Xingguang Yan

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Research Statement

My research is focused on how to efficiently represent, process, and generate 3D data, spanning the fields of computer graphics, computer vision, and machine learning. Recent advances of deep unsupervised learning methods (such as GANs, autoregressive models, and score-based models) have unlocked remarkable success in generating text and images. I am interested in harnessing these techniques' potential to synthesize high-quality 3D objects and scenes, which also require more efficient 3D representations.

Education

Simon Fraser University   2022.06 - 2026.09
Computer Science, Ph.D. (expected)
Advisor: *Prof. Andrea Tagliasacchi*

Shenzhen University   2018.09 - 2021.06
Computer Science, M.Eng.
Advisor: *Prof. Hui Huang*
Thesis: Multimodal Shape Completion

Fujian Normal University   2014.09 - 2018.06
Information and Computing Science, B.Sc.

Research Experience

University College London   2019.06 - 2019.10
Academic visit
Advisor: *Prof. Niloy Mitra*

Publications

ShapeFormer: Transformer-based Shape Completion via Sparse Representation,   2022.06
Xingguang Yan, Liqiang Lin, Niloy Mitra, Dani Lischinski, Danny Cohen-Or, Hui Huang
Computer Vision and Pattern Recognition (CVPR), 2022

RPM-Net: Recurrent Prediction of Motion and Parts from Point Cloud,   2019.11
Zihao Yan, Ruizhen Hu, **Xingguang Yan**, Luanmin Chen, Oliver van Kaick, Hao Zhang, Hui Huang
ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2019

Transductive Zero-Shot Learning with Visual Structure Constraint,   2019.11
Ziyu Wan, Dongdong Chen, Yan Li, **Xingguang Yan**, Junge Zhang, Yizhou Yu, Jing Liao
Neural Information Processing Systems (NeurIPS), 2019

Invited Talks

March 1, 2022 ShapeFormer, visual computing seminar of Tel Aviv University.

Teaching

- Introduction to visual computing @ Shenzhen University, 2019 [*course website*] *Teaching assistant*

Technical Skills

- Programming languages：**C/C++**, **Python**, JavaScript, Mathematica, Matlab
- Tools：**Pytorch**, Tensorflow, **libigl**, **Blender**, Eigen, OpenGL, ROS, Gazebo, SLAM, WebGL, three.js, node.js

Language

Mandarin, English (TOEFL 109, 30/30/25/24)

Misc

- I like endurance sports and have finished 1 full-Marathon, 7 half-Marathon and 1 triathlon.
- I won a Bronze medal in National Olympiad in Informatics 2013 (NOI, China), a programming contest.