Giulia Romano

Postdoctoral Researcher in Artificial Intelligence

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in giuro

Research Interests

Online Learning, Multi-Armed Bandits, Algorithmic Game Theory, Mechanism Design

Education

Nov2019-Apr2023	**Ph.D. in Artificial Intelligence at Politecnico di Milano** **Topics**: Pricing and Advertising Strategies in E-commerce Scenarios. **Advisor**: prof. Nicola Gatti
Dec2018	**Mathematical Engineering MSc - Applied Statistics** Politecnico di Milano, Italy. **Minor**: Decision-making models and methods
Feb2016	**Mathematical Engineering BSc** Politecnico di Milano, Italy

Experience

Apr2023-present	**Postdoctoral Researcher at Politecnico di Milano** Politecnico di Milano, Italy.
Oct2022-Jan2023	**Research Intern at Criteo AI Lab** Criteo Paris Office, France. **Team**: Exploration Exploitation Learning
May2019 - May2021	**Industrial Research Collaboration – AdsHotel** **Project**: automated bid/budget optimization for online advertising
Jan2019 - Jul2021	**Industrial Research Collaboration – DoveVivo** **Project**: automated pricing for room rental
Jan2019-Oct2019	**Research Assistant at Politecnico di Milano**

Skills

Programming Languages: Python, R, SQL, Matlab

Optimization Frameworks: AMPL, Gurobi

Languages: Italian (Native Language), English (Fluent), French (Good)

Service

2019-present	**MSc Thesis co-supervisor** I was the co-supervisor of the master's theses of nine students
2020-present	**Conferences Reviewer** I am a reviewer for leading AI conferences, including NeurIPS, ICML, AAAI, and IJCAI

Awards

2021	Outstanding Poster Award, *At Mediterranean Machine Learning Summer School*

Teaching

2019-2022	**Teaching Assistant**, *Sistemi Informatici (Real-Time Computing Systems)* Politecnico di Milano, Italy

Publications

Conference Papers

- A Unifying Framework for Online Optimization with Long-Term Constraints,
Castiglioni M., Celli A., Marchesi A., Romano G., Gatti N., **NeurIPS-2022**
- The Power of Media Agencies in Ad Auctions: Improving Utility through Coordinated Bidding,
Romano G., Castiglioni M., Marchesi A., Gatti N., **IJCAI-2022**
- Public Signaling in Bayesian Ad Auctions,
Bacchiocchi F., Castiglioni M., Marchesi A., Romano G., Gatti N., **IJCAI-2022**
- Multi-Armed Bandit Problem with Temporally-Partitioned Rewards: When Partial Feedback Counts,
Romano G., Agostini A., Trovò F., Gatti N., Restelli M., **IJCAI-2022**
- Efficiency of Ad Auctions with Price Displaying,
Castiglioni M., Ferraioli D., Gatti N., Marchesi A., Romano G., **AAAI-2022**
- Signaling in Posted Price Auctions,
Castiglioni M., Romano G., Marchesi A., Gatti N., **AAAI-2022**
- Online Posted Pricing with Unknown Time-Discounted Valuations,
Romano G., Tartaglia G., Marchesi A., Gatti N., **AAAI-2021**
- Personality-Based Representations of Imperfect-Recall Games,
Celli A., Romano G., Gatti N., **AAMAS-2019**, *extended-abstract*
- Safe Online Bid Optimization with Return-On-Investment and Budget Constraints subject to Uncertainty,
Castiglioni M., Nuara A., Romano G., Spadaro G., Trovò F., Gatti N., under review
- Algorithmic Advertising in the Metaverse: Finding Effective Ads Allocations,
Castiglioni M., Marchesi A., Romano G., Gatti N., C. Palayamkottai, under review

Journal Papers

- Incentivizing the Contribution of Selfish Agents in Crowd Tasks: Revenue Maximization with Direct and Indirect Mechanisms,
Montazeri M., Castiglioni M., Romano G., Gatti N., Kebriaei H., under review
- Increasing Revenue in Bayesian Posted Price Auctions through Signaling,
Castiglioni M., Romano G., Marchesi A., Gatti N., under review

Workshop Papers

- A Unifying Framework for Online Safe Optimization,
Castiglioni M., Celli A., Marchesi A., Romano G., Gatti N., NeurIPS 2022, Workshop on Machine Learning Safety
- Multi-Armed Bandit Problem with Temporally-Partitioned Rewards,
Romano G., Agostini A., Trovò F., Gatti N., Restelli M., NeurIPS 2022, Women in Machine Learning Workshop
- Safe Online Bid Optimization with Uncertain ROI and Budget Constraints,
Castiglioni M., Nuara A., Romano G., Spadaro G., Trovò F., Gatti N., AAMAS 2022, Learning with Strategic Agents Workshop
- Signaling in Bayesian Posted Price Auctions,
Castiglioni M., Romano G., Marchesi A., Gatti N., AAMAS 2022, Learning with Strategic Agents Workshop
- Equilibrium Analysis of Ad Auctions with Price Displaying,
Castiglioni M., Ferraioli D., Gatti N., Marchesi A., Romano G., AAMAS 2022, Learning with Strategic Agents Workshop

- Ottimizzazione di Campagne Pubblicitarie per Prenotazioni di Hotel con Algoritmi di Intelligenza Artificiale
Alessandrelli L., Trovò F., Romano G., Gatti N., Ital-IA-2022 (In Italian)

- Safe Online Bid Optimization with Uncertain Return-On-Investment and Budget Constraints
Castiglioni M., Nuara A., Romano G., Spadaro G., Trovò F., Gatti N., NeurIPS 2021 Workshop on Machine Learning meets Econometrics (MLECON)

- SHARP: Pricing Automatico dell'affitto di Stanze,
Nuara A., Romano G., Trovò F., Gatti N., Restelli M., Ital-IA-2019 (In Italian)

Talks

2022   A Unifying Framework for Online Safe Optimization, *At NeurIPS-22, poster presentation*

2022   The Power of Media Agencies in Ad Auctions: Improving Utility through Coordinated Bidding, *At IJCAI-22, oral and poster presentation*

2022   Multi-Armed Bandit Problem with Temporally-Partitioned Rewards: When Partial Feedback Counts, *At IJCAI-22, oral and poster presentation*

2022   Public Signaling in Bayesian Ad Auctions, *At IJCAI-22, oral and poster presentation*

2022   Efficiency of Ad Auctions with Price Displaying, *At AAAI-22, oral and poster presentation*

2022   Signaling in Posted Price Auctions, *At AAAI-22, oral and poster presentation*

2022   Ottimizzazione di Campagne Pubblicitarie per Prenotazioni di Hotel con Algoritmi di Intelligenza Artificiale, *At Ital-IA 2022, talk*

2021   Online Posted Pricing with Unknown Time-Discounted Valuations,
At AAAI-21, oral and poster presentation

2021   Safe Online Bid Optimization with Return-on-investment Constraints,
At Mediterranean Machine Learning summer school, poster presentation

2020   Online Posted Pricing with Unknown Time-Discounted Valuations,
At ALGADIMAR annual meeting (Algorithms, Games, and Digital Markets), talk