

# Alex Costanzino Curriculum Vitae

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#### Personal Information

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#### Short Bio & Research Interests

PhD student in Computer Science and Engineering and Teaching Assistant at University of Bologna. My current research activity focuses on Artificial Intelligence and Deep Learning techniques for Computer Vision, in particular for Depth Estimation and Anomaly Detection & Segmentation.

### Education

2022 - ongoing PhD in Computer Science and Engineering at University of Bologna.

2020 - 2022 Master's Degree in Artificial Intelligence

at University of Bologna, with a final mark of 110L/110.

Master Thesis Mitigating non-Lambertian surfaces issues in Stereo Matching with Neural Radiance Fields. [https://amslaurea.unibo.it/26933/]

2017 - 2020 Bachelor's Degree in Automation Engineering

at University of Bologna, with a final mark of 104/110.

Bachelor Thesis Machine learning. Principi teorici e applicazioni.

2012 - 2017 High School Diploma in Automation

at IIS Alessandro Volta, Sassuolo (MO), Italy,

with a final mark of 100/100.

Winner of XXXI edition of Lucchese Prize.

# Relevant Work Experience

2024 - ongoing Visiting Researcher

at Torr Vision Group, University of Oxford.

2022 - 2022 Research Intern for Master Thesis preparation

at Computer Vision LAB, University of Bologna.

2021 - 2022 AI Software Analyst & Developer

at HPE Coxa srl, Modena (MO), Italy.

2019 - 2020 Student Collaboration Activities

at Laboratorio di Automazione e Robotica, University of Bologna.

## Teaching Activities

2022 - ongoing Teaching Assistant

at University of Bologna.

Teaching Assistant of the Computer Vision and Image Processing course for the Master's Degrees in Computer Engineering, Automation Engineering and Electronic Engineering.

2024 - ongoing Teaching Assistant

at University of Bologna.

Teaching Assistant of the *Image Processing and Computer Vision* course for the Master's Degrees in Artificial Intelligence.

## Co-supervised Students

Gasperini, A real multi-view dataset for multimodal Anomaly Detection and Segmentation, Univer-Lucia sity of Bologna, Master's Degree in Artificial Intelligence [LM-DM270]

Lella, A synthetic multi-view dataset for multimodal Anomaly Detection and Segmentation,

Luigi University of Bologna, Master's Degree in Computer Engineering [LM-DM270]

Aiezzo, Test Time Training for Binary Anomaly Segmentation, University of Bologna, Master's

Agostino Degree in Artificial Intelligence [LM-DM270]

Mancini, Instance Segmentation of Non-Lambertian objects, University of Bologna, Master's Letizia Degree in Computer Engineering [LM-DM270]

Del Moro, A Test Time Adaptation Protocol to improve Industrial Anomaly Detection and Segmen-Mirko tation, University of Bologna, Master's Degree in Artificial Intelligence [LM-DM270]

Caltabiano, Creation of a dataset for Instance Segmentation of Transparent and Mirror surfaces, Sofia University of Bologna, Internship in Automation Engineering [LM-DM270]

Lo Russo, Reti neurali monoculari per la stima della profondità di superfici non-Lambertiane, Andrea University of Bologna, Master's Degree in Computer Engineering [LM-DM270]

## List of Publications

- 2025 **Alex Costanzino**, Pierluigi Zama Ramirez, Giuseppe Lisanti, Luigi Di Stefano SiM3D: Single-instance Multiview Multimodal and Multisetup 3D Anomaly Detection Benchmark. [Under Review]
- 2025 **Alex Costanzino**, Pierluigi Zama Ramirez, Giuseppe Lisanti, Luigi Di Stefano *Learning* to be a Transformer to Pinpoint Anomalies. [Under Review]
- 2024 Pierluigi Zama Ramirez, **Alex Costanzino**, Fabio Tosi, Matteo Poggi, Luigi Di Stefano, Jean-Baptiste Weibel, Dominik Bauer, Doris Antensteiner, Markus Vincze et al. TRICKY 2024 Challenge on Monocular Depth from Images of Specular and Transparent Surfaces. [ECCV 2024 Workshops]
- 2024 Pierluigi Zama Ramirez, Fabio Tosi, Luigi Di Stefano, Radu Timofte, Alex Costanzino, Matteo Poggi, Samuele Salti, Stefano Mattoccia et al. NTIRE 2024 Challenge on HR Depth from Images of Specular and Transparent Surfaces. [CVPR 2024 Workshops]
- 2024 **Alex Costanzino**, Pierluigi Zama Ramirez, Mirko Del Moro, Agostino Aiezzo, Giuseppe Lisanti, Samuele Salti, Luigi Di Stefano *Test Time Training for Industrial Anomaly Segmentation*. [CVPR 2024 Workshops]
- 2024 **Alex Costanzino**, Pierluigi Zama Ramirez, Giuseppe Lisanti, Luigi Di Stefano *Multi-modal Industrial Anomaly Detection by Crossmodal Feature Mapping*. [CVPR 2024]
- 2023 **Alex Costanzino**, Pierluigi Zama Ramirez, Matteo Poggi, Fabio Tosi, Stefano Mattoccia, Luigi Di Stefano *Learning Depth Estimation for Transparent and Mirror Surfaces*. [ICCV 2023]

- 2023 Pierluigi Zama Ramirez, Fabio Tosi, Luigi Di Stefano, Radu Timofte, **Alex Costanzino**, Matteo Poggi, Samuele Salti, Stefano Mattoccia et al. *NTIRE 2023 Challenge on HR Depth from Images of Specular and Transparent Surfaces*. [CVPR 2023 Workshops]
- 2023 Pierluigi Zama Ramirez, **Alex Costanzino**, Fabio Tosi, Matteo Poggi, Samuele Salti, Stefano Mattoccia, Luigi Di Stefano. *Booster: a Benchmark for Depth from Images of Specular and Transparent Surfaces*. [IEEE Transactions on Pattern Analysis and Machine Intelligence]

## Organization of Workshops & Tutorials

#### Workshops

- [W1] TRICKY 2024: 2nd Transparent & Reflective objects In the wild Challenges, ECCV 2024 (Milan, Italy)

  [https://sites.google.com/view/eccv24-tricky-workshop/]
- [W2] NTIRE 2024: 9th New Trends in Image Restoration and Enhancement Workshop and Challenges, CVPR Workshops 2024 (Seattle, Washington)
  [https://cvlab-unibo.github.io/booster-web/ntire24]
- [W3] NTIRE 2023: 8th New Trends in Image Restoration and Enhancement Workshop and Challenges, CVPR Workshops 2023 (Vancouver, Canada)
  [https://cvlab-unibo.github.io/booster-web/ntire]