Linxuan Li

Wuhan University
299 Bayi Road, Wuhan
P. R. China, 430079

Email: lxli_0@whu.edu.cn
Mobile: +86-15270020601
Homepage: lxli0.github.io

Education

- **Wuhan University, School of Geodesy and Geomatics** — Wuhan, China
  Bachelor of Geophysics; GPA: 4.0/4.0 (via 133 credits) — *Sep 2019 - Jun 2023 (expected)*
  Rank first in both the academic and comprehensive assessments.

Research Interests — Everything associated with Tectonics!

- **Surface/Subsurface Geodynamic Processes**: Cyclic Loading, Deformation, and Seismicity; Induced Earthquakes
- **Rupture Process and Earthquake Physics**: Coseismic and Postseismic Deformations; Earthquake Triggering; Slow Slip
- **Seismic Cycle**: Earthquake Recurrence (Supercycles); Evolution of Crustal Stress and Strain

Research Experience

- **Investigate seismicity patterns in the Three Gorges Reservoir area** — Sep 2020 - May 2022
  Advisor: Gang Luo (Wuhan University)
  - Use various statistical methods to characterize the spatial and temporal patterns of regional seismicty.
  - Use physics-based calculations to investigate the relationship between earthquakes and hydrosphere changes (reservoir water level and precipitation).

- **Use K–M slope to study seismic sequences** — Feb 2022 - Present
  Advisors: Gang Luo (Wuhan University), Mian Liu (University of Missouri)
  - Verify that the $K-M$ slope (KMS) derived from topological analysis is universally proportional to the b-value derived from Gutenberg-Richter law.
  - Compare KMS estimation with traditional b-value estimation methods to explore the potential application of KMS.

- **Stress-based forecasting of reservoir-induced earthquakes** — Jun 2022 - Present
  Advisors: Gang Luo (Wuhan University), Mian Liu (University of Missouri)
  - Build general model in which an earthquake is simulated by instantly decreasing strength to generate synthetic induced seismic catalogs.

- **Link seismic velocity with hydrosphere changes** — Jul 2022 - Present
  Advisors: Jiangtao Li (Wuhan University), Xiaodong Song (Peking University)
  - Build general model to illustrate whether surface hydrosphere can affect seismic velocity by including stress variations.

Publications

1. **Linxuan Li** and Gang Luo (2022). What causes the spatiotemporal patterns of seismicity in the Three Gorges Reservoir area, central China?. ***Earth and Planetary Science Letters***. doi.org/10.1016/j.epsl.2022.117618.
2. **Linxuan Li**, Gang Luo, and Mian Liu (under review). The K–M slope: a potential supplement for b-value.

Technical Skills

- **Languages**: Chinese, English (IELTS: 7.5)
- **Programming Languages**: MATLAB, C/C++, Python, FORTRAN
- **Technical Softwares**: ABAQUS, GMT, ArcGIS, SPSS
- **Document/Presentation**: Office platform, Adobe, Overleaf

Honors and Awards

- **Yugang-Songxiao Scholarship (for the top 1 of 323 students)** 2020 - 2021
  Sponsored by Wuhan University
- **National Scholarship (for the top 6 of 336 students)** 2019 - 2020
  Sponsored by Ministry of Education of the People's Republic of China
- **The First Prize Scholarship** 2019 - 2020 and 2020 - 2021
  Sponsored by Wuhan University
- **Award for Active Participation in Social Activities** 2020 - 2021
  Sponsored by Wuhan University
- **Finalist in Interdisciplinary Contest in Modeling** 2021
  Sponsored by COMAP (Consortium for Mathematics and Its Applications)
- **The First prize in College Mathematics Contest (Hubei Division)** 2020
  Sponsored by Chinese Mathematical Society

Additional Activities

- **Oxford Online Course (Oxford University)** Jan 2021 - Feb 2021
  Oxford Academic English Skills for Research; Tutor: Garry Maguire; Garde: A (3 credits)
- **Int'I Undergraduate Research Program (KAIST)** Dec 2021 - Feb 2022
  Introduction to Quantum Information; Tutor: Bae Joonwoo
- **Admissions Ambassador (Wuhan University)** Oct 2020 - Present
- **In charge of the Study Department (in Student Union)** Sep 2020 - Jun 2021
- **Responsible for literature and art activities (in class)** Sep 2019 - Present