

# ZHEJUN ZHANG

ETF D 112, Sternwartstrasse 7, 8092 Zurich, Switzerland ♦ + 41 76 508 17 25

[zhejun.zhang@vision.ee.ethz.ch](mailto:zhejun.zhang@vision.ee.ethz.ch) ♦ <https://zhejz.github.io/>

## EDUCATION

---

### ETH Zurich, Switzerland

Jan. 2020 - Jul. 2024

Ph.D. at the Computer Vision Lab with Prof. Luc Van Gool.

Toyota TRACE Zurich

Focus on End-to-End Learning and Neural Simulation for Autonomous Driving.

Keywords: Autonomous Driving, Robotics, IL, RL, World Models, Motion Prediction.

### ETH Zurich, Switzerland

2016 - 2019

M.Sc., Department of Electrical Engineering and Information Technology.

GPA: 5.93/6.00

Willi Studer Prize for Best Master Student in the Department.

Ranking top 1

Focus on System & Control, Deep Learning & Computer Vision.

ESOP Scholarship

### TU Munich, Germany

2012 - 2015

B.Sc., Department of Electrical Engineering and Information Technology.

GPA: 1.03/1.00

B.Sc. with High Distinction for Best Bachelor Student in the Department.

Ranking top 1

Focus on Control & Communication Engineering.

DAAD Full Scholarship

## PUBLICATIONS

---

1. Z. Zhang, A. Liniger, C. Sakaridis, F. Yu, L. Van Gool. "Real-Time Motion Prediction via Heterogeneous Polyline Transformer with Relative Pose Encoding." NeurIPS, 2023.
2. N. Bührer, Z. Zhang, A. Liniger, F. Yu, L. Van Gool. "A Multiplicative Value Function for Safe and Efficient Reinforcement Learning." IROS, 2023.
3. Z. Zhang, A. Liniger, D. Dai, F. Yu, L. Van Gool. "TrafficBots: Towards World Models for Autonomous Driving Simulation and Motion Prediction." ICRA, 2023.
4. Z. Zhang, A. Liniger, D. Dai, F. Yu, L. Van Gool. "End-to-End Urban Driving by Imitating a Reinforcement Learning Coach." ICCV, 2021.

## PATENTS

---

1. "Real-Time Motion Prediction via Heterogeneous Polyline Transformer with Relative Pose Encoding." EP Patent, 2023. Under review.
2. "Prediction method and system, computer program, computer-readable medium" EP Patent, EP4296898A1, 2023.
3. "Training method for training an agent for controlling a controlled device, control method for controlling the controlled device, computer program(s), computer readable medium, training system and control system" EP Patent, EP4124995A1, 2023.

## PROFESSIONAL EXPERIENCE

---

### NVIDIA Switzerland AG, Zurich, Switzerland

Jun. 2024 - Mar. 2025

*Research Internship, Autonomous Vehicles*

Autonomous Vehicle Research Group led by Prof. Marco Pavone.

**Seervision AG, Zurich, Switzerland**

Jan. 2019 - Dec. 2019

*R&D Engineer*

Develop and deploy cinematographic tracking algorithms for PTZ cameras.

**Seervision AG, Zurich, Switzerland**

Sep. 2017 - Apr. 2018

*Research Assistant*

Prototype learning-based tracking algorithms for pan-tilt cameras.

## RESEARCH EXPERIENCE

---

**IFA, ETH Zurich & Seervision AG**

May. 2018 - Dec. 2018

*Master Thesis* with Prof. John Lygeros and Dr. Nikos Kariotoglou.

Learning Cinematographic Motion Control from Videos.

**IDSC, ETH Zurich**

2017

*Semester Project* with Prof. Raffaello D'Andrea.

Improving the Trajectory Tracking of a Parametrized MPC.

**IFA, ETH Zurich**

2016

*Semester Project* with Prof. John Lygeros.

Object Tracking on Arduino and a Commercial Gimbal.

**ITR, TU Munich**

2015

*Bachelor Thesis* with Prof. Sandra Hirche.

Online Gaussian Process Regression Parametrized by Dual Quaternions.

## STUDENT SUPERVISION & TEACHING

---

### Master Thesis

- Nick Bühner. "Safety Critics for Safe and Efficient Reinforcement Learning." 2022.
- Felix Schmitt-Koopmann. "Uncertainty in Reinforcement Learning with World Models." 2021.
- Manuel Breitenstein. "Dream To Drive: Learning Latent Dynamics for Model-Based Reinforcement Learning." 2021.

### Semester Project

- Alan Tirado Mayer. "Learning-Based Autonomous Racing Path Planning from LiDAR Data." 2022.

### Teaching Assistant

- Computer Vision and Artificial Intelligence for Autonomous Cars. 2023.

## SKILLS & LANGUAGES

---

**Programming** Python, C++, Matlab, R, Pytorch, Tensorflow, ROS, OpenCV, Eigen

**Development Tools** CARLA, AWS, Slurm, Git, Linux, Docker, LaTeX, MS-Office

**Language** Chinese (Native), English (Proficient), German (Proficient, C1)

## REFERENCES

---

Dr. Alexander Liniger: [alexliniger@gmail.com](mailto:alexliniger@gmail.com)

*Principal Researcher.* Huawei Zurich Research Center.

Dr. Dengxin Dai: [dengxin.dai@huawei.com](mailto:dengxin.dai@huawei.com)

*Director of Research.* Huawei Zurich Research Center.

Prof. Dr. Luc Van Gool: [vangool@vision.ee.ethz.ch](mailto:vangool@vision.ee.ethz.ch)

CVL, ETH Zurich, Switzerland. PSI, KU Leuven, Belgium. INSAIT, Sofia University, Bulgaria.