

Tiexin Qin

PhD at CityU

My research interests include machine learning for complex dynamical systems, neural differential equations, transfer learning, and their various applications.

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Education

City University of Hong Kong , Doctor of Philosophy Department of Electrical Engineering Supervisor: Haoliang Li	2021 - 2025
Nanjing University , Master of Computer Technology Department of Computer Science and Technology Supervisor: Yinghuan Shi	2018 - 2021
China University of Mining and Technology , Bachelor of Engineering Department of Computer Science and Technology <i>Graduated with Outstanding Honor</i>	2014 - 2018

Experience

University of Oxford, Mathematical Institute , Visiting scholar Characterization of molecular dynamics, supervised by Terry Lyons	Jan 2024 - Apr 2024
Meituan, AI lab , Research Intern Video keyframe extraction for content review, supervised by Lin Ma	Jul 2020 - Nov 2020

Awards and Honors

Research Tuition Scholarship Student with outstanding academic performance in City University of Hong Kong	2024
Outstanding Postgraduate Awarded in Nanjing University	2021
Outstanding Undergraduate Awarded to Top 10% students in China University of Mining and Technology	2018
China National Scholarship The highest scholarship for undergraduate students studying in China	2016

Publications ([Google Scholar](#))

- Torben Berndt, Benjamin Walker, **Tiexin Qin**, Jan Stühmer, Andrey Kormilitzin. “[Permutation Equivariant Neural Controlled Differential Equations for Dynamic Graph Representation Learning](#)”. *Neural Information Processing Systems, (NeurIPS 2025)*
- Kecheng Chen, Xinyu Luo, **Tiexin Qin**, Jie Liu, Hui Liu, Victor Ho Fun Lee, Hong Yan, Haoliang Li. “[Test-time Adaptation for Foundation Medical Segmentation Model without Parametric Updates](#)”. *International Conference on Computer Vision, (ICCV 2025)*

3. **Tiexin Qin**, Hong Yan, Haoliang Li. “Generalize to New Dynamical Systems via Frequency Domain Adaptation”. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, (TPAMI 2025)
4. Jie Liu, **Tiexin Qin**, Hui Liu, Yilei Shi, Lichao Mou, Xiao Xiang Zhu, Shiqi Wang, Haoliang Li. “Q-PART: Quasi-Periodic Adaptive Regression with Test-time Training for Pediatric Left Ventricular Ejection Fraction Regression”. *The IEEE / CVF Computer Vision and Pattern Recognition Conference*, (CVPR 2025)
5. **Tiexin Qin**, Mengxu Zhu, Chunyang Li, Terry Lyons, Hong Yan, Haoliang Li. “Deep Signature: Characterization of Large-Scale Molecular Dynamics”. *International Conference on Learning Representations*, (ICLR 2025)
6. Kecheng Chen, Pingping Zhang, **Tiexin Qin**, Shiqi Wang, Hong Yan, Haoliang Li. “Test-time adaptation for image compression with distribution regularization”. *International Conference on Learning Representations*, (ICLR 2025)
7. Kecheng Chen, **Tiexin Qin**, Victor Ho-Fun Lee, Hong Yan, Haoliang Li. “Learning Robust Shape Regularization for Generalizable Medical Image Segmentation”. *IEEE Transactions on Medical Imaging* (TMI 2024)
8. Benjamin Walker, Andrew D McLeod, **Tiexin Qin**, Yichuan Cheng, Haoliang Li, Terry Lyons. “Log Neural Controlled Differential Equations: The Lie Brackets Make a Difference”. *International Conference on Machine Learning*, (ICML 2024)
9. **Tiexin Qin**, Shiqi Wang, Haoliang Li. “Evolving Domain Generalization via Latent Structure-Aware Sequential Autoencoder”. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, (TPAMI 2023)
10. Wenbin Li, Chuanqi Dong, Pinzhuo Tian, **Tiexin Qin**, Xuesong Yang, Ziyi Wang, Jing Huo, Yinghuan Shi, Lei Wang, Yang Gao, Jiebo Luo. “LibFewShot: A Comprehensive Library for Few-shot Learning”. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, (TPAMI 2023)
11. **Tiexin Qin**, Shiqi Wang, Haoliang Li. “Generalizing to Evolving Domains with Latent Structure-Aware Sequential Autoencoder”. *International Conference on Machine Learning*, (ICML 2022)
12. Ziteng Liu, Yinghuan Shi, Hongwei Chen, **Tiexin Qin**, Xuejie Zhou, Jun Huo, Hao Dong, Xiao Yang, Xiangdong Zhu, Xuening Chen, Li Zhang, Mingli Yang, Yang Gao, Jing Ma. “Machine Learning on Properties of Multiscale Multisource Hydroxyapatite Nanoparticles Datasets with Different Morphologies and Sizes”. *npj Computational Materials* 2021
13. **Tiexin Qin**, Ziyuan Wang, Kelei He, Yinghuan Shi, Yang Gao, Dinggang Shen. “Automatic Data Augmentation via Deep Reinforcement Learning for Effective Kidney Tumor Segmentation”. *IEEE International Conference on Acoustics, Speech and Signal Processing*, (ICASSP 2020)
14. **Tiexin Qin**, Benjamin Walker, Terry Lyons, Hong Yan, Haoliang Li. “Learning Dynamic Graph Embeddings with Neural Controlled Differential Equations”. *In submission to IEEE Transactions on Pattern Analysis and Machine Intelligence*, (TPAMI, Major Revision)
15. **Tiexin Qin**, Wenbin Li, Yinghuan Shi, Yang Gao. “Diversity Helps: Unsupervised Few-shot Learning via Distribution Shift-based Data Augmentation”. *arXiv:2004.05805*
16. Yinghuan Shi, **Tiexin Qin**, Yong Liu, Jiwen Lu, Yang Gao, Dinggang Shen. “Automatic data augmentation by learning the deterministic policy”. *arXiv:1910.08343*
17. **Tiexin Qin**. “Learning to Evolve: Machine Learning for Complex Dynamic Systems”. *Doctoral Thesis*, 2025.

Teaching

CityU EE5434, Machine Learning for Signal Processing Applications Teaching Assistant	2022, 2023
CityU EE5811, Topics in Computer Vision Teaching Assistant	2022
CityU EE3206, Java Programming & Application Teaching Assistant	2021,2024,2025

Academic Service

- **Conference Reviewer**
SIGKDD (2022), ICME (2022), ICASSP (2023, 2024), WACV (2023, 2024), MMSP (2022), WWW (2024), NeurIPS (2024, 2025), ICLR (2025), CVPR (2025), ICML (2025), ICCV (2025), AAAI(2026)
- **Journal Reviewer**
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
Journal of Intelligent & Fuzzy Systems

Professional Skills

Programming language: Python, C++, Java, MATLAB, Latex.
Deep learning frameworks: Pytorch, Keras.