

Chunhui Zhang

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EDUCATION	<i>Ph.D. student, Computer Science</i> Dartmouth College, Hanover, New Hampshire, US Guarini School of Graduate and Advanced Studies Advisor: Prof. Soroush Vosoughi	Sep. 2023 - Present
	<i>Master of Science, Computer Science</i> Brandeis University, Waltham, Massachusetts, US Michtom School of Computer Science GSAS Fellowship	Sep. 2021 - Aug. 2023
	<i>B.S., Computer Science</i> Northeastern University, China School of Computer and Communication Engineering GPA: 89.02/100.00 Outstanding Thesis Award, Mentor: Prof. Xiaoming Yuan	Sep. 2017 - Jun. 2021
EXPERIENCE	Research Assistant The Chinese University of Hong Kong, China Shenzhen Research Institute of Big Data (SRIBD) Mentors: Prof. Lei Cheng, Prof. Zhen Li Developed a differentiable method for neural architecture search that does require much fewer GPU hours (80% computational cost/1,000 GPU hours reduction) on ImageNet.	Nov. 2018-Aug. 2021
RESEARCH INTEREST	<ul style="list-style-type: none">• Trustworthy Machine Learning (<i>e.g., my ICLR'23 on Robustness</i>)• Efficient Machine Learning (<i>e.g., my ICML'23 and TMLR'23 on Sparse Contrastive Pre-training</i>)• Generative AI (<i>e.g., my CIKM'22 on Vision-Language SSL</i>)• Vision Foundation Model (<i>e.g., my CIKM'22, AAAI'W22, IEEE-IoTJ'22, ISBI'W19</i>)• Large Pretrained Model (<i>In-progress work</i>)	
PAPER	<ul style="list-style-type: none">• Chunhui Zhang, Chao Huang, Yijun Tian, Qianlong Wen, Zhongyu Ouyang, Youhuan Li, Yanfang Ye, Chuxu Zhang. When Sparsity Meets Contrastive Models: Less Data Can Bring Better Class-Balanced Representations, <i>Fortieth International Conference on Machine Learning (ICML)</i>, 2023. .• Chunhui Zhang, Yijun Tian, Mingxuan Ju, Zheyuan Liu, Yanfang Ye, Nitesh Chawla, and Chuxu Zhang. Chasing All-Round Graph Representation Robustness: Model, Training, and Optimization, <i>The 11th International Conference on Learning Representations (ICLR)</i>, 2023.• Chunhui Zhang, Hongfu Liu, Jundong Li, Yanfang Ye, Chuxu Zhang. Mind the Gap: Mitigating the Distribution Gap in Graph Few-shot Learning, <i>Transactions on Machine Learning Research (TMLR)</i>, 2023.• Zheyuan Liu*, Chunhui Zhang*, Yijun Tian, Erchi Zhang, Chao Huang, Yanfang Ye and Chuxu Zhang. Fair Graph Representation Learning via Diverse Mixture-of-Experts, <i>International World Wide Web Conference (WWW)</i>, 2023. <i>Note: Co-first author Liu is an undergraduate who was mentored by me. A pleasant first experience as a mentor. Thanks Liu!</i>	

- Zhichun Guo, **Chunhui Zhang**, Yujie Fan, Yijun Tian, Chuxu Zhang, and Nitesh Chawla. Boosting Graph Neural Networks via Adaptive Knowledge Distillation, *Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, 2023.
- Yijun Tian, Kaiwen Dong, **Chunhui Zhang**, Chuxu Zhang, and Nitesh Chawla. Heterogeneous Graph Masked Autoencoders, *Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, 2023.
- Han Yue, **Chunhui Zhang**, Chuxu Zhang, and Hongfu Liu. Label-invariant Augmentation for Semi-Supervised Graph Classification, *Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)*, 2022.
- Yiyue Qian, **Chunhui Zhang**, Yiming Zhang, Qianlong Wen, Yanfang Ye, and Chuxu Zhang. Co-Modality Imbalanced Graph Contrastive Learning, *Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)*, 2022.
- **Chunhui Zhang**, Chao Huang, Youhuan Li, Xiangliang Zhang, Yanfang Ye, and Chuxu Zhang. Look Twice as Much as You Say: Scene Graph Contrastive Learning for Self-Supervised Image Caption Generation, *ACM International Conference on Information and Knowledge Management (CIKM)*, 2022.
- Jiele Wu, **Chunhui Zhang**, Zheyuan Liu, Erchi Zhang, Steven Wilson, and Chuxu Zhang. GraphBERT: Bridging Graph and Text for Malicious Behavior Detection on Social Media, *IEEE International Conference on Data Mining (ICDM)*, 2022.
- **Chunhui Zhang**, Chao Huang, Yijun Tian, Qianlong Wen, Zhongyu Ouyang, Youhuan Li, Yanfang Ye, Chuxu Zhang. Diving into Unified Data-Model Sparsity for Class-Imbalanced Graph Representation Learning, *Thirty-sixth Conference on Neural Information Processing Systems-New Frontiers in Graph Learning Workshop (NeurIPS GLFrontiers Workshop)*, 2022 & *37th AAAI Conference on Artificial Intelligence-Workshop on DL-Hardware Co-Design for AI Acceleration (AAAI DCAA workshop)*, 2023 *Best Paper Runner-up Award*.
- Qianlong Wen, Zhongyu Ouyang, **Chunhui Zhang**, Yiyue Qian, Yanfang Ye, Chuxu Zhang. Adversarial Cross-View Disentangled Graph Contrastive Learning, *Thirty-sixth Conference on Neural Information Processing Systems-New Frontiers in Graph Learning Workshop (NeurIPS GLFrontiers Workshop)*, 2022.
- **Chunhui Zhang**^{*}, Yongyuan Liang^{*}, Yifan Jiang^{*}. AdaSearch: Many-to-One Unified Neural Architecture Search via A Smooth Curriculum, *AAAI-22 Workshop: Learning Network Architecture During Training*.
- **Chunhui Zhang**, Xiaoming Yuan, Qianyun Zhang, Guangxu Zhu, Lei Cheng, and Ning Zhang. Towards Tailored Models on Private AIoT Devices: Federated Direct Neural Architecture Search, *IEEE Internet of Things Journal (IEEE-IoTJ)*, Feb. 2022.
- Qin Wang, Weibing Zhao, **Chunhui Zhang**, Liye Zhang, Changmiao Wang, Zhen Li, Shuguang Cui, Guanbin Li. 3d Enhanced Multi-scale Network For Thoracic Organs Segmentation, *IEEE International Symposium on Biomedical Imaging Challenge (ISBI-W)*, 2019

SKILLS

Programming Skills: C++, Python, PyTorch, MATLAB, Java, Git, Hugging Face, LLM, PyG, DGL
Operating System: Linux

ACTIVITIES

- Publicity Chair for KDD2023 International Workshop on Resource-Efficient Learning for Knowledge Discovery
- Program Committee/Conference reviewer for NeurIPS 2023, AAAI 2023, NeurIPS 2022, CIKM 2022, ICDM 2022, IEEE HPCC 2020

- Journal reviewer for IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Network Science and Engineering, ACM Transactions on Intelligent Systems and Technology, Neurocomputing, Big Data

TEACHING EXPERIENCE

- **Graph Mining**, 2023 Spring Semester, 2021 Fall Semester, Brandeis University
- **Deep Learning**, 2022 Spring Semester, 2022 Fall Semester, Brandeis University

AWARDS

- Brandeis Graduate School of Arts and Sciences Fellowship
- Brandeis GSAS PhD Student Conference Award
- Brandeis Travel and Research Grant
- CIKM Travel Grant Award 2022
- AAAI-DCAA 2023 Best Paper Runner-up Award 2023

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