

# ELIA PERUZZO

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## EDUCATION

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- PhD Student**, University of Trento, MHUG Group Nov. 2020 - April 2025  
Supervisor: Niculae Sebe.  
Topic: Image/Video Generation and Editing, Non-photorealistic Image Rendering.
- Master's Degree in Communication Engineering (Double Degree)** 2018 - 2019  
National Taiwan University  
Thesis: Lossy and Lossless Compression of Binary Images Using Improved Adaptive Arithmetic Coding.  
Supervisor: Jian-Jiun Ding, Giancarlo Calvagno.
- Master's Degree in Information and Communications Technology (Double Degree)** 2017 - 2019  
Università degli Studi di Padova  
Score: 110 / 110 with honors.
- Bachelor's Degree in Information Engineering** 2014 - 2017  
Università degli Studi di Padova  
Score: 110 / 110

## EXPERIENCE

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- Research Scientist Intern**, Picsart AI Research Oct. 2022 - Feb. 2023  
Supervisor: Humphrey Shi, Zhangyang Wang.  
Topic: Real Image and Video Editing.  
Location: New York, USA.
- Teacher Assistant**, University of Trento Feb. 2023 - Feb. 2024  
Topic: Introduction to Machine Learning.  
Location: Trento, Italy.
- Data Scientist**, SAS Institute, AI Team Europe Nov. 2019 - Nov. 2020  
Supervisor: Cristina Conti.  
Topic: Medical Image Processing.  
Location: Milan, Italy.
- Research Assistant**, National Taiwan University, DISP Lab. Sept. 2018 - June 2019  
Supervisor: Jian-Jiun Ding.  
Topic: Image and Video Compression.  
Location: Taipei, Taiwan.

## PUBLICATIONS

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Equal contribution denoted with (\*).

- V. Goel\*, **E. Peruzzo**\*, Y. Jiang, D. Xu, N. Sebe, T. Darrell, Z. Wang, H. Shi. PAIR-Diffusion: A Comprehensive Multimodal Object-Level Image Editor. CVPR, 2024.
- M. D'Incà, **E. Peruzzo**, M. Mancini, D. Xu, V. Goel, X. Xu, H. Shi, Z. Wang, N. Sebe. OpenBias: Open Set Bias Detection in Generative Models, CVPR, 2024.
- **E. Peruzzo**, W. Meanpace, V. Goel, F. Arrigoni, H. Tang, X. Xu, A. Chopikyan, N. Orlov, Y. Hu, H. Shi, N. Sebe, E. Ricci. Interactive Neural Painting. Computer Vision and Image Understanding, 2023.
- **E. Peruzzo**, E. Sangineto, Y. Liu, M. De Nadai, W. Bi, B. Lepri, N. Sebe. Spatial Entropy as an Inductive Bias for Vision Transformers. Machine Learning, 2024.
- J.O. Ayorinde, F. Citterio, M. Landrò, **E. Peruzzo**, et al. Artificial Intelligence You Can Trust: What Matters Beyond Performance When Applying Artificial Intelligence to Renal Histopathology? Journal of the American Society of Nephrology, 2022.

- **E. Peruzzo**, J.J. Ding. Morphological residue encoding and piecewise approximation techniques for lossless binary image compression. APCCAS IEEE, 2019.

## UNDER REVIEW & PREPRINTS

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- **E. Peruzzo**, V. Goel, D. Xu, X. Xu, Y. Jiang, Z. Wang, H. Shi, N. Sebe. VASE: Object-Centric Appearance and Shape Manipulation of Real Videos, *arXiv Preprint*, 2024, under review.
- S. Xing, **E. Peruzzo**, E. Sangineto, N. Sebe. From One to Many Lorikeets: Discovering Image Analogies in the CLIP Space, 2023, under review.
- N. Dall'Asen, W. Menapace, **E. Peruzzo**, E. Sangineto, Y. Wang, E. Ricci. Collaborative Neural Painting. *arXiv Preprint*, 2023, under review.

Last update: June 10, 2024.