

Zehan Zheng

<https://dyfcalid.github.io/> zhengzehan@tongji.edu.cn [Google Scholar](#) [GitHub](#) ★1.6k+

EDUCATION

Tongji University, China Sept. 2022 - Present
M.S.E. Student in Autonomous Driving, Vehicle Engineering
GPA: 4.7 / 5.0 (91.2 / 100), Advised by Prof. Guang Chen

Tongji University, China Sept. 2017 - July 2022
B.E. in Vehicle Engineering (5 years)
GPA: 4.5 / 5.0 (90.1 / 100)

RESEARCH INTEREST

3D Computer Vision, Dynamic Reconstruction, Generative Models, Autonomous Driving

RESEARCH EXPERIENCE

- SU Lab, University of California San Diego** July 2024 - Present
Research Intern, Advisor: [Prof. Hao Su](#) San Diego, US
- Research included: 3D Scene Generation, 3D-Native Diffusion (ongoing)
- CCVL Lab, Johns Hopkins University** March 2024 - Present
Research Intern, Advisor: [Prof. Alan L. Yuille](#) Baltimore, US (Remote)
- Research included: Gaussian Splatting from Sparse Point Clouds (ongoing)
- ISPC Lab, Tongji University** July 2022 - Present
Research Assistant, Advisor: [Prof. Guang Chen](#) Shanghai, CN
- Research included: 3D Point Clouds, 4D Reconstruction, Neural Fields
 - + Proposed a differentiable framework for novel space-time LiDAR view synthesis, which reconstructs and generates dynamic driving scenarios end-to-end (paper accepted by CVPR 2024).
 - + Proposed a global optimization framework for pose-free LiDAR reconstruction, which provides explicit registration priors and improves geometric consistency (paper accepted by NeurIPS 2024).
 - + Proposed a self-supervised multi-frame point cloud interpolation framework using 4D spatio-temporal neural fields to implicitly represent complex motion (paper accepted by CVPR 2023).
- OpenDriveLab, Shanghai AI Laboratory** Dec. 2021 - June 2022
Research Intern, Advisor: [Prof. Hongyang Li](#) Shanghai, CN
- Research included: 3D Laneline Detection in Autonomous Driving
 - + Proposed a monocular 3D lane detector with a novel Transformer-based BEV feature module and the first large-scale real-world 3D lane detection benchmark (paper accepted by ECCV 2022).
- CPRG Lab, Tongji University** Mar. 2021 - Nov. 2021
Research Intern, Advisor: [Prof. Wei Tian](#) Shanghai, CN
- Research included: Fish-eye Camera Calibration, Bird's Eye View (BEV)
 - + Proposed a novel calibration method for vehicle-mounted surround fish-eye cameras via an unmanned aerial vehicle and developed a real-time bird's eye view generator ([GitHub](#) ★600+).

PUBLICATIONS

Zehan Zheng, Fan Lu, Weiye Xue, Guang Chen, Changjun Jiang. **LiDAR4D**: Dynamic Neural Fields for Novel Space-time View LiDAR Synthesis. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

Zehan Zheng, Danni Wu, Ruisi Lu, Fan Lu, Guang Chen, Changjun Jiang. **NeuralPCI**: Spatio-temporal Neural Field for 3D Point Cloud Multi-frame Non-linear Interpolation. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

Weiye Xue*, Zehan Zheng*, Fan Lu, Haiyun Wei, Guang Chen, Changjun Jiang. **GeoNLF**: Geometry-guided Pose-Free Neural LiDAR Fields. *Advances in Neural Information Processing Systems (NeurIPS)*, 2024.

Tianhang Wang, Fan Lu, Zehan Zheng, Guang Chen, Changjun Jiang. **RCDN**: Towards Robust Camera-Insensitivity Collaborative Perception via Dynamic Feature-based 3D Neural Modeling. *Advances in Neural Information Processing Systems (NeurIPS)*, 2024.

Li Chen*, Chonghao Sima*, Yang Li*, Zehan Zheng, Jiajie Xu, Xiangwei Geng, Hongyang Li, Conghui He, Jianping Shi, Yu Qiao, Junchi Yan. **PersFormer**: 3D Lane Detection via Perspective Transformer and the OpenLane Benchmark. In *Proceedings of the European Conference on Computer Vision (ECCV)*, 2022 (Oral).

ACADEMIC SERVICES

- Reviewer: CVPR 2024, ECCV 2024, NeurIPS 2024, AAAI 2025, ICLR 2025, ICML 2025
- Talks at Princeton University (Dec 2024) and China Society of Image and Graphics (May 2023, 2024)

HONORS & AWARDS

- NeurIPS Scholar Award (Travel Grant) 2024
- Excellent Graduate of Tongji University 2022
- Outstanding Student of Tongji University 2018, 2021, 2023
- First Prize of Tongji University Scholarship (Top 2%) 2018, 2021, 2023
- National First Prize in Formula Student China Competition (FSC) 2020
- National Second Prize of China Undergraduate Mathematical Contest in Modeling (CUMCM) 2020

LEADERSHIP EXPERIENCE

- **Tongji University (Formula SAE) Racing Team** sponsored by Lotus 2018 - 2021
Technical Leader & Driver & Aerodynamics Designer Shanghai
- Achieve 1st in Formula Student China (FSC) 2019, 3rd in Formula Student Japan (FSJ) 2019, 3rd in FSC 2020 and 2nd in FSC 2021
- Best Aerodynamics Award in FSJ 2019, Best Design Report Award in FSC 2020

SKILLS

Languages: Chinese (Native), English (Proficient, TOEFL 102)

Programming: Python, MATLAB, C/C++

Libraries: Pytorch, OpenCV, Open3D, NerfStudio, Diffusers

Softwares: Blender, CATIA, Star-CCM+