

# Yao Jiayuan

Associate Professor

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## Education

2018	Ph.D in Geophysics, University of Science and Technology of China, China
2012	B.S. in Geophysics, University of Science and Technology of China, China

## Academic Positions

2021/11 – Present	Associate Professor, China University of Geosciences (Wuhan), China
2021/04 – 2021/09	Research Fellow, Earth Observatory of Singapore, Singapore
2018/08 – 2021/03	Research Fellow, Nanyang Technological University, Singapore

## Research Interests

- Structures of the Earth's Deep Interior
- Seismic Imaging
- Seismic Monitoring

## Teaching Experience

2019 Fall	Mathematics A (Teaching Assistant, Nanyang Technological University)
2019 Spring	Calculus II (Teaching Assistant, Nanyang Technological University)

## Professional Societies & Activities

- Member of the [American Geophysical Union \(AGU\)](#) (since 2012)
- Peer-reviewer of scientific journals: [Seismological Research Letters](#), [Journal of Asian Earth Sciences](#)
- Judge for the Outstanding Student Paper Award, AGU Fall Meeting (2018-2019)
- Instructor for the workshop *Seismic Algorithm and Program at University of Science and Technology of China* (2018/07/03)
- Founder and primary contributor of [seismo-learn](#) (since 2020)

## Awards & Honors

- 2018 Outstanding Graduate Students with Good Conduct, Education Office of Anhui Province
- 2018 Outstanding Graduate Student, University of Science and Technology of China, China
- 2016 Championship of University Football League in Anhui Province
- 2015 Laolei Scholarship for Graduate Students
- 2014 National Scholarship for Graduate Students, Ministry of Education, China

## Peer-reviewed Publications

\*corresponding author, #co-first author.

15. Yao, J., Wu, S., Li, T., Bai, Y., Xiao, X., Hubbard, J., Wang, Y., Thant, M., & Tong, P. (2022). Imaging the upper 10 km crustal shear-wave velocity structure of central Myanmar via a joint inversion of P-wave polarizations and receiver functions. Accepted by *Seismological Research Letters*.
14. Chen, J., Chen, G., Wu, H., Yao, J., & Tong, P. (2022). Adjoint tomography of NE Japan revealed by common-source double-difference traveltimes. Accepted by *Seismological Research Letters*.
13. Li, T., Yao, J., Wu, S., Xu, M., & Tong, P. (2022). Moho complexity in southern California revealed by local PmP and teleseismic Ps waves. Accepted by *Journal of Geophysical Research: Solid Earth*.
12. Wu, S., Yao, J., Wei, S., Hubbard, J., Wang, Y., Yin, M., Myo, T., Wang, X., Wang, K., Liu, T., Liu, Q., & Tong, P. (2021). New insights into the structural heterogeneity and geodynamics of the Indo-Burma subduction zone from ambient noise tomography. *Earth and Planetary Science Letters*. doi:[10.1016/j.epsl.2021.116856](https://doi.org/10.1016/j.epsl.2021.116856).
11. Yao, J., Liu, S., Wei, S., Hubbard, J., Huang, B., Chen, M., & Tong, P. (2021). Slab models beneath Central Myanmar revealed by a Joint Inversion of regional and teleseismic traveltimes. *Journal of Geophysical Research: Solid Earth*, 126, e2020JB020164. doi:[10.1029/2020JB020164](https://doi.org/10.1029/2020JB020164)
10. Tong, P., Yao, J., Liu, Q., Li, T., Wang, K., Liu, S., Cheng, Y., & Wu, S. (2021). Crustal rotation and fluids: Factors for the 2019 Ridgecrest earthquake sequence?. *Geophysical Research Letters*, 48, e2020GL090853. doi:[10.1029/2020GL090853](https://doi.org/10.1029/2020GL090853)
9. Lythgoe, K., Ingrid, M., & Yao, J. (2020). On waveform correlation measurement uncertainty with implications for temporal changes in inner core seismic waves. *Physics of the Earth and Planetary Interiors*, 309, 106606. doi:[10.1016/j.pepi.2020.106606](https://doi.org/10.1016/j.pepi.2020.106606)
8. Yao, J., Tian, D., Sun, L., & Wen, L. (2020). Comment on “Origin of temporal changes of inner-core seismic waves” by Yang and Song (2020). *Earth and Planetary Science Letters*, 553, 116640. doi:[10.1016/j.epsl.2020.116640](https://doi.org/10.1016/j.epsl.2020.116640)
7. Yao, J., Tian, D., Sun, L., & Wen, L. (2019). Temporal change of seismic Earth’s inner core phases: inner core differential rotation or temporal change of inner core surface?. *Journal of Geophysical Research: Solid Earth*, 124, 6720–6736. doi:[10.1029/2019JB017532](https://doi.org/10.1029/2019JB017532)
6. Yao, J., Tian, D., Lu, Z., Sun, L., & Wen, L. (2018). Triggered seismicity after North Korea’s 3 September 2017 nuclear test. *Seismological Research Letters*, 89(6), 2085–2093. doi:[10.1785/0220180135](https://doi.org/10.1785/0220180135)

5. Yao, J., Tian, D., Sun, L., & Wen, L. (2018). Source characteristics of North Korea's 3 September 2017 nuclear test. *Seismological Research Letters*, 89(6), 2078–2084. doi:[10.1785/0220180134](https://doi.org/10.1785/0220180134)
4. Tian, D., Yao, J., & Wen, L. (2018). Collapse and earthquake swarm after North Korea's 3 September 2017 nuclear test. *Geophysical Research Letters*, 45(9), 3976–3983. doi:[10.1029/2018GL077649](https://doi.org/10.1029/2018GL077649)
3. Wen, L., Tian, D., & Yao, J. (2018). Seismic structure and dynamic process of the Earth's inner core and its boundary. *Chinese Journal of Geophysics*, 61(3), 803–818. doi:[10.6038/cjg2018L0500](https://doi.org/10.6038/cjg2018L0500) [in Chinese]
2. Yao, J., Sun, L., & Wen, L. (2015). Two decades of temporal change of Earth's inner core boundary. *Journal of Geophysical Research: Solid Earth*, 120(9), 6263–6283. doi:[10.1002/2015JB012339](https://doi.org/10.1002/2015JB012339)
1. Yao, J., & Wen, L. (2014). Seismic structure and ultra-low velocity zones at the base of the Earth's mantle beneath Southeast Asia. *Physics of the Earth and Planetary Interiors*, 233, 103–111. doi:[10.1016/j.pepi.2014.05.009](https://doi.org/10.1016/j.pepi.2014.05.009)

## Chinese Translations

1. E. Vance (2018), [Earthquakes in the sky](#), 11, *Huanqiukexue* (Chinese version of *Scientific American*).

## Meeting Abstracts

13. Wu S., Yao, J., Wang K., Wei S., Hubbard J., Wang Y., Wang K., Liu Q., & Tong, P. (2020) An integrated 3d velocity structure and earthquake source imaging in Myanmar region. 2020 AOGS 17th Annual Meeting, Hongcheon, Gangwon, South Korea (SE05-A007). (cancelled due to COVID-19)
12. Wei S., Wu S., Yao, J., Fadil W., Wang Y., Hubbard J., & Tong, P. (2020) Subduction dynamics in Myanmar, Southeast Asia revealed by ambient noise tomography. 2020 AOGS 17th Annual Meeting, Hongcheon, Gangwon, South Korea (SE05-A014). (cancelled due to COVID-19)
11. Wu S., Yao, J., Wang K., Wei S., Liu Q., Hubbard J., & Tong, P. (2019) 3-D crustal and uppermost mantle shear wave velocity model of Myanmar, Southeast Asia from ambient noise tomography. 2019 AGU Fall Meeting, San Francisco, CA, USA ([S11C-0353](#)).
10. Yao, J., Liu S., Chen M., Wei S., Hubbard J., & Tong, P. (2019) Joint regional earthquake and teleseismic traveltime tomography of Myanmar. 2019 AGU Fall Meeting, San Francisco, CA, USA ([T14B-05](#), Oral).
9. Yao, J., & Tong, P. (2018) First finite-frequency tomography of Myanmar. 2018 AGU Fall Meeting, Washington, D.C., USA ([S53C-0418](#)).
8. Tian, D., Yao, J., & Wen, L. (2017) Collapse and earthquake swarm after North Korea's 3 September 2017 nuclear test. 2017 AGU Fall Meeting, New Orleans, LA, USA ([S43H-2968](#)).
7. Yao, J., Tian, D., & Wen, L. (2017) High-precision location, yield and tectonic release of North Korea's 3 September 2017 nuclear test. 2017 AGU Fall Meeting, New Orleans, LA, USA ([S43H-2967](#)).

6. **Yao, J.**, Tian, D., Sun, L., & Wen, L. (2017) Temporal change of seismic Earth's inner core phases: inner core differential rotation or temporal change of inner core surface?. 2017 AGU Fall Meeting, New Orleans, LA, USA ([DI33B-0405](#)).
5. **Yao, J.**, Tian, D., Sun, L., & Wen, L. (2017) Temporal change of seismic Earth's inner core phases: inner core super-rotation or temporal change of inner core surface?. Gordon Research Conference: Interior of the Earth, South Hadley, MA, USA.
4. **Yao, J.**, & Wen, L. (2015) Temporal change of the Earth's inner core boundary beneath North Pacific and Eurasia. 2015 AGU Fall Meeting, San Francisco, CA, USA ([DI33A-2608](#)).
3. **Yao, J.**, & Wen, L. (2014) New seismic evidence for localized temporal change of the Earth's inner core boundary. 2014 AGU Fall Meeting, San Francisco, CA, USA ([DI31A-4261](#)).
2. **Yao, J.**, & Wen, L. (2013) Seismic scattering and velocity structure near the Earth's core-mantle boundary beneath the South China Sea and north Indonesia. 2013 AGU Fall Meeting, San Francisco, CA, USA ([DI23A-2289](#)).
1. **Yao, J.**, & Wen, L. (2012) Strong seismic scatterers near the Earth's core-mantle Boundary in the location of the past Sunda subduction. 2012 AGU Fall Meeting, San Francisco, CA, USA ([DI31B-2395](#)).

## Talks

12. **Yao, J.** Slab models beneath central Myanmar revealed by body-wave traveltime tomography. *The Academic Forum about Tectonics and Geophysics for Young Scientists in Nanjing University*, Nanjing, China. Jan. 7, 2021.
11. **Yao, J.** Slab morphology beneath central Myanmar revealed by body-wave traveltime tomography. *The 5th International Academic Forum for Young Scientist in Tongji University*, Shanghai, China. May 30, 2020.
10. **Yao, J.** Joint regional earthquake and teleseismic traveltime tomography of Myanmar. *2019 AGU Fall Meeting, San Francisco, CA, USA*. Dec. 9, 2019.
9. **Yao, J.** Seismic monitoring of North Korea's 2017 nuclear test and its triggered seismicity. *Institute of Geodesy and Geophysics, Chinese Academy of Sciences*, Wuhan, China. May 30, 2019. **[Invited]**
8. **Yao, J.** Seismic monitoring of North Korea's 2017 nuclear test and its triggered seismicity. *Center for Gravitational Experiments, Huazhong University of Science and Technology*, Wuhan, China. May 30, 2019.
7. **Yao, J.** Detection and location of small seismic events. *a workshop of seismic algorithm and program at University of Science and Technology of China*, Hefei, China. Jul. 3, 2018. **[Invited]**
6. **Yao, J.** Seismic monitoring of North Korea's 3 September nuclear test. *Institute of Geology and Geophysics, Chinese Academy of Sciences*, Beijing, China. Jun. 15, 2018. **[Invited]**
5. **Yao, J.** Temporal change of seismic Earth's inner core phases: inner core differential rotation or temporal change of inner core surface?. *Institute of Geology and Geophysics, Chinese Academy of Sciences*, Beijing, China. Jun. 15, 2018. **[Invited]**

4. **Yao, J.** Temporal change of the Earth's inner core surface and seismic monitoring of North Korea's 3 September nuclear test. *Institute of Earthquake Forecasting, China Earthquake Administration*, Beijing, China. Jun. 14, 2018.
3. **Yao, J.** Seismic monitoring of North Korea's 3 September nuclear test. *China Earthquake Networks Center*, Beijing, China. Jun. 12, 2018.
2. **Yao, J.** Temporal change of seismic Earth's inner core phases: inner core differential rotation or temporal change of inner core surface?. *2017 Annual Meeting of Chinese Geoscience Union (CGU)*, Beijing, China. Oct. 17, 2017. **[Invited]**
1. **Yao, J.** Temporal change of the Earth's inner core boundary. *China Earthquake Networks Center*, Beijing, China. Jun. 30, 2016. **[Invited]**

## Field Experience

- Dense array in Singapore, 2019/02/26, installing 20 short-period seismic stations.