

# Jiayi Shen

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## Professional Summary

As a Ph.D. candidate at the University of Amsterdam, my research primarily revolves around **multi-task learning**. To address the data-insufficiency problem in this field, I propose various models based on: probabilistic modeling, graphical learning, and meta-learning, including neural processes. My current focus is multi-task optimization for dense prediction tasks. During my Master's project, I gained experience in transfer learning and zero-shot learning.

## Education

### University van Amsterdam

PhD in CS

Amsterdam

June. 2020 - Present

### Beihang University

MS in EE

Beijing

Sep. 2017 - Feb. 2020

### Beihang University

BS in EE

Beijing

Sep. 2013 - Jun. 2017

## Publications

- [1] **Shen, Jiayi** and Zhen, Xiantong and Wang, Cheems and Worring, Marcel "Episodic Multi-Task Learning with Heterogeneous Neural Processes," [NeurIPS, 2023.] [Spotlight](#).
- [2] **Shen, Jiayi** and Xiao, Zehao and Zhen, Xiantong and Snoke, Cees and Worring, Marcel "Association Graph Learning for Multi-Task Classification with Category Shifts," [NeurIPS, 2022.]
- [3] **Shen, Jiayi** and Zhen, Xiantong and Worring, Marcel and Shao, Ling "Variational multi-task learning with gumbel-softmax priors," [NeurIPS, 2021.]
- [4] Xiao\*, Zehao and **Shen\*, Jiayi** and Zhen, Xiantong and Shao, Ling and Snoek, Cees "A bit more bayesian: Domain-invariant learning with uncertainty." [ICML, 2021.] (co-first author)
- [5] **Shen, Jiayi** and Xiao, Zehao and Zhen, Xiantong and Zhang, Lei "Spherical zero-shot learning," [IEEE Trans. CSVT, 2021.]
- [6] **Shen, Jiayi** and Wang, Haochen and Zhang, Anran and Qiu, Qiang and Zhen, Xiantong and Cao, Xianbin "Model-Agnostic Metric for Zero-Shot Learning," [WACV, 2020.]
- [7] **Shen, Jiayi** and Cao, Xianbin and Li, Yan and Xu, Dong "Feature adaptation and augmentation for cross-scene hyperspectral image classification," [IEEE GRSL, 2018.]
- [8] Du, Yingjun and **Shen, Jiayi** and Zhen, Xiantong and Snoek, Cees "SuperDisco: Super-Class Discovery Improves Visual Recognition for the Long-Tail," [CVPR, 2023.]
- [9] Du, Yingjun and **Shen, Jiayi** and Zhen, Xiantong and Snoek, Cees "EMO: Episodic Memory Optimization for Few-Shot Meta-Learning," [CoLLAs, 2023.]
- [10] Wang, Haochen and **Shen, Jiayi** and Liu, Yongtuo and Gao, Yan and Gavves, Efstratios "NFormer: Robust Person Re-identification with Neighbor Transformer," [CVPR, 2022.]
- [11] Zhang, Lei and Du, Yingjun and **Shen, Jiayi** and Zhen, Xiantong "Learning to Learn with Variational Inference for Cross-Domain Image Classification," [IEEE Trans. Multimedia, 2022.]
- [12] Zhang, Anran and **Shen, Jiayi** and Xiao, Zehao and Zhu, Fan and Zhen, Xiantong and Cao, Xianbin and Shao, Ling "Relational attention network for crowd counting," [ICCV, 2019.]
- [13] Zhang, Anran and Yue, Lei and **Shen, Jiayi** and Zhu, Fan and Zhen, Xiantong and Cao, Xianbin and Shao, Ling "Attentional neural fields for crowd counting," [ICCV, 2019.]

## Awards and Honors

2020	Scholarship: "National Scholarship for Postgraduates"	Beijing
2020	Honorary Title: "Outstanding Postgraduates of Beihang University"	Beijing
2017	Honorary Title: "Outstanding Graduates of Beihang University"	Beijing

## Volunteer Services

### Journal Reviewer

TPAMI, TIP

### Conference Reviewer

NeurIPS23, ICCV23, CVPR23, AAAI21, CVPR20