

Andreas Ziegler

Robotics & CV Researcher/Engineer

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https://andreasaziegler.github.io



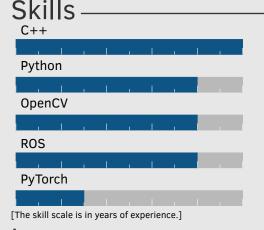
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Please find my full CV here

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.



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

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] 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.
- [2] 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.
- [3] A. N. Horvath, A. A. Ziegler, S. Gerhard, *et al.*, "Time-controlled multichannel dynamic traction imaging of biaxially stretched adherent cells," Mar. 2020.
- [4] 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 [4].

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

2018 Research Assistant Laboratory for Orthopaedic Biomechanics, Zürich Developed an LED light controller for a microscope setup which contributed to [3].

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 [2].

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