

# Massimiliano Mancini

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Ph.D. student in Engineering in Computer Science  
Sapienza University of Rome, (Rome, Italy)  
Fondazione Bruno Kessler (Trento, Italy)

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## Education

### ***Visiting Ph.D. Student***

May 2018 - June 2018

Robotics Perception and Learning laboratory (RPL)  
KTH Royal Institute of Technology (Stockholm, Sweden)  
Supervisors: Dr. Hakan Karaoguz, Prof. Patric Jensfelt  
Main topic: Development of an online incremental class learning algorithm for deep learning detection architectures on a YuMi robotic platform.

### ***PhD in Engineering in Computer Science***

November 2016 -

Sapienza University of Rome (Rome, Italy)  
Supervisor: Prof. Barbara Caputo  
Topic: Increasing generalization capabilities of deep learning architectures in the context of computer and robot vision.

### ***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 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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## Other Research

### **Experiences**

#### ***Technologies of Vision laboratory (TeV)***

July 2016 - 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: 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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## Publications

### 2018

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. (**Honorable mention**)

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.

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.

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**)

M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci

*Robust Place Categorization with Deep Domain Generalization*

IEEE Robotics and Automation Letters, July 2018, vol. 3, n. 3., pp. 2093-2100.

### 2017

M. Mancini, S. Rota Bulò, E. Ricci, B. Caputo

*Learning Deep NBNN Representations for Robust Place Categorization*

IEEE Robotics and Automation Letters, May 2017, vol. 3, n. 2., pp. 1794-1801.

Presented at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2017.

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, pp. 100-111.

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## Awards

### ***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*.

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### ***Excellent graduate student***

May 2017

Sapienza University of Rome (Rome, Italy)

Award given to the best graduated students of the year.

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## Services

### Reviewer for the following journals:

- IEEE Transactions on Multimedia
- IET Computer Vision
- International Journal of Machine Learning and Cybernetics
- Pattern Recognition

### Reviewer for the following conferences:

- IEEE International Conference on Robotics and Automation (ICRA) 2018
- ACM Multimedia Conference (ACM-MM) 2018

### Student Volunteer for:

- IEEE International Conference on Computer Vision (ICCV) 2017

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## Skills

### Languages

- Italian (mother tongue).
- English B1, Certificate by University of Perugia)

### Programming

- Proficiency in: Caffe, Python, PyTorch, Java, MATLAB.
- Experience with: Keras, Android SDK, C++, Prolog, OpenGL

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## Other

### Activities

#### *Volunteer tourist service*

Palazzo Bourbon del Monte

Monte Santa Maria Tiberina (Perugia, Italy)

Summers 2010,2011,2012,2013,2014, 2015.