Mijian Xu, Ph.D Candidate

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http://xumijian.me/
http://github.com/xumi1993/

Employment History

2017 – 2018 **Software Engineer,** Nanjing Site, CIeNET Technologies.

2016 – 2017 **Research Assistant,** School of Earth Science and Engineering, Nanjing University.

Education

2018 – Present **Ph.D Candidate, Nanjing University** in Geology.

2013 – 2016 **M.Sc., Nanjing University** in Geophysics.
Thesis title: *Mantle Transition Zone Structures Beneath SE Tibet Revealed by Receiver Functions*.

Research Interests

- **Seismotectonics**
- **Structures of Upper Mantle**
- **Geodynamics of Tibetan Plateau**
- **Wavefield Simulation in Complex Media**

Research Publications

Journal Articles

1. **Xu**, **M.**, Huang, Z., Wang, L., Xu, M., Zhang, Y., Mi, N., … Yuan, X. (2020). Sharp Lateral Moho Variations Across the SE Tibetan Margin and Their Implications for Plateau Growth. *Journal of Geophysical Research: Solid Earth*, *125*(5). doi:10.1029/2019JB018117
2. Tian, M., Huang, Z., Wang, L., Xu, M., Mi, N., Yu, D., … Bi, Y. (2020). Tectonic evolution of the eastern margin of the Tibetan plateau: Insight from crustal structures using P wave receiver functions. *Journal of Asian Earth Sciences*, *191*, 104230. doi:10.1016/j.jseaes.2020.104230
3. **Xu**, **M.**, Huang, Z., Wang, L., Xu, M., Mi, N., & Yu, D. (2020). Lateral variation of the mantle transition zone beneath the Tibetan Plateau: Insight into thermal processes during IndianAsian collision. *Physics of the Earth and Planetary Interiors*, *301*, 106452. doi:10.1016/j.pepi.2020.106452
4. Han, C., **Xu**, **M.**, Huang, Z., Wang, L., Xu, M., Mi, N., … Bi, Y. (2020). Layered crustal anisotropy and deformation in the SE Tibetan plateau revealed by Markov-Chain-Monte-Carlo inversion of receiver functions. *Physics of the Earth and Planetary Interiors*, 106522. doi:https://doi.org/10.1016/j.pepi.2020.106522
5. **Xu**, **M.**, Huang, H., Huang, Z., Wang, P., Wang, L., Xu, M., … Yuan, X. (2018). Insight into the subducted Indian slab and origin of the Tengchong volcano in SE Tibet from receiver function analysis. *Earth and Planetary Science Letters*. doi:10.1016/j.epsl.2017.11.048
6. **Xu**, **M.**, Huang, H., Huang, Z., & Wang, L. (2016). SplitRFLab: A MATLAB GUI toolbox for receiver function analysis based on SplitLab. *Earthquake Science*. doi:10.1007/s11589-016-0141-8

7 Huang, Z., Wang, P., Xu, M., Wang, L., Ding, Z., Wu, Y., … Li, H. (2015). Mantle structure and dynamics beneath SE Tibet revealed by new seismic images. *Earth and Planetary Science Letters*, *411*, 100–111. doi:10.1016/j.epsl.2014.11.040

Skills

Languages	Mandarin Chinese, English.
Coding	Python, C, Perl, Fortran, Matlab, PyTorch, LaTeX, …
Seismological Software	SAC, Obspy, GMT, Specfsem2D/3D, Fk, CAP, …
Instrument	Reftek-130/130s data logger and Guralp CMG-40T/3T sensor.
Misc.	RedHat operation and maintenance, Continuous Integration, …

Miscellaneous Experience

Open Source Software

2016 **Seispy** – A Python module for automatic calculations of receiver function and its derivative process.
https://seispy.xumijian.me

2015 **BQMail** – A Python module to batch send seismic data requests to IRIS DMC.
https://git.nju.edu.cn/xumi1993/bqmail2.0

2014 **SplitRFLab** – A Matlab toolbox for computing receiver functions and shear wave spliting.
https://github.com/xumi1993/SplitRFLab

Certification

2015 **Red Hat Certified Engineer**

Field Experience

2019 **Geological survey in Huizhou**, Install 500 short period nodes across Lianhuashan Fault zone.

2018 – 2020 **ChinArray III**, Install and maintain broadband seismic stations in Liaodong Peninsula.

2013 – 2016 **ChinArray II**, Install and maintain broadband seismic stations in Ordos basin.

Peer Review

Seismological Research Letters (1).