

# SHENYAO JIN

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## EDUCATION

### Colorado School of Mines, Reservoir Characterization Project

Golden, Colorado

#### *Ph.D. Geophysics*

Aug 2023 – May 2027

- Advisor: Dr. Ge Jin, Committee Chair: Dr. Hossein Kazemi
- **Focus:** *Distributed fiber-optic sensing (DFOS), reservoir stimulation, hydraulic fracture characterization, inversion problems*
- **Minor:** *Computer Science*

### Zhejiang University

Hangzhou, China

#### *B.S. Geoscience*

Sept 2019 – Aug 2023

- **Thesis:** “Clustering-Based Joint Inversion for Imaging Shallow Subsurface Geological Targets”
- Thesis Advisor: Dr. Zhanjie Shi

## TECHNICAL SKILLS

- **Programming:** Python, MATLAB, C/C++, L<sup>A</sup>T<sub>E</sub>X, Bash
- **Software and Packages:** Seismic Un\*x, MOOSE (Multiphysics Object-Oriented Simulation Environment), DAScore (Python Package for Distributed Acoustic Sensing), Devito
- **Geophysical Methods:** DFOS/DAS data processing and modeling, strain-pressure analysis, hydraulic fracture interpretation, signal denoising
- **Related Coursework:** Inversion Theory, Advanced Machine Learning, Reservoir Simulation, Advanced Geophysical Computing, Advanced Data Science
- **Software Development:** Author of **fiBeRIS**, an open-source Python package for history matching and interpretation of DAS data ([github.com/shenyaojin/fibeRIS](https://github.com/shenyaojin/fibeRIS)).

## EXPERIENCE

### Graduate Research Assistant

Golden, Colorado

*Reservoir Characterization Project, Colorado School of Mines*

Aug 2023 – Present

- **Project Mariner, ExxonMobil**
  - Developed a low-frequency DAS (LF-DAS) data processing workflow to monitor cement quality in horizontal wells.
  - Implemented a coupled pressure-strain numerical model using MOOSE to simulate LF-DAS responses under various cementing conditions.
  - Conducted history matching of field LF-DAS data, demonstrating the method’s effectiveness in identifying cement channeling.
- **EGS Data Interpretation, Fervo Energy**
  - Collaborating with Rice University and Fervo Energy to interpret multiple types of geophysical data (e.g., DAS, sonic logs).
  - Developing a novel interpretation tool for LF-DAS data to analyze pressure-strain coupling for fracture characterization.

### Graduate Research Intern

Idaho Springs, Colorado

*Reservoir Characterization Project, Colorado School of Mines*

May 2025 – Aug 2025

- Conducted a DOE project on monitoring high-voltage induced rock fracture using LF-DAS.
- Designed and successfully deployed a novel U-shaped DAS fiber optic cable in two monitoring wells, while also installing separate DTS and DSS fibers for both wells.

### Undergraduate Research Intern

Golden, Colorado

*Reservoir Characterization Project, Colorado School of Mines*

July 2022 – September 2022

- Contributed to the development of data processing workflows for LF-DAS data collected in Lake Hattie, Wyoming.
- Implemented a velocity scanning algorithm for improved data interpretation.

### Undergraduate Research Assistant

Hangzhou, China

*School of Geosciences, Zhejiang University*

Sept 2021 – June 2023

- Conducted research on joint inversion methods for seismic and electromagnetic data.
- Developed a joint inversion algorithm in C++ and validated it against well log data using field datasets.

## ABSTRACTS AND PRESENTATIONS

**Shenyao J., Ge J.** *Low-Frequency DAS for Cement Quality Monitoring in Horizontal Wells*, SEG-AAPG IMAGE 2025, Houston, Texas. Oral Presentation.

**Shenyao J., Ge J.** *Utilizing LFDAS for Cement Quality Monitoring*, Reservoir Characterization Project Sponsor Meeting 2025, Golden, Colorado. Oral Presentation.

**Shenyao J., Ge J.** *Conductive Fracture Monitoring Using Distributed Strain Sensing: From Stimulation to Production*, SEG-AAPG IMAGE 2024, Houston, Texas. Poster Presentation.

## PUBLICATIONS

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**Jin, S.**, and Jin, G. (2025). Low-Frequency DAS for Cement Quality Monitoring in Horizontal Wells. *SPE Journal* (finished, submission target Q4 2026); abstract will be submitted to URTeC 2026.

## HONORS AND AWARDS

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**George R. Pickett Memorial Scholarship** Oct 2024

- Awarded for excellence in borehole geophysics with applied focus on oil and gas workflows.

**First-Year Fellowship for Graduate Students** Mar 2024

- Awarded by the Colorado School of Mines to recognize incoming students for integrating computational geophysics to advance sustainable energy systems.

**Meritorious Winner, Mathematical Contest in Modeling (MCM)** Feb 2022

- Top 8% of international undergraduate teams. Contributed as lead programmer and data analyst.