Andreas Ziegler

Robotics & CV Researcher/Engineer

25 March 1988

8712 Stäfa, Switzerland

+41 79 581 46 90

https://andreasaziegler.github.io

062.127@gmail.com

Please find my full CV here

About me

I am passionate about a mix of robotics and computer vision research and industrial/commercial applications. My vision is to develop novel algorithms and make them work on real robots. I enjoy working independently on research and engineering projects, but I also appreciate the opportunity to exchange ideas with a variety of individuals from various backgrounds.

Skills

C++

Python

OpenCV

ROS

PyTorch

[The skill scale is in years of experience.]

Languages

German: Level C2
English: Level C1
French: Level B1
Korean: Level A2
Chinese: Level A1

education

since 2021 — PhD. Candidate in Robotics & Computer Vision — University of Tübingen
Event-based computer vision for fast robot control

2014-2018 — MSc. ETH in Electical Engineering — ETH Zürich
Specialized in: Robotics, Computer Vision and Machine Learning

2009-2013 — BSc. FHO (HSR) in Electrical Engineering — HSR
Specialized in: Digital Signal and Image Processing, Embedded Systems and Software Engineering and Mobile Communication
Did an exchange year at the Shanghai Jiao Tong University in China

publications

[1] T. Gossard, J. Tebbe, A. Ziegler, and A. Zell, "Spindoe: A ball spin estimation method for table tennis robot," in *IEEE/RSJ Int. Conf. Intell. Robot. Syst. (IROS)*, IEEE, 2023.

[2] A. Ziegler, D. Teigland, J. Tebbe, T. Gossard, and A. Zell, "Real-time event simulation with frame-based cameras," in *2023 International Conference on Robotics and Automation (ICRA)*, IEEE, May 2023, pp. 11 669–11 675.

[3] A. Horvath, A. Ziegler, S. Gerhard, *et al.*, "Focus on time: Dynamic imaging reveals stretch-dependent cell relaxation and nuclear deformation," *Biophysical Journal*, Jan. 2021.

[4] A. N. Horvath, A. A. Ziegler, S. Gerhard, *et al.*, "Time-controlled multichannel dynamic traction imaging of biaxially stretched adherent cells," Mar. 2020.

[5] T. Cieslewski, A. Ziegler, and D. Scaramuzza, "Exploration without global consistency using local volume consolidation," in *IFRR International Symposium on Robotics Research (ISRR), Hanoi, 2019*, IFRR: IEEE, Oct. 2019.

experience

2021- — PhD Candidate — University of Tübingen, Tübingen
Working on event-based computer vision for fast robot control in collaboration with Sony AI Zürich.

2022 — Computer Vision & ML Research Intern — Prophesee, Paris
Worked on slow motion from frame and event data under the supervision of Dr. Amos Sironi.

2018-2021 — Robotics Engineer — MT-Robot AG, Zwingen
Development and maintenance of software for autonomous mobile robots (AMRs), including topics such as multi sensor fusion, mapping, path planning, (multi robot) obstacle avoidance, etc., Deputy Scrum Master.

2018 — Research Assistant — University of Zürich, Robotics and Perception Group, Zürich
Continued working on my master thesis project which lead to [5].

2018 — Research Associate Intern — Disney Research Zürich, Zürich
Integrated a Leica total station in an existing ROS setup within the PaintCopter project.

2018 — Research Assistant — Laboratory for Orthopaedic Biomechanics, Zürich
Developed an LED light controller for a microscope setup which contributed to [4].

2017 — Computer Vision & Robotics Research Intern — Pix4D SA, Lausanne
Worked on indoor navigation for UAVs, investigation of barcode localization and detection algorithms for automatic inventory.

2015-2018 — Software Engineer & System Administrator (20%) — Accelerom AG, Zürich

2013-2014 — Research Assistant (Civil service) — CARD, University Hospital Balgrist, Zürich
Worked on segmentation algorithms for computer-assisted surgical planning.

2013 — Research Assistant (Civil service) — Laboratory for Orthopaedic Biomechanics, Zürich
Extended and adapted a microscope control software which contributed to [3].

2004-2008 — Electronics Engineer Apprentice — Hch. Kündig & Cie. AG, Rüti