

Federico Lincetto

PH.D. STUDENT · COMPUTER VISION

📍 Padova, Italy | ✉ federico.lincetto@phd.unipd.it | 🔗 linkedin.com/in/federicolincetto

Personal Profile

I am a Ph.D. student at the University of Padova. Currently interested in Vision Foundation Models, Novel View Synthesis, 3D Reconstruction, Representation Learning, and Multimodal Imaging. Working on computer vision and computer graphics research projects for 4+ years. 5+ years of experience in deep learning and PyTorch programming. 8+ years of experience in object-oriented programming with Python, Java, and C.

Education

ETH Zurich

Zurich, Switzerland

Visiting PhD Student

Jan 2026 - Jun 2026

- **Topics:** Training a vision foundation model for spectro-polarimetric reconstruction from custom imaging modalities. Dealing with Masked-Autoencoders and fine-tuning Diffusion Models. Exploring geometry awareness of Dino models to overcome limitations of VGGT-like models.
- **Supervisor:** Prof. Dr. Konrad Schindler
- **Methods and Models:** Masked-Autoencoder, Diffusion models, Vision Transformers, RoPE, VGGT, Dino, I-JEPA, HPC cluster.

University of Padova

Padova, Italy

PhD in Information Engineering

Jan 2023 - Current

- **Topics:** Multimodal Neural Rendering and 3D Reconstruction with NeRF and Gaussian Splatting. Acquisition of the first multi-view dataset that includes RGB, mono, infrared, polarimetric, and multispectral data. Vision Foundation Models (MAE, diffusion models) for multimodal images.
- **Supervisor:** Prof. Dr. Pietro Zanuttigh
- **Methods and Models:** NeRF, Gaussian Splatting, Sparse Voxel Rasterization, Signed Distance Fields, multimodal camera calibration, multi-view dataset capture, Structure from Motion, stereo geometry, Stokes vectors, physics-based rendering, spectral calibration, HPC cluster.

University of Padova

Padova, Italy

MSc in ICT for Internet and Multimedia Engineering

Sept 2020 - Dec 2022

- **Final Grade:** 110/110 with Honors
- **Thesis:** "3D Reconstruction of Indoor Scenes: a Neural Radiance Field Approach Supervised by Depth Priors"
- **Relevant Courses:** Machine Learning, Computer Vision, Deep Learning, 3D Augmented Reality, Signal Processing, Big Data Computing

Work Experience

Sony Europe

Stuttgart, Germany

Visiting PhD Student

Nov 2024 - May 2025

- **Topic:** Working on a multimodal NeRF-based method that renders multi-view consistent Near-Infrared, Monochrome, Polarization, and Multi-spectral views of a scene captured with RGB cameras alone. Investigation on an adversarial pixel sampling policy to optimize the reconstruction.
- **Supervisors:** Dr. Gianluca Agresti, Dr. Mattia Rossi, Piergiorgio Sartor - Sony Europe
- **Skills:** Python, PyTorch, OpenCV, Linux, Git, SLURM, $\LaTeX$

Sony Europe

Stuttgart, Germany

Master's Thesis Student

May 2022 - Oct 2022

- **Topic:** Implementation of a NeRF-based method to perform multi-view 3D reconstruction of indoor scenes.
- **Supervisors:** Dr. Gianluca Agresti, Dr. Mattia Rossi - Sony Europe; Prof. Dr. Pietro Zanuttigh - University of Padova
- **Skills:** Python, PyTorch, OpenCV, Linux, Git, Blender, MeshLab, SLURM, $\LaTeX$

Most Relevant Publications

Learning Spectral and Polarimetric Clues for One-to-Multimodal Novel View Synthesis

F. Lincetto, G. Agresti, M. Rossi, P. Sartor, P. Zanuttigh

In Proceedings of the 19th European Conference on Computer Vision (ECCV) 2026

[Link](#)

MultimodalStudio: A Heterogeneous Sensor Dataset and Framework for Neural Rendering across Multiple Imaging Modalities

F. Lincetto, G. Agresti, M. Rossi, P. Zanuttigh

In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2025

[Link](#)

Exploiting Multiple Priors for Neural 3D Indoor Reconstruction

F. Lincetto, G. Agresti, M. Rossi, P. Zanuttigh

In Proceedings of the 34th British Machine Vision Conference (BMVC) 2023

[Link](#)

Honors & Awards

2022 Sony Europe SL1 Best Student Work

Stuttgart, Germany

Great results on the 3D reconstruction of indoor scenes using a NeRF-based approach.

2021 "Mille e una Lode" Scholarship

Padova, Italy

Merit based scholarship established by the University of Padova and awarded to the best 3% students