XINGZHE HE

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Homepage

EDUCATION

University of British Columbia, Canada *2020-2024*
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

SELECTED PUBLICATIONS

1. A Data Perspective on Enhanced Identity Preservation for Diffusion Personalization [pdf]
   Xingzhe He, Zhiwen Cao, Nicholas Kolkin, Lantao Yu, Helge Rhodin, Ratheesh Kalarot
   In Submission
2. Unsupervised keypoints from pretrained diffusion models [pdf] [project]
   Eric Hedlin, Gopal Sharma, Shweta Mahajan, **Xingzhe He**, Hossam Isack, Abhishek Kar Helge Rhodin, Andrea Tagliasacchi, Kwang Moo Yi
   CVPR 2024
3. Few-shot Geometry-Aware Keypoint Localization [pdf] [project]
   Xingzhe He, Gaurav Bharaj, David Ferman, Helge Rhodin, Pablo Garrido
   CVPR 2023
4. LatentKeypointGAN: Controlling GANs via Latent Keypoints [pdf] [project]
   Xingzhe He, Bastian Wandt, Helge Rhodin
   CRV 2023 (Best Paper Award)
5. AutoLink: Self-supervised Learning of Human Skeletons and Object Outlines by Linking Keypoints [pdf] [project]
   Xingzhe He, Bastian Wandt, Helge Rhodin
   NeurIPS 2022 (Spotlight $\sim$ 3% acceptance rate)
6. GANSeg: Learning to Segment by Unsupervised Hierarchical Image Generation [pdf]
   Xingzhe He, Bastian Wandt, Helge Rhodin
   CVPR 2022
7. Nonseparable Symplectic Neural Networks [pdf] [project]
   Shiying Xiong, Yunjin Tong, **Xingzhe He**, Shuqi Yang, Cheng Yang, Bo Zhu
   ICLR 2021

8. Symplectic Neural Networks in Taylor Series Form for Hamiltonian Systems [pdf] [project]
   Yunjin Tong*, Shiying Xiong*, **Xingzhe He**, Guanghan Pan, Bo Zhu
   Journal of Computational Physics

9. Learning Physical Constraints with Neural Projections [pdf] [project]
   Shuqi Yang, **Xingzhe He**, Bo Zhu
   NeurIPS 2020

10. AdvectiveNet: An Eulerian-Lagrangian Fluidic Reservoir for Point Cloud Processing [pdf]
    Xingzhe He, Helen L. Cao, Bo Zhu
    ICLR 2020

11. 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
    CoRL 2020

12. Neural vortex method: from finite lagrangian particles to infinite dimensional eulerian dynamics [pdf]
    Shiying Xiong, **Xingzhe He**, Yunjin Tong, Yitong Deng, Bo Zhu
    Computers & Fluids

EXPERIENCE

Applied Research Scientist Mar 2024 -
Descript *Full-time Remote in Vancouver*

· Developing video generative models.

Machine Learning Intern Jun 2023 - Sep 2023
Adobe, advised by Zhiwen Cao and Ratheesh Kalarot *San Jose, CA, USA*

· Developing generative models, particularly diffusion personalization models.

Engineering Research Intern (remote) Jun 2022 - Nov 2022
Flawless AI, advised by Pablo Garrido and Gaurav Bharaj *Santa Monica, 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*

· Used statistics for computer graphics and animation.
· Gave tutorials on computer vision to visiting students and undergrad students.

PROGRAMMING LANGUAGES

Python