

BINHUI XIE (谢斌辉)

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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

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**, **TKDE**, **NeurIPS**, **CVPR**, **AAAI**, 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 **1000+ citations** according to **Google Scholar**. The detailed paper list is presented as follows.

Selected Publications

- [1]. 🏆 **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
- [2]. **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.
- [3]. 🏆 **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

- [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]. **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)
- [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]. **Joint Adversarial Domain Adaptation**
Shuang Li, Chi Harold Liu, Binhui Xie, Limin Su, Zhengming Ding, Gao Huang
ACM International Conference on Multimedia (MM), 2019.
- [12]. **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.

- [13]. **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.
- [14]. **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.
- [15]. **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.
- [16]. **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.
- [17]. **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 Etedgui, Raja Giryes, Shady Abu-Hussein, **Binhui Xie**, Shuang Li
Proceedings of the NeurIPS 2022 Competitions Track, 2022.

Technical Reports

- **Few Clicks Suffice: Active Test-Time Adaptation for Semantic Segmentation**
Longhui Yuan, Shuang Li, Zhuo He, **Binhui Xie**
arXiv preprint arXiv:2312.01835.
- **Generalized Robust Test-Time Adaptation in Continuous Dynamic Scenarios**
Shuang Li, Longhui Yuan, **Binhui Xie**, Tao Yang
arXiv preprint arXiv:2310.04714.
- **SPCL: A New Framework for Domain Adaptive Semantic Segmentation via Semantic Prototype-based Contrastive Learning**
Binhui Xie, Mingjia Li, Shuang Li
arXiv preprint arXiv:2111.12358.
- **Semantic Distribution-aware Contrastive Adaptation for Semantic Segmentation**
Shuang Li, **Binhui Xie**, Bin Zang, Chi Harold Liu, Xinjing Cheng, Ruigang Yang, Guoren Wang
arXiv preprint arXiv:2105.05013.

PROFESSIONAL SERVICE

Workshop Organizer Student Workshop@VALSE (2022)

Conference Reviewer ICML24, ICLR24/23, NeurIPS23 (**Top Reviewers@2023**), CVPR24/23/22/21, ICCV23/21, ECCV24/22, AAAI24/23/22/21...

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

Teaching Assistant Machine Learning Essentials, Spring 2021 & Spring 2022

AWARDS AND HONORS

- **Scholar Award & Top Reviewers**, NeurIPS, 2023.
- **Young Scientist Group** (青源会), BAAI, 2023.
- **National Scholarship** (国家奖学金), Ministry of Education of China, 2023.
- **3rd place**, VisDA Challenge@NeurIPS, 2022.
- **Special Academic Scholarship** (特等学业奖学金), Beijing Institute of Technology, 2022, 2023.
- **CETC GUORUI Scholarship** (国瑞奖学金), CETC, 2021.
- **Excellent Undergraduate & Graduation Thesis**, Beijing Institute of Technology, 2019.

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.