

XINGZHE HE

xingzhe@cs.ubc.ca

[Homepage](#)

EDUCATION

University of British Columbia, Canada

2020-present

Ph.D. in Computer Science

advised by Professor Helge Rhodin

Rutgers University, USA

2017-2019

Master of Science in Data Science

University of Liverpool, UK

2015-2017

Bachelor of Science with Honors in Mathematics with Finance

Xi'an Jiaotong-Liverpool University

2013-2015

Bachelor of Economics with Honors in Financial Mathematics

PUBLICATIONS

1. LatentKeypointGAN: Controlling GANs via Latent Keypoints [\[pdf\]](#) [\[project\]](#)
Xingzhe He, Bastian Wandt, Helge Rhodin
Arxiv
2. Symplectic Neural Networks in Taylor Series Form for Hamiltonian Systems [\[pdf\]](#) [\[project\]](#)
Yunjin Tong*, Shiyong Xiong*, **Xingzhe He**, Guanghan Pan, Bo Zhu
Journal of Computational Physics
3. Nonseparable Symplectic Neural Networks [\[pdf\]](#) [\[project\]](#)
Shiyong Xiong, Yunjin Tong, **Xingzhe He**, Shuqi Yang, Cheng Yang, Bo Zhu
International Conference on Learning Representations (ICLR) 2021
4. Learning Physical Constraints with Neural Projections [\[pdf\]](#) [\[project\]](#)
Shuqi Yang, **Xingzhe He**, Bo Zhu
Conference on Neural Information Processing Systems (NeurIPS) 2020
5. AdvectiveNet: An Eulerian-Lagrangian Fluidic Reservoir for Point Cloud Processing [\[pdf\]](#)
Xingzhe He, Helen L. Cao, Bo Zhu
International Conference on Learning Representations (ICLR) 2020
6. Soft Multicopter Control using Neural Dynamics Identification [\[pdf\]](#) [\[video\]](#)
Yitong Deng, Yaorui Zhang, **Xingzhe He**, Shuqi Yang, Yunjin Tong, Michael Zhang, Daniel M. DiPietro, Bo Zhu
Conference on Robot Learning (CoRL) 2020

EXPERIENCE

Visiting Researcher

Jan 2019 - Aug 2020

Dartmouth College, advised by Professor Bo Zhu

Hanover, NH, USA

- Applied deep learning to solve physics problems, including solving PDEs and predicting interaction between objects and particles.

- Applied knowledge of physics to improve deep learning and make neural networks more interpretable.
- Gave tutorials on computer vision, and neural-based physics to visiting students and undergrad students.

Research Intern

Satsafe

Jun - Aug 2017

Liverpool, UK

- Developed a machine learning-based scoring system to determine the insurance cost based on GPS trajectories of drivers.

Research Intern

Barnett Waddingham

Jul - Nov 2016

Liverpool, UK

- Developed a risk model for universities to determine the insurance cost.