LIANGHUI ZHU 朱良辉

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School of Electronic Information and Comnunications ⋄ Huazhong University of Science and Technology

RESEARCH INTERESTS

My research interest is LLM, foundation models, and visual representation learning.

EDUCATION

Huazhong University of Science & Technology (HUST) *Sep. 2023 – Dec. 2027*
- Ph.D Candidate in Computer Vision & Deep Learning
- School of Electronic Information and Communications (EIC)
- Advisor: Prof. Xinggang Wang & Prof. Wenyu Liu

Huazhong University of Science & Technology (HUST) *Sep. 2021 – Jun. 2023*
- Master Candidate in Computer Vision & Deep Learning
- School of Electronic Information and Communications (EIC)
- Advisor: Prof. Xinggang Wang & Prof. Wenyu Liu

Huazhong University of Science & Technology (HUST) *Sep. 2016 – Jun. 2021*
- B.Eng. in Information Engineering
- School of Electronic Information and Communications (EIC)
- *Ranking: 4/28 in Key Class*

- Selected Course: Computer Vision [96/100], Digital Image Processing [96/100], Mathematical Modeling [96/100], Object Oriented Programming [97/100], Computer Operating Systems [96/100], Software Engineering and Project Management [97/100]

EXPERIENCE

Bytedance Doubao Team *Jun. 2025 – now*
- The Top Seed Intern
- Foundation model, Vision Language Model
- Mentor: Dr. Yu Li

Vivo AI Laboratory *Mar. 2025 – May. 2025*
- Vision Language Model, Segment Anything Model, Reinforcement Learning

Bytedance Doubao Team *Mar. 2024 – Feb. 2025*
- The Top Seed Vision Group
- Foundation model, Image Generation
- Mentor: Dr. Jiashi Feng & Dr. Zilong Huang

Beijing Academy of Artificial Intelligence *Mar. 2023 – Feb. 2024*
- Foundation model, Large Language Model Judgement and Visual Recognition
- Mentor: Dr. Xinlong Wang

MCLab, EIC, HUST *Sep. 2020 – Feb. 2023*
- Computer Vision Research

- Focusing on weakly-supervised learning in visual understanding tasks.

- Develop an incremental work titled 'DGCNv2: Transfer Saliency Knowledge to DGCN with High-resolution Feature Map' [**Code**].
- Develop a C++-based maxflow algorithm library [**Code**] that enable highly efficient maxflow computation, achieving a 9.6x speed-up compared to the baseline method.

PUBLICATIONS

- **Vision Mamba: Efficient Visual Representation Learning with Bidirectional State Space Model**
- **Lianghui Zhu***, Bencheng Liao*, Qian Zhang, Xinlong Wang, Wenyu Liu, Xinggang Wang.
- ICML 2024 Most Influential Paper (Rank 2nd, Citation 1st), (3144 citations, 3.8k GitHub stars), Paper & Code.

- **JudgeLM: Fine-tuned Large Language Models are Scalable Judges**
- **Lianghui Zhu**, Xinggang Wang, Xinlong Wang.
- ICLR 2025 Spotlight (Top 3%), (321 citations, 425 GitHub stars), Paper & Code.

- **LENS: Learning to Segment Anything with Unified Reinforced Reasoning**
- **Lianghui Zhu***, Bin Ouyang*, Yuxuan Zhang, Tianheng Cheng, Rui Hu, Haocheng Shen, Longjin Ran, Xiaoxin Chen, Li Yu, Wenyu Liu, Xinggang Wang.
- AAAI 2026 Oral, Paper & Code.

- **WeakTr: Exploring Plain Vision Transformer for Weakly-supervised Semantic Segmentation**
- **Lianghui Zhu**, Yingyue Li, Jiemin Fang, Yan Liu, Hao Xin, Wenyu Liu, Xinggang Wang.
- TIP 2026 (76 citations, 140 GitHub Stars), Paper & Code.

- **WeakCLIP: Weakly-supervised Semantic Segmentation with Prompt Learning**
- **Lianghui Zhu**, Xinggang Wang, Jiapei Feng, Yingyue Li, Dingwen Zhang, Junwei Han.
- IJCV 2024, (45 citations), Paper & Code.

- **DiG: Scalable and Efficient Diffusion Models with Gated Linear Attention**
- **Lianghui Zhu**, Zilong Huang, Bencheng Liao, Jun Hao Liew, Hanshu Yan, Jiashi Feng, Xinggang Wang.
- CVPR 2025, (48 citations), Paper & Code.

- **GroundingSuite: Measuring Complex Multi-Granular Pixel Grounding**
- Rui Hu*, **Lianghui Zhu***, Yuxuan Zhang, Tianheng Cheng, Longjin Liu, Hao Liu, Longjin Ran, Xiaoxin Chen, Wenyu Liu, Xinggang Wang.
- ICCV 2025, Paper & Code.

- **WeakSAM: Exploring Classification Clues as SAM Prompts for Weakly-supervised Object Detection and Instance Segmentation**
- **Lianghui Zhu***, Junwei Zhou*, Xinggang Wang.
- ACM MM 2024, (28 citations), Paper & Code.

- **ViG: Linear-complexity Visual Sequence Learning with Gated Linear Attention**
- Bencheng Liao, Xinggang Wang, **Lianghui Zhu**, Qian Zhang, Chang Huang.
- AAAI 2025, (15 citations), Paper & Code.

- **Bird's Eye View Segmentation from an Edge-Aware Perspective**
- **Lianghui Zhu***, Hao Gao*, Zongming Li*, Shaoyu Chen, Kaixin Yu, Rui Huang, Kai Ni, Wenyu Liu, Xinggang Wang.
- In Submission to TIV .

SERVICE

- Reviewer for TPAMI, TIP, CVPR, ICCV, ICML, NeurIPS, ICLR

AWARDS & HONORS (UNDERGRADUATE)

- National Natural Science Foundation (NSFC) of China Basic Research Program for Young Students (Ph.D. Candidates), NSFC, China, in *2025*

- China Association for Science and Technology (CAST) Young Talent Support Project Special Program for Doctoral Students, CAST, China, in *2025*

- National Scholarships, Ministry of Education, China, in *2025*

- National Scholarships, Ministry of Education, China, in *2024*

- Academic Rising Star, Huazhong University of Science and Technology, (rank 1st, only 10 in the whole school.) in *2025*

- Science, Technology and Innovation Scholarship, Ministry of Education, China, in *2025*

- Merit Student, HUST, in *2024*