ELIA PERUZZO

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EDUCATION

PhD Student, University of Trento, MHUG Group
Nov. 2020 - Jan. 2025 (expected)
Supervisor: Niculae Sebe.
Topic: Image/Video Generation and Editing, Non-photorealistic Image Rendering.
Location: Trento, Italy

Master's Degree in Communication Engineering
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
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

ACHIEVEMENTS

Dual-Degree program NTU - UNIPD
2018 - 2019
Selected for a Dual-Degree program between Università degli Studi di Padova (DEI Department) and National Taiwan University (GICE Department).

EXPERIENCE

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

- **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, CVIU, 2023.*

- 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

- **E. Peruzzo**, D. Xu, X. Xu V. Goel, Y. Jiang, Z. Wang, H. Shi, N. Sebe. VASE: Object-Centric Appearance and Shape Manipulation of Real Videos, 2023, <u>under review</u>.

- 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. *arXiv Preprint*, 2023, <u>under review</u>.

- 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, 2023, <u>under review</u>.

- **E. Peruzzo**, E. Sangineto, Y. Liu, M. De Nadai, W. Bi, B. Lepri, N. Sebe. Spatial Entropy as an Inductive Bias for Vision Transformers. *arXiv Preprint*, 2022, <u>under review</u>.

- S. Xing, **E. Peruzzo**, E. Sangineto, N. Sebe. From One to Many Lorikeets: Discovering Image Analogies in the CLIP Space, 2023, <u>under review</u>.

- N. Dall'Asen, W. Menapace, **E. Peruzzo**, E. Sangineto, Y. Wang, E. Ricci. Collaborative Neural Painting. *arXiv Preprint*, 2023, <u>under review</u>.

Equal contribution denoted with (*).