个人简历

基本信息

姓　名	李文瑞	性　别	男	民　族	汉	
出生年月	1999.06	所在地	四川成都	导　师	范晓鹏教授	
政治面貌	中共党员	毕业院校	哈尔滨工业大学			
电子邮件	liwr618@163.com	联系电话	17602834618			
个人主页	https://liwrui.github.io/					
研究方向	多模态联合学习、具身智能、信源信道联合编码、AI4S					

教育经历

时间	学位	专业	学校	导师
2021.09~**2025.12**	博士	计算机科学与技术	哈尔滨工业大学	范晓鹏教授
2017.09~2021.07	学士	数字信号处理	电子科技大学	-

工作/实习经历

时间	地点	职位	合作导师
2023.08~2024.07	北京大学深圳研究生院	访问学生	田永鸿教授
2022.03~2023.03	鹏城国家实验室	访问学生	田永鸿教授

部分获奖经历和荣誉

时间	获奖名称	颁发单位
2023.10	博士生国家奖学金	中华人民共和国教育部
2024.12	比亚迪奖学金	比亚迪集团
2023.08	哈尔滨工业大学计算学部优秀共产党员	哈尔滨工业大学计算学部
2024.04	哈尔滨工业大学五四优秀团员	哈尔滨工业大学
2023.08	哈尔滨工业大学计算学部优秀学生	哈尔滨工业大学计算学部
2021.07	电子科技大学优秀毕业生	电子科技大学
2021.03	美国大学生数学建模一等奖 Meritorious Winner	美国数学建模竞赛协会
2020.08	电子科技大学优秀学生奖学金	电子科技大学
2019.08	电子科技大学优秀学生奖学金	电子科技大学
2018.08	电子科技大学优秀学生奖学金	电子科技大学

主要学术成果

发表论文：

1. **Wenrui Li,** Penghong Wang, Ruiqin xiong and Xiaopeng Fan. "Spiking Tucker Fusion Transformer for Audio-Visual Zero-Shot Learning" IEEE Transactions on Image Processing. **(IEEE TIP/CCF 推荐 A 类期刊)**

2. **Wenrui Li**, Ruiqin Xiong and Xiaopeng Fan. " Multi-layer Probabilistic Association Reasoning Network for Image-Text Retrieval" in IEEE Transactions on Circuits and Systems for Video Technology **(IEEE TCSVT/中科院一区期刊)**

3. **Wenrui Li**, Jiahui Li, Mengyao Ma, Xiaopeng Hong and Xiaopeng Fan."Multi-Scale Spiking Pyramid Wireless Communication Framework for Food Recognition," in IEEE Transactions on Multimedia **(IEEE TMM/中科院一区期刊)**, 2024.

4. **Wenrui Li**, Zhengyu Ma, LiangJian Deng, Xiaopeng Fan and Yonghong Tian."Neuron-Based Spiking Transmission and Reasoning NetworkFor Robust Image-Text Retrieval," in IEEE Transactions on Circuits and Systems for Video Technology **(IEEE TCSVT/中科院一区期刊)**, 2022, doi: 10.1109/TCSVT.2022.3233042.

5. **Wenrui Li**, Zhe Yang, Wei Han, Hengyu Man, Xingtao Wang and Xiaopeng Fan. "Hyperbolic-constraint Point Cloud Reconstruction from Single RGB-D Images", in the 39th Annual AAAI Conference on Artificial Intelligence **(AAAI/CCF 推荐 A 类会议)**, 2025.

6. **Wenrui Li**, Wei Han, Yandu Chen, Yeyu Chai, Yidan Lu, Xingtao Wang and Xiaopeng Fan. "Riemann-based Multi-scale Attention Reasoning Network for Text-3D Retrieval", in the 39th Annual AAAI Conference on Artificial Intelligence **(AAAI/CCF 推荐 A 类会议)**, 2025.

7. **Wenrui Li**, Zhengyu Ma, LiangJian Deng, Penghong Wang, Jinqiao Shi and Xiaopeng Fan. "Reservoir Computing Transformer for Image Text Retrieval," in ACM International Conference on Multimedia **(ACM MM/CCF 推荐 A 类会议)**, Ottawa, Canada, 2023.

8. **Wenrui Li**, XiLe Zhao, Zhengyu Ma, Xingtao Wang, Xiaopeng Fan and Yonghong Tian. "Motion Decoupled Spiking Transformer for Audio Visual Zero Shot Learning," in ACM International Conference on Multimedia **(ACM MM/CCF 推荐 A 类会议)**, Ottawa, Canada, 2023.

9. **Wenrui Li**, Zhengyu Ma, Jinqiao Shi and Xiaopeng Fan. "The style transformer with common knowledge optimization for image text retrieval," in IEEE Signal Processing Letter **(SPL/中科院二区期刊)**, 2023.

10. **Wenrui Li**, Zhengyu Ma, LiangJian Deng and Xiaopeng Fan. "Modality Fusion Spiking Transformer Network for AudioVisual Zero Shot Learning," in IEEE International Conference on Multimedia and Expo **(ICME/CCF 推荐 B 类会议)**, Oral, Brisbane, Australia, 2023.

11. **Wenrui Li** and Xiaopeng Fan. "Image-Text Alignment and Retrieval Using Light-Weight Transformer", IEEE International Conference on Acoustics, Speech and Signal Processing **(ICASSP/CCF 推荐 B 类会议)**, 2022.

12. Jisheng Chu, **Wenrui Li**, Xingtao Wang, Ning Kanglin, Yidan Lu and Xiaopeng Fan. "Riemann-based Multi-scale Attention Reasoning Network for Text-3D Retrieval", in the 39th Annual AAAI Conference on Artificial Intelligence **(AAAI/CCF 推荐 A 类会议)**, 2025.

13. P. Wang, X. Wang, **W. Li**, X. Fan and D. Zhao. 2024. "DV-Hop Localization Based On Distance Estimation Using Multi-Node and Hop Loss in IoT" in IEEE Internet of Things Journal **(IEEE IoTJ/ 中科院一区期刊)**,doi: 10.1109/ JIOT.2024.3404492.

14. Haonan Zheng, Xinyang Deng, Wen Jiang and **Wenrui Li**, "A Unified Understanding of Adversarial Vulnerability Regarding Unimodal Models and Vision-Language Pre-training Models" in ACM International Conference on Multimedia **(ACM**

MM/CCF 推荐 A 类会议), 2024.

15. Haonan Zheng, Wen Jiang, Xinyang Deng and **Wenrui Li**, "Sample-agnostic Adversarial Perturbation for Vision-Language Pre-training Models", in ACM International Conference on Multimedia **(ACM MM/CCF 推荐 A 类会议),** 2024.

16. **Wenrui Li**, Jifei Miao and Guanghui Cheng. "A Jacobi-Like Algorithm for the General Joint Diagonalization Problem with Its Application to Blind Source Separation," 12th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics **(CISP-BMEI/国际 EI 会议),** 2019.

17. M. Guo, **W. Li**, C. Wang, Y. Ge and C. Wang. 2024. "SMILE: Spiking Multi-modal Interactive Label-Guided Enhancement Network for Emotion Recognition," 2024, in IEEE International Conference on Multimedia and Expo **(ICME/ CCF 推荐 B 类会议)**.

18. Yuchuan Feng, Jihang Jiang, Jie Ren, Ruotong Li*, **Wenrui Li** and Xiaopeng Fan. "Text-Guided Editable 3D City Scene Generation," 2025, in IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP).

19. Jifei Miao, Guanghui Cheng, **Wenrui Li** and Gong Zhang. "Non-orthogonal approximate joint diagonalization of non-Hermitian matrices in the least-squares sense," Neurocomputing **(中科院二区期刊),** 2019.

20. Jifei Miao, Guanghui Cheng, **Wenrui Li** and Eric Moreau. "A unitary joint diagonalization algorithm for nonsymmetric higher‐order tensors based on Givens‐like rotations," Numerical Linear Algebra with Applications **(中科院三区期刊),** 2020.

21. Guanghui Cheng, Jifei Miao, **Wenrui Li**, "Two Jacobi-like algorithms for the general joint diagonalization problem with applications to blind source separation," Chinese Journal of Electronics **(中科院四区期刊),** doi: 10.23919/cje.2019.00.102, 2022.

投稿论文：

22. **Wenrui Li**, Penghong Wang, Xingtao Wang, Wangmeng Zuo, Xiaopeng Fan and Yonghong Tian, "Multi-Timescale Motion-Decoupled Spiking Transformer for Audio-Visual Zero-Shot Learning," in IEEE Transactions on Pattern Analysis and Machine Intelligence **(IEEE TPAMI/CCF 推荐 A 类期刊)** – **Under review**.

23. **Wenrui Li**, Wei Han, Penghong Wang, Wangmeng Zuo, Xiaopeng Fan and Yonghong Tian, "Video Summarization with Mixed Bernoulli distribution of Graph Representation Learning," in IEEE Transactions on Pattern Analysis and Machine Intelligence **(IEEE TPAMI/CCF 推荐 A 类期刊)** – **Under review.**

● Two paper submitted to ICASSP-25 as corresponding author.

● Five paper submitted to CVPR-25, two as first author, three as corresponding author.

承担/参与的主要科研项目

纵向课题：

1、国自然青年学生基础研究项目（博士研究生），二维/三维图像图形对齐融合与感知协同交互系统，**30 万元，2025.01-2027.12，**主持。

2、中央高校基本科研业务费专项资金资助，可信多模态对齐、融合及传输，**3 万元，2024.08-2025.08，**主持。

3、国家重点研发计划项目，网络视听全景式交互化新业态关键技术研发与应用示范, 4438.76 万元（国拨 1938.76 万），2021.12-2024.11，参与。

4、国家自然科学基金重点项目，8K 超高清视频智能生成与实时编码器关键技术研究，2023.06-2026.05，参与。

5、国家自然科学基金面上项目，基于边信息的智能视频编码研究，2020.01~2023.12，参与。

6、国家自然科学基金元宇宙专项，元宇宙理论与技术基础研究：人机群智协同的复杂数据可视分析研究 2024，参与

7、鹏城实验室重点攻关项目，新型低功耗计算架构与系统，2021.06-2023.05，参与。

横向课题：

8、 校企合作项目（华为），面向任务的信源信道联合编码，2021.05-2024.04，参与。

学术活动

IEEE Transactions on Circuits and Systems for Video Technology (IEEE TCSVT), Reviewer

IEEE Transactions on Multimedia (IEEE TMM), Reviewer;

The Journal of Supercomputing, Reviewer;

CVPR 2025 Reviewer;

ACM MM 2024,2025 Reviewer;

NeurIPS 2024,2025 Reviewer;

AAAI 2023,2024,2025 Reviewer