Eduard Zamfir

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Education

Ph.D. Computer Science, University of Würzburg — since Aug 2023
- Focus: Computer Vision, Machine Learning
- Advisor: Prof. Radu Timofte

M.Sc. Computational Engineering, Technical University of Darmstadt — Apr 2020 – May 2022
- Graduated with honors (Grade: 1.19, GPA 4.0 equivalent)
- Focus: Computer Vision, Machine Learning
- Advisor: Prof. Stefan Roth

M.Sc. Mechanical Engineering, Technical University of Darmstadt — Oct 2017 – Mar 2020
- Completed 114/120 ECTS; 46 credits transferred to M.Sc. Computational Engineering

B.Sc. Mechanical Engineering, Technical University of Darmstadt — Oct 2013 – Oct 2017
- Focus: Mechatronics, Automotive Engineering

Publications / Preprints

1. Y. Tan, J. Shao, **E. Zamfir**, R. Li, Z. An, C. Ma, D. Paudel, L. van Gool, R. Timofte, Z. Wu, "What You Have is What You Track: Adaptive and Robust Multimodal Tracking", *ICCV*, 2025
2. Y. Tan, Z. Wu, Y. Fu, Z. Zhou, G. Sun, **E. Zamfir**, C. Ma, D. Paudel, L. van Gool, R. Timofte, "XTrack: Multimodal Training Boosts RGB-X Video Object Trackers", *ICCV*, 2025
3. **E. Zamfir**, Z. Wu, N. Mehta, Y. Tan, D. Paudel, Y. Zhang, R. Timofte, "Complexity Experts are Task-Discriminative Learners for Any Image Restoration", *CVPR*, 2025.
4. J. Li, Z. Wu, **E. Zamfir**, R. Timofte, "ReCap: Better Gaussian Relighting with Cross-Environment Captures", *CVPR*, 2025.
5. **E. Zamfir**, Z. Wu, N. Mehta, Y. Zhang, R. Timofte, "See More Details: Efficient Image Super-Resolution by Experts Mining", *ICML*, 2024.
6. **E. Zamfir**, Z. Wu, N. Mehta, D. Paudel, Y. Zhang, R. Timofte, "Efficient Degradation-aware Any Image Restoration", arXiv, 2024.
7. B. Ren, **E. Zamfir**, Z. Wu, Y. Li, Y. Li, D. Paudel, R. Timofte, M.H. Yang, N. Sebe, "Restore Anything Model with Efficient Degradation Adaptation", arXiv, 2024
8. Z. Fang, A. Ignatov, **E. Zamfir**, R. Timofte, "SQAD: Automatic Smartphone Camera Quality Assessment and Benchmarking", *ICCV*, 2023.
9. **E. Zamfir**, M. Conde, R. Timofte, "Towards Real-Time 4K Image Super-Resolution", *CVPRW*, 2023.
10. S. Bahmani*, O. Hahn*, **E. Zamfir***, N. Araslanov, D. Cremers, and S. Roth, "Semantic Self-Adaptation: Enhancing Generalization with a Single Sample", *TMLR*, 2023.

Academic Service

Reviewer: CVPR, ICCV (Outstanding Reviewer 2025), NeurIPS, ICLR, ICML, TPAMI, IJCV, WACV, TIP, ACM Multimedia

Conference Workshops: Co-Organizer 2nd AIGENS Workshop, ICCV 2025; Co-Organizer NTIRE Challenge on Efficient Super-Resolution, CVPR 2024; Co-Organizer NTIRE Challenge on Real-Time 4K Super-Resolution, CVPR 2023

Teaching Assistant: Computer Vision, Image Processing and Computational Photography

Research Experience

Researcher at Computer Vision Lab, University of Würzburg — Aug 2022 – Aug 2023
- Real-time Image Super-Resolution, Camera Quality Assessment
- Advisor: Radu Timofte

Master Thesis at Visual Inference Lab, TU Darmstadt Nov 2021 – May 2022
- Exploiting non-local dependencies for image restoration using attribution priors
- Advisors: Robin Hesse, Prof. Stefan Roth

Student Researcher at Visual Inference Lab, TU Darmstadt Sep 2020 – Sep 2021
- Domain generalization for semantic segmentation
- Advisors: Nikita Araslanov, Prof. Stefan Roth

Student Researcher at Fraunhofer LBF Apr 2019 – Apr 2020
- HiL-testbench for driving dynamics simulations
- Advisors: Riccardo Bartolozzi, Prof. Tobias Melz

Bachelor Thesis at Institute for Mechatronic Systems, TU Darmstadt Apr 2017 – Oct 2017
- Simulation of hybrid energy storage systems for industrial applications
- Advisor: Prof. Stefan Rinderknecht

Work Experience

Intern at Porsche Engineering Group Aug 2018 – Feb 2019
- Driving Performance Team: Software engineering for driving dynamics simulation

Academic Supervision

Master Thesis: Hassan Ali, University of Würzburg Ongoing
- Topic: Iterative Adaptation for Image Processing
- Co-Supervisor: Prof. Radu Timofte

Student Project: Roman Kochnev, University of Würzburg Ongoing
- Topic: Dynamic Vision Models for Image Restoration
- Co-Supervisors: Prof. Radu Timofte

Master Thesis: Tobias Brandner, University of Würzburg 2024
- Topic: Real-Time Rendering Super Resolution with Unreal Engine 5
- Co-Supervisor: Prof. Radu Timofte, Nancy Mehta

Technical Skills

Programming: Python [PyTorch, NumPy, OpenCV], Matlab, Git, LaTeX, Bash, Linux

Languages: **German** - Native, **English** - Fluent, **Romanian** - Native, **French** - Basic (UNIcert B1)