

[Yanrui Daisy Ning]

PERSONAL DATA

[Assistant Professor]
[Brackett Hall]
[720-299-1012]

EDUCATION

- [Ph.D., Colorado School of Mines, 2017, Petroleum Engineering & Geophysics]
- [M.S., University of Wyoming, 2013, Environmental Engineering]
- [B.S., China University of Petroleum, 2011, Petroleum Engineering]

PROFESSIONAL REGISTRATION

Indicate states where you are registered as a professional engineer or other registrations or certifications.

- [NONE]

PROFESSIONAL EXPERIENCE

List the most recent affiliation first.

- [Michigan Technological University, Aug 2025 - Aug 2026, Assistant Professor]
- [Colorado School of Mines, Jan 2021 - Aug 2025, Research Assistant Professor / Research Associate / Postdoc]
- [Crowheart Energy, Feb 2018 – Dec 2019, Reservoir Engineer]

CONSULTING EXPERIENCE

Include only those consulting activities which you consider to be significant.

- [NONE]

MEMBERSHIPS

List current technical and professional society memberships.

- [Member, Society of Petroleum Engineers (SPE)]
- [Member, Society of Exploration Geophysicists (SEG)]

HONORS AND AWARDS

Include names of honorary organizations.

- [NONE]

PUBLICATIONS

H-Index: [Index Number]

Google Scholar H-Index: [Index Number]

Specific style and order of listings may follow discipline convention as an alternate to the illustrative formats given below, except that authors must be listed in the same order as they appear in the original publication, and all authors must be listed. Publications should be listed in chronological order, with the newest first. Please insert **<< Prior to Clemson >>** to designate where employment at Clemson University begins.

Students should be identified in the list of co-authors on any publication/presentation with an asterisk. It is optional to include the impact factor or each journal article and/or acceptance rate for conference proceedings.

Books and Monographs

1. [Ning, Y. and Jin, G., *Enhancing Unconventional Reservoir Development through Low-Frequency Distributed Acoustic Sensing Technology*, Distributed Acoustic Sensing in Borehole Geophysics (2024), Elsevier, Amsterdam, Netherlands.]

Refereed Journal Publications

Articles to-be-submitted should not be included. Include sub-headings for Published, Accepted, and Under Review. Impact factor is optional.

Published

1. [Ning, Y., Bailey, J. R., Bourdier, J., Prasad, P., and Momoh, I., "Optimizing Production Well Geometry in the Utah FORGE Geothermal Project Using Machine Learning and Fluid Flow Modeling," *Renewable Energy*, **237**, p.121767 (2024).]
2. [Ning, Y., Tura, A., Herman, D., Bridgeman, J., and Clark, D., "Feasibility Study on Large-Scale Geologic Carbon Sequestration in Southern Colorado," *International Journal of Greenhouse Gas Control*, **147**, 104462 (2025).]
3. [Ning, Y., Tura, A., and Gultinan, E., "Repurposing a Depleted Natural CO₂ Dome for Permanent CO₂ Sequestration," *SPE Journal*, **30**(06), pp.3881-3895 (2025).]
4. [Ning, Y., Jin, G., Tura, A., and Gale, M., "Exploring Variations in Orientation and Velocity of Hydraulic Fracture Propagation in Denver-Julesburg Basin," *SPE Journal*, **30**(02), pp.687-698 (2024).]
5. [Jin, G., Ning, Y., Gale, M., Simmons, J. and Tura, A., Impact of natural fractures on hydraulic fracture propagation in Denver-Julesburg Basin: Insights from a decade of research. *The Leading Edge*, **43**(12), pp.806-814 (2024).]
6. [Ning, Y., Boak, J., Tura, A., and Prasad, M., "Assessment of CO₂ Sequestration Potential and Economics in Colorado, USA," *International Journal of Greenhouse Gas Control*, **141**, 104301 (2024).]
7. [Ning, Y. and Tura, A., "Economic and Operational Investigation of CO₂ Sequestration through Enhanced Oil Recovery in Unconventional Reservoirs in Colorado, USA," *Geoenergy Science and Engineering*, **226**, p.211820 (2023).]
8. [Ning, Y., Jin, G., Zhu, X. and Tura, A., Well interference and fracture geometry investigation using production and low-frequency distributed acoustic sensing data in an unconventional reservoir. *SPE Reservoir Evaluation & Engineering*, **25**(03), pp.509-519 (2022).]
9. [Ning, Y., Kazemi, H., Tura, A., and Davis, T., "Carbon Neutral Oil Assessment Using a Dual-Porosity Compositional Model in Unconventional Reservoirs," *Geoenergy Science and Engineering*, **221**, 111227 (2023).]
10. [Ning, Y. and Jin, G., Challenges and best practices in interpreting crosswell strain signals to monitor multicrew zipper-fracturing operations. *Interpretation*, **11**(2), pp.SB21-SB32 (2023).]
11. [Ning, Y., Kazemi, H., Tura, A., and Davis, T. L., "Tracer Analysis in Flow Channel Characterization and Modelling of Gas and CO₂ Injection EOR in Unconventional Reservoirs," *Journal of Petroleum Science and Engineering*, **212**, 110349 (2022).]
12. [Ning, Y., Schumann, H., and Jin, G., "Application of Data Mining to Small Datasets: Identification of Key Production Drivers in Unconventional Resources," *SPE Reservoir Evaluation & Engineering*, **26**(02), pp.411-421 (2022).]
13. [Ning, Y., Kazemi, H., and Tahmasebi, P., "A Comparative Machine Learning Study for Time Series Oil Production Forecasting: ARIMA, LSTM, and Prophet," *Computers & Geosciences*, **164**, 105126 (2022).]

Accepted

1. [Ning, Y., Jin, G., Hammack, R., Kohnke, C., Rosenbaum, E., and Zorn, E., "Subsurface Fracture Characterization via Inversion of Distributed Strain Sensing Data," *SPE Journal*. 2026]

Conference Proceedings (Reviewed)

List publications based on a review of the entire paper, not just an abstract. Acceptance rate is optional.

1. [Bailey, J. R., Ning, Y., Bourdier, J., Momoh, I., and Prasad, P., "Application of Machine Learning to Create a Discrete Fracture Network Model for Utah FORGE Fracture Injections," *SPE Hydraulic Fracturing Technology Conference and Exhibition*, Society of Petroleum Engineers (SPE), The Woodlands, TX, (January 2024).]

2. [Ning, Y. and Tura, A., "Wellbore Integrity Impact on Carbon Leakage to Ensure Safe Geological Sequestration," *SPE Annual Technical Conference and Exhibition (ATCE)*, SPE, San Antonio, TX, (September 2022)]
3. [Ning, Y., Jin, G., Zhu, X., and Tura, A., "Integration of Production Communication and Hydraulic Fracture Connection in Unconventional Reservoirs," *Unconventional Resources Technology Conference (URTeC)*, SPE / AAPG / SEG, Houston, TX, (June 2022).]

Conference Proceedings (Unreviewed)

Publications based on a review of abstract only.

1. [Ning, Y., Jin, G., Hammack, R., Zorn, E., Kohnke, C., and Rosenbaum, E., "Monitor Potential Fracture Growth in Carbon Sequestration Reservoirs Using Distributed Strain Sensing," *International Meeting for Applied Geoscience & Energy (IMAGE)*, Society of Exploration Geophysicists (SEG) / American Association of Petroleum Geologists (AAPG), Houston, TX, (August 2025).]
2. [Jin, G., Ning, Y., Li, P., Hammack, R., and Wu, K., "Distributed Strain Sensing Based Reservoir Monitoring for Carbon Sequestration Reservoirs," *NETL Technical Conference*, National Energy Technology Laboratory (NETL), Pittsburgh, PA, (2024).]
3. [Ning, Y. and Tura, A., "CO₂ Sequestration into a Depleted Natural CO₂ Dome: Sheep Mountain, Colorado," *IMAGE*, SEG / AAPG, Houston, TX, (August 2024).]
4. [Ning, Y. and Tura, A., "Advancing Large-Scale Geological Carbon Sequestration in Colorado," *IMAGE*, SEG / AAPG, Houston, TX, (August 2024).]
5. [Ning, Y. and Jin, G., "Investigation of Hydraulic Fracture Orientation and Propagation Velocity in DJ Basin LF-DAS," *IMAGE*, SEG / AAPG, Houston, TX, (August 2024).]
6. [Ning, Y. and Tura, A., "Coupled Fluid-Geomechanical Modeling for a Large-Scale CO₂ Sequestration Project in Southern Colorado," *IMAGE*, SEG / AAPG, Houston, TX, (August 2023).]
7. [Ning, Y. and Jin, G., "Investigation on the Azimuth Variation and Propagation of Hydraulic Fractures Using Low-Frequency Distributed Acoustic Sensing (LF-DAS)," *IMAGE*, SEG / AAPG, Houston, TX, (August 2023).]
8. [Ning, Y. and Tura, A., "Technical Evaluation of CO₂ Capture from an NGCC Power Plant and Sequestration in Saline Aquifers (Colorado)," *Carbon Capture, Utilization, and Storage (CCUS) Conference*, SPE, Houston, TX, (2023).]
9. [Ning, Y., Mjehovich, J., Zhu, X., and Jin, G., "Low-Frequency DAS Interpretation upon Multi-Crew Zipper Fracturing Configuration," *SEG International Exposition and Annual Meeting*, SEG, Houston, TX, (November 2022).]
10. [Ning, Y. and Tura, A., "CO₂ Injection into Unconventional Reservoirs and Saline Aquifers, and Leakage Risk Assessment," *AAPG Carbon Capture, Utilization, and Storage (CCUS) Conference*, American Association of Petroleum Geologists (AAPG), Houston, TX, (2022).]

Research Reports

List only significant reports such as annual or final reports.

1. [Livo, K., Ning, Y., Sonnenberg, S., Tura, A., and Prasad, M., "Evaluation of CO₂ Sequestration Potential for the State of Colorado: Ranking Criteria, Resource Assessment, and Storage Capacity," Colorado School of Mines, State Land Board, (2022).]

Other Scholarly Publications

Abstracts, invited reviews, and discussions.

1. [NONE]

PRESENTATIONS

List presentations chronologically; list only those not listed under publications. Include acceptance rate if available and denote if Invited.

1. [Ning, Y., "Integrating Subsurface Modeling and Monitoring for Sustainable Geoenergy Futures," Department of Environmental Engineering & Earth Science Seminar (Invited), Clemson University, Clemson, SC (March 2025).]
2. [Ning, Y., "Advancing Subsurface Modeling and Monitoring for Geological Carbon Sequestration," Department of Geological and Mining Engineering and Sciences Seminar (Invited), Michigan Technological University, Houghton, MI (February 2025).]

3. [Ning, Y., "CO₂ Sequestration into a Depleted Natural CO₂ Dome: Sheep Mountain, Colorado," Geophysical Research for Gigatonnes CO₂ Storage Workshop (Invited), Golden, CO (July 2024).]
4. [Ning, Y., "Enhancing Energy Sustainability via Integrated Subsurface Characterization," Department of Earth and Atmospheric Sciences Seminar (Invited), University of Houston, Houston, TX (March 2024).]
5. [Ning, Y., "Advancing Large-Scale Geological Carbon Sequestration in Colorado," School of Geosciences Seminar (Invited), University of Oklahoma, Norman, OK (March 2024).]
6. [Ning, Y., "Advancing Large-Scale Geological Carbon Sequestration in Colorado," Geophysics Seminar (Invited), Georgia Institute of Technology, Atlanta, GA (November 2023).]
7. [Ning, Y., "Geological Carbon Sequestration Capacity Estimation in Colorado," GP Gives – CCUS Workshop (Invited), Colorado School of Mines Geophysics 100th Anniversary, Golden, CO (November 2023).]
8. [Ning, Y., "Feasibility Study of CO₂ Sequestration in Saline Aquifers in Southern Colorado," Carbon Utilization Storage Partnership (CUSP) Annual Meeting, Lawrence, KS (June 2023).]
9. [Ning, Y., "Investigation of CO₂ Leakage to Drinking Water Formations During Carbon Sequestration," Carbon Management Project Review Meeting, Pittsburgh, PA (August 2022).]
10. [Ning, Y., "CO₂ Leakage Risk Assessment in the Denver–Julesburg Basin, Colorado," Toward Gigatonnes CO₂ Storage – Grand Geophysical Challenge Workshop (Invited), Stanford University, Stanford, CA (June 2022).]
11. [Ning, Y., "Feasibility Study of a Potential CCUS Project in Colorado," Carbon Utilization Storage Partnership (CUSP) Annual Meeting, Las Vegas, NV (June 2022).]
12. [Ning, Y., "CCUS Progress Update in Colorado," Carbon Utilization Storage Partnership (CUSP) Annual Meeting, Las Vegas, NV (June 2022).]
13. [Ning, Y., "Integration of Production Communication and Hydraulic Fracture Connection in Unconventional Reservoirs," 27th Annual 3D Seismic Symposium, Denver, CO (March 2021).]

PATENTS

[NONE]

SPONSORED RESEARCH

- ["Fiber-Optic Monitoring of Excavation- and Seepage-Induced Drift Deformation for Safer Critical-Mineral Mining", Michigan Technological University, PI, Total \$ 26,960 (\$ 26,960 Allocated to Candidate), (Jan 2026 - Dec 2026).]
- ["CarbonSAFE CO₂ Storage Project", US Department of Energy, PI, Total \$11,158,273 (\$ 412,000 Allocated to Candidate), (Sep 2024 - Oct 2025).]
- ["Exploring the Potential of LF-DAS in Monitoring Fracture Evolution and Fault Reactivation within CCS Reservoirs", National Energy Technology Laboratory (NETL), co-PI, Total \$105,393 (\$ 52,696 Allocated to Candidate), (Feb 2023 – Mar 2025).]
- ["CO₂ Capture from a Gas Power Plant Source and Sequestration in the DJ Basin or a Saline Aquifer Near the CO₂ Source", US Department of Energy", co-PI, Total \$49,125 (\$39,300 Allocated to Candidate), (Oct 2021 – Sep 2024).]

OTHER SPONSORED ACTIVITY

List other sponsorships, e.g., industrial residencies, travel grants, equipment grants, etc.

- [None]

GRADUATE STUDENT ADVISING

List in chronological order while denoting those students that you have been the major advisor, co-advisor, or committee member. List the month/year of graduation or anticipated graduation for each student.

Doctoral Graduates

- [Student's Name, "Dissertation Title," Graduation Month/Year, (Advisor/Committee status).]

Master's Graduates

- [Student's Name, (Degree Designation; MS or MENG) "Thesis/Project Title," Graduation Month/Year, (Advisor/Committee status).]

Current Graduate Advising

- [Names (degree sought), "Dissertation/Thesis Topic", Expected Graduation Month/Year, (Advisor/Committee status).]

Post-Doctoral Research Advisees

- [Name, "Project Title" (Dates).]

High School Student Mentoring

- [Name, "Project Title" or Type of Mentoring (Dates).]

TEACHING

Courses Taught

Beginning Fall 1990

- [Course Number, Course Title, When Taught.]

<< Prior to Clemson >>

- [GE3850, Geohydrology, Spring 2026.]

New Course Development (List Courses Developed)

- [Course Number, Course Title, When Developed.]

PROFESSIONAL ACTIVITIES

List committees, committee offices, boards, and commissions.

- Committee Member / Session Chair, IMAGE – The International Meeting for Applied Geoscience & Energy, SEG/AAPG, (2023–Present).
- [Co-Organizer, SEG 2025 AI and Its Application in CCUS, EOR and the Energy Transition, Society of Exploration Geophysicists (SEG) at Penn State University, (2025).]
- [Co-Organizer, SEG Geologic Carbon Storage (GCS) Summer Research Workshop, Society of Exploration Geophysicists (SEG) at Colorado School of Mines, (2024).]
- [Committee Member / Theme Chair / Session Chair, SPE/AAPG/SEG Carbon Capture, Utilization, and Storage (CCUS), (2024–Present).]
- [Committee Member / Session Chair, SPE Annual Technical Conference and Exhibition (ATCE), Society of Petroleum Engineers (SPE), (2023–2026).]
- [Committee Member, Offshore Technology Conference (OTC) – SEG Committee, (2021–2022).]

UNIVERSITY AND PUBLIC SERVICE

Continuing Education (Lecturer, Developer, Conference Chair, etc.)

- ["Course Title," Faculty member's role (Month/Year).]

Committees (Group according to department, college, university.)

- [Level: Title, Name of Committee (Dates: leave ending date open for active committees).]

Other Service

- [Format:Description, Organization (Dates).]

MISCELLANEOUS

Special achievements, accomplishments, and scholarly activities worthy of note but not included above.

Updated on [Date].