Wanhua Li

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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] 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)**

[2] 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

[3] 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

[4] 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

[5] 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

[6] **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

[7] **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

[8] 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

[9] **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*

[10] **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*

[11] 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*

[12] 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*

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

[14] **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*

[15] **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

[16] 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

[17] Bingyao Yu, **Wanhua Li**, Xiu Li, Jie Zhou, and Jiwen Lu
Uncertainty-aware hierarchical labeling for face forgery detection
*Pattern Recognition (**PR**, IF: 8), 2024*

[18] 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*

[19] 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*

[20] 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*

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

[22] 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*

[23] **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**
  $22,000 in credit, Harvard University, PI: Wanhua Li *2023- 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