Andreas Ziegler

andreasaziegler.github.io 062.127@gmail.com +41795814690
https://www.linkedin.com/in/andreas-ziegler-34087467/
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About Me

I consider myself a full-stack roboticist, passioned about an (application-driven) mix of robotics, computer vision, and machine learning research.
In my next role, I aim to grow as an individual contributor while leveraging my leadership experience to foster team collaboration and drive impactful results. By shifting from individual achievements to collective success, I aspire to advance the fields of robotics, computer vision, and machine learning as a Postdoctoral Researcher.

Education

2021.06 –	**PhD., University of Tübingen, Germany** in Robotics & Computer Vision. Thesis title: *Event-based Computer Vision for Fast Robot Control*
2014.09 – 2018.04	**MSc., ETH Zürich, Switzerland** in Electrical Engineering. Specialized in Robotics, Computer Vision, and Machine Learning
2011.09 – 2012.08	**BSc., Shanghai Jiao Tong University, China** in Electrical Engineering & Chinese Language (Exchange Year).
2009.09 – 2013.09	**BSc., FHO (HSR), Switzerland** in Electrical Engineering.

Research Publications

1. Gossard, T., Krismer, J., Ziegler, A., Tebbe, J., & Zell, A. (2024, June). Table tennis ball spin estimation with an event camera. In *2024 ieee/cvf conference on computer vision and pattern recognition workshops (cvprw)*. doi:10.48550/arXiv.2404.09870
2. Gossard, T., Ziegler, A., Kolmar, L., Tebbe, J., & Zell, A. (2024). Ewand: A calibration framework for wide baseline frame-based and event-based camera systems. In *2024 International Conference on Robotics and Automation (ICRA)*, IEEE. Retrieved from https://arxiv.org/pdf/2309.12685.pdf
3. Gossard, T., Tebbe, J., Ziegler, A., & Zell, A. (2023, October). Spindoe: A ball spin estimation method for table tennis robot. In *2023 ieee/rsj international conference on intelligent robots and systems (iros)*. doi:10.1109/iros55552.2023.10342178
4. Ziegler, A., Teigland, D., Tebbe, J., Gossard, T., & Zell, A. (2023, May). Real-time event simulation with frame-based cameras. In *2023 ieee international conference on robotics and automation (icra)*. doi:10.1109/icra48891.2023.10160654
5. Ziegler, A., Gossard, T., Vetter, K., Tebbe, J., & Zell, A. (2023). A multi-modal table tennis robot system. In *Roboletics: Workshop on robot learning in athletics @corl 2023*. doi:10.48550/arXiv.2310.19062
6. Horvath, A., Ziegler, A., Gerhard, S., Holenstein, C., Beyeler, B., Snedeker, J., & Silvan, U. (2021). Focus on time: Dynamic imaging reveals stretch-dependent cell relaxation and nuclear deformation. *Biophysical Journal*. doi:10.1016/j.bpj.2021.01.020
7. Cieslewski, T., Ziegler, A., & Scaramuzza, D. (2019, October). Exploration without global consistency using local volume consolidation. In *Ifrr international symposium on robotics research (isrr), hanoi, 2019*, IFRR: IEEE. Retrieved from https://doi.org/10.5167/uzh-197724

Employment History

2021.06 –	**PhD Candidate,** University of Tübingen, Germany. In collaboration with Sony AI
2023.11 – 2024.03	**Research Scientist Intern,** Sony AI, Zürich, Switzerland.
2022.08 – 2022.10	**Computer Vision & Machine Learning Intern,** Prophesee, Paris, France.
2018.09 – 2021.05	**Robotics Engineer,** MT-Robot AG, Zwingen, Switzerland.
2018.06 – 2018.09	**Research Assistant,** Robotics and Perception Group, University of Zürich, Switzerland.
2018.04 – 2018.06	**Research Associate Intern,** Disney Research Zürich, Zürich, Switzerland.
2018.02 – 2018.03	**Research Assistant,** Laboratory for Orthopaedic Biomechanics, University and ETH Zürich, Switzerland.
2017.03 – 2017.08	**Computer Vision & Robotics Research Intern,** Pix4D SA, Lausanne, Switzerland.
2013.08 – 2015.08	**Research Assistant (partially Civil Service),** Laboratory for Orthopaedic Biomechanics, University and ETH Zürich, Switzerland.
2013.11 – 2014.02	**Research Assistant (Civil Service),** Computer Assisted Research and Development, University Hospital Balgrist, Zürich, Switzerland.
2004.08 – 2008.08	**Electronics Engineer Apprentice,** Hch. Künding & Cie. AG, Rüti ZH, Switzerland.

Independent Coursework & Training

2024.09 – 2024.11	**Leadership Talent Academy**, University of Tübingen, Germany.
2024.05	**Search Inside Yourself: Emotional Intelligence for Leadership**, Swiss Engineering, Switzerland.
2021.08	**DT-01x: Self-Driving Cars with Duckietown**, ETHx on edX.
2018.03	**Deep Leaning Specialization**, deeplearning.ai on Coursera.
2014.04	**Autonomous Mobile Robots**, ETHx on edX.

Skills

Languages	German (native, C2), English (excellent, C1), French (good, B1), Korean (basics, A2), Chinese (basics, A1).
Coding	C++, Python, Julia, C, Java
Libraries	OpenCV, ROS1/2, numpy, PyTorch, Eigen, boost, DDS

Awards and Media Coverage

Awards

2024	**Scholarship for the Leadership Talent Academy**, Startup Center Tübingen & University of Tübingen.

Media Coverage

2023	**Forscherteam der Uni Tübingen entwickelt Tischtennis-Roboter**, Schwäbisches Tagblatt.