

Curriculum Vitae

Tingan Li

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EDUCATION

Ph.D.	Geography, Simon Fraser University, Burnaby BC, Canada	2022
M.S.	Geology, China University of Petroleum-Beijing, China	2017
B.S.	Geology, China University of Petroleum-Beijing, China	2014

RESEARCH EXPERIENCE

Postdoctoral Fellow with Dr. Leonard Sklar and Dr. Jeremy Venditti 2022-present
Environmental Science, Simon Fraser University, Burnaby BC, Canada.

- Examine the past, present and future impacts of landslides on flow dynamics, sediment transport, Fraser salmon migration and indigenous communities
- Build a new landscape evolution framework to predict the influence of climate change on the occurrences of landslides and rock erosion
- Develop the first mechanistic method to predict evolution and dynamics of bedrock channel morphology
- Investigate the effectiveness of fluvial erosion processes on Saturn's moon Titan using experiment measurements of polycrystalline ice and observations at Huygens landing site

Graduate Student and Research Assistant with Dr. Jeremy Venditti 2017-2022
Geography, Simon Fraser University, Burnaby BC, Canada.

- Develop mechanistic models for lateral erosion of bedrock channel banks by impacts of fine and coarse sediments
- Investigate flow structure and partition bed and bank shear stresses in bedrock rivers
- Develop the first model to predict steady-state bedrock channel width from the physics of flow, sediment transport and bedrock erosion

TEACHING EXPERIENCE

Temporary Lecturer, Simon Fraser University

Lecture on Glacial Landform	2018
Lecture on Hillslope Processes	2019

Teaching Assistant, Simon Fraser University 2017-2021
Introduction to Geomorphology 2017 Fall -2021 Fall, 2018 Spring

- Help the lecturer design lab materials and exams, teach lab materials, grade assignments and exams
- Assist the lecturer with fieldwork in the field trip

Methods in Environmental Science 2021 Spring

- Teach lab materials, grade assignments and exams
- Assist the lecturer and students with fieldwork and experimental work

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Earth systems	2018 Fall, 2019 Spring
Introduction to Environmental Science	2018 Summer
<ul style="list-style-type: none">Teach lab materials, grade assignments and exams	
River Geomorphology	2019 Spring, 2020 Spring
<ul style="list-style-type: none">Teach lab materials, grade assignments and examsAssist students with field measurements in the field trip	

HONORS and AWARDS

Editor's Highlight (Li et al., 2021) in AGU Eos News	2021
Top Cited Article (Li et al., 2021) in JGR-Earth Surface	2021
Top Cited Article (Li et al., 2020) in JGR-Earth Surface	2020
Graduate Fellowship	2019, 2020, 2022
Simons Foundation Award Environment	2020, 2021
Travel & Minor Research Award	2020, 2021
President's PhD scholarship	2020
BC Environmental Innovator's Award	2020
Special Grad Entrance School Fellowship	2017
National Graduate Fellowship (China)	2014-2016
First Prize of China Contemporary Undergraduate Mathematical Contest in Modelling	2013

PUBLICATIONS

Peer-Reviewed Journal Articles

9. **Li, T.**, Venditti, J. G., & Sklar, L. S. (2023). Steady-state bedrock channel width. *Geophysical Research Letters*. <https://doi.org/10.1029/2023GL105344>
8. Curran, M., Steelquist, A. T., Larimer, J., Seagren, E., **Li, T.**, Heathfield, D., Menounos, B., Clague, J. J., Church, M., & Venditti, J. G. (2023). Structural control of bedrock river alignment and morphology in the Fraser Canyon, British Columbia, Canada. *Earth Surface Processes and Landforms*, 1–14. <https://doi.org/10.1002/esp.5702>
7. **Li, T.**, Venditti, J. G., Sklar, L.S., & Lamb, M.P. (2023). Lateral erosion of bedrock channel banks by bedload and suspended load. *Journal of Geophysical Research: Earth Surface*, 128, e2022JF006806. <https://doi.org/10.1029/2022JF006806>
6. **Li, T.**, Venditti, J. G., Rennie, C. D., & Nelson, P. A. (2022). Bed and bank stress partitioning in bedrock rivers. *Journal of Geophysical Research: Earth Surface*, 127(2), e2021JF006360. <https://doi.org/10.1029/2021JF006360>
5. Cao, Z., Venditti, J. G., & **Li, T.** (2022). Experiments on pool formation in bedrock canyons. *Journal of Geophysical Research: Earth Surface*, e2021JF006456. <https://doi.org/10.1029/2021JF006456>
4. Wright, M., Venditti, J. G., **Li, T.**, Hurson, M., Chartrand, S., Rennie, C., & Church, M. (2022). Covariation in width and depth in bedrock rivers. *Earth Surface Processes and Landforms*, 47(6), 1570–1582. <https://doi.org/10.1002/esp.5335>

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3. **Li, T.**, Venditti, J. G., & Sklar, L. S. (2021). An analytical model for lateral erosion from saltating bedload particle impacts. *Journal of Geophysical Research: Earth Surface*, 126(7), e2020JF006061. (**Top Cited Article & Editor's Highlight in AGU Eos News**)
<https://doi.org/10.1029/2020JF006061>
2. **Li, T.**, Fuller, T. K., Sklar, L. S., Gran, K. B., & Venditti, J. G. (2020). A mechanistic model for lateral erosion of bedrock channel banks by bedload particle impacts. *Journal of Geophysical Research: Earth Surface*, 125(6), e2019JF005509. (**Top Cited Article**)
<https://doi.org/10.1029/2019JF005509>
1. Venditti, J. G., **Li, T.**, Deal, E., Dingle, E., & Church, M. (2020). Struggles with stream power: Connecting theory across scales. *Geomorphology*, 366, 106817.
<https://doi.org/10.1016/j.geomorph.2019.07.004>

PRESENTATIONS

Conferences

- Li, T.**, Venditti, J. G., & Sklar, L.S. Steady-state bedrock channel width. AGU Fall Meeting 2023 (Oral).
- Li, T.**, Venditti, J. G., Sklar, L.S., & Lamb, M.P. Lateral erosion of bedrock channel banks by bedload and suspended load. GSA Connects Meeting 2022 (Oral).
- Li, T.**, Venditti, J. G., Rennie, C. D., & Nelson, P. A. Bed and bank stress partitioning in bedrock rivers. AGU Fall Meeting 2021 (Poster).
- Li, T.**, Venditti, J. G., & Sklar, L. S. A mechanistic model for bedrock undercut from saltating bedload particle impacts. EGU General Assembly 2021 (**Invited Speaker**).
- Li, T.**, Fuller, T. K., Sklar, L. S., Gran, K. B., & Venditti, J. G. A mechanistic model for lateral erosion of bedrock channel banks by bedload particle impacts. AGU Fall Meeting 2019 (Oral).

Invited Seminars

- Li, T.** Controls on width in bedrock rivers. Earth and Environmental Sciences, Tulane University, 2022.
- Li, T.** Lateral erosion in bedrock rivers. Department of Geography, University of British Columbia, 2020.

PROFESSIONAL ACTIVITIES

Reviewer

- Journal of Geophysical Research: Earth Surface
- Geophysical Research Letters
- Earth and Planetary Science Letters
- Water Resources Research
- Earth Surface Dynamics