIT)                           |
|        | 2018        | Martin Fellow for Sustainability (MIT)                        |
|        | 2017        | EarthScope AGeS Geochronology Grant (NSF)                     |
|        | 2016        | Graduate Research Fellowship Program (NSF)                    |
|        | 2015        | Ida Green Fellowship (MIT)                                    |
|        | 2015 – 2018 | Student Research Fund (MIT)                                   |
|        | 2015        | Exxon Mobil Outstanding Undergraduate Award<br>(Rice)         |
|        | 2014 – 2015 | Maby Scholarship (Houston Geological Society)                 |
|        | 2014        | Devin-Schnable Field Camp Award (Rice)                        |
|        | 2014        | Best Student Poster (Society for Sedimentary Geology,<br>GSA) |
|        | 2013        | Eugen Merton Memorial Prize (Rice)                            |

---

|                          |          |  |
|--------------------------|----------|--|
| INVITED TALKS            |          |  |
| University of Oregon     | Apr 2023 | Panelist: Climate Change, Dynamic Landscapes, and<br>Evolution ( <i>Museum of Natural and Cultural History</i> ) |
| Austin Peay State        | Apr 2023 | Biology Honors Seminar   |
| City College New York    | Mar 2023 | Earth and Environmental Science Seminar  |
| Queens College           | Mar 2023 | School of Earth and Environmental Sciences Seminar   |
| Landscapes Live          | Mar 2023 | Weekly international online geomorphology seminar.   |
| Florida State University | Feb 2023 | Ecology and Evolution Group  |

---

---

INVITED TALKS cont.

|                          |          |   |
|--------------------------|----------|---|
| Florida State University | Mar 2022 | Department of Earth, Ocean, & Atmospheric Science                               |
| Princeton University     | Mar 2022 | Department of Geoscience  |
| UT Austin                | Feb 2022 | Soft Rock Seminar   |
| AGU annual meeting       | Dec 2021 | New Developments and Integrated Approaches in the Earth-Life Sciences (invited) |
| Yale University          | Oct 2021 | Yale Institute for Biospheric Studies   |
| ETH Zurich               | Feb 2021 | Earth Surface Dynamics seminar  |
| Caltech                  | Feb 2021 | Geoclub   |

---

TEACHING

|             |  |
|-------------|--|
| Apr 2022    | Guest Lecturer, Western Connecticut State University (Conservation Biology)                      |
| 2018        | 12.001: Introduction to Geology (MIT); TA<br>Average Evaluation 7.0/7.0                          |
| 2017        | 12.163/12.462 Geomorphology (MIT); TA<br>Average Evaluation 6.8/7.0                              |
| 2015 – 2018 | Discover Earth, Atmospheric, and Planetary Sciences at MIT: Yellowstone (week-long field course) |

---

ADDITIONAL TRAINING AND EXPERIENCE

|             |   |
|-------------|---|
| 2018 - 2022 | Fish sampling in North Carolina, Tennessee, South Carolina, Georgia, Arkansas, Missouri                                   |
| 2018 - 2022 | DNA extraction and library preparation for RADseq sequencing of fish tissues (Yale University)                            |
| 2017 - 2019 | Sediment sampling Virginia, North Carolina; cosmogenic-nuclide sample preparation (mineral separation clean geochemistry) |
| 2017        | Workshop on Molecular Evolution, Marine Biology Laboratory  |
| 2016        | Biology of southern Appalachian Salamanders, Highlands Biological Station, NC   |
| 2016        | Tufa collection in the Altiplano-Puna Plateau of Chile  |
| 2014        | Stratigraphy and sedimentology, western Ireland   |
| 2014        | Geology Field Camp, University of Arizona   |

---

SERVICE

|  |      |   |
|--|------|---|
| <b>American Geophysical Union Session Convener</b> | 2022 | Reorganization of River Basins                              |
|  | 2021 | Planform change of river networks and their drainage basins |
|  | 2019 | Feedbacks Among Life, Landscapes, and Processes             |

|                          |             |  |
|--------------------------|-------------|--|
| <b>Outreach</b>          | May 2023    | 8 <sup>th</sup> Grade Classroom Presentation: Biodiversity of Freshwater Fishes (Cobb Middle School) |
|                          | 2020        | Living on Mars: month-long weekend enrichment course for Boston-area high school students            |
|                          | 2020 - 2021 | K-12 Classroom Outreach: Led and participated remotely (UP Academy Dorchester)                       |
| <b>Thesis Committees</b> | 2022        | Garett Maag – Arizona State University, MS   |
|                          | 2023 –      | Julia Wood – Yale University, PhD  |
|                          | 2023 –      | Klint Cromhout – Florida State University, MS  |

**Peer Reviewer:** Nature Ecology & Evolution, JGR Earth Surface, Geomorphology, Earth Surface Processes and Landforms, Geoscientific Model Development

## PUBLICATIONS

Kim, D., **Stokes, MF**, Ebersole, S., Near, TJ. Exhumation of carbonate rock facilitates dispersal-mediated allopatric speciation in freshwater fishes, *in review*.

**Stokes, MF**, Kim, D, Gallen, SF, Benavides, E, Keck, BP, Wood, J, Goldberg, SL, Larsen, IJ, Mollish, JM, Simmons, JW, Near, TJ, Perron, JT, Erosion of heterogeneous rock drives diversification of Appalachian fishes, *in press, Science*.

**Stokes, MF**, Larsen, IJ, Goldberg, SL, McCoy, SW, Prince, PP, & Perron, JT, 2023, The erosional signature of drainage divide motion along the Blue Ridge escarpment, *JGR: Earth Surface*, 128, e2022JF006757. <https://doi.org/10.1029/2022JF006757>.

Dolby, GA, Bennett, SEK., Dorsey, RJ, **Stokes, MF**, Riddle, BR, Lira-Noriega, A, Munguia-Vega, A, Wilder, BT, 2022, Integrating Earth-Life systems: A geogenomics approach. *Trends in Ecology & Evolution*. <https://doi.org/10.1016/j.tree.2021.12.004>.

**Stokes, MF** and Perron, JT, 2020, Modeling the evolution of aquatic organisms in dynamic river basins, *JGR: Earth Surface*, 125, e2020JF005652. <https://doi.org/10.1029/2020JF005652>

**Stokes, MF**, Goldberg, SL, Perron, JT, 2018, Ongoing river capture in the Amazon, *Geophysical Research Letters*, 45(11), 5545-5552. <https://doi.org/10.1029/2018GL078129>

## SELECT CONFERENCE PRESENTATIONS

**Stokes, MF**, Kim, D, Perron, JT, Near, TJ, 2023, Erosion through ancient geologic structures as a mechanism for freshwater fish speciation in a post-orogenic mountain range. *European Geophysical Union, Annual Meeting*.

**Stokes, MF**, Kim, D, Perron, JT, Near, TJ, 2022, Rivers, geology, and the diversification of endemic darters. *Southeastern Fishes Council, Annual Meeting*.

- Stokes, MF**, Wood, JE, Kim, D, Alley, ZD, McGregor, SW, Near, TJ, 2022, Erosion through layered rocks drives drainage divide migration and fish dispersal between river basins in the southeastern United States, *American Geophysical Union, Fall Meeting, Poster*.
- Seales, J, **Stokes, MF**, Araya-Donoso R, Dolby, G, Bennett, SEK, 2021, The species richness of exoplanet mountains. *AGU AbSciCon*.
- Stokes, MF**, Near, TJ, Kim, D, Gallen, SF, Perron, JT, 2021, Erosion of heterogeneous rock drives fish diversification in a tectonically quiescent mountain range. *American Geophysical Union, Fall Meeting, Oral Presentation (invited)*.
- Stokes MF**, Larsen IJ, McCoy SW, Goldberg SL, Perron JT, 2020, A Tale of Three Divides: Investigating the erosional signature of divide motion along the Blue Ridge Escarpment. *American Geophysical Union, Fall Meeting, Oral Presentation*.
- Goldberg SL, **Stokes MF**, Perron JT, 2020, Climate modulates lithologic control of river incision. *American Geophysical Union, Fall Meeting*.
- Dolby GA, Dorsey RJ, Bennett S, Hausback B, Noriega AL, Darin M, Araya-Donoso R, Orton J, **Stokes MF**, Vega AM, Kusumi K, Wilder B., 2020, Can we use causal theory to understand how Earth processes shape Life? *American Geophysical Meeting, Fall Meeting*.
- Stokes, MF**, Gallen, SF, Perron, JT and Near, TJ, 2019, Knickpoints drive allopatric speciation in the Blue Ridge relict landscape, *American Geophysical Union, Fall Meeting, Oral Presentation*.
- Stokes MF** and Perron, JT, 2019, Modeling the evolution of aquatic organisms in dynamic river basins, *Geological Society of America Annual Meeting, Oral Presentation*.
- Stokes, MF**, Chen, CY, and McGee, D, 2018. A Landsat-derived Record of Lake Area Fluctuations on the Altiplano-Puna Plateau. *American Geophysical Union, Fall Meeting, Poster*.
- Stokes, MF** and Perron, JT, 2017. Biologic signatures of dynamic rivers from a coupled landscape evolution and neutral community model, *American Geophysical Union, Fall Meeting, Poster*.
- Stokes, MF**, Dwyer, SN, Nittrouer, J, 2014. Growth faults and dewatering structures in prodelta sedimentary deposits: using sedimentary structures to constrain post-failure sediment transport in the Western Irish Namurian Basin: *Geological Society of America Annual Meeting, Poster*.

## PRESS

<https://eos.org/research-spotlights/how-river-capture-affects-the-evolution-of-aquatic-organisms>  
<http://news.mit.edu/2019/from-streams-to-teams-maya-stokes-mit-0818>  
<https://blogs.agu.org/geospace/2018/08/15/amazon-pirating-water-from-neighboring-rio-orinoco/>  
<https://eapsweb.mit.edu/news/2018/amazon-pirating-water-neighboring-rio-orinoco>