Yao Jiayuan

Associate Professor

Institute of Geophysics and Geomatics
China University of Geosciences
Room 205, Basic Building
388 Lumo Rd, Hongshan, Wuhan, Hubei, China

yaojiayuan@cug.edu.cn
0000-0001-7036-4238
core-man.github.io/academic
core-man

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

Employment

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

- Deep Earth structure
- Earthquake locations
- Seismic imaging

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

Professional Activities

- 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)
- Founder and primary contributor of seismo-learn (since 2020)

Professional Societies

- Member of the American Geophysical Union (AGU) (since 2012)

Group

Undergraduate Students

- Luo Wanxin (senior), China University of Geosciences (Wuhan), 2022 – Present

Visiting Scholars

- Zhang Yaxi, China Earthquake Networks Center, 2022 – Present

Peer-reviewed Publications

*corresponding author, #co-first author.

16. Bai, Y., **Yao, J.**, Wu, S., Wei, S., Wang Y., Rondenay, S., He, Y., Ai, Y., Tong, P., & Jiang, M. (2023). Rapid along-strike variations of shallow crustal structure in response to Indo-Burma subduction: Constraints from multi-type passive seismic data *Earth and Planetary Science Letters*, *610*, 118105. doi:10.1785/0220210292.

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. *Seismological Research Letters*. doi:10.1785/0220210292.

14. Chen, J., Chen, G., Wu, H., **Yao, J.**, & Tong, P. (2022). Adjoint tomography of NE Japan revealed by common-source double-difference traveltime data. *Seismological Research Letters*. doi:10.1785/0220210317.

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. *Journal of Geophysical Research: Solid Earth*, *127*, e2021JB023033. doi:10.1029/2021JB023033.

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*, *562*, 116856. doi: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 traveltime data. *Journal of Geophysical Research: Solid Earth*, *126*, e2020JB020164. doi: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.

9. Lythgoe, K., Inggrid, 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

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.

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.

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.

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.

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.

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. [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.

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.

Chinese Translations

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

Meeting Abstracts

16. Bai, Y., **Yao, J.**, Wu, S., Wei, S., Wang, Y., Rondenay, S., He, Y., Ai, Y., Tong, P., & Jiang, M. (2022) A 3-D probabilistic shallow velocity model in Myanmar and its implication for subduction tectonics. 2022 AGU Fall Meeting, Chicago, IL, USA (S52B-05).

15. Li, T., **Yao, J.**, Wu, S., & Tong, P. (2021) Moho topography in southern California revealed by local PmP and teleseismic Pms waves. 2021 AGU Fall Meeting, New Orleans, LA, USA (S21C-08).

14. Jones, M., Grund, M., Schlitzer, W., Leong, W. J., Tian, D., **Yao, J.**, & Uieda L. (2021) PyGMT: An open-source Python library for geospatial processing, analysis, and visualization. 2021 AGU Fall Meeting, New Orleans, LA, USA (IN55C-08).

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

13. Seismic imaging of Myanmar. *University of Science and Technology of China*, Hefei, China. Mar. 3, 2023.
12. 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. 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. Joint regional earthquake and teleseismic traveltime tomography of Myanmar. *2019 AGU Fall Meeting, San Francisco*, CA, USA. Dec. 9, 2019.
9. 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.
8. 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. Location and source characteristics of North Korea's 2017 nuclear test and its triggered seismicity. *Earth Observatory of Singapore*, Singapore. Sep. 14, 2018.
6. Seismic monitoring of North Korea's 3 September nuclear test. *Institute of Geology and Geophysics, Chinese Academy of Sciences*, Beijing, China. Jun. 15, 2018.
5. 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.
4. Temporal change of the Earth's inner core surface and seismic monitoring of North Korea's 3 September nuclear test. *Institute of Earthquake Forcasting, China Earthquake Administration*, Beijing, China. Jun. 14, 2018.
3. Seismic monitoring of North Korea's 3 September nuclear test. *China Earthquake Networks Center*, Beijing, China. Jun. 12, 2018.
2. 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.
1. Temporal change of the Earth's inner core boundary. *China Earthquake Networks Center*, Beijing, China. Jun. 30, 2016.

Teaching Experience

Courses

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

Workshops

- Instructor, Seismic Algorithm and Program at University of Science and Technology of China: Match & Locate (2018/07/03)

Field Experience

- A small network of SmartSolo in Wuhan and Xianning, 2022/01/06 – Present, installing 4 IGU-16HR 3C node.

- A geophysical experiment site for solid Earth-atmosphere coupling at Wuhan, 2022/12/28 – Present, installing 2 broadband seismograph and some meteorological equipments.
- Dense array in Singapore, 2019/02/26, installing 20 short-period seismic stations.