Curriculum Vitae of Minzhe Hu

Ph.D. candidate
University of Science and Technology of China
Email: hmz2018@mail.ustc.edu.cn
Phone: (86) 189-0570-8898

RESEARCH INTERESTS

Data processing: Open-source software for distributed acoustic sensing data processing.

Source observation: Detection, location and characterization of traditional and unconventional sources based on distributed acoustic sensing.

Fault zone detection: Fault zone detection based on distributed acoustic sensing.

EDUCATION & APPOINTMENT

2022-current	Ph.D. in Geophysics, University of Science and Technology of China
2018-2022	B.S. in Geophysics, University of Science and Technology of China

PROFESSIONAL SERVICES

2024	Reviewer for JGR-Solid Earth and SRL

HONORS & ADWARDS

2024	National Scholarship
2024	Outstanding Student Presentation, CGU Annual Meeting, Xiamen
2024	Outstanding Flash Presentation, DAS T&A Conference, Nanjing
2022-2024	First-Class Postgraduate Scholarships, USTC
2022	Outstanding Graduate, USTC
2018	Outstanding Student Scholarships, USTC
2018	Outstanding Freshman Scholarship, USTC

PROFESSIONAL ACTIVITIES

2024-2026	Student Membership of Chinese Geophysical Society
2024	Student Membership of American Geophysical Union
2024	Student Membership of Seismological Society of America

FIELD EXPERIENCE

2024 3rd DAS deployment for tunnel engineering monitoring in Guangzhou, Guangdong

2024 2nd DAS deployment 2 for tunnel engineering monitoring in Guangzhou, Guangdong

2024 Urban DAS deployment on telecommunication cables in Hefei, Anhui

2023 1st DAS deployment 1 for tunnel engineering monitoring in Guangzhou, Guangdong

PROFESSIONAL SKILLS

Developed research codes: Data processing for distributed acoustic sensing, Earthquake detection package, Seismic phase picking package, machine learning

Computer languages: Python, Matlab, C, and Shell scripts

Machine learning tools: Pytorch, Scikit-learn

PUBLICATIONS

Journal Articles:

1. **Hu, M.**, and Z. Li (2024), DASPy: A Python Toolbox for DAS Seismology. *Seismo. Res. Lett*., doi: https://doi.org/10.1785/0220240124.

Conference Abstracts:

1. **Hu, M.**, and Z. Li (2024), DASPy: A Python Toolbox for DAS Seismology, *AGU 2024 Annual Meeting*, S21G-3480, Washington, DC, Dec. 2024.
2. **Hu, M.**, Z. Li, Q. Zhang, B. Wang, Zhidi Sensing Technology Co., Ltd., Hefei Rail Transit Group Operation Co., Ltd. (2024), Intelligent Early Warning of Rail Safety Based on Distributed Acoustic Sensing, *Distributed Acoustic Sensing Technology and Application Conference*, Nanjing, Nov. 2024.
3. **Hu, M.**, and Z. Li (2024), DASPy: Software for DAS Data Processing and Seismology Application, *CGU 2024 Annual Meeting*, Xiamen, Oct. 2024.
4. Li, Z., and **M. Hu** (2024), DASPy: Data Processing and Seismological Application Software for Distributed Acoustic Sensing, *Seminar on Application of Fiber Optic Seismic Technology*, Hefei, Apr. 2024.
5. **Hu, M.**, and Z. Li (2023), Deep clustering of marine biological signals based on distributed acoustic sensing, *The 18th Academic Conference of the Seismological Society of China*, Guizhou, Aug. 2023.
6. **Hu, M.**, and Z. Li (2023), Deep clustering of marine biological signals based on distributed acoustic sensing, *The 4th "Artificial Intelligence Seismology" Workshop, Hefei*, July 2023.

Patent

1. University of Science and Technology of China (2022). Automatic detection method and device for underground faults based on distributed optical fiber acoustic wave sensing, CN202211241819.8. (Inventor：**Minzhe Hu**, Zefeng Li)
2. University of Science and Technology of China (2024). An intelligent early warning method for urban tunnel intrusion prevention based on distributed acoustic sensing, CN 202411961545.9. (Inventor：**Minzhe Hu**, Zefeng Li, Qiang Zhang, Baoshan Wangs)

Software Copyright

1. University of Science and Technology of China (2024). DASPy: Advanced tool software for distributed acoustic sensing data processing, 2024SR1758384 (Designer：**Minzhe Hu**, Zefeng Li)
2. University of Science and Technology of China (2023). DASPy: Basic tool software for distributed acoustic sensing data processing, 2023SR1580432 (Designer：**Minzhe Hu**, Zefeng Li)