

# Giorgia Ramponi

## Contacts

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## PhD student

Information Technology  
Politecnico di Milano

## EDUCATION

### PhD candidate,

Information Technology

*Politecnico di Milano*

Supervisor: Marcello Restelli

Main topic: Multi-agent Reinforcement Learning

from November 2017

### Visiting PhD candidate, Institute for Applied Computational Science

*Harvard University, Institute for Applied Computational Science*

Project: Generative Adversarial Network for Time Series with unfixed time intervals and lenght

May 2018 - July 2018

### Master of Science, Computer Science

*La Sapienza, University of Rome*

THESIS - Average Distortion of LSH Schemes

*Supervisor: Flavio Chierichetti*

Final score: 110/110 cum laude

October 2015 - July 2017

### Bachelor of Science, Computer Science

*La Sapienza, University of Rome*

THESIS - Development of a backscattering system for videogame controllers

*Supervisor: Gaia Maselli*

Final score: 110/110 cum laude

October 2012 - July 2015

## SUMMER SCHOOLS

### Machine Learning Summer School,

*Universidad Autnoma de Madrid, Spain*

The MLSS is a course promulgating modern methods of statistical machine learning and inference.

September 2018

### IDEA League PhD school,

*TU Delft, RWTH Aachen, ETH Zurich, Chalmers University, Politecnico di Milano*

PhD school on Engineering Complex Systems and IT

January 2018 - September 2018

### Complex Networks: Theory, Methods and Applications,

*Villa del Grumello, Como, Italy*

PhD school on Complex Networks with lessons held by Albert-László Barabási, Stefano Battiston, Ulrik Brandes, Vittoria Colizza, Puck Rombach and Alessandro Vespignani.

May 2018

## LANGUAGES

**Italian:** Mother Tongue

**English:** Fluently — Certificate: IELTS 7.0

## AWARDS

**Best Student Recognition La Sapienza**

April 2018

One of the 400 best graduate students 2017 at La Sapienza

**Travel Grant Award**

October 2016

MobiCom '16 the 22nd Annual International Conference on Mobile Computing and Networking

**IBM Best Student Recognition Event**

July 2016

IBM Hursley

One of the 30 students in Europe and Middle East invited, for academic merits, to the IBM Best Student Recognition Event, to spend 3 days on IBM's laboratory

**University Scholarship**

October 2012 - July 2015

La Sapienza University of Rome

University scholarship for academic merits

## RESEARCH EXPERIENCE

**Research fellowship**

December 2017 - January 2018

Politecnico di Milano

- 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.

**Honours Master of Science Program**

March 2017 - July 2017

La Sapienza University of Rome

*Supervisor: Alessandro Panconesi*

Program dedicated to the top 3 Computer Science MSc students

- In-depth analysis of some of the basic techniques to design and analyse probabilistic algorithms and lower bounds, by studying some notable examples taken from the recent literature.

**Research fellowship**

October 2015 - February 2016

La Sapienza University of Rome

- Design, development and implementation of backscattering RFID solutions

**Honours Bachelor of Science Program**

February 2014 - July 2015

La Sapienza University of Rome

*Supervisor: Gaia Maselli*

Program dedicated to the top 5 Computer Science Bachelor students

- Active participation in the PhD seminars of Prof. Ganesan from the University of Massachusetts Amherst.
- Implementation of a new use of RFID Technology and proposal for a new Communication Protocol for RFID Technology.

## TEACHING EXPERIENCE

- Teaching assistant** March 2019 - June 2019  
Politecnico di Milano
- Teaching assistant for *Algorithms and Information principles* at the second year of BSc in Computer Engineering; Prof. Sara Comai
- Teaching assistant** October 2018 - January 2019  
Politecnico di Milano
- Teaching assistant for *Domain Specific Modeling* at the second year of MSc in Computer Engineering; Prof. Marco Brambilla
- Teaching assistant** October 2018 - January 2019  
Politecnico di Milano
- Teaching assistant for *Informatica A* at the BSc in Management Engineering; Prof. Florian Daniel
- Teaching assistant** March 2018 - June 2018  
Politecnico di Milano
- Teaching assistant for *Algorithms and Information principles* at the second year of BSc in Computer Engineering; Prof. Sara Comai
- Teaching assistant** March 2017 - June 2017  
La Sapienza University of Rome
- Teaching assistant for *Fundamentals of Computer Science* at the second year of BSc in Math; Prof. Ivano Salvo

## ACADEMIC ACTIVITIES

- Foreign student assistant** June 2016 - June 2017  
La Sapienza University of Rome
- Assistant for foreign student who wants to attend MSc in Computer Science at La Sapienza
- Department of Computer Science scholarship** January 2014 - December 2016  
La Sapienza University of Rome
- Laboratory and library scholarship at the department of Computer Science

## 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

## NOT-ACADEMIC EXPERIENCES

**FaStyle data analyst and machine learning expert** February 2017 - April 2017  
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.

**Google Technologies for Cloud and Web Development** January 2015 - May 2015

*Staff: Yossi Matias (Google Tel-Aviv), Shir Landau-Febish (Tel-Aviv University), Misha Seltzer (Google Tel-Aviv)*

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.

### **Unicredit Appathon 2015**

November 2015

Hackaton on development new ideas for mobile banking. Member of the team recipient of:

- best team and best innovative platform award by TataConsulting
- best team and best technological development award by Value Transformation Services (IBM)

Individual recipient of:

- best creative attitude and initiative award by BeConsulting spa.

## **PUBLICATIONS**

### **Preprints**

#### **Newton-based Policy Optimization for Games**

*Giorgia Ramponi, Marcello Restelli*

#### **Inverse Reinforcement Learning from a Gradient-based Learner**

*Giorgia Ramponi, Gianluca Drappo, Marcello Restelli*

#### **Dealing with multiple experts and non-stationarity in inverse reinforcement learning**

*Amarildo Likmeta, Alberto Maria Metelli, Giorgia Ramponi, Andrea Tirinzoni, Matteo Giuliani, and Marcello Restelli*

#### **TC-GAN: Conditional Generative Adversarial Network for Data Augmentation in Noisy Time Series with Irregular Sampling**

*Giorgia Ramponi, Pavlos Protopapas, Marco Brambilla, Ryan Janssen*

### **Conferences**

#### **Truly Batch Model-Free Inverse Reinforcement Learning about Multiple Intentions**

Proceedings of 23rd International Conference on Artificial Intelligence and Statistics 2020

*Giorgia Ramponi, Amarildo Likmeta, Alberto Maria Metelli, Andrea Tirinzoni, Marcello Restelli*

#### **Assigning users to domains of interest based on content and network similarity with champion instances**

Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining

*Mattia Gasparini\*, Giorgia Ramponi\*, Marco Brambilla, Stefano Ceri (\*equal contribution)*

#### **News Sharing User Behaviour on Twitter: A Comprehensive Data Collection of News Articles and Social Interactions**

Proceedings of the International AAAI Conference on Web and Social Media 2019

*Giovanni Brena, Marco Brambilla, Stefano Ceri, Marco Di Giovanni, Francesco Pierri, Giorgia Ramponi*

#### **Vocabulary-based Community Detection and Characterization**

Proceedings of ACM SAC 2019 - Symposium On Applied Computing

*Giorgia Ramponi, Marco Brambilla, Stefano Ceri, Florian Daniel, Marco Di Giovanni*

#### **Content-based Classification of Political Inclinations of Twitter Users**

Proceeding of IEEE Big Data 2018 - Workshop on Application of Big Data for computational social science  
*Marco Di Giovanni, Marco Brambilla, Stefano Ceri, Florian Daniel, Giorgia Ramponi*

### **Iterative Knowledge Extraction from Social Networks**

Proceedings of WWW 18 Companion: The 2018 Web Conference Companion, April 23-27, 2018, Lyon, France.

*Marco Brambilla, Stefano Ceri, Florian Daniel, Marco Di Giovanni, Andrea Mauri, Giorgia Ramponi*

### **Demo: JoyTag: a battery-less videogame controller exploiting RFID backscattering**

Proceedings of MobiCom '16, the 22nd Annual International Conference on Mobile Computing and Networking, New York, USA.

*Gaia Maselli, Mauro Piva, Giorgia Ramponi, Deepak Ganesan*

## **Journals**

### **Content-based characterization of online social communities**

Information Processing & Management 2019

*G Ramponi, M Brambilla, S Ceri, F Daniel, M Di Giovanni*

## **COMPUTER SKILLS**

### **In-depth knowledge**

Java, ML, Python, Latex, SQL, Tensorflow

### **Good knowledge**

C, C++, MathLab, Assembly, PHP, Swift, Android