Lihe Ding

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Beijing Institute of Technology, Beijing

EXPERIENCE

- **Research Assistant in 3DVICI Lab at Tsinghua University**
  Unsupervised single view 3D reconstruction with NeRF (Supervised by Asst. Prof. Li Yi).
  March 2022 to now
- **Internship in Qcraft (self-driving startup)**
  3D detection on Point Clouds (RD Perception).
  June 2021 to March 2022
- **Summer Exchange in MIT**
  Complete the on-campus course of Machine Learning and Artificial Intelligence (MIT EECS).
  July 2019 to August 2019

EDUCATION

- **MA.Sc.Optical Imaging Detection and Recognition Laboratory**
  Beijing Institute of Technology
  September 2020 to Now
- **B.S.Optoelectronic information science and Engineering, GPA: 90.2/100**
  Beijing Institute of Technology
  August 2016 to July 2020

AWARDS & RECOGNITION

- **Xu Teli Scholarship**
  The highest scholarship of Beijing Institute of Technology (President Scholarship).
  2020
- **Innovation and entrepreneurship scholarship of MIIT**
  2019
- **First prize of National Undergraduate optoelectronic Design Competition**
  The title of the competition is to design intelligent robot which can identify and extinguish the fire source
  2018

PUBLICATIONS

- **FH-Net: A Fast Hierarchical Network for Scene Flow Estimation on Real-world Point Clouds (ECCV22 *Oral, 2.7 %*)**
  Lihe Ding*, *Shaocong Dong**, *Tingfa Xu, Xinli Xu, Jie Wang, Jianan Li. code*
- **CAGroup3D: Class-Aware Grouping for 3D Object Detection on Point Clouds (NeurIPS22)**
  *Haiyang Wang**, ***Lihe Ding****, *Shaocong Dong, Shaoshuai Shi, Aoxue Li, Jianan Li, Zhenguo Li, Liwei Wang.*
- **MsSVT: Mixed-scale Sparse Voxel Transformer for 3D Object Detection on Point Clouds (NeurIPS22)**
  *Shaocong Dong**, ***Lihe Ding****, *Haiyang Wang, Tingfa Xu, Xinli Xu, Jie Wang, Ziyang Bian, Ying Wang, Jianan Li.*
- **Local Grid Rendering Networks for 3D Object Detection in Point Clouds (submitted to TMM)**
  *Jianan Li, **Lihe Ding**, Tingfa Xu, Jiashi Feng*
- **PAPooling: Graph-based Position Adaptive Aggregation of Local Geometry in Point Clouds**
  *Jie Wang, Jianan Li, **Lihe Ding**, Ying Wang, Tingfa Xu. arXiv*

PROJECTS

- **3D detection for autonomous vehicles**
  Bird Eye View & perspective view fusion, temporal fusion, combine center-based method and anchor-based method
  achieve 92.6 mAP on qcraft dataset and 78.5 mAP on Waymo (L1)
- **Office building automatic cruise temperature measuring robot**
  The robot cruises in the floor and detects the temperature of pedestrians
  Trial operation in Chongqing Innovation Center, China

Interests

3D vision, DL on Point Clouds, Diffusion model, NeRF