

Matteo Papini

Ph.D. Student at Politecnico di Milano

Personal Information

First Name Matteo.
Last Name Papini.
Date of Birth July 5th, 1993.
Place of Birth Sondrio, Italy.
Citizenship Italian.

Work Information

Institution Politecnico di Milano.
Department Dipartimento di Elettronica, Informazione e Bioingegneria (DEIB).
Laboratory Artificial Intelligence and Robotics Laboratory (AIRLAB).
Office 34/5 Via Ponzio, 20133 Milan, Italy.
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Education

2017–present **Ph.D. student**, *Politecnico di Milano*, Milan, Italy.
Advisor: Marcello Restelli
2015–2017 **Master of Science, Computer Science and Engineering**, *Politecnico di Milano*, Milan, Italy.
Final Mark: 110/110 cum laude
Master Thesis: Adaptive Batch Size for Safe Policy Gradient Methods
Advisor: Marcello Restelli
2012–2015 **Bachelor of Science, Computer Engineering**, *Politecnico di Milano*, Milan, Italy.
Final Mark: 110/110 cum laude

Research Interests

My main research interest is *reinforcement learning (RL)*, with a focus on *policy*, *safe exploration* and applications of RL to *Industry 4.0*.

Research Experience

2017–present **Research Assistant**, *Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano*, Milan, Italy.
Research Topic: Reinforcement Learning for Industry 4.0

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Teaching Experience

- Autumn 2018 **Teaching Assistant**, *Politecnico di Milano*.
Informatica B (introductory computer science class)
Prof. Luca Cassano
- Spring 2018 **Teaching Assistant**, *Politecnico di Milano*.
Web and Internet Economics
Prof. Nicola Gatti
- Autumn 2017 **Lab Assistant**, *Politecnico di Milano*.
Informatica B (introductory computer science class)
Prof. Luca Cassano
- Spring 2016 **Lab Tutor**, *Politecnico di Milano*.
Prova Finale–Ingegneria del Software (software engineering: final project)
Prof. Carlo Ghezzi

Schools and Exchange Programs

- 2018 **Deep Learning and Reinforcement Learning Summer School**, Toronto, Canada.
- 2017 **ACAI Summer School on Reinforcement Learning**, Nieuwpoort, Belgium.
- Autumn 2016 **Erasmus Programme**, KTH Royal Institute of Technology, Stockholm, Sweden.

Languages

Italian, *mother tongue*.
English, *fluent (FCE, Grade A, C1 level)*.

Publications (Conference Papers)

- [1] **Matteo. Papini**, A. M. Metelli, L. Lupo, and M. Restelli. Optimistic policy optimization via multiple importance sampling. In *Proceedings of the 36th International Conference on Machine Learning*, volume 97 of *Proceedings of Machine Learning Research*, 2019.
- [2] **Matteo. Papini**, D. Binaghi, G. Canonaco, M. Pirotta, and M. Restelli. Stochastic variance-reduced policy gradient. In J. Dy and A. Krause, editors, *Proceedings of the 35th International Conference on Machine Learning*, volume 80 of *Proceedings of Machine Learning Research*, pages 4026–4035, Stockholmsmässan, Stockholm Sweden, 10–15 Jul 2018. PMLR.
- [3] A. M. Metelli, **Matteo. Papini**, F. Faccio, and M. Restelli. Policy optimization via importance sampling. In S. Bengio, H. Wallach, H. Larochelle, K. Grauman, N. Cesa-Bianchi, and R. Garnett, editors, *Advances in Neural Information Processing Systems 31*, pages 5443–5455. Curran Associates, Inc., 2018.
- [4] **Matteo. Papini**, M. Pirotta, and M. Restelli. Adaptive batch size for safe policy gradients. In I. Guyon, U. V. Luxburg, S. Bengio, H. Wallach, R. Fergus, S. Vishwanathan, and R. Garnett, editors, *Advances in Neural Information Processing Systems 30*, pages 3591–3600. Curran Associates, Inc., 2017.

Workshop Papers

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- [W1] **Matteo Papini**, Andrea Battistello and Marcello Restelli. Safely Exploring Policy Gradient. In 14th European Workshop on Reinforcement Learning, Lille, France, 2018.

Editorial Activities

- 2019 **Reviewer**, *Neural Information Processing Systems (NeurIPS)*.
2019 **PC Member**, *Conference on Uncertainty in Artificial Intelligence (UAI)*.
2019 **Reviewer**, *International Conference on Machine Learning (ICML)*.
2018 **Subreviewer**, *International Joint Conference on Artificial Intelligence (IJCAI)*.

Mentoring and Advising

Master students:

- 2018–present Giovanni Pelosi.
2018–present Lorenzo Lupo.
2018 Andrea Battistello.
2017–2018 Francesco Faccio.
2017–2018 Giuseppe Canonaco.
2017–2018 Damiano Binaghi.