Matteo Prata

EDUCATION AND TRAINING

PhD in Computer Science
Sapienza University of Rome, Italy [Oct 2019 – Current]

Master Degree in Computer Science
Sapienza University of Rome, Italy [Oct 2017 – Oct 2019]

Final grade: 110/110 with honours
Thesis: On Optimal Opinion Control in Social Networks: a Stochastic Modelling Approach

Bachelor Degree in Computer Science
Sapienza University of Rome, Italy [Oct 2013 – May 2017]

Final grade: 110/110
Thesis: Counting K-Cliques with Apache Spark

High School
Scientific Lyceum at Guglielmo Marconi Institute Colleferro (Rome), Italy [2008 – 2013]

Final grade: 100/100

PUBLICATIONS

"Tomography-based Progressive Network Recovery and Critical Service Restoration after Massive Failures"

Arrigoni V., **Prata M.**, Bartolini N. 2023. Accepted and to appear at *IEEE Conference on Computer Communications (IEEE INFOCOM 2023) [Ranking: A++]* [**to appear**].

"A2-UAV: Application-Aware Content and Network Optimization of Edge-Assisted UAV Systems"

Coletta A., Giorgi F., Maselli G., **Prata M.**, Silvestri D., Ashdown J., Restuccia F. 2023. Accepted and to appear at *IEEE Conference on Computer Communications (IEEE INFOCOM 2023) [Ranking: A++]* [**to appear**].

"Stop & Route: Periodic Data Offloading in UAV Networks" **[Best Paper Award, Runner-up at WONS 23]

Bartolini N., Coletta A., Giorgi F., Maselli G., **Prata M.**, Silvestri D. 2023. Accepted and to appear at *IEEE Conference on* Wireless On-demand Network Systems and Services *(IEEE WONS 2023)* [**to appear**].

"TaMaRA: a Task Management and Routing Algorithm for FANETs"

Bartolini N., Coletta A., Maselli G., **Prata M.** 2023. Under review at IEEE Transactions on Mobile Computing. Extension of the work "On Connected Deployment of Delay-Critical FANETs" [**under review**].

"Towards Realistic Market Simulations: a Generative Adversarial Networks Approach"

*Coletta A., **Prata M.**, Conti M., Mercanti E., Bartolini N., Moulin A., Vyetrenko S., Balch T.* 2021. In Proceedings of the Second ACM International Conference on AI in Finance (ICAIF '21). Association for Computing Machinery, New York, NY, USA, Article 46, 1–9.

"On Connected Deployment of Delay-Critical FANETs"

Bartolini N., Coletta A., **Prata M.**, Serino C. 2021. IEEE/RSJ International Conference on Intelligent Robots and Systems (IEEE/RSJ IROS 2021).

"MAD for FANETs: Movement Assisted Delivery for Flying Ad-hoc Networks"

*Bartolini N., Coletta A., Gennaro A., Maselli G., **Prata M.*** 2021. IEEE Proceedings of the International Conference on Distributed Computing Systems (IEEE ICDCS).

WORK EXPERIENCE

Research Grant Funded by Sapienza University under Research Call for Proposals 2022
[31 Oct 2021 – 31 Oct 2023]

Title of the research: **MAPP for FANETs: Multi-Agent Patrolling Protocol for Flying Ad Hoc Networks**

The funding for the academic year 2021/2022 was renewed for 2022/2023. I proposed the development of a fault-tolerant and input-agnostic multi-agent patrolling protocol for flying ad hoc networks using Deep Reinforcement Learning (DRL).

Research Grant Funded by J.P. Morgan at Sapienza University
[Apr 2020 – 15 Dec 2022]

Title of the research: **The Impact of Trading Strategies and Market Rules on Fairness of Financial Markets**
I studied how legitimate trading instruments in a market offering equal opportunities to all traders may cause unfairness due to information asymmetry.

Research Grant Funded by NATO at Sapienza University of Rome, Italy
[6 Jun 2019 – 6 Sep 2019]

I received a grant for research for cooperating on a project funded by NATO. I formulated optimisation problems regarding the propagation of harmful content in social networks.

FORMATIVE EXPERIENCES

Conference Speaker

1. _IEEE International Conference on Computer Communications (IEEE INFOCOM)_ held on May 17, 2023
2. _IEEE International Conference on Distributed Computing Systems (IEEE ICDCS)_ held on July 7, 2021

Paper Reviewer of Conferences and Journals

I reviewed scientific papers flagship conferences and journals in the Networking and Machine Learning fields:

- International Conference on Machine Learning (ICML 2021)
- International Conference on Intelligent Robots and Systems (IROS 2021)
- International Conference on Neural Information Processing Systems (NEURIPS 2021)
- Pervasive and Mobile Computing (PMC)
- International Conference on Sensing Communication, and Networking (SECON 2022)
- International Conference on Smart Computing (SMARTCOMP 2022)

Teaching Assistant

[2016 – 2021]

1. _Course on_ **_Artificial Intelligence for Trading_**_, at the Computer Science Department of Sapienza University of Rome, Italy:_ I held seminars about Python libraries (Pandas and Numpy) used for financial data processing and **Supervised Regression Learning** and **Deep Reinforcement Learning** usage for financial predictors. I assigned homework and supported students with their homework and final projects.
2. _Course on_ **_Computer Network Performance_**_, at the Computer Science Department of Sapienza University of Rome, Italy_
3. _Course on_ **_General Informatics_**_, at the Mathematics Department of Sapienza University of Rome, Italy_

Conferences, Workshops and Summer Schools

[2019 – Current]

Attended conferences, workshops and summer schools on _Robotics_, _Computer Networks_, _Distributed Systems_ and **_Finance:_** _ACM ICAIF (AI and finance); IEEE INFOCOM; IEEE ICDCS; IEEE WONS_ and others; _IEEE RAS Summer School on Multi-Robot Systems; Advanced Course on Data Science and Machine Learning (ACDL)._