Alberto Marchesi

Curriculum Vitae et Studiorum

Personal Information

Date of Birth	September 22, 1992
Place of Birth	Piacenza, Italy
Citinzenship	Italian

Work Information

University	Politecnico di Milano
Department	Dipartimento di Elettronica, Informazione e Bioingegneria (DEIB)
Address	Via Golgi 39, 20133, Milano (MI), Italy
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Highlights

Alberto Marchesi is an assistant professor at the Department of Electronics, Information, and Bioenginnering of Politecnico di Milano, within the Artificial Intelligence and Robotics Lab. His research focuses on *algorithmic game theory* and *machine learning*, with the aim of bridging the two fields to build novel AI systems. He got his PhD in Information Technology with laude from Politecnico di Milano. His PhD thesis was awarded the *2020 Chorafas Award* by the Dimitris N. Chorafas Foundation and received an honorable mention for the *2020 EurAI Dissertation Award*. He is the author of more than 40 peer-reviewed research papers, including papers published in premier journals, such as *Journal of the ACM*, *Artificial Intelligence Journal* (5), *Algorithmica*, and *Games and Economic Behavior*, and in top-tier international conferences, such as *AAAI* (7), *IJCAI* (7), *NeurIPS* (6), *ICML* (4), *ACM EC* (3), and *AAMAS* (2). One of his papers was awarded an *"Outstanding Paper Award"* at NeurIPS 2020, which is the most important annual gathering in the field of AI and machine learning (only 3 papers have been selected out of 9467 submissions). He serves as a program committee member for several top-tier confereces in AI and machine learning, and he was also guest associate editor for the *Frontiers in Artificial Intelligence* journal. He was involved in several research and industrial projects, taking the role of *principal investigator* (PI) in some of them. Currently, he is co-PI of a PRIN 2022 project funded by the MUR, co-PI of a research unit in the "*ELIAS*" project funded by HORIZON-RIA, and co-leader of a work-package of the Spoke 4 in the "*PNRR-PE FAIR - Future Artificial Intelligence Research*" project funded by NextGenerationEU. In 2020, he co-founded *ML cube s.r.l.*, which is part of the *spin-off* program of Politecncio di Milano. He also taught several courses at BSc, MSc and PhD level on computer science and AI.

Experience

2022 — **Assistant Professor (RTD-A)**, *Politecnico di Milano, Dipartimento di Elettronica Informazione e Bioingegneria (DEIB)*, Milano.
Working in the Artificial Intelligence and Robotics Lab (AIRLAB).

2020 — **Co-founder & AI Specialist**, *ML cube s.r.l. – Polimi Spin-Off*, Milano.
Involved in some projects at ML cube s.r.l., whose goal is providing cutting-edge solutions for machine learning systems and their life-cycle-management optimization.

2020 – 2022 — **Postdoc Research Assistant**, *Politecnico di Milano, Dipartimento di Elettronica Informazione e Bioingegneria (DEIB)*, Milano.
Working in the Artificial Intelligence and Robotics Lab (AIRLAB), within the research group lead by Prof. Nicola Gatti.

Education

2016 – 2020 — **PhD in Information Technology**, *Politecnico di Milano*, Milano.
Thesis: Leadership Games: Multiple Followers, Multiple Leaders, and Perfection.
Advisor: Prof. Nicola Gatti.
Mark: *with laude*.

2014 – 2016 — **MSc in Computer Science and Engineering**, *Politecnico di Milano*, Milano.
Thesis: Methods for finding Leader-Follower equilibria with multiple followers.
Advisor: Prof. Nicola Gatti.
Mark: *110 cum laude/110*.

2011 – 2014 — **BSc in Computer Science and Engineering**, *Politecnico di Milano*, Milano.
Mark: *110 cum laude/110*.

2011 — **Diploma di Perito Industriale in Informatica**, *Istituto Tecnico Industriale Statale G. Marconi*, Piacenza.
Mark: *100 cum laude/100*.

Research Interests

His research focuses on *Artificial Intelligence*, especially on *Algorithmic Game Theory*, *Multi-agent Learning*, and *Online Learning*.

Algorithmic Game Theory
- Analysis of the computational complexity of equilibirum finding problems.
- Computing equilbiria in large imperfect-information sequential games.
- Information structure design problems (a.k.a. algorithmic Bayesian persuasion).
- Auctions and mechanism design under the compuatational lense.
- Algorithms for pricing in e-commerce.
- Computational analaysis of principal-agent problems in contract theory.
- Simulation-based games and their applications to complex real-world problems.

Multi-agent Learning
- Design of efficient no-regret learning dynamics converging to equilibria in games.
- Multi-agent reinforcement learning.

Online Learning
- Online learning techniques applied to classical algorithmic game theory problems.
- Online convex optimization and its relation to learning dynamics in games.
- Online learning subject to long-term constraints.
- Multi-armed bandit problems.

Summary

Research
- Author of 10 journal papers, including 8 top-ranked Q1 journal papers (SCIMAGO).
- Author of 32 papers on peer-reviewed international conferences, including 25 top-tier A++ conferences (CORE).
- h-index 16 and 537 citations (Google Scholar, accessed: 22-06-2023).
- Outstanding Paper Award at NeurIPS 2020.
- Recipient of the 2020 Chorafas Award.
- Honorable mention for the 2020 EurAI Dissertation Award.
- PC member of several top-tier international conferences in AI and ML, including *NeurIPS*, *ICML*, *AAAI*, *IJCAI*, and *ICLR*.
- Senior PC memenber of a top-tier international conference (*IJCAI*).
- Guest associate editor for the *Frontiers in Artificial Intelligence* journal.
- Invited speaker in several international workshops.
- Member of the ELLIS Society, within the MIlan ELLIS unit.
- International collaborations with CMU, Columbia University, and University of Southampton.

Teching
- Professor of a BSc course on computer science at *Politecnico di Milano*.
- Professor of a PhD course on multi-agent learning at *Politecnico di Milano*.
- Lecturer of a PhD course on algorithmic game theory at *Università degli studi di Bergamo* and of an advanced course on that topic held for *Ferrari s.p.a.*
- Teaching assistant of BSc and MSc courses at *Politecnico di Milano* for 7 years.

Projects
- Co-PI of the *PRIN 2022* project "*Targeted Learning Dynamics: Computing Efficient and Fair Equilibria through No-Regret Algorithms*" funded by the MUR.
- Co-PI of a research unit in the project "*ELIAS*" funded by HORIZON-RIA.
- Co-leader of a work-package of the Spoke 4 in the project "*PNRR-PE FAIR - Future Artificial Intelligence Research*" funded by NextGenerationEU.
- Co-PI an industrial project with *MBDA Italia s.p.a.*.
- Reserach scientist for the *PRIN 2017* project "*ALGADIMAR*" funded by the MUR.
- Reserach scientist for several indutrial projects, including *DoveVivo s.p.a.*, *Marina Militare*, *Leonardo s.p.a.*, *MBDA Italia s.p.a.*, and *Locify Inc.*.

Technology Transfer
- Co-founder of *MIcube s.r.l.*, a spin-off of *Politecnico di Milano*.

Publications

Papers on Proceedings of International Conferences

[C1] Castiglioni M., Marchesi A., Gatti N.
Multi-Agent Contract Design: How to Commission Multiple Agents with Individual Outcomes
The 24th ACM Conference on Economics and Computation, EC 2023, London, UK

[C2] Bernasconi M., Castiglioni M., Celli A., Marchesi A., Trovò F., Gatti N.
Optimal Rates and Efficient Algorithms for Online Bayesian Persuasion
The 40th International Conference on Machine Learning, ICML 2023, Honolulu, USA

[C3] Bernasconi M., Castiglioni M., Marchesi A., Trovò F., Gatti N.
Constrained Phi-Equilibria
The 40th International Conference on Machine Learning, ICML 2023, Honolulu, USA

[C4] Castiglioni M., Celli A., Marchesi A., Romano G., Gatti N.
A Unifying Framework for Online Optimization with Long-Term Constraints
The 36th Conference on Neural Information Processing Systems, NeurIPS 2022, New Orleans, USA

[C5] Bernasconi M., Castiglioni M., Marchesi A., Gatti N., Trovò F.
Sequential Information Design: Learning to Persuade in the Dark
The 36th Conference on Neural Information Processing Systems, NeurIPS 2022, New Orleans, USA

[C6] Bernasconi M., Cacciamani F., Castiglioni M., Marchesi A., Gatti N., Trovò F.
Safe Learning in Tree-Form Sequential Decision Making: Handling Hard and Soft Constraints
The 39th International Conference on Machine Learning, ICML 2022, Baltimore, USA

[C7] Castiglioni M., Marchesi A., Gatti N.
Designing Menus of Contracts Efficiently: The Power of Randomization
The 23rd ACM Conference on Economics and Computation, EC 2022, Boulder, USA

[C8] Bacchiocchi F., Castiglioni M., Marchesi A., Romano G., Gatti N.
Public Signaling in Bayesian Ad Auctions
The 31st International Joint Conference on Artificial Intelligence, IJCAI 2022, Vienna, Austria

[C9] Romano G., Castiglioni M., Marchesi A., Gatti N.
The Power of Media Agencies in Ad Auctions: Improving Utility through Coordinated Bidding
The 31st International Joint Conference on Artificial Intelligence, IJCAI 2022, Vienna, Austria

[C10] Castiglioni M., Marchesi A., Gatti N.
Bayesian Persuasion Meets Mechanism Design: Going Beyond Intractability with Type Reporting
The 21st International Conference on Autonomous Agents and Multi-Agent Systems, AAMAS 2022, Virtual conference

[C11] Castiglioni M., Romano G., Marchesi A., Gatti N.
Signaling in Posted Price Auctions
The 36th AAAI Conference on Artificial Intelligence, AAAI 2022, Virtual conference

[C12] Castiglioni M., Ferraioli D., Gatti N., Marchesi A., Romano G.
Efficiency of Ad Auctions with Price Displaying
The 36th AAAI Conference on Artificial Intelligence, AAAI 2022, Virtual conference

[C13] Bernasconi M., Cacciamani F., Fioravanti S., Gatti N., Marchesi A., Trovò F.
Exploiting Opponents Under Utility Constraints in Sequential Games
The 35th Conference on Neural Information Processing Systems, NeurIPS 2021, Virtual conference

[C14] Castiglioni M., Marchesi A., Gatti N.
Bayesian Agency: Linear versus Tractable Contracts
The 22nd ACM Conference on Economics and Computation, EC 2021, Virtual conference

[C15] Castiglioni M., Marchesi A., Celli A., Gatti N.
Multi-Receiver Online Bayesian Persuasion
The 38th International Conference on Machine Learning, ICML 2021, Virtual conference

[C16] Celli A., Marchesi A., Farina G., Gatti N.
Decentralized No-regret Learning Algorithms for Extensive-form Correlated Equilibria (Extended Abstract)
The 30th International Joint Conference on Artificial Intelligence, IJCAI 2021, Virtual conference

[C17] Romano G., Tartaglia G., Marchesi A., Gatti N.
Online Posted Pricing with Unknown Time-Discounted Valuations
The 35th AAAI Conference on Artificial Intelligence, AAAI 2021, Virtual conference

[C18] Marchesi A., Gatti N.
Trembling-Hand Perfection and Correlation in Sequential Games
The 35th AAAI Conference on Artificial Intelligence, AAAI 2021, Virtual conference

[C19] Castiglioni M., Celli A., Marchesi A., Gatti N.
Signaling in Bayesian Network Congestion Games: the Subtle Power of Symmetry
The 35th AAAI Conference on Artificial Intelligence, AAAI 2021, Virtual conference

[C20] Celli A., Marchesi A., Farina G., Gatti N.
No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium
The 34th Conference on Neural Information Processing Systems, NeurIPS 2020, Virtual conference [**Best Paper Award**, only **3** out of **9467** submissions; Invited at the Sister Conference Best Paper Track session at the 30th International Joint Conference on Artificial Intelligence, IJCAI 2021; Invited at the Highlights Beyond EC plenary session at the 22nd ACM Conference on Economics and Computation, EC 2021]

[C21] Castiglioni M., Celli A., Marchesi A., Gatti N.
Online Bayesian Persuasion
The 34th Conference on Neural Information Processing Systems, NeurIPS 2020, Virtual conference [**Spotlight** presentation, top **2.96%** of submissions]

[C22] Marchesi A., Trovò F., Gatti N.
Learning Probably Approximately Correct Maximin Strategies in Simulation-Based Games with Infinite Strategy Spaces
The 19th International Conference on Autonomous Agents and Multi-Agent Systems, AAMAS 2020, Virtual conference

[C23] Celli A., Marchesi A., Bianchi T., Gatti N.
Learning to Correlate in Multi-Player General-Sum Sequential Games
The 33rd Conference on Neural Information Processing Systems, NeurIPS 2019, Vancouver, Canada

[C24] Castiglioni M., Marchesi A., Gatti N.
Be a Leader or Become a Follower:The Strategy to Commit to with Multiple Leaders
The 28th International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China

[C25] Marchesi A., Castiglioni M., Gatti N.
Leadership in Congestion Games: Multiple User Classes and Non-Singleton Actions
The 28th International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China

[C26] Marchesi A., Farina G., Kroer C., Gatti N., Sandholm T.
Quasi-Perfect Stackelberg Equilibrium
The 33rd AAAI Conference on Artificial Intelligence, AAAI 2019, Honolulu, USA

[C27] Marchesi A., Coniglio S., Gatti N.
Leadership in Singleton Congestion Games
The 27th International Joint Conference on Artificial Intelligence, IJCAI 2018: 447-453, Stockholm, Sweden

[C28] Farina G., Marchesi A., Kroer C., Gatti N., Sandholm T.
Trembling-Hand Perfection in Extensive-Form Games with Commitment
The 27th International Joint Conference on Artificial Intelligence, IJCAI 2018: 233-239, Stockholm, Sweden

[C29] De Nittis G., Marchesi A., Gatti N.
Computing the Strategy to Commit to in Polymatrix Games
The 32nd AAAI Conference on Artificial Intelligence, AAAI 2018: 989-996, New Orleans, USA

[C30] Coniglio S., Gatti N., Marchesi A.
Pessimistic Leader-Follower Equilibria with Multiple Followers
The 26th International Joint Conference on Artificial Intelligence, IJCAI 2017: 171-177, Melbourne, Australia

[C31] Celli A., Marchesi A., Gatti N.
On the Complexity of Nash Equilibrium Reoptimization
The 33rd Conference on Uncertainty in Artificial Intelligence, UAI 2017: 292-301, Sydney, Australia

[C32] Basilico N., Coniglio S., Gatti N., Marchesi A.
Bilevel programming approaches to the computation of optimistic and pessimistic single-leader-multi-follower equilibria
The 16th International Symposium on Experimental Algorithms, SEA 2017: 31:1-31:14 London, UK, June 21-23, 2017

International Journals

[J1] Castiglioni M., Marchesi A., Gatti N.
Designing menus of contracts efficiently: The power of randomization
Artificial Intelligence Journal (AIJ), 2023

[J2] Castiglioni M., Celli A., Marchesi A., Gatti N.
Regret minimization in online Bayesian persuasion: Handling adversarial receiver's types under full and partial feedback models
Artificial Intelligence Journal (AIJ), 2023

[J3] Farina G., Celli A., Marchesi A., Gatti N.
Simple Uncoupled No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium
Journal of the ACM (JACM), 2022

[J4] Castiglioni M., Marchesi A., Gatti N.
Bayesian Agency: Linear versus Tractable Contracts
Artificial Intelligence Journal (AIJ), 2022

[J5] Castiglioni M., Marchesi A., Gatti N.
Committing to correlated strategies with multiple leaders
Artificial Intelligence Journal (AIJ), 2021

[J6] Gatti N., Gilli M., Marchesi A.
A Characterization of Quasi-Perfect Equilibria
Games and Economic Behavior, 2020

[J7] Coniglio S., Gatti N., Marchesi A.
Computing a Pessimistic Stackelberg Equilibrium with Multiple Followers: the Mixed-Pure Case
Algorithmica, 2020

[J8] Castiglioni M., Marchesi A., Gatti N., Coniglio S.
Leadership in Singleton Congestion Games: What is Hard and What is Easy
Artificial Intelligence Journal (AIJ), 2019

[J9] Basilico N., Coniglio S., Gatti N., Marchesi A.
Bilevel programming methods for computing single-leader-multi-follower equilibria in normal-form and polymatrix games
EURO Journal on Computational Optimization, 2019

[J10] Celli A., Marchesi A.
Learning Dynamics in Limited-Control Repeated Games
Intelligenza Artificiale, 2018

Papers in International Workshops

[W1] Castiglioni M., Ferraioli D., Gatti N., Marchesi A., Romano G.
Equilibrium Analysis of Ad Auctions with Price Displaying
Learning with Strategic Agents Workshop (AAMAS 2022), Virtual workshop

[W2] Castiglioni M., Romano G., Marchesi A., Gatti N.
Signaling in Bayesian Posted Price Auctions
Learning with Strategic Agents Workshop (AAMAS 2022), Virtual workshop

[W3] Bernasconi M., Cacciamani F., Fioravanti S., Gatti N., Marchesi A., Trovò F.
Exploiting Opponents Subject to Utility Constraints in Extensive-Form Games
Learning with Strategic Agents Workshop (AAMAS 2022), Virtual workshop

[W4] Bernasconi M., Cacciamani F., Fioravanti S., Gatti N., Marchesi A., Trovò F.
Exploiting Opponents under Utility Constraints in Extensive-Form Games
AAAI-22 Workshop on Reinforcement Learning in Games, Virtual workshop

[W5] Castiglioni M., Celli A., Marchesi A., Gatti N.
Bayesian Persuasion in Online Setting
AAAI-21 Workshop on Reinforcement Learning in Games, Virtual workshop

[W6] Marchesi A., Trovò F., Gatti N.
Learning Probably Approximately Correct Maximin Strategies in Games with Infinite Strategy Spaces
AAAI-21 Workshop on Reinforcement Learning in Games, Virtual workshop

[W7] Celli A., Marchesi A., Farina G., Gatti N.
No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium
Cooperative AI Workshop (NeurIPS 2020), Virtual workshop

[W8] Castiglioni M., Marchesi A., Gatti N.
Computing Correlated Strategies to Commit to with Multiple Leaders
Games, Agents and Incentives Workshops at AAMAS 2020, Virtual workshop

[W9] Marchesi A., Trovò F., Gatti N.
Learning Maximin Strategies with Best Arm Identification Techniques
Games, Agents and Incentives Workshops at AAMAS 2020, Virtual workshop

[W10] Celli A., Marchesi A., Bianchi T., Gatti N.
Learning to Correlate in Multi-Player General-Sum Sequential Games
Smooth Games Optimization and Machine Learning Workshop (NeurIPS 2019), Vancouver, Canada.

[W11] Marchesi A., Trovò F., Gatti N.
Learning Maximin Strategies in Simulation-Based Games with Infinite Strategy Spaces
Smooth Games Optimization and Machine Learning Workshop (NeurIPS 2019), Vancouver, Canada.

[W12] Farina G., Marchesi A., Kroer C., Gatti N., Sandholm T.
Trembling-Hand Perfection in Stackelberg Sequential Games
Games, Agents and Incentives Workshops at AAMAS 2019, Montreal, Canada

[W13] Marchesi A., Farina G., Kroer C., Gatti N., Sandholm T.
Computing a Quasi-Perfect Stackelberg Equilibrium
Games, Agents and Incentives Workshops at AAMAS 2019, Montreal, Canada

[W14] Marchesi A., Coniglio S., Gatti N.
Singleton Congestion Games with Leadership
Games, Agents and Incentives Workshops at AAMAS 2019, Montreal, Canada

[W15] Marchesi A., Farina G., Kroer C., Gatti N., Sandholm T.
Quasi-Perfect Stackelberg Equilibrium
AAAI-19 Workshop on Reinforcement Learning in Games, Honolulu, USA

[W16] Celli A., Marchesi A.
Nash Equilibrium Reoptimization is Hard
The 3rd IJCAI Algorithmic Game Theory Workshop, Melbourne, Australia

Awards

Paper Awards

NeurIPS 2020 Outstanding Paper Award
The paper "No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium" has been selected as one of the best **3** papers out of **9467** submissions.

Personal Awards

Honorable mention for the 2020 EurAI Dissertation Award
Prize awarded by the European Association for Artificial Intelligence to the best PhD thesis on artificial intelligence among those of students in european institutions.

2020 Chorafas Award
Prize awarded by the Dimitris N. Chorafas Foundation to the best doctoral student(s) in the Hard Sciences in each partner university.

National Doctoral Scholarship
Doctoral scholarship for three years, sponsored by the italian Ministry of Education, Universities and Research.

Borsa di Studio FCA e CNH Industrial 2017
Scholarships for the best graduated students (Laurea Magistrale) who are sons/daughters of employees of FCA and CNH Industrial.

Borsa di Studio FCA e CNH Industrial 2015
Scholarships for the best graduated students (Laurea Triennale) who are sons/daughters of employees of FCA and CNH Industrial.

Teaching

Courses with a Primary Responsibility

2023 **Multi-agent Learning: From Theory to Practice**, *Politecnico di Milano*, Milano.
– **Role:** Professor (with Nicola Gatti and Matteo Castiglioni).
– **Academic Year:** 2022-2023 (15 hours).
– **Description:** Course for the the students of the PhD in Information Technology and the MSc in Computer Science Engineering at Politecnico di Milano .

2022

Informatica B, *Politecnico di Milano*, Milano.

– **Role:** Professor.

– **Academic Year:** 2022-2023 (29 hours).

– **Description:** Course for the the students of the BSc in Mechanical Engineering and the BSc in Energy Engineering.

2020

Algorithmic Game Theory, *Università degli studi di Bergamo*, Bergamo.

– **Role:** Lecturer (with Prof. Nicola Gatti).

– **Academic Year:** 2020-2021 (10 hours).

– **Description:** Course for the the students of the PhD program in Computer Science.

2019

Algorithmic Game Theory, *Ferrari s.p.a.*, Maranello.

– **Role:** Lecturer (with Prof. Nicola Gatti and Dr. Andrea Celli; 25 hours in total).

– **Description:** Course on algorithmic game theory for the employees of Scuderia Ferrari.

Teaching Assistant Activities

2022

Algorithmic Game Theory, *Politecnico di Milano*, Milano.

– **Role:** Teaching assistant.

– **Academic Years:** 2021-2022 (24 hours); 2022-2023 (21 hours).

– **Description:** Exercise sessions using innovative teaching methodologies for students of the MSc in Computer Science Engineering and the MSc in Mathematical Engineering.

2018
2021

Economics and Computation, *Politecnico di Milano*, Milano.

– **Role:** Teaching assistant.

– **Academic Years:** 2017-2018 (14 hours); 2018-2019 (14 hours); 2019-2020 (24 hours); 2020-2021 (24 hours).

– **Description:** Exercise sessions using innovative teaching methodologies for students of the MSc in Computer Science Engineering and the MSc in Mathematical Engineering.

2018

Informatica A, *Politecnico di Milano*, Milano.

– **Role:** Teaching assistant.

– **Academic Years:** 2018-2019 (20 hours); 2019-2020 (20 hours); 2020-2021 (51 hours); 2021-2022 (51 hours).

– **Description:** Exercise sessions for students of the BSc in Mathematical Engineering.

2019
2020

Game Theory, *Politecnico di Milano*, Milano.

– **Role:** Teaching assistant.

– **Academic Year:** 2019-2020 (15 hours).

– **Description:** Exercise sessions for students of the MSc in Mathematical Engineering.

Industrial and Research Projects

Research Projects

2023
2025

PRIN 2022 Targeted Learning Dynamics: Computing Efficient and Fair Equilibria through No-Regret Algorithms, *Ministry of Education, Universities and Research*, Italy.

– **Role:** Co-PI.

– **Description:** Research project focused on the development of decentralized learning dynamics with guarantees on their solution quality, with emphasis on building algorithms that can reach fair and socially-good outcomes even in presence of strategic behaviors.

2023 – 2027 **ELIAS**, *HORIZON-RIA*, European Union.
– **Role:** Co-PI.
– **Description:** Research project focused on the development of decentralized learning dynamics with guarantees on their solution quality, with a particular emphasis on building learning algorithms that can reach fair and socially good equilibrium outcomes even in presence of strategic behaviors.

2023 – 2026 **PNRR-PE FAIR - Future Artificial Intelligence Research**, *NextGenerationEU*, European Union.
– **Role:** Co-PI.
– **Description:** Research project focused on fostering research in foundational AI.

2019 – 2021 **PRIN 2017 ALGADIMAR**, *Ministry of Education, Universities and Research*, Italy.
– **Role:** Co-PI of a research unit.
– **Description:** Research project focused on fostering cross-institutional collaborations, cross-disciplinary collaborations, and industry-academic partnerships. .

Industrial Projects

2023 – 2025 **Proof-of-concept of distributed mission planning algorithms and guidance to perform collaborative tasks**, *MBDA Italia s.p.a.*, Italy.
– **Role:** Co-PI.
– **Description:** Industrial project with the aim of developing AI-based solutions for planning collaborative tasks.

2022 **Digital Advertising in the Metaverse**, *Locify Inc.*, USA.
– **Role:** Research Scientist (in collaboration with ML cube s.r.l.).
– **Description:** Industrial project with the aim of developing innovative algorithms for ads allocation in the metaverse.

2022 **AI for Mission Planning and Performance Modeling**, *MBDA Italia s.p.a.*, Italy.
– **Role:** Research Scientist (in collaboration with ML cube s.r.l.).
– **Description:** Industrial project with the aim of developing AI-based solutions for mission planning and performance modeling in missile systems.

2021 **Machine Learning per l'Autonomia dei Velivoli**, *Leonardo s.p.a.*, Italy.
– **Role:** Research Scientist.
– **Description:** Industrial project with the aim of developing ML-based systems for autonomous mission and fleet management.

2019 – 2021 **RentMatic**, *DoveVivo s.p.a.*, Italy.
– **Role:** Research Scientist.
– **Description:** Industrial project with the aim of developing AI-based pricing algorithms for a room rental website.

2019 – 2020 **RocketAvoid**, *Analisi&Valore s.r.l. and Marina Militare*, Italy.
– **Role:** Research Scientist.
– **Description:** Industrial project with the aim of developing AI algorithms managing counter-missile defensive strategies for military ships.

Talks and Seminars

Talks given at International Conferences

Jul. 2021 **Multi-Receiver Online Bayesian Persuasion**
The 38th International Conference on Machine Learning, ICML 2021, Virtual

Feb. 2021 **Trembling-Hand Perfection and Correlation in Sequential Games**
The 35th AAAI Conference on Artificial Intelligence, AAAI 2021, Virtual

Dec. 2020 **No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium**
The 34th Conference on Neural Information Processing Systems, NeurIPS 2020, Virtual

Aug. 2019 **Be a Leader or Become a Follower: The Strategy to Commit to with Multiple Leaders**
The 28th International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China

Feb. 2018 **Computing the Strategy to Commit to in Polymatrix Games**
The 32nd AAAI Conference on Artificial Intelligence, AAAI 2018, New Orleans, USA

Aug. 2017 **Pessimistic Leader-Follower Equilibria with Multiple Followers**
The 26th International Joint Conference on Artificial Intelligence, IJCAI 2017, Melbourne, Australia

Talks given at International Workshops

Jun. 2023 **Online Bayesian Persuasion**
Algorithms, Learning, and Games (ALGA) Workshop, Punta Sampieri in Scicli, Italy

Apr. 2023 **Relaxing Common Assumptions in Bayesian Persuasion Through Online Learning**
Games, Learning, and Networks Workshop, Institute for Mathematical Sciences, National University of Singapore, Singapore

Sep. 2022 **Designing Menus of Contracts Efficiently: The Power of Randomization**
ELLIS@Milan Artificial Intelligence Workshop, Bocconi University, Milan, Italy

Dec. 2020 **No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium**
Algadimar Annual Meeting 2020, Virtual

Aug. 2019 **Be a Leader or Become a Follower:The Strategy to Commit to with Multiple Leaders**
Markets, Algorithms, Prediction, and LEarning 2019, MAPLE 2019, Milan, Italy

Aug. 2017 **Nash Equilibrium Reoptimization is Hard**
The 3rd IJCAI Algorithmic Game Theory Workshop, Melbourne, Australia

Seminars

Jan. 2018 **When Are Equilibria of Simple Auctions Near-Optimal?**
Permanent Itinerant Game Theory Seminars (P.I.G.S.), Politecnico di Milano, Italy

Mar. 2017 **Leadership Games**
Permanent Itinerant Game Theory Seminars (P.I.G.S.), Politecnico di Milano, Italy

Editorial Activities

International Journals

2020 **Guest Associate Editor**, *Frontiers in Artificial Intelligence*.

International Conferences

2021 **Senior Program Committee Member**, *International Joint Conference on Artificial Intelligence*.

2022 **Program Committee Member**, *International Conference on Learning Representations*.

2021 **Program Committee Member**, *International Conference on Machine Learning*.

2020 **Program Committee Member**, *Conference on Neural Information Processing Systems*.

2020–2021 **Program Committee Member**, *International Joint Conference on Artificial Intelligence*.

2018 **Program Committee Member**, *AAAI Conference on Artificial Intelligence*.

Students Supervision

MSc Sudents

- Matteo Castiglioni (now a postdoctoral researcher at Politecnico di Milano)
- Tommaso Bianchi (Honours Programme Scientific Research in IT)
- Jacopo Pio Gargano (Honours Programme Scientific Research in IT)
- Francesco Bacchiocchi (now a PhD student at Politecnico di Milano)
- Federica Gianotti
- Edoardo Lamonaca
- Giordano Colombi
- Gianluca Tartaglia
- Federico Cini
- Niccolo Raspa
- Gabriele Aquaro
- Federico Maggi
- Edoardo Disarò
- Lorenzo Casalini
- Emanuele Ricciardelli

Qualifications

Sep 2013 **TOEIC**, *Mark 980/990*, Milano.
Certificate of English language

Languages

Italian	Native	*Mother Tongue*
English	Fluent	*Daily practice, all work performed in English*

Internships

2011

Web Application Programmer, *H&S - Qualità nel software*, Piacenza (PC), Italy.
Development of a web application in ASP.NET and C#, management of databases in SQL Server 2008 Professional.

Skills

General

Social	Good ability to adapt to multicultural environments, good communication skills.
Organisational	Team spirit, team coordination.
Technical	MS Office tools.

Programming

Languages	C, Java, Python (numpy, scipy), R, MATLAB, AMPL, SQL, HTML, C#, Scheme, Haskell, Prolog
IDEs	Pycharm, Eclipse, NetBeans, MATLAB, R
Typesetting	Microsoft Office, Apple iWork, LaTeX
Operating Systems	Microsoft Windows, Apple MacOS, GNU/Linux

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