

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. AutoLink: Self-supervised Learning of Human Skeletons and Object Outlines by Linking Keypoints [\[pdf\]](#) [\[project\]](#)
Xingzhe He, Bastian Wandt, Helge Rhodin
NeurIPS 2022 (Spotlight ~ 3% accept rate)
2. GANSeg: Learning to Segment by Unsupervised Hierarchical Image Generation [\[pdf\]](#)
Xingzhe He, Bastian Wandt, Helge Rhodin
CVPR 2022
3. LatentKeypointGAN: Controlling GANs via Latent Keypoints [\[pdf\]](#) [\[project\]](#)
Xingzhe He, Bastian Wandt, Helge Rhodin
CVPRW 2022
4. 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
5. Nonseparable Symplectic Neural Networks [\[pdf\]](#) [\[project\]](#)
Shiyong Xiong, Yunjin Tong, **Xingzhe He**, Shuqi Yang, Cheng Yang, Bo Zhu
ICLR 2021
6. Learning Physical Constraints with Neural Projections [\[pdf\]](#) [\[project\]](#)
Shuqi Yang, **Xingzhe He**, Bo Zhu
NeurIPS 2020
7. AdvectiveNet: An Eulerian-Lagrangian Fluidic Reservoir for Point Cloud Processing [\[pdf\]](#)
Xingzhe He, Helen L. Cao, Bo Zhu
ICLR 2020
8. Soft Multicopter Control using Neural Dynamics Identification [\[pdf\]](#) [\[video\]](#)
Yitong Deng, Yaorui Zhang, **Xingzhe He**, Shuqi Yang, Yunjin Tong, Michael Zhang, Daniel M.

EXPERIENCE

Research Intern

Jun 2022 - Nov 2022

Flawless AI, advised by Pablo Garrido and Gaurav Bharaj

Los Angeles, CA, USA

- Detect 3D keypoint from single static images with few-shot 2D keypoint annotations.
- Model mouth area with sparse 3D keypoints.

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

Jun - Aug 2017

Satsafe

Liverpool, UK

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

Research Intern

Jul - Nov 2016

Barnett Waddingham

Liverpool, UK

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

PROGRAMMING LANGUAGES

Python