

Giorgia Ramponi

Curriculum Vitae

Education

- 2017–2020 **Ph.D. in Computer Science**, *Politecnico di Milano*.
◦ Major: “*Multi-Agent Reinforcement Learning*”
Supervisor: Prof. Marcello Restelli
- 2015–2017 **M.Sc. in Computer Science**, 110/110 cum laude, La Sapienza University of Rome.
◦ Thesis: “*Average Distortion of LSH Schemes*”
Supervisor: Prof. Flavio Chierichetti
Co-supervisor: Prof. Alessandro Panconesi
- 2012–2015 **B.Sc. in Computer Science**, 110/110 cum laude, La Sapienza University of Rome.
◦ Thesis: “*Development of a backscattering system for videogame controllers*”
Supervisor: Prof. Gaia Maselli
Co-supervisor: Ph.D. Dora Spenza

Honors & Awards

- 04/2018 **Best Student Recognition**, among the top 2 Computer Science student in the year 2016-2017, at La Sapienza University of Rome.
- 03/2017 **Honours Master of Science program**, among the top 3 Computer Science student in the year 2016-2017, at La Sapienza University of Rome.
- 10/2016 **Travel Grant Award**, at MobiCom '16 the 22nd Annual International Conference on Mobile Computing and Networking.
- 07/2016 **IBM Best Student Recognition Award in EMEA**, for academic merits.
- 02/2014 **Honours Bachelor of Science program**, among the top 5 Computer Science student in the year 2014-2015, at La Sapienza University of Rome.
- 2014-2016 **Department of Computer Science scholarship**, for merits, at La Sapienza University of Rome.
- 2012-2015 **University Scholarship**, for merits, at La Sapienza University of Rome.

Research Experiences

- 06-07/2018 **Research visit**, Institute for Applied Computational Science, Harvard University, June-July 2018. Headed by Prof. Pavlos Protopapas.
◦ Project: *Generative Adversarial Network for Time Series with unfixed time intervals and lenght*

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2017–2018 **Research fellowship**, Politecnico di Milano , under supervision of Prof. Marco Brambilla.

- Collection, integration and analysis of data from web sources, social networks and official sources relating to commercial behavior and effectiveness of online communication actions by fashion brands.

2015–2016 **Research fellowship**, La Sapienza University of Rome, under supervision of Prof. Gaia Maselli.

- Design, development and implementation of backscattering RFID solutions

Publications

In Preparation or Under Review

[P3] **G. Ramponi**, A. Concetti, A.M. Metelli, M. Restelli, “Online Non-cooperative Configurable Markov Decision Processes”, under revision

[P2] A. Likmeta, A. M. Metelli, **G. Ramponi**, A. Tirinzoni, M. Giuliani, M. Restelli “Dealing with multiple experts and non-stationarity in inverse reinforcement learning”, under minor revision at Machine Learning Journal

[P1] **G. Ramponi**, P. Protopapas, M. Brambilla, R. Janssen “TC-GAN: Conditional Generative Adversarial Network for Data Augmentation in Noisy Time Series with Irregular Sampling”, <https://arxiv.org/abs/1811.08295>

Conferences

[C8] **G. Ramponi**, M. Restelli, “Newton-based Policy Optimization for Games”, <https://arxiv.org/abs/2007.07804>
To appear at AAAI Conference on Artificial Intelligents, 2021

[C7] **G. Ramponi**, G. Drappo, M. Restelli, “Inverse Reinforcement Learning from a Gradient-based Learner”, <https://arxiv.org/abs/2007.07812>
Proceedings of Thirty-fourth Conference on Neural Information Processing Systems, NeurIPS, 2020

[C6] **G. Ramponi**, A. Likmeta, A. M. Metelli, A. Tirinzoni, M. Restelli “Truly Batch Model-Free Inverse Reinforcement Learning about Multiple Intentions”, <http://proceedings.mlr.press/v108/ramponi20a.html>
Proceedings of 23rd International Conference on Artificial Intelligence and Statistics, 2020

[C5] M. Gasparini*, **G. Ramponi***, M. Brambilla, S. Ceri (*equal contribution “Assigning users to domains of interest based on content and network similarity with champion instances” <https://dl.acm.org/doi/abs/10.1145/3341161.3343687>
Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, 2019

[C4] G. Brena, M. Brambilla, S. Ceri, M. Di Giovanni, F. Pierri, **G. Ramponi** “News Sharing User Behaviour on Twitter: A Comprehensive Data Collection of News Articles and Social

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Interactions”, <https://www.aaai.org/ojs/index.php/ICWSM/article/view/3256>
Proceedings of the International AAAI Conference on Web and Social Media, 2019

[C3] **G. Ramponi**, M. Brambilla, S. Ceri, F. Daniel, M. Di Giovanni “Vocabulary-based Community Detection and Characterization”,<https://dl.acm.org/doi/abs/10.1145/3297280.3297384>
Proceedings of ACM SAC 2019 - Symposium On Applied Computing, 2019

[C2] M. Brambilla, S. Ceri, F. Daniel, M. Di Giovanni, A. Mauri, **G. Ramponi** “Iterative Knowledge Extraction from Social Networks”<https://dl.acm.org/doi/abs/10.1145/3184558.3191578>
Proceedings of WWW ’18 Companion: The 2018 Web Conference Companion, Lyon, France, 2018

[C1] G. Maselli, M. Piva, **G. Ramponi**, D. Ganesan Demo: JoyTag: a battery-less videogame controller exploiting RFID backscattering, <https://dl.acm.org/doi/abs/10.1145/2973750.2985628>
Proceedings of MobiCom ’16, the 22nd Annual International Conference on Mobile Computing and Networking, New York, USA, 2016

Workshops

[W4] **G. Ramponi**, A. Concetti, A. M. Metelli, M. Restelli “Online Learning in Non-Cooperative Configurable Markov Decision Process ”,
Workshop on Reinforcement Learning in Games at AAAI Conference 2021

[W3] A. Likmeta, A. M. Metelli, **G. Ramponi**, A. Tirinzoni, M. Giuliani, M. Restelli “Handling Non-Stationary Experts in Inverse Reinforcement Learning: A Water System Control Case Study”,
Challenges of Real World Reinforcement Learning Workshop at Conference on Neural Information Processing Systems, NeurIPS, 2020

[W2] **G. Ramponi**, M. Restelli, “Newton-based Policy Optimization for Games”,
<https://arxiv.org/abs/2007.07804>
CooperativeAI Workshop at Conference on Neural Information Processing Systems, NeurIPS, 2020

[W1] M. Di Giovanni, M. Brambilla, S. Ceri, F. Daniel, **G. Ramponi** “ Content-based Classification of Political Inclinations of Twitter Users”
<https://ieeexplore.ieee.org/abstract/document/8622040/>
Proceeding of IEEE Big Data 2018 - Workshop on Application of Big Data for computational social science, 2018

Journals

[J1] G. Ramponi, M. Brambilla, S. Ceri, F. Daniel, M. Di Giovanni, “Content-based characterization of online social communities”,
<https://www.sciencedirect.com/science/article/pii/S0306457319303516>
Information Processing & Management 2019

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Scientific Activities

- Program Committee and Reviewer: DSAA (2019), ECAI (2020), NeurIPS (2020), AAAI (2020), ICLR (2021), IJCAI (2021), AISTATS (2021), ALA (2021)
- Journal Reviewer: Journal of Web Engineering

Teaching Experiences

- 2019 **Teaching Assistant**, for *Theoretical Foundation of Computer Science* at the second year of BSc in Computer Engineering, at Politecnico di Milano.
- 2018 **Teaching Assistant**, for *Domain Specific Modeling* at the second year of MSc in Computer Engineering, at Politecnico di Milano.
- 2018 **Teaching Assistant**, for *Informatica A* at the BSc in Management Engineering, at Politecnico di Milano.
- 2018 **Teaching Assistant**, for *Theoretical Foundation of Computer Science* at the second year of BSc in Computer Engineering, at Politecnico di Milano.
- 2017 **Teaching Assistant**, for *Fundamentals of Computer Science* at the second year at the second year of BSc in Math, at La Sapienza University of Rome.

Student Supervision

- Giovanni Brena, “Modeling and profiling of users based on news-sharing behavior on Social Networks”, MSc in Computer Science and Engineering December 2018
- Paola Sanfilippo, “Understanding user similarity from social media using topic analysis”, MSc in Computer Science and Engineering April 2019
- Federico Betti, “Controlled text generation with adversarial learning”, MSc in Computer Science and Engineering December 2019
- Massimo Perini, “Dynamic graph embedding on event streams”, MSc in Computer Science and Engineering December 2019
- Gianluca Drappo, “Gradient-based approach to Inverse Reinforcement Learning observing a non-expert demonstrator”, MSc in Computer Science and Engineering December 2020
- Davide Spinelli, “Opponent Identification in Multi-Agent Reinforcement Learning”, MSc in Computer Science and Engineering December 2019

Working experiences

- 2017 **FaStyle data analyst and machine learning expert.**
 - FaStyle is a virtual assistant to book services in beauty salons. In the FaStyle startup I created a tool to personalise discounts looking at users interests.

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Other activities

2015 **Google Technologies for Cloud and Web Development.**

- Proposal, design, and development of an Android and iOS application using Google technologies. The aim of the app is broadcasting the parking information of the shared cars among the members of the family.
Staff: Yossi Matias (Google Tel-Aviv), Shir Landau-Febish (Tel-Aviv University), Misha Seltzer (Google Tel-Aviv)

2016-2017 **Foreign student assistant.**

- Assistant for foreign students who want to attend MSc in Computer Science at La Sapienza University of Rome

Computer skills

- **Programming languages:** Java, ML, Python, SQL, C, C++, MathLab, Assembly, PHP, Swift
- **Frameworks:** Tensorflow, Keras, Torch

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