

Zehan Zheng

<https://dyfcalid.github.io/> zhengzehan@tongji.edu.cn [Google Scholar](#) [GitHub](#) ★1.5k+

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](#) ★500+).

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
- Invited Talks for Shanghai Computer Society (SCS) and China Society of Image and Graphics (CSIG)

HONORS & AWARDS

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| • 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

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

SKILLS

Languages: Chinese (Native), English (Proficient)

Programming: Python, MATLAB, C/C++

Libraries: Pytorch, OpenCV, Open3D, NerfStudio, Diffusers

Softwares: Blender, CATIA, Star-CCM+