

Massimiliano Mancini

Curriculum Vitae

Assistant Professor (RTD-b) Department of Information Engineering and Computer Science
University of Trento, (Trento, Italy)

ASN: 09/H1 - Sistemi di Elaborazione delle Informazioni (valid until 10/07/2035)

ASN: 01/B1 - Informatica (valid until 15/07/2035)

Education

Ph.D. in Engineering in Computer Science November 2016 - December 2020

Sapienza University of Rome (Rome, Italy)

Advisor: Prof. Barbara Caputo

Co-Advisor: Prof. Elisa Ricci

Thesis title: *Towards Recognizing New Semantic Concepts in New Visual Domains*

External reviewers: Prof. Bernt Schiele, Prof. Timothy M. Hospedales

Award date: 7/12/2020

Grade: Excellent cum laude.

Master of Science in Artificial Intelligence and Robotics

Sapienza University of Rome (Rome, Italy)

October 2014 - October 2016

Supervisor: Prof. Barbara Caputo

Thesis title: *Deep Naïve Bayes Nearest Neighbor*

Grade: 110/110 cum laude and excellence mention.

Bachelor degree in Computer and Electronic Engineering

University of Perugia (Perugia, Italy)

October 2010 - May 2014

Supervisor: Prof. Emilio Di Giacomo

Thesis title: *Project and realization of a software system for the use of a mobile device as a webcam for computer*

Grade: 101/110.

Ph.D. Schools and Programs

ELLIS PhD Program

March - June 2020

European Laboratory for Learning and Intelligent Systems (ELLIS Society)

Primary Host: Prof. Barbara Caputo

Exchange Host: Prof. Zeynep Akata

Main topic: Zero-Shot Adaptation and Learning.

FBK International PhD Program

January 2017 - December 2020

Fondazione Bruno Kessler (Trento, Italy)

Internal advisor: Prof. Elisa Ricci

International Computer Vision Summer School

July 2017

Scicli, Italy

Organizers: Prof. Roberto Cipolla (University of Cambridge), Prof. Sebastiano Battiato (University of Catania), Prof. Giovanni Maria Farinella (University of Catania).

Regularization Methods for Machine Learning

June 27th - July 1st 2016

Genova, Italy

Organizers: Dr. Alessandro Rudi (University of Genova), Raffaello Camoriano (IIT and University of Genova), Dr. Silvia Villa (IIT).

Research Experience

- Department of Information Engineering and Computer Science** May 2025 -
University of Trento (Trento, Italy)
Position: Assistant Professor (RTD-b)
Main topic: Trustworthy machine learning, compositionality
- Multimedia and Human Understanding Group** April 2023 - May 2025
University of Trento (Trento, Italy)
Position: Assistant Professor (RTD-a)
Main topic: Transfer learning, continual learning, domain generalization, open vocabulary recognition
- Explainable Machine Learning Laboratory** December 2020 - March 2023
University of Tübingen (Tübingen, Germany)
Position: Postdoctoral Researcher
Supervisor: Prof. Zeynep Akata
Main topic: Zero-Shot Learning and Compositionality.
- Explainable Machine Learning Laboratory** July - December 2020
University of Tübingen (Tübingen, Germany)
Position: Ph.D. Researcher
Supervisor: Prof. Zeynep Akata
Main topic: Zero-Shot Learning and Compositionality.
- Visual and Multimodal Applied Learning (VANDAL)** May 2019 - May 2020
Istituto Italiano di Tecnologia (Turin, Italy)
Position: Research Fellow
Head of the Laboratory: Prof. Barbara Caputo
Main topic: Incremental Class Learning for Semantic Segmentation.
- Robotics Perception and Learning laboratory (RPL)** August-September 2018
KTH Royal Institute of Technology (Stockholm, Sweden)
Position: Visiting Ph.D. Student
Supervisors: Dr. Hakan Karaoguz, Prof. Patric Jensfelt
Main topic: Application of an online deep incremental class learning algorithm for object detection on a YuMi robotic platform.
- Robotics Perception and Learning laboratory (RPL)** May - June 2018
KTH Royal Institute of Technology (Stockholm, Sweden)
Position: Visiting Ph.D. Student
Supervisors: Dr. Hakan Karaoguz, Prof. Patric Jensfelt
Main topic: Development of an online deep incremental class learning algorithm for object classification and detection.
- Technologies of Vision laboratory (TeV)** January 2017 - January 2020
Fondazione Bruno Kessler (Trento, Italy)
Position: Research Collaborator
Head of the Laboratory: Dr. Stefano Messelodi
Main topic: Generalization and Robustness of Convolutional Neural Networks.
- Technologies of Vision laboratory (TeV)** July - September 2016
Fondazione Bruno Kessler (Trento, Italy)
Position: Intern
Supervisor: Prof. Elisa Ricci

Main topic: End-to-end training of Convolutional Neural Networks for Scene Recognition using a Naïve Bayes Nearest Neighbor-based classifier.

Linguistic Computing Laboratory (LCL)

October 2015 - March 2016

Sapienza University of Rome (Rome, Italy)

Position: Master Student

Supervisor: Prof. Roberto Navigli

Main topic: Development of an algorithm for simultaneously producing word and sense embeddings from text corpora.

**Awards and
Acknowledgements**

Ph.D. Thesis Award 2020

April 2022

Sapienza University of Rome (Rome, Italy)

Awarded to the best Ph.D. theses defended at the Sapienza University of Rome between January 2017 and December 2020.

Excellent Ph.D. student

March 2021

Fondazione Bruno Kessler International PhD Program (Trento, Italy)

Awarded to Ph.D. students fulfilling research excellence criterions.

Outstanding editor

- International Conference on Robotics and Automation (ICRA) 2024

Outstanding reviewer

- Advances in Neural Information Processing Systems (NeurIPS) 2023
- International Conference on Machine Learning 2022
- IEEE/CVF International Conference on Computer Vision (ICCV) 2019, 2021
- IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR) 2019, 2021, 2022
- IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) 2025

Doctoral Consortium mentee

June 2020

IEEE/CVF International Conference on Computer Vision and Pattern Recognition

Mentor: Prof. Bernt Schiele

Best Paper Award Honorable mention

September 2018

ECCV Workshop on Transferring and Adapting Source Knowledge in Computer Vision (Munich, Germany)

For the work *Adding New Tasks to a Single Network with Weight Transformations using Binary Masks*.

Reading Group Competition Winner

July 2017

International Computer Vision Summer School 2018 (Scicli, Italy)

Member of the winning team of the reading group competition, with Julian Zilly, Amit Boyarski, Micael Carvalho, Amir Atapour Abarghouei, Konstantinos Amplianitis, Aleksandr Krasnov, Hernán Gonzalez, Riccardo Spezialetti, Carlos Sampedro Pérez.

Excellent graduate student

May 2017

Sapienza University of Rome (Rome, Italy)

Awarded to the best M.Sc. graduate students of the year.

Participation to Research Projects

Compressed Vision Language Models for Lightweight Compositional Generalization (COMP2GEN)

Call: Italian SuperComputing Resource Allocation (ISCRA) - Call B

Founder: CINECA (Italy)

Role: Principal Investigator

Period: 2024-2025

Budget: 1'868'192 standard computational hours

Trustworthy and Dynamic Compositional Recognition

Call: Innovation Grants for Science/Life Science

Founder: University of Tübingen (Tübingen, Germany)

Role: Principal Investigator

Period: 2022-2023

Budget: 190'108 €

Deeply Explainable Intelligent Machines (DEXIM)

Principal Investigator: Prof. Zeynep Akata

Call: ERC Starting Grant

Founder: European Research Council

Role: Researcher

Period of participation: 2020-2022

Robots Learning about Objects from Externalized Knowledge Sources (RoboExNovo)

Principal Investigator: Prof. Barbara Caputo

Call: ERC Starting Grant

Founder: European Research Council

Role: Researcher

Period of participation: 2017-2020

Services:

Membership

- Member of the ELLIS Society
- Member of the ELLIS Unit Trento
- Member of the Computer Vision Foundation (CVF)
- Member of the Italian Association for Computer Vision, Pattern Recognition and Machine Learning (CVPL)

Editorial activity:

- Guest Editor for the Special Issue on Multimodal Learning, International Journal of Computer Vision
- Associate Editor for Computer Vision and Image Understanding
- Action Editor for Transactions on Machine Learning Research

Conferences organization:

- Publicity/Web Chair for International Conference on Image Analysis and Processing (ICIAP) 2019
- Area Chair for CVPR 2024-2025

- Area Chair for ECCV 2024
- Area Chair for NeurIPS 2024-2025
- Associate Editor (Visual Perception and Learning) for ICRA 2024-2025

Workshops organization:

- 1st International Workshop on Industrial Machine Learning (at ICPR 2020)
- 2nd International Workshop on Industrial Machine Learning (at ICPR 2022)
- 5th Multimodal Learning and Applications Workshop (at CVPR 2022)
- Workshop on Weakly Supervised Computer Vision (at Deep Learning Indaba 2022)
- Explainability in Machine Learning Workshop (Tübingen, March 2023)
- 1st Workshop on Green Foundation Models (at ECCV 2024)

Tutorials organization:

- Transferring Knowledge Across Domains: an Introduction to Deep Domain Adaptation (at ICIAP 2019)
- Visual Recognition Beyond the Comfort Zone: Adapting to Unseen Concepts on the Fly (at ICCV 2023)
- ItalNet: Connecting the early career Italian computer vision and pattern recognition community (at ICIAP 2025)

Symposiums organization:

- Computer Vision Trento Symposium (Trento, June 2024)

Evaluator for the following PhD Programs:

- International Max Planck Research School for Intelligent Systems (IMPRS-IS) 2021-2023
- European Laboratory for Learning and Intelligent Systems (ELLIS) 2022

Evaluator for the following PhD Theses:

- *Knowledge Transferability for Data-Efficient Deep Learning*
Dr. Andrea Maracani (University of Genova, IIT)
- *Spatial Reasoning with Graph Neural Networks*
Dr. Francesco Giuliani (University of Genova, IIT)
- *Morphing Distributed and Transfer Learning Paradigms for Visual Understanding*
Dr. Donald Shenaj (University of Padova)

Reviewer for the following journals:

- IEEE Transactions on Pattern Analysis and Machine Intelligence
- International Journal of Computer Vision
- IEEE Transactions on Image Processing
- IEEE Transactions on Multimedia
- Computer Vision and Image Understanding
- IET Computer Vision
- International Journal of Machine Learning and Cybernetics
- Pattern Recognition

- IEEE Robotics and Automation Letters
- Machine Vision and Applications
- Engineering Reports
- Frontiers in Computer Science
- IEEE Transaction on Robotics
- Transactions on Machine Learning Research
- IEEE Transactions on Neural Networks and Learning Systems
- Neural Networks
- ACM Transactions on Multimedia Computing Communications and Applications

Reviewer for the following conferences:

- IEEE International Conference on Robotics and Automation (ICRA) 2018-2022
- ACM Multimedia Conference (ACM-MM) 2018-2022
- IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR) 2019-2023
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2019-2022
- IEEE International Conference on Computer Vision (ICCV) 2019-2023
- Advances in Neural Information Processing Systems (NeurIPS) 2019-2023
- AAAI Conference on Artificial Intelligence (AAAI) 2020-2021
- International Conference on Pattern Recognition (ICPR) 2020-2022
- European Conference on Computer Vision (ECCV) 2020-2022
- Asian Computer Vision Conference (ACCV) 2020
- German Conference on Pattern Recognition (GCPR) 2020
- Winter Conference on Applications of Computer Vision (WACV) 2021-2023, 2025
- International Conference on Learning Representations (ICLR) 2022, 2024
- International Conference on Machine Learning (ICML) 2022-2023, 2025
- Conference on Lifelong Learning Agents (CoLLAs) 2022
- British Machine Vision Conference (BMVC) 2022
- IEEE Conference on Artificial Intelligence (CAI) 2023

Reviewer/member of the program committee for the following workshops:

- Transferring Knowledge and Adapting Source Knowledge in Computer Vision and VisDA Challenge (at ECCV 2018)
- Transferring and Adapting Source Knowledge in Computer Vision (at ECCV 2020)
- Learning from Limited or Imperfect Data (at CVPR 2021)
- Towards a Complete Analysis of People: From Face and Body to Clothes (at ICIAP 2021)
- Learning with Limited Labelled Data for Image and Video Understanding (at CVPR 2022)

- Towards a Complete Analysis of People: From Face and Body to Clothes (at ICPR 2022)
- 6th Multimodal Learning and Applications Workshop (at CVPR 2023)
- Workshop on Computer Vision for Human Motion Analysis (at IEEE International Conference on Multimedia and Expo)
- Foundation models Creators meet Users (at ECCV 2024)

Mentor for:

- Speed Mentoring session at the European Conference on Computer Vision (ECCV) 2024

Student Volunteer for:

- IEEE International Conference on Computer Vision (ICCV) 2017

Publications

Journal papers

- [J1] M. Mancini, S. Rota Bulò, E. Ricci, B. Caputo
Learning Deep NBNN Representations for Robust Place Categorization
IEEE Robotics and Automation Letters, 2017, vol. 2, n. 3, pp. 1794-1801.
Presented at IROS 2017.
- [J2] M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci
Robust Place Categorization with Deep Domain Generalization
IEEE Robotics and Automation Letters, 2018, vol. 3, n. 3, pp. 2093-2100.
- [J3] M. Mancini, L. Porzi, S. Rota Bulò, B. Caputo, E. Ricci
Inferring Latent Domains for Unsupervised Deep Domain Adaptation
IEEE Transactions on Pattern Analysis & Machine Intelligence, 2019, vol. 43, n. 2, pp. 485-498.
- [J4] D. Fontanel, F. Cermelli, M. Mancini, S. Rota Bulò, E. Ricci, B. Caputo
Boosting Open World Recognition by Clustering
IEEE Robotics and Automation Letters, 2020, vol. 5, n. 4, pp. 5985-5992.
- [J5] M. Mancini, E. Ricci, B. Caputo, S. Rota Bulò
Boosting Binary Masks for Multi-Domain Learning through Affine Transformations
Machine Vision and Applications, 2020, vol. 31, n. 6, pp. 1-14.
- [J6] D. Fontanel, F. Cermelli, M. Mancini, B. Caputo
On the Challenges of Open World Recognition under Shifting Visual Domains
IEEE Robotics and Automation Letters, 2020, vol. 6, n. 2, pp. 604-611.
- [J7] F. Cermelli, M. Mancini, S. Rota Bulò, E. Ricci, B. Caputo
Modelling the Background for Incremental and Weakly-Supervised Semantic Segmentation
IEEE Transactions on Pattern Analysis & Machine Intelligence, 2021, vol. 44, n. 12, pp. 10099-10113.
- [J8] Y. Chen, M. Mancini, X. Zhu, Z. Akata
Semi-Supervised and Unsupervised Deep Visual Learning: A Survey
IEEE Transactions on Pattern Analysis & Machine Intelligence, 2024, vol. 46, no. 3, pp. 1327-1347.

- [J9] M. Mancini, M. F. Naeem, Y. Xian, Z. Akata
Learning Graph Embeddings for Open World Compositional Zero-Shot Learning
IEEE Transactions on Pattern Analysis & Machine Intelligence, 2024, vol. 46, no. 3, pp. 1545-1560.
- [J10] A. Chaudhuri, M. Mancini, Z. Akata, A. Dutta
Relational Proxies: Fine-Grained Relationships as Zero-Shot Discriminators
IEEE Transactions on Pattern Analysis & Machine Intelligence, 2024, vol. 46, no. 12, pp. 8652-8664.
- [J11] J. Fechner, M. Born, M. Mancini, Z. Akata, P. Haag, S. Diekelmann, J. Born
The Influence of Intentions on Dream Content
SLEEP Advances, 2024.
- [J12] T. De Min, M. Mancini, S. Lathuilière, S. Roy, E. Ricci
Unlearning Personal Data from a Single Image
Transactions on Machine Learning Research 2025.

Conference papers

- [C1] M. Mancini, J. Camacho-Collados, I. Iacobacci, R. Navigli
Embedding Words and Senses together via Joint Knowledge-Enhanced Training
Proceedings of the SIGNLL Conference on Computational Natural Language Learning (CoNLL) 2017.
- [C2] M. Mancini, H. Karaoguz, E. Ricci, P. Jensfelt, B. Caputo
Kitting in the Wild through Online Domain Adaptation
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2018.
- [C3] M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci
Best sources forward: domain generalization through source-specific nets
IEEE International Conference on Image Processing (ICIP) 2018.
- [C4] M. Mancini, L. Porzi, S. Rota Bulò, B. Caputo, E. Ricci
Boosting Domain Adaptation by Discovering Latent Domains
IEEE Computer Vision and Pattern Recognition (CVPR) 2018. **(spotlight)**
- [C5] M. Mancini, L. Porzi, F. Cermelli, B. Caputo
Discovering Latent Domains for Unsupervised Domain Adaptation Through Consistency
International Conference on Image Analysis and Processing (ICIAP) 2019.
- [C6] L. O. Vasconcelos, M. Mancini, D. Boscaini, B. Caputo, E. Ricci
Structured Domain Adaptation for 3D Keypoint Estimation
International Conference on 3D Vision (3DV) 2019. **(oral)**
- [C7] F. Cermelli, M. Mancini, E. Ricci, B. Caputo
The RGB-D Triathlon: Towards Agile Visual Toolboxes for Robots
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2019.
- [C8] M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci
AdaGraph: Unifying Predictive and Continuous Domain Adaptation through Graphs
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2019. **(oral)**
- [C9] M. Mancini, H. Karaoguz, E. Ricci, P. Jensfelt, B. Caputo
Knowledge is Never Enough: Towards Web Aided Deep Open World Recognition
IEEE International Conference on Robotics and Automation (ICRA) 2019.

- [C10] L. O. Vasconcelos, M. Mancini, D. Boscaini, S. Rota Bulò, B. Caputo, E. Ricci
Shape Consistent 2D Keypoint Estimation under Domain Shift
International Conference on Pattern Recognition (ICPR) 2020.
- [C11] M. Mancini, Z. Akata, E. Ricci, B. Caputo
Towards Recognizing Unseen Categories in Unseen Domains
European Computer Vision Conference (ECCV) 2020.
- [C12] F. Cermelli, M. Mancini, S. Rota Bulò, E. Ricci, B. Caputo
Modelling the Background for Incremental Learning in Semantic Segmentation
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2020.
- [C13] F. Cermelli, M. Mancini, Y. Xian, Z. Akata, B. Caputo
Prototype-based Incremental Few-Shot Semantic Segmentation
British Machine Vision Conference (BMVC) 2021.
- [C14] M. Mancini, M. F. Naeem, Y. Xian, Z. Akata
Open World Compositional Zero-Shot Learning
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2021.
- [C15] S. Karthik, M. Mancini, Z. Akata
KG-SP: Knowledge Guided Simple Primitives for Open World Compositional Zero-Shot Learning
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2022.
- [C16] A. Chaudhuri, M. Mancini, Z. Akata, A. Dutta
Relational Proxies: Emergent Relationships as Fine-Grained Discriminators
Neural Information Processing Systems (NeurIPS) 2022. (**spotlight**)
- [C17] A. Chaudhuri, M. Mancini, Y. Chen, Z. Akata, A. Dutta
Cross-Modal Fusion Distillation for Fine-Grained Sketch-Based Image Retrieval
British Machine Vision Conference (BMVC) 2022.
- [C18] S. Alaniz, M. Mancini, A. Dutta, D. Marcos, Z. Akata
Abstracting Sketches through Simple Primitives
European Computer Vision Conference (ECCV) 2022.
- [C19] U. Upadhyay, S. Karthik, Y. Chen, M. Mancini, Z. Akata
BayesCap: Bayesian Identity Cap for Calibrated Uncertainty in Frozen Neural Networks
European Computer Vision Conference (ECCV) 2022.
- [C20] U. Upadhyay, S. Karthik, M. Mancini, Z. Akata
ProbVLM: Probabilistic Adapter for Frozen Vision-Language Models
International Computer Vision Conference (ICCV) 2023.
- [C21] A. Christensen, M. Mancini, A. S. Koepke, O. Winther, Z. Akata
Image-free Classifier Injection for Zero-Shot Classification
International Computer Vision Conference (ICCV) 2023.
- [C22] S. Alaniz, M. Mancini, Z. Akata
Iterative Superquadric Recomposition of 3D Objects from Multiple Views
International Computer Vision Conference (ICCV) 2023.
- [C23] R. van der Klis, S. Alaniz, M. Mancini, C. Dantas, D. Ienco, Z. Akata, D. Marcos
PDiscoNet: Semantically consistent part discovery for fine-grained recognition
International Computer Vision Conference (ICCV) 2023.
- [C24] A. Chaudhuri, M. Mancini, Z. Akata, A. Dutta
Transitivity Recovering Decompositions: Interpretable and Robust Fine-Grained Relationships
Neural Information Processing Systems (NeurIPS) 2023.

- [C25] A. Conti, E. Fini, M. Mancini, P. Rota, Y. Wang, E. Ricci
Vocabulary-free Image Classification
Neural Information Processing Systems (NeurIPS) 2023.
- [C26] S. Karthik, K. Roth, M. Mancini, Z. Akata
Vision-by-Language for Training-Free Compositional Image Retrieval
International Conference on Learning Representations (ICLR) 2024.
- [C27] L. Zanella, W. Menapace, M. Mancini, Y. Wang, E. Ricci
Harnessing Large Language Models for Training-free Video Anomaly Detection
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2024.
- [C28] M. Farina, M. Mancini, E. Cunegatti, G. Liu, G. Iacca, E. Ricci
MULTIFLOW: Shifting Towards Task-Agnostic Vision-Language Pruning
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2024.
- [C29] M. d’Incà, E. Peruzzo, M. Mancini, D. Xu, V. Goel, X. Xu, Z. Wang, H. Shi, N. Sebe
OpenBias: Open-set Bias Detection in Text-to-Image Generative Models
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2024. (**highlight**)
- [C30] T. De Min, M. Mancini, S. Lathuilière, S. Roy, E. Ricci
Less is more: Summarizing Patch Tokens for efficient Multi-Label Class-Incremental Learning
Third Conference on Lifelong Learning Agents (COLLAs) 2024.
- [C31] M. Farina, G. Franchi, G. Iacca, M. Mancini, E. Ricci
Frustratingly Easy Test-Time Adaptation of Vision-Language Models
Neural Information Processing Systems (NeurIPS) 2024.
- [C32] D. Das, D. Talon, Y. Wang, M. Mancini, E. Ricci
One VLM to Keep it Learning: Generation and Balancing for Data-free Continual Visual Question Answering
IEEE/CVF Winter Conference on Applications of Computer Vision 2025.
- [C33] M. Garosi, R. Tedoldi, D. Boscaini, M. Mancini, N. Sebe, F. Poiesi
3D Part Segmentation via Geometric Aggregation of 2D Visual Features
IEEE/CVF Winter Conference on Applications of Computer Vision 2025.
- [C34] L. Zanella, M. Mancini, W. Menapace, S. Tulyakov, Y. Wang, E. Ricci
Can Text-to-Video Generation help Video-Language Alignment?
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2025.
- [C35] M. Farina, M. Mancini, G. Iacca, E. Ricci
Rethinking Few-Shot Adaptation of Vision-Language Models in Two Stages
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2025.
- [C36] Q. Guimard, M. d’Incà, M. Mancini, E. Ricci
Classifier-to-Bias: Toward Unsupervised Automatic Bias Detection for Visual Classifiers
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2025.
- [C37] M. Garosi, A. Conti, G. Liu, E. Ricci, M. Mancini
Compositional Caching for Training-free Open-vocabulary Attribute Detection
IEEE/CVF Winter Conference on Applications of Computer Vision 2025. (**highlight**)
- [C38] D. Berasi, M. Farina, M. Mancini, E. Ricci, N. Strisciuglio
Not Only Text: Exploring Compositionality of Visual Representations in Vision-Language Models
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2025. (**highlight**)

- [C39] M. Liu, T.L. Hayes, M. Mancini, E. Ricci, R. Volpi, G. Csurka
Test-time Vocabulary Adaptation for Language-driven Object Detection
 IEEE International Conference on Image Processing (ICIP) 2025.

Workshop papers

- [W1] M. Mancini, E. Ricci, B. Caputo, S. Rota Bulò
Adding New Tasks to a Single Network with Weight Transformations using Binary Masks
 ECCV Workshop on Transferring and Adapting Source Knowledge in Computer Vision 2018. **(best paper award honorable mention)**
- [W2] S. Karthik, M. Mancini, Z. Akata
Revisiting Visual Product for Compositional Zero-Shot Learning
 NeurIPS Workshop on Distribution Shifts 2021.
- [W3] A. Dutta, M. Mancini, Z. Akata
Concurrent Discrimination and Alignment for Self-Supervised Feature Learning
 ICCV Workshop on Multi-Task Learning in Computer Vision 2021.
- [W4] G. Pastore, F. Cermelli, Y. Xian, M. Mancini, Z. Akata, B. Caputo
A Closer Look at Self-training for Zero-Label Semantic Segmentation
 CVPR Workshop on Learning from Limited and Imperfect Data 2021.
- [W5] D. Caldarola, M. Mancini, F. Galasso, M. Ciccone, E. Rodolà, B. Caputo
Cluster-driven Graph Federated Learning over Multiple Domains
 CVPR Workshop on Learning from Limited and Imperfect Data 2021.
- [W6] D. Fontanel, F. Cermelli, M. Mancini, B. Caputo
Detecting Anomalies in Semantic Segmentation with Prototypes
 CVPR Workshop on Safe and Artificial Intelligence for Automated Driving 2021.
- [W7] I. Cugu, M. Mancini, Y. Chen, Z. Akata
Attention Consistency on Visual Corruptions for Single-Source Domain Generalization
 CVPR Workshop on Learning with Limited Labelled Data for Image and Video Understanding 2022.
- [W8] T. De Min, M. Mancini, K. Alahari, X. Alameda-Pineda, E. Ricci
On the Effectiveness of LayerNorm Tuning for Continual Learning in Vision Transformers
 The First Workshop on Visual Continual Learning at ICCV 2023. **(oral)**
- [W9] S. Caldarella, M. Mancini, E. Ricci, R. Aljundi
The Phantom Menace: Unmasking Privacy Leakages in Vision-Language Models
 The Trust What You learn (TWYN) Workshop at ECCV 2024.

Others

- M. Mancini
Towards Recognizing New Semantic Concepts in New Visual Domain
 Sapienza Università Editrice, 2022
 Ph.D. Thesis published for winning the Sapienza Ph.D. Thesis Award 2020.
 Volume 124, pages 280.

Presentations

at conferences and workshops

Oral/spotlights [J1],[C2],[C4],[C8],[W1]

Posters [C5],[C9],[C15],[C18],[C19],[C20],[C21],[C22],[C24],[C25],[C27],[C28],[C29],[W7]

Virtual [C11],[C12],[C14]

Invited Talks

AdaGraph: Unifying Predictive and Continuous Domain Adaptation through Graphs

International Conference on Image Analysis and Processing (ICIAP) 2019.
CVPL highlights, short presentation.

Open World Compositional Zero-Shot Learning

EPFL Computer Vision Talks, Virtual, June 2021.

Compositional Zero-Shot Learning

2D3DAI, Virtual, April 2021.

Deep Learning beyond the Closed World

Summer School on Complex Networks and Telecommunications, Como (Italy), July 2022.

On the challenges of Open World Compositional Zero-Shot Learning

Bosch Industry-on-Campus (IoC) Lab, Virtual, May 2022.

Compositional Zero-Shot Learning

National AI PhD Fall School, Turin (Italy), November 2023.

Vocabulary-free Image Classification

1st Year Joint workshop of FAIR and ELLIS, Trento (Italy), December 2023.

Opening multimodal doors with language: from recognition to bias detection

7th Multimodal Learning and Applications Workshop (at CVPR 2024), Seattle (USA), June 2024.

From zero-shot learning to training-free generalization

AIXIA International Summer School on Advances in Artificial Intelligence, Como (Italy), September 2024.

From zero-shot learning to training-free generalization

Department of Informatics, Systems and Communication (DISCO), University of Milano-Bicocca, Milan (Italy), October 2024.

Vocabulary-free Image Classification

Workshop on Traditional Computer Vision in the Deep Learning Era, Institute of Robotics and Intelligent Machines (I-RIM) 2024, Rome (Italy), October 2024.

From zero-shot learning to training-free generalization

Department of Mathematics "Tullio Levi-Civita", University of Padova, Padova (Italy), December 2024.

Compositional Representations in Vision-Language Models

Workshop "Stimulating and Measuring Creativity. A research project on human and AI performance".

Department of Humanities, University of Macerata, Macerata (Italy), June 2025.

Teaching

Seminars on Learning with Limited Labeled Data

October-December 2021

Faculty of Computer Science

University of Tübingen (Tübingen, Germany)

Level: Master and Bachelor

Role: Teaching assistant

Credits: 3

Duration: 28 hours

Visual Recognition beyond the Closed World

August-September 2023

Information Engineering and Computer Science Doctoral School

University of Trento (Trento, Italy)

Level: Ph.D.

Role: Lecturer

Credits: 3

Duration: 20 hours

Trends and Applications of Computer Vision

Winter Semester 2023/2024

Master in Artificial Intelligence Systems

University of Trento (Trento, Italy)

Level: Master

Role: Co-lecturer

Credits: 6

Duration: 48 hours (teaching 20)

Trends and Applications of Computer Vision

Winter Semester 2024/2025

Master in Artificial Intelligence Systems

University of Trento (Trento, Italy)

Level: Master

Role: Co-lecturer

Credits: 6

Duration: 48 hours (teaching 20)

Supervision

Ph.D. students:

- Simone Caldarella (University of Trento) 2024 - ongoing
- Thomas De Min (University of Trento) 2024 - ongoing
- Matteo Farina (University of Trento) 2024 - ongoing

Master students:

- Fabio Cermelli (Politecnico di Torino) 2018
- Dario Fontanel (Politecnico di Torino) 2019
- Alessandro Rizzuto (University of Trento) 2020

- Debora Caldarola (Politecnico di Torino) 2020
- Giuseppe Pastore (Politecnico di Torino) 2020
- Robin M. Schmidt (University of Tübingen) 2021
- Michael Gröger (University of Tübingen) 2023
- Marco Garosi (University of Trento) 2024

**Bibliometric
indices**

Google Scholar: h-index 27, n. citations 2745

Scopus: h-index 18, n. citations 1422

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