

# KAITLIN ELIZABETH SCHAIBLE

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Graduate Student • University of Texas Institute for Geophysics • Jackson School of Geosciences  
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## RESEARCH INTERESTS

Investigate the rheology, stress evolution, and frictional failure of subduction zone faults and landslides using geophysical logs, numerical modeling, and laboratory experiments on natural samples. Conduct laboratory studies on materials recovered from international ocean drilling expeditions and active landslides to investigate the material properties and mechanics governing failure in these geophysical systems.

## EDUCATION

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**University of Texas at Austin** 2026 (anticipated)  
PhD Candidate, Geophysics  
Advisor: Demian Saffer  
PhD Topic: Multidisciplinary investigation of stress in subduction zones through wellbore breakout analysis, numerical modeling of stress, and laboratory testing of natural subduction zone materials.  
Cumulative GPA: 4.0/4.0

**Carleton College, Northfield, MN** June 2019  
Bachelor of Arts, Geology  
Magna Cum Laude, Phi Beta Kappa  
Cumulative GPA: 3.83/4.0

## HONORS & AWARDS

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2025	USSP Post Expedition Award, IODP Exp 405 (\$ 20k)
2025	Outstanding Graduate Student Award - UTIG
2024 - 2025	Schlanger Ocean Drilling Fellowship (\$ 30k)
2024	UT Institute for Geophysics Graduate Fellowship
2022	AGU Outstanding Student Presentation Award
2018	Littell Internship Award

## PUBLICATIONS

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**Schaible, K.E., & Saffer, D.M.,** (2025) State of stress across major faults in the Nankai Subduction zone estimated from wellbore breakouts. *Journal of Geophysical Research: Solid Earth*, 130, e2024JB030242. <https://doi.org/10.1029/2024JB030242>

*In Review*

**Schaible., K.E.,** Saffer, D.M., Finnegan, N.J., (2025) Rheological controls on creeping landslides within the Franciscan mélange: Insights from laboratory experiments. *Geophysical Research Letters*

Machida, Y., Araki, E., Yokobiki, T., Saruhashi, T., Kyo, M., Tsuji, S., Sakurai, N., Yokoyama, T., **Schaible, K.,** Matsumoto, H., Nishida, S., Furuichi, M., Daniel S., Morikawa (2025) Development and

installation of a long-term borehole monitoring system at C9038B borehole observatory, Nankai Trough. *Journal of Oceanic Engineering*.

Conin, M., **Schaible, K.**, Fulton, P., Kodaira, S., Shreedharan, S., Doan, M-L., Sone, H., Kirkpatrick, J., Regalla, C., Ujiie, K., Lin, W., and IODP Expedition 405 Scientists (2025) Fault slip and no stress change in the maximum slip area of the Mw 9.1 Tohoku-oki earthquake.

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## CONFERENCE ABSTRACTS & PRESENTATIONS

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**Schaible, K.**, Saffer, D.M., Finnegan, N.J., (2025) Frictional strengthening as a control on landslide creep within the Franciscan mélange, *International Earthquake Symposium, Yokohama, Japan* (Talk)

**Schaible, K.**, Miller, P., Saffer, D.M., (2024) The Role of Carbonate Friction in Subduction Zone Slip Behavior: Insights from Costa Rica and Hikurangi, *AGU Fall Meeting Abstracts* (Poster)

Burton, S., **Schaible, K.**, Saffer, D.M., Finnegan, N.J., (2024) Experimental constraints on the frictional rheology of a slow-moving landslide in California's Franciscan mélange, *AGU Fall Meeting Abstracts* (Talk)

**Schaible, K.**, Heidari, M., Saffer, D., Flemings, P., (2024) Revisiting stress determinations from borehole breakouts at subduction zones: the role of plastic failure, *Gordon Research Conference and Seminar on Rock Deformation, Bates College, Maine* (Poster)

**Schaible, K.**, & Saffer, D.M., (2023) In situ stress within the Nankai accretionary prism determined from borehole breakouts, *IODP NanTroSEIZE Synthesis Workshop* (Invited Talk)

**Schaible, K.**, Heidari, M., Saffer, D.M., Flemings, P.B., (2023) Revisiting stress determinations from borehole breakouts at subduction zones: the role of plastic failure, *AGU Fall Meeting Abstracts* (Talk)

Bolton, D.C., Shreedharan, S., **Schaible, K.**, Saffer, D.M., Trugman, D.T., (2023) Insights into the physics of earthquake rupture from a 1-meter earthquake machine, *AGU Fall Meeting Abstracts* (Poster)

**Schaible, K.**, & Saffer, D.M., (2022) In situ stress within the Nankai accretionary prism determined from borehole breakouts, *AGU Fall Meeting Abstracts*, T32E-0211 (Poster)

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## FIELD EXPERIENCE

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2024	IODP Exp 405 JTRACK, D/V Chikyu Participation as a logging scientist and structural geologist.	60 days
2023	CK23-03, D/V Chikyu Participation as part of the science party for a borehole observatory installation in the Nankai Trough, November 2023.	25 days
2023	TN415 CORKs, R/V Thompson, ROV Jason Chief Scientist: E. Solomon. Performed watch duties during instrument deployment and recovery at CORK observatories with ROV Jason.	14 days

2020	Electrical Resistivity field survey, THG Geophysics Conducted site surveys for a prospective wind turbine installation.	9 days
2018	Lake Powell Coring Chief Scientist: S. A. Hynek. Assisted with sediment core processing and characterization during drilling operations. Collected water samples and conducted grain size analysis.	14 days
2018	Geology of New Zealand Field Course and Mapping	70 days

## SKILLS

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Python, MATLAB, Java, R, ArcGIS, Adobe Illustrator, Microsoft Office, Geolog, Kingdom Suite, Techlog

## SERVICE & MENTORSHIP

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[2024 – Present] Undergraduate Student Research Mentor, student Lucero Tunjar Cruz  
 [2024] REU Co-mentor, student Sam Burton  
 [2023 - 2025] UT Geoscience Student Executive Committee, Website and Social Media Coordinator  
 [2023] JSG Critical Minerals Faculty Search SP2023, Graduate Student Representative  
 [2023] MTMOD Summer Reading Group Coordinator and Discussion Facilitator  
 [2022] Jackson School AGU 2022 Booth Setup and Student Representative  
 [2022] Jackson School Graduate Orientation Trip, Graduate Student Volunteer  
 [2022] Geofluids Field Trip TA  
 [2022] RTX Co-mentor, student Brianna Fernandez

## WORKSHOPS AND SHORT COURSES

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[2023] IODP NanTroSEIZE Synthesis Workshop, Tokyo, Japan  
 [2023] MTMOD Megathrust Modeling Framework Summer School, Austin, TX  
 [2022] SZ4D Community Meeting, Houston, TX  
 [2022] MTMOD Megathrust Modeling Framework Summer School, Austin, TX