

HAIWEN DIAO

Three-year Doctoral Candidate

Intelligent Image Analysis and Understanding (IIAU) Lab

School of Information and Communication Engineering

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Research Interests

My primary research interests are *Vision-and-Language*, *Transfer Learning* and *Multimodal Large Language Model*. Specifically, my research in the vision-and-language domain strives to build up an efficient system that entails recognizing visual-semantic contents and contextualizing fine-grained correspondences across modalities.

Experience

Beijing Academy of Artificial Intelligence, *Beijing* **Sep.2023 — Present**
Research Internship

- Director: [Dr. XinLong Wang](#) (Computer Vision Center)

Hong Kong University of Science and Technology, *Dalian* **Jan.2023 — Jul.2023**
Remote Visiting Research

- Director: [Dr. Long Chen](#) (Computer Science and Engineering)

Tencent AI Lab, *Shenzhen* **Jun.2020 — Mar.2021**
CCF-Tencent Open Fund

- Director: [Dr. Ying Zhang](#), [Dr. Lin Ma](#) (Computer Vision Center)

Education

Dalian University of Technology (DUT), *Dalian* **Sep. 2021 — Present**
Ph.D. in Information and Communication Engineering

- Thesis: Parameter-efficient Transfer Learning, Multi-modal Large Language Model
- Director: [Prof. Huchuan Lu](#)

Dalian University of Technology (DUT), *Dalian* **Sep. 2018 — Jun. 2021**
M.E. in Information and Communication Engineering

- Thesis: Person Re-Identification, Image-text Retrieval, Video-text Retrieval
- Director: [Prof. Huchuan Lu](#)

Dalian University of Technology (DUT), *Dalian* **Sep. 2014 — Jun. 2018**
B.E. in Electronic Information Engineering

- GPA: Top3% (School of Information and Communication Engineering)

Awards & Hornors

Awards

- Gold Award of the 9th Liaoning College students' 'Internet+' Competition *Liaoning Province, 2023*

Hornors

- Excellent Graduate of Dalian City (Bachelor's degree) *Dalian City, 2018*
- Excellent Graduate of Dalian University of Technology (Bachelor's degree) *DUT, 2018*
- Lingshui Scholarship (First Prize) (Top 5%) *Dalian City, 2016*
- China National Scholarship (Top 1%) *Ministry of Education, 2015*
- Awarded Learning Excellence Award (First Prize) (Top 5%) *DUT, 2015/16*

Publications

Conference Publications

1. **Similarity Reasoning and Filtration for Image-Text Matching**

Haiwen Diao, Ying Zhang, Lin Ma, Huchuan Lu

Conference on Artificial Intelligence (AAAI), 2021. (google citations: 170+) [Code]

Journal Publications

2. **Plug-and-Play Regulators for Image-Text Matching**

Haiwen Diao, Ying Zhang, Wei Liu, Xiang Ruan, Huchuan Lu

IEEE Transactions on Image Processing (TIP), 2023. [Code]

Preprints (Under Review)

3. **Deep Boosting Learning: a Brand-new Cooperative Fashion for Image-Text Matching**

Haiwen Diao, Ying Zhang, Shang Gao, Xiang Ruan, Huchuan Lu

Submitted to TIP, 2024 (Major Revision). [Code]

4. **GSSF: Generalized Structural Sparse Function for Deep Cross-modal Metric Learning**

Haiwen Diao, Ying Zhang, Shang Gao, Jiawen Zhu, Huchuan Lu, Long Chen

Submitted to IJCAI, 2024. [Code]

5. **UniPT: Universal Parallel Tuning for Transfer Learning with Efficient Parameter and Memory**

Haiwen Diao, Bo Wan, Ying Zhang, Xu Jia, Huchuan Lu, Long Chen

Submitted to CVPR, 2024. [Code]

6. **Transfer Anything: Synthesizing High Accuracy and Efficient Memory for Resource-Limited Transfer Learning**

Haiwen Diao, Bo Wan, Xu Jia, Huchuan Lu, Long Chen

Submitted to CVPR, 2024. [Code]

Patents Declaration

6. **An Image Retrieval Method and Related Device**

Huchuan Lu, Haiwen Diao, Ying Zhang, Lin Ma

CN111914113A, China, 2020.

Professional Services

Journal Reviewer:

IEEE Transactions on Image Processing

Conference Reviewer:

CVPR (2022 - 2024), ICCV (2023), ECCV (2022), AAAI (2023 - 2024)

References

- **Prof. Huchuan Lu (Ph.D. Advisor)**

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- **Dr. Lin Ma (Industrial Director)**

Meituan AI Lab

Chaoyang, Beijing, 100102, China

Email: forest.linma@gmail.com

- **Dr. XinLong Wang (Industrial Director)**

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Haidian District, Beijing, 100871, China

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- **Dr. Ying Zhang (Collaborator)**

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Shenzhen, Guangdong 518000, China
Email: zydl0907@gmail.com

- **Asst. Prof. Long Chen (Remote Director)**

Hong Kong University of Science and Technology (HKUST)
Clear Water Bay, Kowloon, Hong Kong, 999077, China
Email: longchen@cse.ust.hk

- **Ph.D. Bo Wan (Collaborator)**

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