HAORAN MENG (孟浩然)

Postdoctoral Scholar

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EDUCATION

1. Sep 2014 – Jul 2019: **Ph.D.** in Geophysics, University of Southern California
    Dissertation: Detailed properties of seismic waveforms and earthquake sources in Southern California
2. Sep 2011 – Jul 2014: **M.S.** in Geophysics, Peking University
    Dissertation: Synthetic sensitivity analysis of high frequency radiation of 2011 Tohoku-Oki (M_W 9.0) earthquake
3. Sep 2007 – Jul 2011: **B.S.** in Geophysics, Peking University

RESEARCH POSITIONS

Oct 2020 – present: Postdoctoral scholar, University of California, San Diego

Sep 2019 – Sep 2020: Postdoctoral scholar, Florida State University

Sep 2014 – Aug 2019: Research assistant, University of Southern California

Sep 2011 – Jul 2014: Research assistant, Peking University

RESEARCH INTERESTS

Earthquake nucleation and interaction

Earthquake source properties

Large-N array seismology

Urban and environmental seismology

PUBLICATIONS

Current h-index: 7 (Google Scholar). Total 214 citations, with average 21.4 citations per published article (as of 10/07/2021).

12. **Meng, H.**, Fan, W., McGuire, J., and Cochran, E., 2021. Resolving finite source attributes of moderate and small magnitude earthquakes of the 2019 Ridgecrest earthquake sequence. *Submitted*.
11. Zhang, X., Arrowsmith, S., Hayward, C., **Meng, H.**, Ben-Zion, Y., 2021. A framework for the automatic detection of aircraft-generated ground motion on seismic stations and arrays using computer-vision and machine learning. Accepted by *Seismological Research Letters*.
10. **Meng, H.**, and Fan, W., 2021. Immediate foreshocks indicating cascading rupture developments for 527 M 0.9 to 5.4 Ridgecrest earthquakes. *Geophysical Research Letters*. [PDF]
9. **Meng, H.**, Ben-Zion, Y., and Johnson, C. W., 2021. Analysis of seismic signals generated by vehicle traffic with application to derivation of subsurface Q values. *Seismological Research Letters*. [PDF]
8. **Meng, H.**, Ben-Zion, Y., and McGuire, J., 2020. Semi-automated estimates of directivity

and related source properties of small to moderate southern California earthquakes with second seismic moments, *Journal of Geophysical Research: Solid Earth*, 125(4). [PDF]

7. Johnson, C.W., Ben-Zion, Y., **Meng, H.**, and Vernon, F., 2020. Identifying different classes of seismic noise signals using unsupervised learning. *Geophysical Research Letters*, 47(15). [PDF]

6. **Meng, H.**, Ben-Zion, Y. and Johnson, C., 2019. Detection of random noise and anatomy of continuous seismic waveforms in dense array data near Anza California. *Geophysical Journal International*, 219(3), pp.1463-1473. [PDF]

5. Johnson, C.W., **Meng, H.**, Vernon, F. and Ben-Zion, Y., 2019. Characteristics of ground motion generated by wind interaction with trees, structures, and other surface obstacles. *Journal of Geophysical Research: Solid Earth*, 124(8), pp.8519-8539. [PDF]

4. **Meng, H.**, and Ben-Zion, Y., 2018. Characteristics of airplanes and helicopters recorded by a dense seismic array near Anza California. *Journal of Geophysical Research: Solid Earth*, 123(6), pp.4783-4797. [PDF]

3. **Meng, H.**, and Ben-Zion, Y., 2017. Detection of small earthquakes with dense array data: example from the San Jacinto fault zone, southern California. *Geophysical Journal International*, 212(1), pp.442-457. [PDF]

2. Ben-Zion, Y., Vernon, F.L., Ozakin, Y., Zigone, D., Ross, Z.E., **Meng, H.**, White, M., Reyes, J., Hollis, D. and Barklage, M., 2015. Basic data features and results from a spatially dense seismic array on the San Jacinto fault zone. *Geophysical Journal International*, 202(1), pp.370-380. [PDF]

1. **Meng, H.**, and Chen, Y.J., 2014. Synthetic sensitivity analysis of high frequency radiation of 2011 Tohoku-Oki (M W 9.0) earthquake. *Earthquake Science*, 27(4), pp.355-364. [PDF]

FUNDING

2020   SCEC Funds: $32,000   Co-PI with Dr. Wenyuan Fan
Resolving Finite Source Attributes of Moderate Magnitude Earthquakes of the 2019 Ridgecrest Earthquake Sequence

AWARDS

2018   IRIS Workshop Scholarship
2016   Department TA award, University of Southern California
2014   Prestigious fellowship, University of Southern California
2013   Kwang-Hua Scholarship, Peking University
2012   Founder Scholarship, Peking University
2009   National Scholarship, Peking University

SERVICE

Apr 2021 – present: Topic editor of journal *Geosciences* (ISSN 2076-326)
Sep 2018 – present: Invited reviewer of *Geophysical Research letters, Journal of Geophysical Research*, *Bulletin of the Seismological Society of America, Seismological research letters*