Elisabetta Fedele

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Education

Sep 2024 – present
PhD in Computer Science, *ETH Zürich*
○ Co-advised by Prof. Marc Pollefeys and Prof. Bernhard Scholköpf
○ Supported by the ETH AI Center Fellowship *(2% acceptance rate)*

Sep 2021 – July 2024
Master in Computer Science, *ETH Zürich*
○ Major in **Machine Intelligence** and Minor in **Theoretical Computer Science**.
○ **Courses**: Algorithmic Game Theory, Algorithms Lab, Randomized Algorithms and Probabilistic Methods, Graph Theory, Computational Intelligence Lab, Generative Visual Models, Advanced Machine Learning, Machine Perception, Computer Graphics, Computer Vision, NLP.

Sep. 2018 – Jun. 2021
Bachelor in Computer Systems Engineering, *Politecnico di Milano*
○ Final grade: 110/110 *cum laude*.

Research Experience

Mar. 2025 – Aug. 2025
Visiting Student Researcher, *Stanford University*
○ Advised by Leonidas Guibas and Francis Engelmann.
○ Worked on primitive-based representations of 3D scenes and on spatial conditioning for 3D generation.

Feb. 2024 – July 2024
Master Thesis Student, *ETH*
○ Advised by Marc Pollefeys and Francis Engelmann.
○ Worked on primitive-based representations of 3D scenes.

Jul. 2023 – Sep. 2023
Research Intern, *EPFL*
○ Advised by Alessandro Chiesa and Giacomo Fenzi.
○ We found a new family of algorithms that greatly improves the asymptotic and practical performance of the sumcheck protocol. Recently, these algorithms were proven to be optimal.
○ Resulted in a publication at *Theory of Cryptography Conference* (**TCC**) **2025**.

Mar. 2023 – Jun. 2023
Semester Project Student, *Google Zürich*
○ Advised by Federico Tombari, Marc Pollefeys, and Francis Engelmann.
○ We leveraged the capabilities of CLIP to expand the task of 3D instance segmentation to an Open-Vocabulary setting.
○ Resulted in a publication at **NeurIPS 2023**.

Oct. 2020 – Mar. 2021
Research Assistant, *Politecnico di Milano*
○ Advised by Stefano Ceri.
○ We processed and analyzed data on SARS-CoV2 viral sequence mutations at the nucleotide and amino acid levels.

Publications and Preprints

🔗 **Elisabetta Fedele***, Francis Engelmann*, Ian Huang, Or Litany, Marc Pollefeys, Leonidas Guibas. SpaceControl: Introducing Test-Time Spatial Control to 3D Generative Modeling. *Under review. Presented as a demo at ICCV 2025.*

🔗 **Elisabetta Fedele**, Boyang Sun, Leonidas Guibas, Marc Pollefeys, Francis Engelmann. SuperDec: 3D Scene Decomposition with Superquadric Primitives. *International Computer Vision Conference* (**ICCV**) *2025* (**Oral**, top 2.4%).

🔗 Dimitri Von Rütte*, **Elisabetta Fedele***, Jonathan Thomm*, Lukas Wolf*. FABRIC: Personalizing Diffusion Models with Iterative Feedback. *European Conference on Computer Vision Workshops* (**ECCVW**) *2024*.

⊘ Ayca Takmaz*, **Elisabetta Fedele***, Robert W. Sumner, Marc Pollefeys, Federico Tombari, Francis Engelmann. OpenMask3D: Open-Vocabulary 3D Instance Segmentation. *Advances in Neural Information Processing Systems (**NeurIPS**) 2023*. Also presented in Google Zürich, Google booth at ICCV'23 and ICML'24, Zürich AI+X Summit 2023. Also featured in Computer Vision News.

Academic Activities, Service, and Outreach

2023-2025 **Co-organizer of OpenSUN3D**, *ICCV'23'25, ECCV'24, CVPR'24'25*
I am among the organizers of OpenSUN3D, a series of Workshops on Open-Vocabulary 3D Scene Understanding, held twice a year in conjunction with the major computer vision conferences.

2024-2025 **Co-organizer of ZurichCV Meetups**, *Zurich*
I am among the organizers of the ZurichCV Meetups, a monthly meetup which gathers the Computer Vision community of Zurich both from academia and industry.

2024-2025 **Conference reviewer**, *ECCVW'24, CVPRW'25, ICCVW'25, 3DV'26, ICLR'26, ICRA'26*
Reviewed papers for workshops and main conferences across multiple venues.

Honors & Awards

2025 **SwissAI Grant for Small Projects**, *SwissAI*, 50k GPU hours
2025 **NVIDIA Academic grant**, *NVIDIA*, USD 100k cloud credit, 12k hardware
2025 **SNSF Mobility Grant in Projects**, *Swiss National Science Foundation (SNSF)*, CHF 20k
2025 **ETH AI Center Doctoral Fellowship**, *ETH AI Center*, 2% acceptance rate
2024 **ICVSS Best Presentation Award**, *International Computer Vision Summer School (ICVSS)*
2023 **NeurIPS 2023 Scholar Award**, *NeurIPS*
2023 **Summer@EPFL Fellowship**, *EPFL*, 1.5% acceptance rate
2022-2023 **Scholarship for Sardinian students**, *Regione Sardegna*
2020-2021 **Merit-Based Scholarship**, *Politecnico di Milano*
2019 **Scholarship for Sports Merits**, *Politecnico di Milano*
2019 **Best Freshmen Prize**, *Politecnico di Milano*

Extracurricular activities

2022 - present **Sailing Instructor Diploma - Level I**, *Italian Sailing Federation*

2006–2019 **Professional Optimist and 420 sailor**, Cagliari/Mandello del Lario
○ Member of the **Italian Sailing Team** from 2012 to 2019.
○ Competed in 6 **World Championships** and in 4 **European Championships**.
○ Awarded **Best Italian Female Sailor** by *Tutto Vela* for the year 2014.

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* authors contributed equally