

# Massimiliano Mancini

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Assistant Professor (RTD-a) @ Multimedia and Human Understanding Group  
University of Trento, (Trento, Italy)

ELLIS member

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**website:** <https://mancinimassimiliano.github.io/>

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## Education

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

Sapienza University of Rome (Rome, Italy)

Advisor: Prof. Barbara Caputo, 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.

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## 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, UK), Prof. Sebastiano Battiato (University of Catania, Italy), Prof. Giovanni Maria Farinella (University of Catania, Italy).

***Regularization Methods for Machine Learning***

June 27th - July 1st 2016

Genova, Italy

Organizers: Dr. Alessandro Rudi (University of Genova, Italy), Raffaello Camoriano (Italian Institute of Technology and University of Genova, Italy), Dr. Silvia Villa (Italian Institute of Technology, Italy).

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## Research Experience

### ***Multimedia and Human Understanding Group***

April 2023 - present

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.

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## 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

***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.

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## 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

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**Services:**

**Membership**

- Member of the ELLIS Society
- Member of the ELLIS Unit Trento
- Member of the Computer Vision Foundation

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

**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)

**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*  
Andrea Maracani
- *Spatial Reasoning with Graph Neural Networks*  
Francesco Giuliari

**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

**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
- International Conference on Learning Representations (ICLR) 2022
- International Conference on Machine Learning (ICML) 2022-2023
- 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)

**Student Volunteer for:**

- IEEE International Conference on Computer Vision (ICCV) 2017

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## 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] 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.
- [J9] Y. Chen, M. Mancini, X. Zhu, Z. Akata  
*Semi-Supervised and Unsupervised Deep Visual Learning: A Survey*  
IEEE Transactions on Pattern Analysis & Machine Intelligence, 2022 (in press).
- [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 (in press).

### 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.

## 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)**

## 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.

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## Presentations at conferences and workshops

**Oral/spotlights** [J1],[C2],[C4],[C8],[W1]  
**Posters** [C5],[C9],[C15],[C18],[C19],[C20],[C21],[C22],[C24],[C25],[W7]  
**Virtual** [C11],[C12],[C14]

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## 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.

***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, November 2023.

***Vocabulary-free Image Classification***

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

***Opening multimodal doors with language: from recognition to bias detection***

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

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**Teaching**

***Deep Learning beyond the Closed World***

July 2021

Summer School on Complex Networks and Telecommunications

Lake Como School of Advanced Studies (Como, Italy)

Level: Ph.D.

Role: Lecturer

***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)

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## Supervision

### Ph.D. students:

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

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## Bibliometric indices

**Google Scholar:** h-index 21, n. citations 1835

**Scopus:** h-index 16, n. citations 917

**ORCID Number:** 0000-0001-8595-9955

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## Others

### Languages

- Italian (mother tongue)
- English (professional proficiency)