

# 姚家园

## 博士后

南洋理工大学，数学和物理科学学院

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主页: <https://core-man.github.io/academic-homepage>

## 教育经历

- 2018 地球物理学博士，中国科学技术大学，中国
- 2012 地球物理学学士，中国科学技术大学，中国

## 工作经历

- 2021/04 - 至今 博士后，地球观测研究所，新加坡
- 2018/08 - 2021/03 博士后，南洋理工大学，新加坡

## 研究方向及兴趣

- 地球深部结构
- 地震学成像
- 地震监测

## 教学经历

- 2019 秋季学期 高等数学 A (助教，南洋理工大学)
- 2019 春季学期 微积分 II (助教，南洋理工大学)

## 学术活动

- 2012 – 至今      美国地球物理联合会 (AGU) 会员
- 2018 – 至今      期刊审稿人: *Seismological Research Letters* (2), *Journal of Asian Earth Sciences* (1)
- 2018 – 2019      AGU 秋季会议 Outstanding Student Paper Award 评审
- 2018/07/03      中国科学技术大学地震学算法和程序培训班指导讲师
- 2020 – 至今      “地震”学”创办者和核心贡献者

## 荣誉

- 2018    安徽省普通高等学校品学兼优毕业生
- 2018    中国科学技术大学优秀毕业生
- 2016    安徽省大学生足球联赛冠军
- 2015    劳累奖学金
- 2014    硕士研究生国家奖学金

## 已发表论文

# 共同一作

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.
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., Inggred, 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](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)

## 尚未发表论文（准备中）

1. Yao, J., Sun, L., & Wen, L. Global temporal change of Earth's inner core boundary from repeating earthquakes

## 中文翻译

1. E. Vance (2018), [Earthquakes in the sky](#), 11, 环球科学 (Scientific American 中文版).

## 会议摘要

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](#)).

## 学术报告

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 Scientists 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. [邀请报告]
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.** Location and source characteristics of North Korea's 2017 nuclear test and its triggered seismicity. *Earth Observatory of Singapore*, Singapore. Sep. 14, 2018. [邀请报告]
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. [邀请报告]
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. [邀请报告]
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. [邀请报告]
1. **Yao, J.** Temporal change of the Earth's inner core boundary. *China Earthquake Networks Center*, Beijing, China. Jun. 30, 2016. [邀请报告]

## 开源软件

\* 年份表示项目开始时间。所有软件目前仍在维护中。

2015 [repeating-earthquake](#) - 重复地震搜索 (C 语言程序)

## 参考手册

\* 年份表示参考手册创建时间。所有手册目前仍在维护中。

2020 [software](#) - 地震“学”软件

2020 [seismology101](#) - 地震“学”科研入门教程

## 网站

\* 年份表示网站建立时间。所有网站目前仍在维护中。

2018 [Seismo Links](#) - 地球物理和地震学研究常用链接

2020 [seismo-learn](#) - 地震“学”网站

## 野外经历

- 新加坡密集台阵 02/26/2019, 布设 20 个短周期地震台