

Hao Zhang

PHD STUDENT · GEOPHYSICS

3651 Trousdale Pkwy, Los Angeles, CA 90089

✉ zhsess@gmail.com | 🏠 zhsess.github.io

Education

University of Southern California

Los Angeles, CA

PH.D. IN GEOPHYSICS (IN PROGRESS)

2021 - present

- Advisor: Prof. Yehuda Ben-Zion
- Doing side projects with Prof. John Vadale

Peking University

Beijing, China

B.Sc. IN GEOPHYSICS (WITH HONOR)

2016 - 2020

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

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

- [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, *Geophys. Res. Lett.*, in review.
- 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.*, 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

- [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

SERVICE AND OUTREACH

2018-2019 **Peking University Football Association**, Chairman

PROFESSIONAL MEMBERSHIPS

American Geophysical Union

Seismological Society of America

Geological Society of America

EXPERTISE

Generalization Theory: Mathematical Physics, Linear Algebra, General Physics, Probability and Statistics

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

Experimental skills: Rock Mechanics Experiment, Seismological Field Work