Curriculum Vitae
Dunyu Liu

Contact Information

Institute for Geophysics
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Educational Background

Ph.D. Geophysics, *Texas A&M University*	2018
M.S. Geophysics, *Peking University, China*	2014
B.S. Geophysics, *Peking University, China*	2011

Professional Experience

Software Engineer	University of Texas at Austin	2020—
Postdoctoral Researcher	Texas A&M University	2019—2020
Graduate Research Assistant	Texas A&M University	2014—2018
Graduate Research Assistant	Peking University	2011—2014
Undergraduate Research Assistant	Peking University	2009—2011

Peer-Reviewed Publications

Liu, D., B. Duan, and B. Luo (2020). EQsimu, a 3-D finite element dynamic earthquake simulator for multicycle dynamics of geometrically Complex Faults Governed by Rate- and State-dependent Friction, *Geophysics Journal International*, **220**(1):598-609, Doi: 10.1093/gji/ggz475.

Luo, B., B. Duan, and **D. Liu** (2020). 3D Finite-Element Modeling of Dynamic Rupture and Aseismic Slip over Earthquake Cycles on Geometrically Complex Faults, *Bull. Seismol. Soc. Am.,* **110**(6):2619-2637, Doi:10.1785/0120200047

Liu, D., and B. Duan (2018). Scenario Earthquake and Ground-Motion Simulations in North China: Effects of Heterogeneous Fault Stress and 3D Basin Structure, *Bull. Seismol. Soc. Am.,* **108**(4):2148-2169, Doi: 10.1785/0120170374.

Harris, R. A., M. Barall, B. Aagaard, S. Ma, D. Roten, K. Olsen, B. Duan, **D. Liu**, B. Luo, K. Bai, J. P. Ampuero, Y. Kaneko, A. A. Gabriel, K. Duru, T. Ulrich, S. Wollherr, Z. Shi, E. Dunham, S. Bydlon, Z. Zhang, X. Chen, S. N. Somala, C. Pelties, J. Tago, V. M. Cruz-Atienza, J. Kozdon, E. Daub, K. Aslam, Y. Kase, K. Withers, and L. Dalguer (2018). A Suite of Exercises for Verifying Dynamic Earthquake Rupture Codes, *Seismol. Res. Lett.* **89** 1146-1162. Doi: 10.1785/0220170222.

S. Zhong, Z. Wan, B. Duan, **D. Liu**, and B. Luo (2018) Do earthquakes trigger mud volcanoes? A case study from the Southern margin of the Junggar Basin, NW China, *Geological Journal,* **54**(3):1223-1237, Doi: 10.1002/gj.3222.

Duan, B., **D. Liu**, and A. Yin (2017). Seismic shaking in the North China Basin expected from ruptures of a possible seismic gap, *Geophys. Res. Lett.* **44**(10):4855-4862. Doi: 10.1002/2017gl072638.

Liu, D., C. Hu, and Y. Cai (2015). Numerical Simulation of the Dynamic Rupture Process of the 2011 Tohoku-Oki, Japan M_w 9.0 Earthquake, *Chinese J. Geophys.*, 58(9): 3133-3143, doi: 10.6038/cjg20150910

W. Geng, **D. Liu**, Y. Cai, Q. Zhang, and J. Lei (2014). Prediction of the influence of the Proposed Beijing Metro Line 16 on a precise instrument of Peking University, *Earthquake Engineering and Engineering Dynamics*.

Conference Presentations

Liu, D., B. Duan, and B. Luo. Modeling fully dynamic earthquake cycles on a bent fault governed by rate- and state-dependent friction using EQsimu (2020 AGU poster)

Duan, B., Q. Meng, **D. Liu,** and Y. Cai. Developing a dynamic stress inversion method to study coseismic stress evolution of earthquakes. (2020 AGU poster)

Liu, D., and B. Duan. Effects of the Pingding Shan double bend on dynamic ruptures along the Altyn Tagh Fault over multiple earthquake cycles (2019 AGU poster)

Liu, D., and B. Duan. Off-fault inelastic deformation and orientations of microcracks induced by dynamic ruptures on a 3D strike-slip fault with a bend (Talk in 2018 AGU)

Liu, D., B. Duan, and B. Luo. A Dynamic Earthquake Simulator for Geometrically Complex Faults Governed by Rate- and State- Friction (2018 SCEC poster).

Liu, D., and B. Duan. "Multicycle dynamics of a 3D strike-slip fault system with bends (2017 SSA poster).

L. Jiao, **D. Liu**, and B. Duan. Quantifying factors that cause severe damage in Tainan city during the 2016 M_w 6.4 Meinong, Taiwan Earthquake by spontaneous rupture modeling (AGU 2016 poster).

Liu, D., B. Duan, and B. Luo. "Stress heterogeneity at restraining double bends under multicycles and its effect on rupture propagation in 3D." Southern California Earthquake Center (2016 SCEC poster).

Liu, D., and B. Duan. Scenario earthquake and ground motion simulations in the North China Basin: Effects of heterogeneous stress and 3D basin structure. (2016 SSA talk).