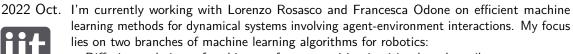
Paolo Didier Alfano

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Current position

Now Postdoctoral, Italian Institute of Technology, Genoa.





- Diffusion techniques for object surface recognition in vision-based tactile sensors
- Computer vision techniques for real-time action recognition

Education

2022 Oct. Ph.D. in Computer Science, University of Genoa, Italy.



2019 Nov. Ph.D. in statistical learning applied to computer vision, emphasizing transfer learning and domain adaptation under resource constraints (e.g., time, space, data). I conducted an extensive and in-depth investigation into the applicable statistical techniques within the field of computer vision.

> • Ph.D. thesis: Efficient machine learning with resource constraints. Supervised by Lorenzo Rosasco and Francesca Odone.

2019 Apr. Master Degree in Computer Science, University of Turin, Italy.

2016 Nov. Artificial Intelligence curriculum, focused on artificial intelligence and machine learning.



o Master thesis: Adapting a recurrent network to tonal analysis of audio files. A study on techniques, methodologies, and models associated with speech recognition to predict sequences of chords played within audio tracks.

Supervised by Roberto Esposito.

2016 Oct. Bachelor Degree in Computer Science, University of Pisa, Italy.



2013 Nov. O Bachelor thesis: Deep Learning Model for graphics accelerator. An overview over convolutional deep learning models. The results were presented as demo during the Nvidia's GPU Europe technology conference 2016. Supervised by Davide Bacciu.

Awards and Prizes

- 2022 Postdoctoral researcher position, funded by the Italian Insitute of Technology (IIT), Genoa, Italy.
- 2019 Ph.D. position, funded by the European Research Grant SLING 819789 at the University of Genoa, Italy.
- 2018 Internship position, funded by Fermi National Accelerator Laboratory (FermiLab), Chicago, IL, USA..

Internships, Schools, Workshops

2023 Sep. Workshop, Primo Workshop 2023, University of Bari, Bari, Topic: Machine Learning, Inverse problems & Optimization.

The PRIMO Workshop offers an overview on topics within the research areas of imaging science, deep learning and non linear optimization to early-career researchers.

2022 Jul. Summer School, International Computer Vision Summer School, University of Catania, Catania, Topic: Deep Learning & Computer vision.

> The International Computer Vision Summer School (ICVSS) offers an exploration of cuttingedge Computer Vision research. Experts from academia and industry deliver courses on theory, practical problem-solving, and commercial applications.

2018 Sep. Internship, Summer Student program at the Fermi National Accelerator Laboratory, 2018 Jul. FERMILAB, Chicago, Topic: Deep Learning & Cybersecurity.

> A two-month internship where I developed deep learning algorithms for CAPTCHA image analysis. Our work led to recommendations for creating stronger CAPTCHAs and expanded our understanding of applying deep learning to malicious code detection.

Publications and Preprints

Sim2Real Bilevel Adaptation for Object Surface Classification using Vision-Based Tactile Sensors.

PD. Alfano, GM. Caddeo, A. Maracani, NA. Piga L. Rosasco, L. Natale in International Conference on Robotics and Automation 2024

Top-Tuning: a study on transfer learning for an efficient alternative to fine tuning for image classification with fast kernel methods.

PD. Alfano, VP. Pastore, L. Rosasco, F. Odone in Image and Vision Computing Journal, volume 142, 2023

ICIAP An unsupervised learning approach to resolve phenotype to genotype mapping in budding yeasts vacuoles.

P.D. Alfano, VP. Pastore et al.

in International Conference of Image Analysis and Processing 2023

Efficient Unsupervised Learning for Plankton Images. P.D. Alfano, M. Rando, M. Letizia, F. Odone, L. Rosasco and VP. Pastore in International Conference on Pattern Recognition 2022

Teaching

- 2022 Advanced Machine Learning, 10 hours, Master Degree in Computer Science, laboratory assistant, Genoa University.
- 2021 Introduction to Deep Learning and Convolutional Neural Networks, 4 hours, Introductory lessons for corporate students through the MAIA program.
- 2021 Algorithm and data structure, 20 hours, Bachelor Degree in Computer Science, exam assistant, Genoa University.
- 2021 Advanced Machine Learning, 20 hours, Master Degree in Computer Science, laboratory assistant, Genoa University.
- 2020 Introduction to Deep Learning and Convolutional Neural Networks, 8 hours, Introductory lessons for corporate students through the MAIA program.









- 2020 Algorithm and data structure, 20 hours, Bachelor Degree in Computer Science, exam assistant, Genoa University.
- 2020 Advanced Machine Learning, 20 hours, Master Degree in Computer Science, laboratory assistant, Genoa University.

Technical skills

- Programming Languages: C, C++, Python, Java, F#, HTML, CSS, JavaScript, Prolog, CLINGO, CLIPS, Ocaml, SQL, MATLAB.
- Computer Science: artificial intelligence, machine learning, neural networks, data structures, algorithms, logic, operating systems, computer architectures, computer networks, databases.
- o Mathematics: numerical analysis, calculus, proability theory and statistics

Languages

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English	Listening	Reading	Spoken Interaction	Spoken Production	Writing
	C1	C1	C1	C1	C1
French	Listening	Reading	Spoken Interaction	Spoken Production	Writing
	A2	A2	A1	A1	A1