Ms. Jingxuan Deng

Ph.D. Candidate
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Education and Professional Career

2011-2015 B.S. in Environmental Engineering at University of Shanghai for Science and Technology, Shanghai, China
2016-2020 M.S. in Environmental Engineering at University of Stuttgart, Stuttgart, Germany
2021-2027 Ph.D. in Earth Sciences at University of Minnesota, Minneapolis, USA
2020-2021 Research Assistant at University of Stuttgart, Stuttgart, Germany
Since 2021 Graduate Researcher at University of Minnesota, Minneapolis, USA
2026 Teaching Assistant at University of Minnesota, Minneapolis, USA

Commitment, Appointments and Scientific Volunteer Jobs

2021-2022 Displace Committee Member, Department of Earth & Environment Sciences, University of Minnesota
2023-2024 Francis A. Gibson Fellowship, University of Minnesota
2024-2025 Data Science Initiative-MnDRIVE PhD Graduate Assistantship, University of Minnesota
2025-2026 SAFL Edward Silberman Fellowship, University of Minnesota
2026-2027 Doctoral Dissertation Fellowship (DDF), University of Minnesota
2026 InterPore2026 Conference Local Organizing Committee Volunteer

Professional Awards, Offers and Recognitions

2022 SAFL Graduate Student Travel Award, University of Minnesota
2022-2025 Graduate Student Travel Grant, University of Minnesota
2023 SAFL Tsai Travel Award, University of Minnesota
2023 Kerry R. Kelts Memorial Awards, University of Minnesota
2026 InterPore 2026 Student Poster Award

Most important Publications (maximum 10)
(Peer reviewed journal articles / books / patents)

[1] **Deng, J.**, Pyrak-Nolte, L. J., & Kang, P. K. (2026). Geologic stress modulates fluid mixing at fracture intersections. Communications Earth & Environment, 7(1), 463.
[2] **Deng, J.**, Sharma, R. P., Szymczak, P., & Kang, P. K. (2025). Anomalous transport in dissolving porous media: Transitions between Fickian and non-Fickian regimes. Geophysical Research Letters, 52(15), e2025GL115940
[3] Sharma, R. P., **Deng, J.**, Kang, P. K., & Szymczak, P. (2023). Effects of mixing at pore intersections on large-scale dissolution patterns and solute transport. Geophysical Research Letters, 50(21), e2023GL105183.
[4] Weinhardt, F., **Deng, J.**, Hommel, J., Vahid Dastjerdi, S., Gerlach, R., Steeb, H., & Class, H. (2022). Spatiotemporal distribution of precipitates and mineral phase transition during biomineralization affect porosity–permeability relationships: Microfluidic investigations. Transport in Porous Media, 143(2), 527-549.
[5] Ohashi, N., **Deng, J.**, Liu, H., Hwang, L. K., Kang, P. K., Kwon, B.. Physics-Informed Machine Learning for Reconstructing 3D Velocity Fields from 2D Concentration Fields Measured by Confocal Laser Scanning Microscopy. Manuscript under revision for Physics of Fluids.