李金涛（博士）

浙江大学
海洋精准感知技术全国重点实验室
海洋学院
浙江省杭州市西湖区浙大路 38 号
信电楼 430

✉ lijintao@zju.edu.cn
🆔 0000-0002-1022-9170
⊙ JintaoLee-Roger

研究方向及兴趣

- 人工智能地球物理
- DAS 基础模型
- 地震基础模型
- 海底分布式光纤智能感知和海洋环境监测
- DAS 数据分析
- 地震超分辨率
- 地震解释与反演
- 地球物理软件

工作经历

- 2025/10 至今, 博士后
  浙江大学, 海洋精准感知技术全国重点实验室 & 海洋学院
  合作导师: 李伟昌教授

教育经历

- 2020/9 - 2025/6, 地球物理学博士
  中国科学技术大学, 中国安徽省合肥市
  指导老师: 伍新明教授
  博士论文: 高分辨率叠后地震数据智能处理及应用

- 2016/9-2020/6, 地球物理学学士
  中国科学技术大学, 中国安徽省合肥市
  指导老师: 伍新明教授

已发表论文

G Google Scholar

∗ → 共同一作, † → 通讯作者

7. **Li, J.**, Wu, X., Sun, X., Deng, B., and Wang, G., 2026. High-Fidelity Seismic Super-Resolution Using Prior-Informed Deep Learning with 3D Awareness. *IEEE Transacations on Image Processing (TIP)*, Accepted.
   - 中科院一区 TOP, CCF-A, IF: 13.7

6. **Li, J.** and Wu, X., 2026, Memory-Efficient Full-Volume Inference for Large-Scale 3D Dense Prediction without Performance Degradation. *Communications Engineering*.
   - **Nature Portfolio Journal**
   - This paper was unanimously recognized by all three reviewers.

5. **Li, J.**, Shi, Y. and Wu, X., 2024, June. CIGVis: An Open-Source Python Tool for Real-Time Interactive Visualization of Multidimensional Geophysical Data. *Geophysics*, 90(1), pp.1-37.

4. **Li, J.**, Wu, X., Ye, Y., Yang, C., Hu, Z., Sun, X. and Zhao, T., 2023. Unsupervised contrastive learning for seismic facies characterization. *Geophysics*, 88(1), pp.WA81-WA89.

3. **Li, J.**, Wu, X. and Hu, Z., 2021. Deep learning for simultaneous seismic image super-resolution and denoising. *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 60, pp.1-11.
   - **中科院一区 TOP, ESI 高被引论文**

2. Sheng, H., Wu, X., Si, X., **Li, J.**, Zhang, S. and Duan, X., 2025. Seismic Foundation Model (SFM): a new generation deep learning model in geophysics. *Geophysics*, 90(2), pp.1-64.

1. Han, L., Wu, X., Hu, Z., **Li, J.** and Fang, H., 2024. MAMCL: Multi-attributes Masking Contrastive Learning for explainable seismic facies analysis. *Computers & Geosciences*, 193, p.105731.

尚未发表论文（审稿中/修改中）

3. Wang, Y., **Li, J.** [†], Sun, X., and Wu, X., 2025. Deep Learning-based Seismic Reflectivity Estimation using Labeled Synthetic Data Pre-training and Physics-guided Fine-tuning in Field Data. *Geophysics*, **Moderate Revision** (通讯作者).

2. Yimin Dou, Xinming Wu, Nathan L Bangs, Harpreet Singh Sethi, **Jintao Li**, Hang Gao, Zhixiang Guo, 2025, Geological Everything Model 3D: A Promptable Foundation Model for Unified and Zero-Shot Subsurface Understanding, IEEE TPAMI. Under Revision.

1. Hanlin Sheng, Xinming Wu, Hang Gao, Haibin Di, Sergey Fomel, **Jintao Li** and Xu Si, 2025, On the workflow, opportunities and challenges of developing foundation model in geophysics. Submitted.

会议论文

4. **Li, J.**, Shi, Y. and Wu, X., 2024, June. CIGVis: An Open-Source Python Tool for Real-Time Interactive Visualization of Multidimensional Geophysical Data. In 85th EAGE Annual Conference & Exhibition (including the Workshop Programme) (Vol. 2024, No. 1, pp. 1-5). European Association of Geoscientists & Engineers. (**EI 论文**)

3. Sheng, H., Wu, X., Si, X., **Li, J.**, Zhang, S. and Duan, X., 2024, June. Seismic Foundation Model (SFM): All-Purpose Feature Extraction from Seismic Data for Diverse Geophysical Applications. In 85th EAGE Annual Conference & Exhibition (including the Workshop Programme) (Vol. 2024, No. 1, pp. 1-5). European Association of Geoscientists & Engineers. (**EI 论文**)

2. Si, X., Wu, X., **Li, J.**, Cui, X., Sheng, H., Gao, H., Li, Z., and Peng, Z., 2024. Tuning into Earth's Voice: Leveraging Large Language Models for Earthquake Detection. AGU24.

1. **Li, J.**, Wu, X. and Hu, Z., 2020. Deep learning for simultaneous seismic image super-resolution and denoising. In SEG Technical Program Expanded Abstracts 2020 (pp. 1661-1665). Society of Exploration Geophysicists. (**EI 论文**)

荣誉

2025	中国科学技术大学优秀毕业生
2024	中石油奖学金
2021	**研究生国家奖学金**
2021-2025	中国科学技术大学一等学业奖学金
2020	优秀本科毕业论文奖
2019	国家励志奖学金

开源软件

2023 至今　**cigvis** | https://github.com/JintaoLee-Roger/cigvis/
基于 python 的多维（三维）可交互地球物理数据可视化软件

2022 至今　**cigsegy** | https://github.com/JintaoLee-Roger/cigsegy/
SEG-Y 格式和 NumPy 格式相互转换的 python 工具

2025 至今　**torchseis** | https://github.com/JintaoLee-Roger/torchseis/
Repository for the *Communications Engineering* (2025) paper.

2021 至今　**SeismicSuperResolution**
Repository for the *IEEE TGRS* (2022) paper.

学术服务

期刊审稿人: *Geophysics, IEEE Transactions on Geoscience and Remote Sensing (TGRS), Scientific Reports, Computers & Geosciences, Journal of Geophysical Research: Machine Learning and Computation (JGR-MLC), Interpretation, IEEE Geoscience and Remote Sensing Letters (GRSL), Journal of Geophysics and Engineering (JGE)* 等

教学经验

中国科学技术大学

- **人工智能地球物理 | 助教组长**　　　　　　　　　　　　　2021 年秋季学期本科课程
  - 担任课程 **Header TA**，负责协调 8 名助教的工作。
  - 设计课程作业和评分标准。

- **人工智能地球物理 | 专题讲师**　　　　　　　　　　　　　2023 年秋季学期本科课程
  - 独立讲授**一个专题课程**（约 3 学时），主题为"基于 Python 的科学数据可视化"。

最后更新: Monday 9th February, 2026