Wanhua Li

150 Western Ave. RM 2.423 – Allston, MA 02134

✉ wanhua@seas.harvard.edu • ⌂ li-wanhua.github.io

Academic Employment

School of Engineering and Applied Sciences, Harvard University Boston, USA
Postdoctoral Fellow, working with Prof. Hanspeter Pfister *Oct. 2022 - Present*

Education

Department of Automation, Tsinghua University Beijing, China
Ph.D. in Computer Vision *Aug. 2017 - Jun. 2022*
Advisors: Prof. Jiwen Lu, and Prof. Jianjiang Feng
GPA: 3.9/4.0, Top 1/76

School of Data and Computer Science, Sun Yat-Sen University Guangzhou, China
B.E. in Computer Science *Aug. 2013 - Jun. 2017*
GPA: 4.0/4.0, Top 1/118

Work Experiences

○ **Visual Computing Group at Microsoft Research Asia (MSRA)**
Research assistant, working with Dr. Qi Dai and Dr. Han Hu *Jun. 2022 - Oct. 2022*

Publications

* indicates equal contribution, ✉ indicates corresponding author

Peer-Reviewed Conference Publications

[1] Ye Liu, Jixuan He, **Wanhua Li**✉, Junsik Kim, Donglai Wei, Hanspeter Pfister, Chang Wen Chen
R^2-Tuning: Efficient Image-to-Video Transfer Learning for Video Temporal Grounding
*European Conference on Computer Vision (**ECCV**), 2024*

[2] Minghan Qin*, **Wanhua Li***✉, Jiawei Zhou*, Haoqian Wang✉, Hanspeter Pfister
LangSplat: 3D Language Gaussian Splatting
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2024* **(Highlight)**

[3] Kento Nishi, Junsik Kim, **Wanhua Li**, Hanspeter Pfister
Joint-Task Regularization for Partially Labeled Multi-Task Learning
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2024*

[4] Zhiyi Shi, Junsik Kim, **Wanhua Li**, Yicong Li, Hanspeter Pfister
MoRA: LoRA Guided Multi-Modal Disease Diagnosis with Missing Modality
*International Conference on Medical Image Computing and Computer-Assisted Intervention (**MICCAI**), 2024*

[5] Junsik Kim, Zhiyi Shi, Davin Jeong, Johannes Knittel, Helen Y. Yang, Yonghyun Song, **Wanhua Li**, Yicong Li,
Dalit Ben-Yosef, Daniel Needleman, Hanspeter Pfister
Multimodal Learning for Embryo Viability Prediction in Clinical IVF
*International Conference on Medical Image Computing and Computer-Assisted Intervention (**MICCAI**), 2024*

[6] Devaansh Gupta, Siddhant Kharbanda, Jiawei Zhou, **Wanhua Li**, Hanspeter Pfister, and Donglai Wei
CLIPTrans: Transferring Visual Knowledge with Pre-trained Models for Multimodal Machine Translation
*IEEE International Conference on Computer Vision (**ICCV**), 2023*

[7] Shuai Shen, **Wanhua Li**, Xiaobing Wang, Dafeng Zhang, Zhezhu Jin, Jie Zhou, and Jiwen Lu
CLIP-Cluster: CLIP-Guided Attribute Hallucination for Face Clustering
*IEEE International Conference on Computer Vision (**ICCV**), 2023*

[8] Shuai Shen, Wenliang Zhao, Zibin Meng, **Wanhua Li**, Zheng Zhu, Jie Zhou, and Jiwen Lu
DiffTalk: Crafting Diffusion Models for Generalized Audio-Driven Portraits Animation
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023*

[9] **Wanhua Li***, Xiaoke Huang*, Zheng Zhu, Yansong Tang, Xiu Li, Jie Zhou, and Jiwen Lu
OrdinalCLIP: Learning Rank Prompts for Language-Guided Ordinal Regression
Conference on Neural Information Processing Systems (***NeurIPS***), 2022

[10] **Wanhua Li**, Zhexuan Cao, Jianjiang Feng, Jie Zhou, and Jiwen Lu
Label2Label: A Language Modeling Framework for Multi-Attribute Learning
European Conference on Computer Vision (***ECCV***), 2022

[11] Shuai Shen, **Wanhua Li**, Zheng Zhu, Yueqi Duan, Jie Zhou, and Jiwen Lu
Learning Dynamic Facial Radiance Fields for Few-Shot Talking Head Synthesis
European Conference on Computer Vision (***ECCV***), 2022

[12] **Wanhua Li**, Xiaoke Huang, Jiwen Lu, Jianjiang Feng, and Jie Zhou
Learning Probabilistic Ordinal Embeddings for Uncertainty-Aware Regression
IEEE/CVF Conference on Computer Vision and Pattern Recognition (***CVPR***), 2021

[13] **Wanhua Li**, Shiwei Wang, Jiwen Lu, Jianjiang Feng, and Jie Zhou
Meta-Mining Discriminative Samples for Kinship Verification
IEEE/CVF Conference on Computer Vision and Pattern Recognition (***CVPR***), 2021

[14] Shuai Shen, **Wanhua Li**, Zheng Zhu, Guan Huang, Dalong Du, Jiwen Lu, and Jie Zhou
Structure-Aware Face Clustering on a Large-Scale Graph with 10^7 Nodes
IEEE/CVF Conference on Computer Vision and Pattern Recognition (***CVPR***), 2021

[15] Bingyao Yu, **Wanhua Li**, Xiu Li, Jiwen Lu, and Jie Zhou
Frequency-Aware Spatiotemporal Transformers for Video Inpainting Detection
IEEE International Conference on Computer Vision (***ICCV***), 2021

[16] **Wanhua Li**, Yueqi Duan, Jiwen Lu, Jianjiang Feng, and Jie Zhou
Graph-Based Social Relation Reasoning
European Conference on Computer Vision (***ECCV***), 2020

[17] **Wanhua Li**, Jiwen Lu, Jianjiang Feng, Chunjing Xu, Jie Zhou and Qi Tian
BridgeNet: A Continuity-Aware Probabilistic Network for Age Estimation
IEEE/CVF Conference on Computer Vision and Pattern Recognition (***CVPR***), 2019

[18] **Wanhua Li**, Yingqiang Zhang, Kangchen Lv, Jiwen Lu, Jianjiang Feng, and Jie Zhou
Graph-Based Kinship Reasoning Network
IEEE International Conference on Multimedia and Expo (ICME), 2020, Oral Presentation

[19] Benchao Li, **Wanhua Li**, Yongyi Tang, Jian-Fang Hu, and Wei-Shi Zheng
GL-PAM RGB-D Gesture Recognition
IEEE International Conference on Image Processing (ICIP), 2018

Peer-Reviewed Journal Publications

[20] Yicong Li, **Wanhua Li***, Qi Chen*, Wei Huang*, Yuda Zou*, Xin Xiao*, Kazunori Shinomiya, Pat Gunn, Nishika Gupta, Alexey Polilov, Yongchao Xu, Yueyi Zhang, Zhiwei Xiong, Hanspeter Pfister, Donglai Wei, Jingpeng Wu
WASPSYN: A Challenge for Domain Adaptive Synapse Detection in Microwasp Brain Connectomes
IEEE Transactions on Medical Imaging (***TMI***), 2024

[21] Bingyao Yu, **Wanhua Li**, Xiu Li, Jie Zhou, and Jiwen Lu
Uncertainty-aware hierarchical labeling for face forgery detection
Pattern Recognition (***PR***), 2024

[22] Shuai Shen, **Wanhua Li**, Zheng Zhu, Jie Zhou, and Jiwen Lu
STAR-FC: Structure-Aware Face Clustering on Ultra-Large-Scale Graphs
IEEE Transactions on Pattern Analysis and Machine Intelligence (***T-PAMI***, IF: 24.31), 2023

[23] Shuai Shen*, **Wanhua Li***, Xiaoke Huang*, Zheng Zhu, Jie Zhou, and Jiwen Lu
SD-NeRF: Towards Lifelike Talking Head Animation via Spatially-adaptive Dual-driven NeRFs
IEEE Transactions on Multimedia (***TMM***), 2023

[24] Bingyao Yu, Xiu Li, **Wanhua Li**, Jie Zhou, and Jiwen Lu
Discrepancy-aware Meta-learning for Zero-shot Face Manipulation Detection
IEEE Transactions on Image Processing (***TIP***), 2023

[25] **Wanhua Li**, Jiwen Lu, Abudukelimu Wuerkaixi, Jianjiang Feng, and Jie Zhou
MetaAge: Meta-Learning Personalized Age Estimators
IEEE Transactions on Image Processing (***TIP***), 2022

[26] Hongyi Sun, **Wanhua Li**, Yueqi Duan, Jie Zhou, and Jiwen Lu
Learning Adaptive Patch Generators for Mask-Robust Image Inpainting
*IEEE Transactions on Multimedia (**TMM**), 2022*

[27] **Wanhua Li**, Jiwen Lu, Abudukelimu Wuerkaixi, Jianjiang Feng, and Jie Zhou
Reasoning Graph Networks for Kinship Verification: from Star-shaped to Hierarchical
*IEEE Transactions on Image Processing (**TIP**), 2021*

Talks

○ **Learning Probabilistic Ordinal Embeddings for Uncertainty-Aware Regression**
Invited Presentation at 2021 Beijing University Academic Forum on Artificial Intelligence   *April 2021*

○ **Graph-Based Kinship Reasoning Network**
ICME'2020 Oral Presentation   *July 2020*

○ **BridgeNet: A Continuity-Aware Probabilistic Network for Age Estimation**
Invited Presentation at 2019 Beijing University Academic Forum on Artificial Intelligence   *March 2019*

Scholarships and Awards

○ NeurIPS Scholar Award   *2022*

○ ICCV Doctoral Consortium Travel Award   *2021*

○ **Weihai Talent Scholarship, Tsinghua**   *2021*

○ **3rd Place in VIPriors Instance Segmentation Challenge at ICCV**   *2021*

○ Outstanding Oral Presentation at 2021 Beijing University Academic Forum on Artificial Intelligence   *2021*

○ **2nd Place in ChaLearn LAP Large-scale Isolated Gesture Recognition Challenge at ICCV**   *2017*

○ Outstanding Undergraduate Thesis, SYSU   *2017*

○ Outstanding Graduate, SYSU   *2017*

○ National Encouragement Scholarship, Ministry of Education of P.R. China   *2016*

○ **National Scholarship, Ministry of Education of P.R. China**   *2015*

○ **National Scholarship, Ministry of Education of P.R. China**   *2014*

Grants

○ **Harvard Data Science Initiative Azure Funding**
$40,000 in credit, Harvard University, PI: Wanhua Li   *2023 - 2024*

○ **HDSI-AI4G Collaboration Azure Grant**
$30,000 in credit, Harvard University, PI: Wanhua Li   *2024 - 2024*

Academic Services

Conference Reviewer / PC Member

○ IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

○ International Conference on Computer Vision (ICCV)

○ European Conference on Computer Vision (ECCV)

○ AAAI Conference on Artificial Intelligence (AAAI)

○ International Joint Conference on Artificial Intelligence (IJCAI)

○ IEEE International Conference on Multimedia and Expo (ICME)

○ IEEE International Conference on Image Processing (ICIP)

○ International Conference on Pattern Recognition (ICPR)

○ Chinese Conference on Pattern Recognition and Computer Vision (PRCV)

Journal Reviewer

○ IEEE Transactions on Pattern Analysis and Machine Intelligence

- IEEE Transactions on Image Processing
- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Transactions on Biometrics, Behavior, and Identity Science
- IEEE Transactions on Artificial Intelligence
- IEEE Transactions on Cybernetics
- International Journal of Computer Vision
- IEEE Signal Processing Letters
- Pattern Recognition
- Neural Networks
- Neurocomputing
- Pattern Recognition Letters
- Knowledge-Based Systems
- Journal of Visual Communication and Image Representation