Samuel D. Brenner

PhD Candidate at the University of Washington, School of Oceanography and the Applied Physics Laboratory

on request
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Research summary

I use in-situ observations and simple theory to understand the dynamic links between sea ice and the upper ocean, with a specific focus on atmosphere-ice-ocean momentum transfer in the Arctic.

Education

University of Washington *Seattle, WA, USA*

PhD in Oceanography *ongoing*
- Advisors: Luc Rainville and Jim Thomson

Masters of Science in Oceanography May 2019

University of British Columbia *Vancouver, BC, Canada*

Masters of Applied Science in Civil Engineering Aug. 2017
- Advisor: Bernard Laval
- Thesis: *The free oscillatory response of fjord-type multi-armed lakes* doi:10.14288/1.0353196

Bachelors of Applied Science in Civil Engineering Jun. 2015

Camosun College *Victoria, BC, Canada*

Advanced Diploma in Civil Engineering Technology Bridge Jun. 2013
Diploma in Civil Engineering Technology Jun. 2010

Teaching experience

Teaching Assistant - University of Washington

Coastal Engineering (CEE473/CEWA573) Spring 2021
Foundations of Ocean Sensors (OCEAN351) Winter 2019

Teaching Assistant - University of British Columbia

Fluid Mechanics I (CIVL215) Spring 2016
Environmental Hydraulics (CIVL416) Fall 2016
Fluid Mechanics II (CIVL315) Fall 2016
Fluid Mechanics II (CIVL315) Fall 2015

Non-academic work experience

AECOM *Burnaby, BC, Canada*

Civil Engineering Student Intern May – Sep. 2015

Canadian Sewage Solutions Inc. *Langford, BC, Canada*

Junior Engineering Technologist Dec. 2011 – Nov. 2012

Kiewit Construction *Kearl Lake Oilsands, AB, Canada*

Purchasing Engineer (co-op student) Aug. 2010 – Jan. 2011
Field Engineer (co-op student) Aug. – Dec. 2009

District of North Saanich *North Saanich, BC, Canada*

Drafting Assistant (co-op student) Dec. 2008 – Mar. 2009

Publications

Google Scholar page ResearchGate page Orcid page

MacKinnon, J., et. al, [including **Brenner, S.**], 2021. A warm jet in a cold ocean. Nat. Comm., 12(1) p.12 doi:10.1038/s41467-021-22505-5

Brenner, S., Rainville, L., Thomson, J. Cole, S. and Lee, C., 2021. Comparing observations and parameterizations of ice-ocean drag through an annual cycle across the Beaufort Sea. J. Geophys. Res. Oceans. 126(4), p.29. doi:10.1029/2020JC016977

Brenner, S., Rainville, L., Thomson, J. and Lee, C., 2020. The evolution of a shallow front in the Arctic marginal ice zone. Elem. Sci. Anth., 8(1), p.17. doi:10.1525/elementa.413/

Brenner, S. D., and B. E. Laval. 2018. Seiche modes in multi-armed lakes. Limnol. Oceanogr., 63: 2717-2726 doi:10.1002/lno.11001

Conference presentations and posters

Brenner S., L. Rainville, J. Thomson, C. Lee, Distributed and year-long observations of ice-ocean drag across a range of ice morphologies in the Beaufort Sea. Presented at: AGU Fall Meeting 2020 Dec. 01-17; virtual.

Brenner S., L. Rainville, J. Thomson, J. MacKinnon, C. Lee, Momentum fluxes across the air-ice-ocean interface in the Beaufort Sea. Poster presented at: Ocean Sciences Meeting; 2020 Feb. 17-21; San Diego, CA. doi:10.1002/essoar.10502273.2

Brenner S., L. Rainville, J. Thomson, C. Lee, The evolution of an Arctic meltwater front. Poster presented at: Liège Colloquium on Ocean Dynamics; 2019 May. 6-9; Liège, Belgium

Brenner S., L. Rainville, J. Thomson, C. Lee, Small scale upper-ocean variability in the Arctic. Poster presented at: Ocean Sciences Meeting; 2018 Feb. 11-16; Portland, OR

Brenner S., B. Laval, J. Shore, S. Vagle. Surface Seiching in Quesnel Lake, British Columbia. Poster presented at: Canadian Meteorological and Oceanographic Society Congress; 2017 June 4-8; Toronto, ON