

Mattia D'Urso

mattiadurso98@gmail.com | mattiadurso.com | github.com/mattiadurso | linkedin.com/mattiadurso
Citizenship: Italian (EU Citizen) | Languages: Italian (Native), English (C1 - Full Professional)

Education

- Feb 2024 – Today **Ph.D. in Computer Science and AI**
at *Institute of Visual Computing, Graz University of Technology (Austria)*
• Funded by Sony Europe and under the supervision of Prof. Friedrich Fraundorfer.
Topics: 3D Computer Vision · Deep Learning · Structure-from-Motion · Geometric Optimization
- 2020 – 2022 **M.Sc. in Computer Science and AI at the Universities of Klagenfurt and Udine**
- 2017 – 2020 **B.Sc. in Computer Science at University of Udine**

Experiences

- May 2026 – Oct 2026 **ETH Zürich, Zürich, Visiting Researcher**
• Supervised by Prof. Marc Pollefeys and Dr. Dániel Baráth at the CVG group.
• Extending 3D foundation models capabilities for real-world deployment.
- Jun 2023 – Aug 2023 **Canva, Vienna, Applied Scientist Intern**
• Adapted Discrete Stable Diffusion paper for Layout Generation on a custom dataset.
• Improved by 20% the number of perfect samples generated by enhancing data and model.
- Mar 2022 – Nov 2022 **Infineon Technologies AG, Villach, Applied Scientist Intern**
• Developed a predictive maintenance system based on time series using Deep Learning models.

Publications

[Boosting 3D Foundation Models with Edge-based Pose Optimization](#)

[Mattia D'Urso](#), C. Sormann, M. Rossi, F. Fraundorfer

European Conference of Computer Vision (ECCV) 2026

- Trackless refinement of cameras and geometry from 3D foundation models, matching Bundle Adjustment accuracy with up to 80% lower runtime.

[TerraSky3D: Multi-View Reconstructions of European Landmarks in 4K](#)

[Mattia D'Urso](#), Y. Hu, C. Sormann, M. Rossi, F. Fraundorfer

3DMV @ CVPRW 2026 [Best Paper Award (Runner-Up)]

- 4K dataset of 150 European landmark scenes (50K images) with curated poses and depth maps, bridging ground-level and aerial views for 3D reconstruction.

[A Streamlined Attention-based Network for Descriptor Extraction](#)

[Mattia D'Urso](#), E. Santellani, C. Sormann, M. Rossi, A. Kuhn, F. Fraundorfer

13th International Conference on 3D Vision (3DV) 2026

- Descriptor module trainable on top of any keypoint detector, significantly improving pose estimation on high-resolution images.

[A LoD of Gaussians: Out-of-Core Training and Rendering for Seamless Ultra-Large Scene](#)

F. Windisch, T. Köhler, L. Radl, [Mattia D'Urso](#), M. Steiner, D. Schmalstieg,

M. Steinberger. *SIGGRAPH 2026*

[PyTorchGeoNodes: Enabling Differentiable Shape Programs for 3D Shape Reconstruction](#)

S. Stekovic, A. Artykov, S. Ainetter, [Mattia D'Urso](#), F. Fraundorfer. *CVPR 2025*

Other Experiences

- 2025 – Today **Mentor at Lead The Future**
• Invited as a mentor within LTF, a selective STEM community (15% acceptance).
• I identified strategic, fulfilling research opportunities for two graduate students and coached them through execution helping one secure a Master's thesis at ETH Zürich and another a PhD position. More valuable than these outcomes, though, was the long-term trusting rapport I built with each mentee by listening actively and understanding their individual goals.