

Davide Abati

Computer Vision and Machine Learning Researcher

Work Experience

- since June 2020 **Engineer, Senior**, *Qualcomm AI Research Netherlands*.
- April-May 2020 **Deep Learning consultant**, *Deep Vision Consulting*.
- June-Sept. 2019 **Engineering Intern**, *Qualcomm AI Research Netherlands*.
- 2016 **Research Fellow**, *University of Modena and Reggio Emilia*.
I was selected through a competitive process to design and implement computer vision solutions for automotive applications. After two months I resigned in order to accept the Ph.D. scholarship I won.
- 2015 **Web Development Intern**, *Ot Consulting*, Reggio Emilia.

Education

- 2020 **Ph.D. Student**, *University of Modena and Reggio Emilia*.
Advisor: Prof. Rita Cucchiara
I got my Ph.D. in computer vision at AimageLab. In my first year My thesis is about attention prediction applied to human drivers and anomaly detection.
- 2016 **Postgraduate Master in Visual Computing and Multimedia Technologies**, *University of Modena and Reggio Emilia*.
I won one of the 12 scholarships available for the first edition of the school. I worked in several group projects addressing the management of multimedia data and its elaboration, analysis and transmission.
- 2015 **Master's degree in Computer Engineering**, *University of Modena and Reggio Emilia*.
Final mark: 110/110 cum laude
Thesis title: Search system on images and 3D details for cultural heritage
Advisors: Prof. Rita Cucchiara, Ing. Giuseppe Serra
Awards: Unimore Degree Award 2013/2014
- 2012 **Bachelor's Degree in Computer Engineering**, *University of Modena and Reggio Emilia*.

Languages

Italian Native Speaker
English B2

good working knowledge

Publications (selected)

- 2022 **Region-of-Interest Based Neural Video Compression**
Yura Perugachi Diaz, Guillaume Sautière, Davide Abati, Yang Yang, Amirhossein Habibian, Taco Cohen
British Machine Vision Conference (*BMVC 22, oral*)

- 2022 **Delta Distillation for Efficient Video Processing**
Amirhossein Habibian, Haitam Ben Yahia, Davide Abati, Efstratios Gavves, Fatih Porikli
European Conference on Computer Vision (*ECCV 22*)
- 2021 **Efficient Video Super Resolution by Gated Local Self Attention**
D. Abati, A. Ghodrati, A. Habibian
British Machine Vision Conference (*BMVC 21*)
- 2021 **Skip-Convolutions for Efficient Video Processing**
A. Habibian, D. Abati, T. Cohen, B. E. Bejnordi
IEEE International Conference on Computer Vision and Pattern Recognition (*CVPR 21*)
- 2020 **Dark Experience for General Continual Learning**
P. Buzzega, M. Boschini, A. Porrello, D. Abati, S. Calderara
Neural Information Processing Systems (*NeurIPS 20*)
- 2020 **Conditional Channel Gated Networks for Task-Aware Continual Learning**
D. Abati, J. Tomczak, T. Blankevoort, S. Calderara, R. Cucchiara, B. E. Bejnordi
IEEE International Conference on Computer Vision and Pattern Recognition (*CVPR 20, oral*)
- 2019 **Latent Space Autoregression for Novelty Detection**
D. Abati, A. Porrello, S. Calderara, R. Cucchiara
IEEE International Conference on Computer Vision and Pattern Recognition (*CVPR 19*)
- 2018 **Predicting the Driver's Focus of Attention: the DR(eye)VE Project**
A. Palazzi, D. Abati, S. Calderara, F. Solera, R. Cucchiara
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

--- (Past) Reviewing Service

- Journals IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), IEEE Transactions on Neural Networks and Learning Systems (TNNLS), IEEE Transactions on Multimedia (TMM), IEEE Transactions on Intelligent Transportation Systems (TITS), Neural Networks (NEUNET), Pattern Recognition Letters (PRL) .
- Conferences IEEE Conference on Computer Vision and Pattern Recognition (CVPR), IEEE International Conference on Computer Vision (ICCV), Neural Information Processing Systems (NeurIPS), International Conference on Representation Learning (ICLR), International Conference on Machine Learning (ICML), International Joint Conferences on Artificial Intelligence (IJCAI) .

--- (Past) Teaching Activities

- 2018 AI-DLDA 2018, *International Summer School on Artificial Intelligence*, Laboratory lecturer - Predicting human eye fixations.
- 2018 Machine Learning and Deep Learning, *Prof. Simone Calderara*, Laboratory Lecturer.
- 2017 Computer Vision, *Prof. Rita Cucchiara*, Laboratory lecturer.
- 2017 Pattern Recognition and Machine Learning, *Prof. Simone Calderara*, Laboratory lecturer.
- 2017 Pattern Recognition and Machine Learning - MuMeT 2017, *Prof. Simone Calderara*, Laboratory lecturer.

--- Schools, Courses, Certificates

- REGML 2018, *Genova (GE), Italy*, [certificate](#).
- ICVSS 2017, *Scicli (RG), Italy*, [certificate](#).
- CIS Spring Camp 2016, *Queen Mary University of London*, [website](#).