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Education:

2024 (exp.) PhD Civil Engineering, University of Massachusetts, Amherst MA

2018 BaSc Honours Interfaculty Environment, McGill University, Montreal QC

Honors & Awards:

2021-2024 NASA Future Investigators in Earth, Space Science & Technology Award ($135k)

2023 University of Massachusetts College of Engineering Teaching Fellow Award ($2.5k)

2021 AGU Hydrology Remote Sensing Technical Committee Presentation Award ($100)

2020 AGU Outstanding Student Presentation Award ($150)

2020 NSF Graduate Research Fellowship Honorable Mention

2017 McGill University Science Undergraduate Research Award ($4.8k)

2017 Oklahoma State University REU Award ($3k- declined)

Scholarship (referred publications): (first/co authorship: 4/9)

13. Riggs RM, Allen GH, BRINKERHOFF CB, Sikder MD, Wang J (2023). Turning lakes into river gauges using the LakeFlow algorithm. *Geophysical Research Letters*. doi.org/10.1029/2023GL103924.

12. Durand M, Gleason CJ, Pavelsky TM, Frasson RPM., Turmon M, David CH, Altenau EH, Tebaldi N, Larnier K, Monnier J, Malaterre PO, Oubanas H, Allen GH, Astifan B, BRINKERHOFF CB, Bates PD, Bjerklie, D, Coss S, Dudley R, Fenoglio L, Garambois PA, Getirana A, Lin P, Margulis SA, Matte P, Minear JT, Muhebwa A, Pan M, Peters D, Riggs R, Safat Sikder MD, Simmons T, Stuurman C, Taneja J, Tarpanelli A, Schulze K, Tourian MJ, Wang J (2023). A framework for estimating global river discharge from the Surface Water and Ocean Topography satellite mission. *Water Resources Research.* doi.org/10.1029/2021WR031614.

11. Lin P, Feng D, Gleason CJ, Pan M, BRINKERHOFF CB, Yang X, Beck HE, Frasson RPM (2023). Inversion of river discharge from remotely sensed river widths: a critical assessment at three-thousand global river gauges. *Remote Sensing of Environment*. doi.org/10.1016/j.rse.2023.113489.

10. Maavara T, BRINKERHOFF CB, Hosen J, Aho KS, Logozzo L, Saiers J, Stubbins A, Raymond PA (2023). Watershed DOC uptake occurs mostly in lakes in the summer and in rivers in the winter. *Limnology & Oceanography*. doi.org/10.1002/lno.12306.

9. BRINKERHOFF CB, Gleason CJ, Zappa CJ, Raymond PA, Harlan ME (2022). Remotely sensing river greenhouse gas exchange velocity using the SWOT satellite. *Global Biogeochemical Cycles*. doi.org/10.1029/2022GB007419.

8. Liu S, Maavara T, BRINKERHOFF CB, Raymond PA (2022). Global controls on DOC reaction versus export in watersheds: A Damköhler number analysis. *Global Biogeochemical Cycles*. doi.org/10.1029/2021GB007278.

7. Liu S, Kuhn C, Amatulli G, Aho KS, Butman D, Allen GH, Lin P, Pan M, Yamazaki D, BRINKERHOFF CB, Gleason CJ, Xia X, Raymond PA (2022). The importance of hydrology in routing terrestrial carbon to the atmosphere via global streams and rivers. *Proceedings of the National Academy of Sciences.* doi.org/10.1073/pnas.2106322119.

6. Maavara T, Logozzo L, Stubbins A, Aho KA, BRINKERHOFF CB, Hosen J, Raymond PA (2021) Does photomineralization of dissolved organics matter in temperate rivers? *Journal of Geophysical Research- Biogeosciences.* doi.org/10.1029/2021JG006402.

5. Frasson RPM, Durand MT, Larnier K, Gleason CJ, Andreadis KM, Hagemann MH, Dudley RW, Bjerklie DM, Oubanas H, Garambois PA, Malaterre PO, Lin P, Pavelsky TM, Monnier J, BRINKERHOFF CB**,** David CH (2021). Exploring the factors controlling the error characteristics

of the Surface Water and Ocean Topography mission discharge estimates. *Water Resources Research.* doi.org/10.1029/2020WR028519.

4. BRINKERHOFF CB, Raymond PA, Maavara T, Ishitsuka I, Aho KS, Gleason CJ (2021). Lake morphometry and river network controls on evasion of terrestrially sourced headwater CO_2. *Geophysical Research Letters.* doi.org/10.1029/2020GL090068.
3. BRINKERHOFF CB, Gleason CJ, Feng D, Lin P (2020). Constraining remote river discharge estimation using reach-scale geomorphology. Water Resources Research. doi.org/10.1029/2020WR027949.
2. Andreadis KM, BRINKERHOFF CB, & Gleason CJ (2020). Constraining the assimilation of SWOT observations with hydraulic geometry relations. *Water Resources Research*. doi.org/10.1029/2019WR026611.
1. BRINKERHOFF CB, Gleason CJ, & Ostendorf DW (2019). Reconciling at-a-station and at many stations hydraulic geometry through river-wide geomorphology. *Geophysical Research Letters*. doi.org/10.1029/2019GL084529.

Scholarship (first author presentations): (invited/oral/poster: 1/5/1)

7. BRINKERHOFF CB, Gleason CJ, Ishitsuka I, Sosa J, Bates PD, Liu S (2022). Anticipated continental-scale river gas exchange dynamics: how will SWOT inform river CO2 modeling? *AGU Fall Meeting, Chicago, Illinois*. Poster.
6. BRINKERHOFF CB, Gleason CJ, Zappa CJ, Saccardi B, Raymond PA, Winnick M, Harlan ME (2022). Informing global river CO_2 models with SWOT. *SWOT Science Team Meeting, Chapel Hill, North Carolina*. Oral.
5. BRINKERHOFF CB, Gleason CJ, Zappa CJ, Raymond PA, Harlan ME (2022). Towards global scale remote sensing of river gas exchange velocity via the SWOT satellite and hydraulic geometry. *Frontiers in Hydrology, San Juan, Puerto Rico.* Oral. Note: accepted but withdrawn due to illness.
4. BRINKERHOFF CB, Gleason CJ, Raymond PA, Zappa CJ, Harlan ME (2021). Gas exchange in large rivers controlled by largest turbulent eddies: implications for remotely sensing gas exchange via SWOT. *AGU Fall Meeting, New Orleans, Louisiana*. Oral.
3. BRINKERHOFF CB, Saccardi B, Winnick M, Gleason CJ (2021). Towards continental-scale transport modeling of drainage network CO2 evasion. *AGU Fall Meeting, New Orleans, Louisiana*. Invited.
2. BRINKERHOFF CB, Raymond PA, Maavara T, Ishitsuka I, Aho KS, Shaoda L Gleason CJ (2020). Lake/reservoir controls on evasion of inland water CO_2 and implications for remote sensing of network scale CO2 emissions. *AGU Fall Meeting virtual*. Oral.
1. BRINKERHOFF CB, Gleason CJ, Lin P, & Andreadis K (2019). Constraining remotely-sensed river discharge estimation using reach-scale geomorphology. *AGU Fall Meeting, San Francisco, California*. Oral.

Co-author presentations: 10 (available upon request)

Scholarship (Invited seminars):

3. Northeastern University (2023) host: Aron Stubbins
2. SWOT Discharge Algorithm Working Group (2022) host: Michael Durand
1. University of Massachusetts (2020) host: Kostas Andreadis

Grants & Fellowships:

2021-2024 A first global analysis of daily riverine gas exchange using the SWOT satellite, Bayesian remote sensing, and carbon transport modeling. *NASA FINESST.* $135k. FI: Craig Brinkerhoff.

Media coverage:

2022 The world's rivers exhale a massive amount of carbon *Nature research highlight*

2022 Calculating terrestrial carbon's role in river and stream emissions *Yale University press release*

Teaching:

2023	Instructor of record	ENG-FYS 191: Engineering rivers and ecosystems (UMass)
2019	Teaching assistant	ENG-CEE 470/570: GIS for Engineers (UMass)

Mentoring:

2022-present	Wenwen Tang	Graduate student (UMass)

Synergistic activities:

Referee	*Journal of Hydrology*, *Nature Scientific Reports*, *Biogeosciences*, *Journal of Hydraulic Engineering* (Record available on ORCID)
Developer	Maintainer of the geoBAMr R package
Developer	Maintainer of the BIKER R package
Member	rOpenSci community for open and reproducible computational science
Member	NASA/CNES SWOT Mission Discharge Algorithm Working Group
Member	Professional societies: American Geophysical Union, Association for the Sciences of Limnology and Oceanography
Outreach	Talk about rivers' role in the carbon cycle to the Wooster Society of Friends (2021)
Pedagogy	CIRTL associate (Center for the Integration of Research, Teaching, and Learning)