

TIANYUAN ZHANG

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77 Massachusetts Ave, Cambridge, MA 02139

EDUCATION

Massachusetts Institute of Technology, U.S.

Ph.D

Ph.D in Electrical Engineering and Computer Science

2023.9 - present

Advisor: Prof. Bill Freeman

Carnegie Mellon University, U.S.

Master

M.S. in Robotics. Robotics Institute, School of Computer Science

2021.9 - 2023.8

Advisor: Prof. Srinivasa Narasimhan

Peking University, China

Undergraduate

B.S., Department of Computer Science, School of Electronics Engineering and Computer Science

2016.9 - 2020.6

RESEARCH INTEREST

Physics-based vision, Computational Imaging, Inverse Graphics, Representation Learning.

PUBLICATIONS

(*: equal contribution)

Analyzing Physical Impacts using Transient Surface Wave Imaging

Tianyuan Zhang, Mark Sheinin, Dorian Yao Chan, Mark Rau,

Matthew O'Toole, Srinivasa Narasimhan.

CVPR2023

ViP3D: End-to-End Visual Trajectory Prediction via 3D Agent Queries

Junru Gu, Chenxu Hu, **Tianyuan Zhang**, Xuanyao Chen, Yilun Wang,

Yue Wang, Hang Zhao

CVPR2023

RIFE: Real-Time Intermediate Flow Estimation for Video Frame Interpolation

Zhewei Huang, **Tianyuan Zhang**, Wen Heng, Boxin Shi, Shuchang Zhou.

ECCV 2022.

MUTR3D: A Multi-camera Tracking Framework via 3D-to-2D Queries

Tianyuan Zhang, Xuanyao Chen, Yue Wang, Yilun Wang, Hang Zhao.

CVPR 2022. Workshop on autonomous driving

Embracing Single Stride 3D Object Detector with Sparse Transformer

Lue Fan, Ziqi Pang, **Tianyuan Zhang**, Yu-Xiong Wang, Hang Zhao,

Feng Wang, Naiyan Wang, Zhaoxiang Zhang.

CVPR 2022.

DETR3D: 3D Object Detection from Multi-view Images via 3D-to-2D Queries

Yue Wang, Vitor Guizilini*, **Tianyuan Zhang***, Yilun Wang, Hang Zhao, Justin Solomon.
CoRL 2021.

Objects365: A Large-scale, High-quality Dataset for Object Detection

Shuai Shao*, Zeming Li*, **Tianyuan Zhang***, Chao Peng*, Gang Yu,
Xiangyu Zhang, Jing Li, Jian Sun.
ICCV 2019.

You Only Propagate Once: Accelerating Adversarial Training via Maximal Principle

Dinghui Zhang*, **Tianyuan Zhang***, Yiping Lu*, Zhanxing Zhu, Bin Dong.
NeurIPS 2019.

Interpreting Adversarially Trained Convolutional Neural Networks

Tianyuan Zhang, Zhanxing Zhu
ICML 2019.

EXPERIENCE

EECS, MIT

Research Assistant

2023.9 - present

Mentor: Prof. Bill Freeman

Robotics Institute, CMU

Research Assistant

2022.1 - 2023.8

Mentor: Prof. Srinivasa Narasimhan

Shanghai Qizhi Research Institute

Research Assistant on Autonomous Driving

2021.4 - 2021.8

Mentor: Prof. Hang Zhao

Bytedance AI Lab

Research Engineer

2020.6 - 2021.3

Microsoft Research Asia

Research Intern

2020.1 - 2020.6

Mentor: Prof. Dihe & Dr. Guolin Ke

Megvii(Face++) Research

Research Intern

2018.3 - 2020.1

Mentor: Dr. Xiangyu Zhang

Center for Big Data, Peking University

Research Assistant

2018.2 - 2020.6

Mentor: Prof. Zhanxing Zhu

HONORS AND AWARDS

Bronze Medal, Chinese Mathematical Olympiad (CMO), December 2015

Merit Student, Peking University 2016-2017

Leo Koguan Scholarship 2016-2017

WuSi Scholarship 2017-2018

Lihuirong Scholarship 2018-2019

Merit Student, Peking University, 2018-2019