

# BINHUI XIE (谢斌辉)

Ph.D. Student@Beijing Institute of Technology

+86-18811379626 | binhuixie@bit.edu.cn | Google Scholar | GitHub | HomePage

## EDUCATION

### Beijing Institute of Technology

Beijing, China

Ph.D. Student in School of Computer Science and Technology

Sep 2019 – 2025 (expected)

- Advisor: Prof. Shuang Li and Prof. Chi Harold Liu

### Beijing Institute of Technology

Beijing, China

B.Eng. in Software Engineering

Sep 2015 – Jul 2019

- GPA: 3.5/4.0; Excellent Undergraduate

## RESEARCH EXPERIENCE

### Beijing Academy of Artificial Intelligence

Beijing, China

Research Intern in multimodal and vision research center

Sep 2022 – Apr 2023

- Mentored by Yue Cao and closely collaborated with Xinlong Wang, Yuxin Fang, Wen Wang, Quan Sun on the project “EVA: Visual Representation Fantasies”.

## PUBLICATIONS

Binhui Xie is currently a Ph.D. student at Beijing Institute of Technology, focusing on transfer learning, data-efficient learning, and multimodal learning. He has published several works in top-tier journals and conferences including TPAMI, NeurIPS, ICML, CVPR etc. Two were selected as **ESI Highly Cited Paper**. His work of EVA was selected as the **7th most influential paper in CVPR 2023**. He has collected **1,300+ citations** according to **Google Scholar**. The detailed paper list is presented as follows.

### Selected Publications

[1]. **EVA: Exploring the Limits of Masked Visual Representation Learning at Scale**

Yuxin Fang, Wen Wang, **Binhui Xie**, Quan Sun, Ledell Yu Wu, Xinggang Wang, Tiejun Huang, Xinlong Wang, Yue Cao

IEEE Conference on Computer Vision and Pattern Recognition (CVPR, **Highlight**), 2023.

**CVPR 2023 Top-10 Influential Papers (Rank 7)**

- [2]. **SePiCo: Semantic-Guided Pixel Contrast for Domain Adaptive Semantic Segmentation**  
Binhui Xie, Shuang Li, Mingjia Li, Chi Harold Liu, Gao Huang, Guoren Wang  
*IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI, IF: 23.6)*, 2023.  
 **ESI Highly Cited Paper**
- [3]. **Generalized Domain Conditioned Network**  
Shuang Li, Binhui Xie, Qiuxia Lin, Chi Harold Liu, Gao Huang, Guoren Wang  
*IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI, IF: 23.6)*, 2022.
- [4]. **Annotator: A Generic Active Learning Baseline for LiDAR Semantic Segmentation**  
Binhui Xie, Shuang Li, Qingju Guo, Chi Harold Liu, Xinjing Cheng  
*Advances in Neural Information Processing Systems (NeurIPS)*, 2023.
- [5]. **Towards Fewer Annotations: Active Learning via Region Impurity and Prediction Uncertainty for Domain Adaptive Semantic Segmentation**  
Binhui Xie, Longhui Yuan, Shuang Li, Chi Harold Liu, Xinjing Cheng  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR, Oral)*, 2022.
- [6]. **Active Learning for Domain Adaptation: An Energy-based Approach**  
Binhui Xie, Longhui Yuan, Shuang Li, Chi Harold Liu, Xinjing Cheng, Guoren Wang  
*AAAI Conference on Artificial Intelligence (AAAI)*, 2022.
- [7]. **A Collaborative Alignment Framework of Transferable Knowledge Extraction for Unsupervised Domain Adaptation**  
Binhui Xie, Shuang Li, Fangrui Lv, Chi Harold Liu, Guoren Wang, Dapeng Wu  
*IEEE Transactions on Knowledge and Engineering (TKDE)*, 2023.  
 **ESI Highly Cited Paper**
- [8]. **VBLC: Visibility Boosting and Logit-Constraint Learning for Domain Adaptive Semantic Segmentation under Adverse Conditions**  
Mingjia Li\*, Binhui Xie\* (co-first author), Shuang Li, Chi Harold Liu, Xinjing Cheng  
*AAAI Conference on Artificial Intelligence (AAAI, Oral)*, 2023.
- [9]. **Robust Test-Time Adaptation in Dynamic Scenarios**  
Longhui Yuan, Binhui Xie, Shuang Li  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.
- [10]. **Simultaneous Semantic Alignment Network for Heterogeneous Domain Adaptation**  
Shuang Li, Binhui Xie, Jiashu Wu, Ying Zhao, Chi Harold Liu, Zhengming Ding  
*ACM International Conference on Multimedia (MM)*, 2020.

## Full Publications

- [11]. **Enhancing Cross-Modal Fine-Tuning with Gradually Intermediate Modality Generation**  
Lincan Cai, Shuang Li, Wenxuan Ma, Jingxuan Kang, **Binhui Xie**, Zixun Sun, Chengwei Zhu  
*International Conference on Machine Learning (ICML)*, 2024.
- [12]. **Critical Classes and Samples Discovering for Partial Domain Adaptation**  
Shuang Li, Kaixiong Gong, **Binhui Xie**, Chi Harold Liu, Weipeng Cao, Song Tian  
*IEEE Transactions on Cybernetics (TYCB)*, 2023.
- [13]. **Joint Semantic Transfer Network for IoT Intrusion Detection**  
Jiashu Wu, Yang Wang, **Binhui Xie**, Shuang Li, Hao Dai, Kejiang Ye, Chengzhong Xu  
*IEEE Internet of Things Journal (IoTJ)*, 2023.
- [14]. **VisDA 2022 Challenge: Domain Adaptation for Industrial Waste Sorting**  
Dina Bashkirova, Samarth Mishra, Diala Lteif, Piotr Teterwak, Donghyun Kim, Fadi Alladkani, James Akl, Berk Calli, Sarah Adel Bargal, Kate Saenko, Daehan Kim, Minseok Seo, YoungJin Jeon, Dong-Geol Choi, Shahaf Etdedgui, Raja Giryes, Shady Abu-Hussein, **Binhui Xie**, Shuang Li  
*Proceedings of the NeurIPS 2022 Competitions Track*, 2022.
- [15]. **Bi-Classifier Determinacy Maximization for Unsupervised Domain Adaptation**  
Shuang Li, Fangrui Lv, **Binhui Xie**, Chi Harold Liu, Jian Liang, Chen Qin  
*AAAI Conference on Artificial Intelligence (AAAI)*, 2021.
- [16]. **Domain Conditioned Adaptation Network**  
Shuang Li, Chi Harold Liu, Qiuxia Lin, **Binhui Xie**, Zhengming Ding, Gao Huang, Jian Tang  
*AAAI Conference on Artificial Intelligence (AAAI)*, 2020.
- [17]. **Discriminative Transfer Feature and Label Consistency for Cross-Domain Image Classification**  
Shuang Li, Chi Harold Liu, Limin Su, **Binhui Xie**, Zhengming Ding, CL Philip Chen, Dapeng Wu  
*IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2020.
- [18]. **Joint Adversarial Domain Adaptation**  
Shuang Li, Chi Harold Liu, **Binhui Xie**, Limin Su, Zhengming Ding, Gao Huang  
*ACM International Conference on Multimedia (MM)*, 2019.

## AWARDS AND HONORS

---

- “Xu Teli”Scholarship（徐特立奖学金，**北理工最高荣誉奖学金**），Beijing Institute of Technology, 2024.
- Excellent Doctoral Dissertation Fund（优秀博士学位论文育苗基金），Beijing Institute of Technology, 2024.
- Top Reviewers & Scholar Award, NeurIPS, 2023.

- **National Scholarship** (国家奖学金, **Top 2% in BIT**), Ministry of Education of China, 2023.
- **3rd place**, VisDA Challenge@NeurIPS, 2022.
- **CETC GUORUI Scholarship** (国瑞奖学金), CETC, 2021.
- **Excellent Undergraduate & Graduation Thesis**, Beijing Institute of Technology, 2019.

## ACADEMIC SERVICES

---

**Conference Reviewer** ICML'24, ICLR'24/23, NeurIPS'23, CVPR'24/23/22/21, ICCV'23/21, ECCV'24/22...

- **Top Reviewers**, NeurIPS, 2023

**Journal Reviewer** T-PAMI, IJCV, T-IP, T-KDE, T-CSVT, Pattern Recognition, T-IV...

**Workshop Organizer** Student Workshop@VALSE (2022)

**Teaching Assistant** Machine Learning Essentials, Spring 2021 & Spring 2022

## INVITED TALKS

---

- 2023.11, **AI TIME** (online), A Generic Active Learning Baseline in LiDAR Semantic Segmentation
- 2023.4, **VALSE** (recorded), Data-Efficient Semantic Segmentation.
- 2022.6, **ReadPaper** (recorded), Active Learning for Adaptive Semantic Segmentation.
- 2022.6, **Synced** (online), Towards Fewer Annotations for Semantic Segmentation.
- 2022.5, **Zhidx Course** (online), Domain Adaptation meets Active Learning.
- 2022.03, **AI Drive** (online), Energy-based Active Domain Adaptation.
- 2021.10, **VALSE** (Hangzhou), spotlight & poster, Generalized Domain Conditioned Adaptation.