

# ZIJIE GAO

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## Education and Certification

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### University of Kansas (KU)

Ph.D. in Geology (Advisor: Dr. Mike Blum)

*Project: 1) Middle-Late Pleistocene Sediment Gravity Flow Deposits in the Distal Bengal Fan: Characteristics and Insights for the Propagation of Himalayan Climate Signals*  
*2) SEM image analysis with AI*

**Expected Graduation: Dec 2025**

Cumulative GPA: 4/4

### University of Kansas (KU)

M.S. in Geology (Advisor: Dr. Jennifer Roberts)

**Aug 2019 – Dec 2021**

Cumulative GPA: 3.86/4

### China University of Petroleum – Beijing (CUPB)

B.E. in Resource Exploration Engineering (Petroleum Geology)

**Sept 2015 – June 2019**

Cumulative GPA: 4.18/5 (3.72/4)

**Small Unmanned Aircraft (Drone) Certificate issued by the U.S. Federal Aviation Administration**

**Oct 2024 – Present**

## Publications

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- (5) **Gao, Z.** (2021). Investigating the Fate of Mg-Bearing Calcium Carbonates during Early Diagenesis. Master's Thesis, Available from ProQuest Dissertations & Theses Global Database. (UMI No. 28868559).
- (4) Niu, H., Jiao, X., Xie, Q., Zhang, Y., Li, X., Wu, Z., Wang, B., Yang, X., Li, Y., & **Gao, Z.** (2020). Origin and Tectonic Implications of Granitoids from the Eastern Segment of the South Altyn Block, North-western China: Constraints from Petrogeochemistry, Zircon U–Pb Dating, and Lu–Hf Isotope Geochemistry. *Geological Journal*. DOI: 10.1002/gj.3863. Citation = 4.
- (3) **Gao, Z.**, & Zhu, S. (2018). Controlling Factors of the Ordered Index of Dolomite. *Science and Technology Innovation Herald*, DOI: 10.16660/j.cnki.1674-098X.2018.08.033. [In Chinese]. National Journal in China. Citation = 14.
- (2) Qin, Y., Zhu, S., Zhu, X., Jia, G., Tang, D., Chen, T., Zhang, W., & **Gao, Z.** (2017). Shallow Water Delta Sedimentation and Source to Sink Process in the South Slope Belt, Dongying Sag. *Earth Science*, DOI: 10.3799/dqkx.2017.000. [Core Journal in China]. Citation = 19.
- (1) **Gao, Z.**, & Gao, T. (2017). Management Optimization of the University Volunteer Community. *Environmental Education*. [In Chinese]. National Journal in China. Citation = 1.

*Citations current as of 12/16/2024, with citation counts sourced from Google Scholar and China National Knowledge Infrastructure (CNKI)*

## Conference

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- (3) **Gao, Z.**, Pickering, J., and Blum, M., 2024, Statistical Analysis of the Thickness of Deepwater Sedimentary Deposits from IODP Expedition 354: Climatic Insights Gained Using a Data-Driven Approach: Geological Society of America, Anaheim, CA, USA.
- (2) **Gao, Z.**, Blum, M., and Pickering, J., 2024, Unveiling Sedimentary Dynamics in the Distal Bengal Fan: Insights from IODP Expedition 354 Core Site U1454b: International Association of Sedimentologists, Aberdeen, Scotland, UK.
- (2) Pickering, J., Goodbred, S.L., Sincavage, R., Ibn Salam, M., **Gao, Z.**, 2023, Extreme Floods from Source-to-Sink: Tracking Himalayan GLOFs through the Ganges-Brahmaputra Delta to the Deep Marine Bengal Turbidite Fan Using Radiocarbon Dating: American Geophysical Union, San Francisco, CA, USA
- (1) Rodriguez-Colon, B.J., Roberts, J.A., and **Gao, Z.**, 2020, Assessing the Role of Solution Chemistry and Organic Matter in the Genesis of the Dengying Formation Dolostones at Sichuan Basin, China: Kansas Interdisciplinary Carbonates Consortium, Online.

## Academic Service

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Peer Reviewer for:

- Sedimentology

Employment

Geology Intern | Occidental Oil and Gas Corporation (Oxy), Midland Basin Appraisal, Houston, TX May 2023 – Aug 2023

- Mapped out reservoir properties, petrofacies, and pyrolysis data across the Midland Basin for four unconventional shale benches; leveraged **Python** for efficient QC and data integration
- Correlated 1,200 wells and picked 4,800 tops
- Worked with petrophysicist and reservoir engineer to calculate OIP and EUR
- Proposed the landing zone, frac range, and location of a test well in key acreage, with drilling anticipated in 2024

Geology Intern | Civitas Resources Inc., Reservoir Characterization Department, Denver, CO May 2022 – Aug 2022

- Integrated 3D seismic volumes, completion design, strata information and treatment data into microseismic dataset with **python** and Transform.
- Built Spotfire visualization and analytic tool to calculate optimal well spacing, evaluate completion design and approximate the growth of fracture network with time

Hourly Student | University of Kansas, Geology Department, Lawrence, KS May 2021 – Aug 2021

- Performed XRD analysis to understand the mineralogy of Nebraska loess samples (n=274)

Graduate Research Assistant | University of Kansas, Geology Department, Lawrence, KS Aug 2019 - Present

- Leading a machine learning application research in petrology segmentation with a computer scientist in KU EECS department and a geophysicist in Kansas Geological Survey, 2022 to present
- Described IODP 354 cores in Kochi, Japan, and assisted labmates’ field work in Nebraska and Bangladesh, 2022-2023
- Set up instruments, made batch experiments and performed analyses (pH, alkalinity, XRD, and ICP-MS), 2019-2021

Graduate Teaching Assistant | University of Kansas, Geology Department, Lawrence, KS Aug 2019 – Present

- GEOL 542 Energy and Society Lab; 2019 Fall
- GEOL 541 Geomorphology Lab; 2023 Fall
- GEOL 311 Mineralogy Lab; 2022 Fall & 2023 Fall
- GEOL 302 Oceanography Lab; 2019 Fall
- GEOL 171/172 Earthquakes and Natural Disasters; 2025 Spring
- GEOL 103 Geology Fundamentals Lab; 2020 Spring & 2020 Fall
- GEOL 101 The Way the Earth Works; 2020 & 21 & 25 Spring & 2022 Fall

Undergraduate Researcher | National Key Lab of Oil & Gas Exploration, Beijing, China Dec 2018 – Jun 2019

- Undergraduate thesis titled ‘*Characterization of Chang 9&10 Reservoir of Yanchang Formation in Ordos Basin, China*’
- Concluded general petrography, reservoir property, diagenesis of target reservoir with *Python 3*
- Implied the controlling factors during reservoir evolution and predicted area where may good reservoirs developed
- Helped colleagues extract and calculate desired data from well-logging dataset more efficiently with *Python 3*

Awards & Honors

KU Geology Summer Scholarship (\$4,500)	2025
American Association of Petroleum Geologists ( <b>AAPG</b> ) Roger W. Stoneburner Memorial Grant (\$3,000)	2025
KU Research Excellence Initiative Grant-Writing Incentive Fund (\$1,000)	2025
KU Graduate Student Travel Fund (\$750)	2024
Geological Society of America ( <b>GSA</b> ) South Central Travel Grant (\$300)	2024
International Association of Sedimentologists ( <b>IAS</b> ) Post-graduate Research Grant (€1,000 ~ \$1,090)	2024
Geological Society of America ( <b>GSA</b> ) Research Grant (\$2,500)	2024
International Association of Sedimentologists ( <b>IAS</b> ) Travel Grant (€200 ~ \$209)	2024
KU Geology Summer Research Grant (\$4,500)	2024
The Geological Society, London - Research Grant (£ 1,666 ~ \$2,057)	2024

American Association of Petroleum Geologists ( <b>AAPG</b> ) R. Dana Russell Memorial Grant (\$3,000)	2024
International Ocean Discovery Program ( <b>IODP</b> ) Schlanger Fellowship (\$30,000)	2024
Society for Sedimentary Geology ( <b>SEPM</b> ) Graduate Student Research Grant (\$726)	2023
Jackson Fellowship	2023
D.A. McGee Scholarship	2023
Angino-Ferry Geochemistry Scholarship	2022& 2021 & 2020
University of Kansas Graduate Fellowship	2021
Kansas Geological Foundation Research Scholarship (\$500)	2021
Geological Society of America ( <b>GSA</b> ) Graduate Research Award (\$1,250)	2020

-----Below are Undergraduate Awards at CUPB-----	
Dean’s list	2019
Finalist of Li Siguang Excellent Undergraduate Award (highest geology undergraduate award in China)	2018
First place of <b>National</b> Geological Competition – Field work section	2018
Top ten Undergraduate Technology Innovation Star	2018
Beijing Merit Student ( <b>Top 0.5%</b> )	2018
Outstanding Undergraduate Leader	2018
First Prize Scholarship of CUPB	2018
Champion of Geological Skill Competition	2018
First place of Comprehensive Geoscience Knowledge Competition	2018
First place of CUPB Geoscience Undergraduate Colloquium	2017
Second place of Asia and Pacific Mathematical Contest in Modeling	2017
Second place of May Day Mathematical Contest in Modeling	2017
Second place of Comprehensive Geoscience Knowledge Competition	2017
National Scholarship ( <b>Top 1%</b> )	2016 & 2017
First place of CUPB Mathematical Contest in Modeling	2016
Third prize of Calculus Contest	2016

## Field Trips and Short Courses

Santa Cruz Island Field Trip (Instructors: <i>Daniel Muhs and Scott Minor</i> , USGS Geologist)	Sept 2024
ArcGIS Pro Workshop (Instructor: <i>Zoe Ponterio</i> , Cornell University)	Sept 2024
Deep Water Clastic Short course (Instructor: <i>Adam McArthur</i> , University of Leeds)	June 2024
Digital Outcrop Methodology (Instructor: <i>John Howell</i> , University of Aberdeen)	June 2024
Geology Field Safety Training (Instructor: <i>Kevin Bobacs</i> , ExxonMobil Geologist)	Aug 2023
Source to Sink Field Trip, Arkansas (Instructor: <i>Mike Blum</i> , KU)	Mar 2023 & Oct 2024
Deep Water Short Course (Instructor: <i>Brad Prather</i> , Shell Geologist)	Dec 2022
Grand Canyon Rafting Field Trip, Arizona (Instructor: <i>Mike Talyor</i> , KU; and <i>Paul Kapp</i> , University of Arizona)	July 2022
Fluvial Processes and Systems, Colorado, Wyoming and Utah (Instructor: <i>Mike Blum</i> , KU)	May 2021 & 2023
Modern Geomorphology and Records in Outcrops, Nebraska and Colorado (Instructor: <i>Mike Blum</i> , KU)	Oct 2021
River Process Regime Recognized in Outcrops, Book cliffs, Utah (Instructors: <i>Ron Steel and Cornel Olariu</i> , UT Austin)	Aug 2018

## Community Service

<b>Volunteer   KU New Student Recruitment at the 2024 GSA Annual Meeting</b>	<b>Sept 2024</b>
<ul style="list-style-type: none"> <li>Introduced KU's Geology and Environmental Science programs, funding opportunities, and recommended faculty specialties to prospective students based on their academic backgrounds and research interests.</li> </ul>	
<b>Secretary   Association For Women Geoscientists (AWG) - Osage Chapter</b>	<b>Sept 2020 – Sept 2021</b>
<ul style="list-style-type: none"> <li>Took charge of social media and recorded weekly meetings</li> </ul>	
<b>Lecturer   Li Siguang GeoTeachers Team</b>	<b>Jun 2017–Jun 2018</b>
<ul style="list-style-type: none"> <li>Taught basic sedimentary geology to students in four primary schools (in total over 200 students)</li> <li>Collaborated with the teaching team to develop engaging geology courses at primary school level</li> </ul>	
<b>Coordinator  Organizational Department in Volunteers Association</b>	<b>Jun 2016 – Jun 2017</b>
<ul style="list-style-type: none"> <li>Organized various volunteering or teaching activities for primary schools</li> </ul>	

- Led the team to win the **second place** of the **Best Volunteer Organizations** at CUPB

## Professional Societies

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The Geological Society, London – Elected Fellow	2024 – 2025
International Association of Sedimentologists – Student member	2023 – present
Society for Sedimentary Geology ( <b>SEPM</b> ) – Student member	2023 – 2024t
American Association of Petroleum Geologists – Student member	2019 – present
Geological Society of America – Student member	2019 – 2020; 2023 – present
Association of Women Geologists – Student member	2019 – 2020

## Computer Skills

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Python, Machine learning, Deep Learning, Visual Studio Code, Spotfire, Petrel, ArcGIS Pro, Transform, CorelDraw, Adobe Illustrator, Matlab, SPSS, C language