

Zhilin Shi

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Education

Master of Science in Geography, Texas A&M University

2024 – 2026 (expected)

– Thesis: *Assessing the Influence of Spatially Heterogeneous Shallow Compaction on Delta Morphodynamics (in progress)*

– Major GPA: 4.00/4.00

Bachelor of Arts in Geology, Colorado College

2019 – 2023

– Thesis: *How does Lithology Influence the Migration and Stability of Meandering Bedrock Rivers?*

– Major GPA: 3.59/4.00

Research Experience

Geography Graduate Research Assistant, Texas A&M University

– Integrated a **1-D pressure-driven compaction model** into a **2-D rules-based morphodynamic delta framework** using **Python** to investigate how variable subsidence patterns influence channel evolution and deltaic plain development.

Advisor: Andrew Moodie

Aug 2024 – Present

Fluvial Geomorphology Intern, Northwest Hydraulic Consultants, Inc, WA

– Created polygons in **ArcGIS Pro** to delineate **150 active stream channels** based on hydrological data extracted from scientific publications and compiled into a **cross-referenced Excel database**.

Advisor: Andrew Nelson

June 2023 – Aug 2023

Geology Undergraduate Research Assistant, Colorado College

– Contributed to an NSF-funded sedimentary provenance study of Cambrian–Ordovician strata across the northern Tethyan Himalaya (India–Nepal–Tibet) by generating detrital zircon (**U-Th**)/**Pb** geochronologic data using **LA-MC-ICP-MS** at the **Arizona LaserChron Center**.

Advisor: Paul Myrow

Aug 2022

– Supported an NSF-funded project on meandering bedrock rivers by assisting with **CRN** and **OSL** sample collection, running a **1D detachment-limited erosion model** on Indiana University’s HPC systems, and analyzing lithologic controls on channel stability using **Python**.

Advisor: Sarah Schanz

Jun 2022 – Aug 2022

– Integrated **litho-**, **bio-**, and **chronostratigraphic** data from published sources and well logs to construct a chronostratigraphic framework of the **Upper Cretaceous Denver Basin**, generating isopach maps and interpreting basin subsidence history.

Advisor: Zhiyang Li

Jan 2022 – Sep 2022

– Sorted matrix for microfossils collected below the **K-Pg Boundary** in the Denver Basin, later used for **carbon isotope analysis**.

– Prepared **over 400 carbonate samples** for $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ **stable isotope analysis**, supporting paleoenvironmental reconstruction efforts.

Advisor: Paul Myrow

Scientific Presentations with Abstracts

- [3] **Zhilin Shi**, Andrew Moodie (2025). “Assessing the Influence of Spatially Heterogeneous Shallow Compaction on Delta Morphodynamics” In: American Geophysical Union. Poster.
- [2] **Zhilin Shi**, Sarah Schanz, and Brian Yanites (2024). “Lithology erodibility and channel cross-sectional geometry control the evolution of the meandering bedrock rivers in uplifted Oregons” In: The Geological Society of America. Oral. [\[link\]](#)
- [1] **Zhilin Shi**, Ren Carroll and Zhiyang Li (2022). “Differentiating different subsidence mechanisms in the Cordilleran Foreland Basin through the Late Cretaceous: Examples from the Piceance and Denver Basin” In: The Geological Society of America. Vol. 56-5. Poster. [\[link\]](#)

Awards and Honors

- 2023 Noblett-Witter Family Fund for Geology Internship, *Colorado College*
Grants for internships in professional geology settings.
- 2023 Estwing Outstanding Senior Geologist Award, *Colorado College*
Awarded annually for academic achievement and contribution to the Geology Department.
- 2022 Patricia J. Buster Research Scholarship, *Colorado College*
Supports undergraduate research in geology and related earth sciences.
- 2022 – 2023 Dean’s List, *Colorado College*
For achieving a GPA of 3.75 or higher.

Teaching Experience

Texas A&M University

2025 – 2026 GEOG TBD

Instructor: Dr. TBD

Colorado College

2023 – 2024 GY320 Landscape Processes & Evolution

Instructor: Dr. Sarah Schanz

GY250 Introduction to Soils

Instructor: Dr. Rachel Havnarek

GY212 Investigating Earth as a Physical System

Instructor: Dr. Sarah Schanz & Dr. Tyler Grambling

GY205 Historical Geology: Earth, Oceans, Climate & Life through Time

Instructor: Dr. Paul Myrow

GY140 Introduction to Earth System

Instructor: Dr. Henry Fricke; Dr. Michelle Gevedon; Dr. Paul Myrow

CC105 Forensic Geology: Stratigraphy, Relative Dating, and Understanding Past Events

Instructor: Dr. Michelle Gevedon

CC100 Understanding the San Luis Valley

Instructor: Dr. Henry Fricke

Above are courses I supported as a paraprofessional in the geology department at Colorado College. My responsibilities included: - Assisting with lab experiments and field trips - Grading and providing feedback on student assignments - Maintaining lab equipment and supplies - Participating in departmental meetings and events - Providing support to faculty and students - Other duties as assigned.

Professional Associations

American Geophysical Union, Earth and Planetary Surface Processes

2025

Geological Society of America

2022–2024

Field Experience

Volcanic system processes and earth system interactions	Hawaii, HI; two weeks
Site selection and collection of OSL and CRN samples	Smith River, OR; one week
Carbonate sample collection for isotope and micropaleontological analysis	Southeastern China; two weeks

Practical and Analytical Experience

Geoscience:	Sediment transport, Autogenic channel processes, Reduced-complexity modeling
Computation:	Linear algebra, Calculus
Technology:	Python, Git, ArcGIS Pro, L ^A T _E X, Adobe Illustrator, Linux-based HPC Workflow