

Hao Zhang

PHD STUDENT · GEOPHYSICS

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Education

University of Southern California

PH.D. IN GEOPHYSICS (IN PROGRESS)

• Advisor: John Vidale & Yehuda Ben-Zion

Los Angeles, CA

2021 - present

Peking University

B.SC. IN GEOPHYSICS (WITH HONOR)

• Thesis: Frequency-Bessel Transform Method to Extract Higher-Mode Rayleigh Dispersion Curves.
• Advisor: Prof. Xiaofei Chen

Beijing, China

2016 - 2020

Professional Experience

2021-pres. **Graduate Research Assistant**, University of Southern California
2020-2021 **Research Assistant**, Institute of Theoretical and Applied Geophysics, Peking University
2020-2021 **Research Assistant**, Institute of Geophysics, China Earthquake Administration

Publications

PUBLISHED

- [2] **Zhang, H.**, H. Meng and Y. Ben-Zion, 2023. Lateral variations across the Southern San Andreas Fault Zone revealed from analysis of traffic signals at a dense seismic array, *Geophys. Res. Lett.*, **50**, e2023GL103759, doi: 10.1029/2023GL103759
- [1] Wang, L., Y. Zhou, S. Zhou and **H. Zhang**, 2023. Detection of Fault Zone Head Waves and the Fault Interface Imaging in the Xianshuihe-Anninghe Fault Zone (Eastern Tibetan Plateau), *Geophys. J. Int.*, **234**(2), 1157-1167, doi: 10.1093/gji/ggad131.

IN REVIEW

Zhang, H. and Y. Ben-Zion, 2023. Enhancing regional seismic velocity model with higher-resolution local results using sparse dictionary learning, *J. Geophys. Res.*, in review.

Awards, Fellowships & Grants

2023 **Earth Sciences Graduate Student Research Award**, University of Southern California

2021 **Graduate Student Fellowship**, University of Southern California

2020 **Distinguished Graduate**, Peking University
Distinguished Graduate, Beijing City

2019 **Outstanding Research Award**, Peking University

2017 **May Fourth Scholarship**, Peking University
Merit Student, Peking University

2015 **The First Prize**, Chinese Physics Olympiad

Selected Talks & Presentations

- [3] **Zhang, H.** and Ben-Zion, Y., 2023. Enhancing regional seismic velocity model with higher-resolution local results using sparse dictionary learning. Poster: *SCEC Annual Meeting*, Palm Springs, CA.
- [2] **Zhang, H.**, H. Meng and Y. Ben-Zion, 2022. Internal Structure of Southern San Andreas Fault Zone from Traffic Signals recorded by a Dense Seismic Array. Poster: *SCEC Annual Meeting*, Palm Springs, CA.
- [1] **Zhang H.**, S. Zhou, Y. Zhou and L. Wang, 2019. CPPC: A New Method to Detect and Pick the Fault Zone Head Wave Arrivals and its Application in Xiaojiang Fault Zone of West-Southern China. Oral presentation: AGU Fall Meeting, San Francisco, CA.

Teaching Experience _____

2022	Crises of a Planet , Teaching Assistant	USC
2019	The Earth Gravity Field , Teaching Assistant	PKU

Outreach & Professional Development _____

PROFESSIONAL MEMBERSHIPS

Member, American Geophysical Union

EXPERTISE

Generalization Theory: Mathematical Physics, Theoretical Physics, Probability and Statistics, Machine Learning

Programming Language: Python, MATLAB, Mathematica, C/C++, R, Fortran

Experimental skills: Rock Mechanics Experiment, Seismological Field Work