OLIVER HAHN

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EDUCATION

Ph.D. Computer Science, Technical University of Darmstadt   Oct 2022 – Present
- Topic: Scene Understanding with Limited Supervision
- Advisor: Stefan Roth

M.Sc. Computational Engineering, Technical University of Darmstadt   Nov 2018 – Apr 2022
- Focus: Machine Learning & Computer Vision
- Incl. Exchange Semester at Tongji University Shanghai, China (Fall 2019)

B.Sc. and M.Sc. Mechanical Engineering, Technical University of Darmstadt   Oct 2014 – Mar 2023
- Focus: Mechatronics

PUBLICATIONS

Oliver Hahn, Nikita Araslanov, Simone Schaub-Meyer and Stefan Roth. Boosting Unsupervised Semantic Segmentation with Principal Mask Proposals. In *Transactions on Machine Learning Research (TMLR)*, 2024.

Christoph Reich, **Oliver Hahn**, Daniel Cremers, Stefan Roth and Biplob Debnath. A Perspective on Deep Vision Performance with Standard Image and Video Codecs. In *IEEE/CVF Computer Vision and Pattern Recognition Conference Workshops (CVPRW)*, 2024. (Best Student Paper Award @ AIS Workshop)

Sherwin Bahmani*, **Oliver Hahn***, Eduard Zamfir*, Nikita Araslanov, Daniel Cremers and Stefan Roth. Semantic Self-adaptation: Enhancing Generalization with a Single Sample. In *Transactions on Machine Learning Research (TMLR)*, 2023.

Daniel Schöneberger and **Oliver Hahn**. Electrodynamic Linear Twin Coil Actuator. DPMA Patent: DE102021113012.3, 2022.

PROFESSIONAL EXPERIENCE

Master Thesis, Technical University of Darmstadt (Visual Inference Lab)   Sep 2021 – Mar 2022
- Topic: Multimodal Data Augmentation for Image Captioning
- Advisors: Stefan Roth, Shweta Mahajan

Student Research Assistant, Technical University of Darmstadt (Visual Inference Lab)   Apr 2021 – Aug 2021
- Topic: Temporal Consistency for Dense Unsupervised Video Segmentation
- Advisors: Stefan Roth, Nikita Araslanov

Student Research Assistant, Technical University of Darmstadt (Institute for Mechatronic Systems)   Nov 2018 – Oct 2020
- Topic: Multi-Objective Optimization of Electrical Machines
- Advisors: Stephan Rinderknecht, Daniel Schöneberger

Research Intern, Bosch (Munich)   Mai 2018 – Oct 2018
- Topic: Optimization of Component Topologies in Electrical Machines
- Advisors: Christian Boie

Bachelor Thesis, Technical University of Darmstadt (Institute for Mechatronic Systems)   Oct 2017 – Apr 2018
- Topic: Development of an Electrodynamic Linear Actuator for Electrified Drivetrains
- Advisors: Stephan Rinderknecht, Daniel Schöneberger

PROJECT SUPERVISION

Master Thesis Co-Supervision, Jannik Endres (at École Polytechnique Fédérale de Lausanne (EPFL))   ongoing
- Topic: Depth Estimation from Omnidirectional Cameras using Deep Learning
- Co-Supervisors: Alexandre Alahi, Charles Corbière, Simone Schaub-Meyer

Master Thesis Co-Supervision, Yasemin Göksu (at Technical University of Darmstadt)   ongoing
- Topic: Self-supervised Learning for Robotic Visuomotor Skills
- Co-Supervisors: Jan Peters, Alap Kshirsagar

Master Thesis Supervision, Xinrui Gong (at Technical University of Darmstadt)   ongoing
- Topic: Unsupervised Video Instance Segmentation via Lightweight Pseudo-Label Mining
- Co-Supervisor: Stefan Roth

Master Thesis Co-Supervision, Christoph Reich (at NEC Laboratories America)   2023
- Topic: Deep Image Codec Control for Vision Models.
- Co-Supervisors: Stefan Roth, and Biplob Debnath

Master Thesis Co-Supervision, Melda Eksi (at Technical University of Darmstadt)   2023
- Topic: Optical-Flow-Guided Pretrained Video Instance Segmentation
- Co-Supervisors: Stefan Roth, Simone Schaub-Meyer, Dustin Carrion

ACADEMIC SERVICE

Reviewer: CVPR, ECCV, TMLR
Teaching Assistant: Computer Vision I (Fall 2022), Computer Architecture (Spring 2024), Deep Learning for Computer Vision Project Lab (Fall 2024, 2025)
Reading Group Co-Organizer: Joint reading group with the Max Planck Institute for Informatics (MPI-INF)

SKILLS

Programming: Python (PyTorch, PyTorch Lightning, NumPy, Scikit-Learn, Kornia, Timm, SciPy, OpenCV, Matplotlib), Git, LaTeX, TikZ, Matlab, Java, HTML, CSS, JavaScript, Bash, Linux

Languages: German (Native), English (Fluent, C1), Chinese (Basic, B1), French (Basic), Polish (Native)