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教育背景

- 2007/08 – 2010/09 香港城市大学 计算机系, 博士研究生, 哲学博士.
- 2003/10 – 2004/10 中国科学院 软件所, 硕士研究生.
- 2002/09 – 2005/11 云南大学 计算机系, 硕士研究生, 工学硕士.
- 1998/09 – 2002/07 云南大学 计算机系, 本科生, 工学学士.

工作经历

- 2014/09 – 至今 副教授 博士生导师, 厦门大学.
- 2012/07 – 2013/12 博士后, 法国国家信息与自动化所, 法国.
- 2011/02 – 2012/06 博士后, 凯泽斯劳滕大学, 德国.
- 2010/09 – 2011/01 副高级研究员, 香港城市大学, 香港特别行政区.
- 2005/03 – 2007/07 研究助理, 香港城市大学, 香港特别行政区.

期刊论文

- 1. Wan-Lei Zhao, Chong-Wah Ngo: **Scale-Rotation Invariant Pattern Entropy for Keypoint-based Near-Duplicate Detection**, *IEEE Trans. on Image Processing*, 18(2): 412–423, 2009. (IF=11.041, CCF A)
- 2. Wan-Lei Zhao, Chong-Wah Ngo: **Flip-Invariant SIFT for Copy and Object Detection**, *IEEE Trans. on Image Processing*, 22(3): 980–991, 2013. (IF=11.041, CCF A)
- 3. Wan-Lei Zhao, Chong-Wah Ngo, H.-K. Tan, X. Wu: **Near-Duplicate Keyframe Identification with Interest Point Matching and Pattern Learning**, *IEEE Trans. on Multimedia*, 9(5): 1037–1048, 2007. (IF=8.18, CCF B)
- 4. Wan-Lei Zhao, Xiao Wu, Chong-Wah Ngo: **On the Annotation of Web Videos by Efficient Near-duplicate Search**, *IEEE Trans. on Multimedia*, 12(5):448–461, 2010. (IF=8.18, CCF B)
- 5. Wan-Lei Zhao, Chong-Wah Ngo, Hanzi Wang*: **Fast Covariant VLAD**, *IEEE Trans. on Multimedia*, 18(9): 1843–1854, 2016. (IF=8.18, CCF B)
- 6. Wan-Lei Zhao*, Hui Wang, Chong-Wah Ngo: **Approximate k -NN Graph Construction: a Generic Online Approach**, *IEEE Trans. on Multimedia*, 1909–1921, vol.24, 2022. (IF=8.18, CCF B)

- 7. Hui-Chu Xiao, Jie Lin, **Wan-Lei Zhao***, Yi-Geng Hong, Chong-Wah Ngo: **Deeply Activated Salient Region for Instance Search**, *ACM Trans. on Multimedia Computing Communications and Applications*, 2022. (IF=4.09, CCF B)
- 8. Wei Chen, Jie Zhao, **Wan-Lei Zhao***, Song-Yuan Wu: **Shape-Aware Monocular 3D Object Detection**, *IEEE Trans. on Intelligent Transportation Systems*, 2023. (IF=9.551, CCF B)
- 9. **Wan-Lei Zhao***, Hui Wang, Peng-Cheng Lin, Chong-Wah Ngo: **On the Merge of KNN Graph**, *IEEE Trans. on Big Data*, 2021. (IF=7.5, CCF C)
- 10. Jie-Feng Wang, **Wan-Lei Zhao***, Shihai Xiao, Jiajie Yao, Xuecang Zhang: **Dynamic NN-Descent: An Efficient k-NN Graph Construction Method**, *IEEE Trans. on Big Data* to appear, 2024. (IF=7.5, CCF C)
- 11. **Wan-Lei Zhao***, Cheng-Hao Deng, Chong-Wah Ngo: **k-means: a revisit**, *Neurocomputing*, 291, 195–206, 2018. (IF=5.779, CCF C)
- 12. Jie Lin, Yu Zhan, **Wan-Lei Zhao***: **Instance Search based on Weakly Supervised Feature Learning**, *Neurocomputing*, 117–124, 2021. (IF=5.779, CCF C)
- 13. Run-Qing Chen, Guang-Hui Shi, **Wan-Lei Zhao***, Chang-Hui Liang: **A Joint Model for IT Operation Series Prediction and Anomaly Detection**, *Neurocomputing*, 448(2021), 130–139. (IF=5.779, CCF C)
- 14. Yu Zhan, **Wan-Lei Zhao***: **Instance Search via Instance Level Segmentation and Feature Representation**, *Journal of Visual Communication and Image Representation*, vol.79, 2021. (IF=2.678, CCF C)
- 15. Chang-Hui Liang, **Wan-Lei Zhao***, Run-Qing Chen: **Dynamic Sampling for Deep Metric Learning**, *Pattern Recognition Letters*, 150 (2021), 49–56. (IF=4.757, CCF C)

会议论文

- 1. Chong-Wah Ngo, **Wan-Lei Zhao**, Yu-Gang Jiang: **Fast Tracking of Near-Duplicate Keyframes in Broadcast Domain with Transitivity Propagation**, *ACM Int. Conf. on Multimedia*, Oct. 2006: pp.845–854. (Oral, CCF A)
- 2. **Wan-Lei Zhao**, Hervé Jégou, Guillaume Graviér: **Sim-Min-Hash: An efficient matching technique for linking large image collections**, *ACM Int. Conf. on Multimedia*, Oct. 2013. (CCF A)
- 3. Yi-Geng Hong, Hui-Chu Xiao, **Wan-Lei Zhao***: **Towards Accurate Object Localization by Instance Search**, *ACM Int. Conf. on Multimedia*, Oct. 2021. (Oral, CCF A)
- 4. Cheng-Hao Deng, **Wan-Lei Zhao***: **Fast k-means clustering based on k-NN graph**, *Int. Conf. on Data Engineering*, poster, Apr. 2018. (CCF A)
- 5. Xiao Wu, **Wan-Lei Zhao**, and Chong-Wah Ngo: **Towards Google Challenge: Combining Contextual and Social Information for Web Video Categorization**, *ACM Int. Conf. on Multimedia*, Multimedia Grand Challenge, Beijing, Oct. 2009. (CCF A)

- 6. **Wan-Lei Zhao**, Yu-Gang Jiang, Chong-Wah Ngo: **Keyframe Retrieval by Keypoints: Can Point-to-Point Matching Help?** *Int. Conf. on Image and Video Retrieval*, July, 2006: pp.72–81. (Oral, CCF B)
- 7. **Wan-Lei Zhao**, Song Tan, and Chong-Wah Ngo: **Large-scale Near-duplicate Web Video Search: Challenge and Opportunity**, *IEEE Int. Conf. on Multimedia & Expo, Workshop on Internet Multimedia Search and Mining*, Cancun, Mexico, Jul. 2009. (Oral, CCF B)
- 8. Xiao Wu, **Wan-Lei Zhao**, and Chong-Wah Ngo: **Near-Duplicate Keyframe Retrieval with Visual Keywords and Semantic Context**, *ACM Int. Conf. on Image and Video Retrieval*, Netherlands, Jul. 2007. (CCF B)
- 9. Yang Liu, **Wan-Lei Zhao**, Chong-Wah Ngo, Changsheng Xu, Hanqing Lu: **Coherent bag-of audio words model for efficient large-scale video copy detection**, *ACM Int. Conf. on Image and Video Retrieval*, 2010. (CCF B)
- 10. Gao-Dong Liu, **Wan-Lei Zhao***, Jie Zhao: **Online Deep Metric Learning via Mutual Distillation**, *IEEE Int. Conf. on Multimedia and Expo*, July, 2022. (CCF B, Oral)
- 11. Gao-Dong Liu, **Wan-Lei Zhao***, Jie Zhao: **Decoupled Mutual Distillation for Incremental Object Detection**, *IEEE Int. Conf. on Multimedia and Expo*, July, 2023. (CCF B)
- 12. Xiao Wu, **Wan-Lei Zhao**, and Chong-Wah Ngo: **Efficient Near-Duplicate Keyframe Retrieval with Visual Language Models**, *IEEE Int. Conf. on Multimedia & Expo*, Beijing, Jul. 2007. (CCF B)
- 13. **Wan-Lei Zhao***, Shi-Ying Lan, Run-Qing Chen, Chong-Wah Ngo: **k-sums clustering: a stochastic optimization approach**, *30th ACM Int. Conf. on Information and Knowledge Management*, Nov. 2021. (CCF B)
- 14. Hui Wang, **Wan-Lei Zhao***, Xiangxiang Zeng, Jianye Yang: **Fast k-NN Graph Construction by GPU based NN-Descent**, *30th ACM Int. Conf. on Information and Knowledge Management*, Nov. 2021. (CCF B)
- 15. **Wan-Lei Zhao**, Guillaume Graviér, Hervé Jégou: **Oriented pooling for dense and non-dense rotation-invariant features**, *BMVC*, Sep. 2013. (CCF B)

授权专利

- 1. 赵万磊 等 **协变局部特征聚集的图像特征表示法**. 专利号: ZL2015 1 0710221.2, 中国国家知识产权局, 2018.
- 2. 赵万磊 等 **一种用于运维数据的无监督异常检测和鲁棒趋势预测方法**. 专利号: ZL2020 1 0746722.7, 中国国家知识产权局, 2022.
- 3. 赵万磊 等 **Method for Encoding on Basis of Mixture of Vector Quantization and Nearest Neighbor Search**. 专利号: 特许第 7006996, 日本特许厅, 2022.
- 4. 赵万磊 等 **一种分布式人脸检索系统及方法**. 专利号: ZL2020 11 094648.1, 中国国家知识产权局, 2022.
- 5. 赵万磊 等 **一种基于多通道注意力区域扩展的实例检索方法**. 专利号: ZL2020 10 746717.6, 中国国家知识产权局, 2022.

主持项目

- 2020/04 – 2020/10 **300,000 RMB**, 面向大规模图像特征库的快速检索算法研发, **宁波博登智能科技**.
- 2020/03 – 2021/12 **100,000 RMB**, 基于图像和三维点云融合的视觉目标检测和追踪, **宁波博登智能科技**.
- 2020/01 – 2023/12 **580,000 RMB**, 大规模视觉实例检索关键技术研究, **国家自然科学基金**, 面上项目.
- 2018/11 – 2020/01 **270,000 RMB**, *Bonree AIOPs* 算法开发, **北京博睿科技**.
- 2016/03 – 2017/03 **100,000 RMB**, *Large-scale Image Search*, **ODD Concepts Inc.**, 韩国, 首尔.
- 2016/01 – 2019/12 **740,000 RMB**, 基于内容的大规模近似图像检索及挖掘技术研究, **国家自然科学基金**, 面上项目.
- 2015/03 – 2016/03 **152,000 RMB**, *Large-scale Image Search*, **ODD Concepts Inc.**, 韩国, 首尔.

所获奖项

- 2020/11 **国家一流本科课程**, *C 语言程序设计*, 教育部.
- 2020/11 **省级一流本科课程**, *C 语言程序设计*, 福建省教育厅.
- 2018/12 **厦门大学第十三届青年教师教学技能比赛**, 二等奖, 英语组.
- 2020/08 **第十一届全国大学生企业软件外包创新创业大赛**, 二等奖, 教育部和商务部, 指导教师.
- 2010/04 **Outstanding Academic Performance Award**, 香港城市大学.
- 2009/04 **Outstanding Academic Performance Award**, 香港城市大学.

专业服务

- 程序委员会委员 **ACM Multimedia**, since 2018; **Int. Conf. on Multimedia & Expro**, 2016 – 至今.
ACM Trans. on Probabilistic Machine Learning 编委
- 技术顾问 **Beautifeye.co** (爱尔兰企业, 2014), **ODD Concepts Inc.** (韩国企业, 2014 – 2016), 宁波博登智能科技. (2018 – 至今)

教学经历

- 2023 – 至今 **凸优化理论与方法**, 本科, 厦门大学, 中英双语.
- 2015 – 2022 **C 程序设计**, 本科, 厦门大学.
- 2015 – 2018 **高等数学试验分析**, 本科, 厦门大学.
- 2015 – 至今 **多媒体技术**, 研究生, 厦门大学, 全英文.
- 2012/3 – 2012/6 **Multimedia Analysis and Datamining**, 研究生, 德国凯泽斯劳滕大学, 全英文.
- 2011/3 – 2011/6 **Multimedia Information Retrieval**, 研究生, 德国凯泽斯劳滕大学, 全英文.