

Mathieu Molina

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Experience

Oct 2025 – Now Tel Aviv, Israel	Postdoctoral Fellowship - Tel Aviv University <i>Supervised by Michal Feldman</i>
Mar 2026 – May 2026 Santiago, Chile	Research Visit, University of Chile Collaboration with José Correa and Victor Verdugo on learning in prophet inequalities
Jan 2022 – Oct 2025 Palaiseau, France	PhD Student, Inria FAIRPLAY – CREST ENSAE <i>Supervised by Vianney Perchet, Patrick Loiseau, and Nicolas Gast</i> Thesis: The Impact of Fairness in Resource Allocation
Mar 2025 – Jun 2025 Rome, Italy	Research Visit, Luiss University Collaboration with Marco Scarsini and Xavier Venel on Learning and Strategic Queueing
Apr 2021 – Sept 2021 Grenoble, France	Research intern, Inria POLARIS - LIG Intersectional fairness in classification, supervised by Patrick Loiseau
Apr 2020 – Aug 2020 Luxembourg	Program Manager Intern, Amazon EU Private brands
Aug 2019 – Jan 2020 Boston, USA	Research intern, Boston Children's Hospital – Harvard University Time series prediction in health-care, supervised by Mauricio Santillana

Education

Sept 2020 – Sept 2021	PSL University – Master degree (ranked 1st out of 30) Artificial Intelligence, Systems, Data Master degree
Sept 2017 – Sept 2021	Mines Paris – Engineering degree Specialization in applied probability and geostatistics
Sept 2018 – Feb 2019	Tokyo Institute of Technology – Exchange semester
Sept 2015 – Sept 2017	Lycée Louis le Grand / Henri IV – CPGE MPSI/PSI*

Publications

Thesis link: [The Impact of Fairness in Resource Allocation](#)

*Papers marked * are projects that I led or co-led, from the problem formulation through the main technical development and manuscript preparation.*

Fair Prophets*

with Michal Feldman and Paul Duetting – Manuscript under review

When Two is Too Many: Combinatorial Contracts in Small Teams*

with Tomer Ezra, Michal Feldman, and Maya Schlesinger – Manuscript under review

Kernel Methods for Refined Prophet Inequalities*

with Patrick Loiseau, Sebastian Perez-Salazar, Vianney Perchet, and Victor Verdugo – Preprint on ArXiv

Tight L_∞ Sample Complexity for Low-Degree and Sparse Boolean Polynomials*

with Jasper van Doornmalen, Victor Verdugo, José Verschae – Manuscript under review

Prophet Inequalities under Local Differential Privacy*

with Achraf Azize, Hugo Richard, and Vianney Perchet – EC 2026

The Price of Opportunity Fairness in Matroid Allocation Problems*

with Rémi Castera, Felipe Garrido-Lucero, Patrick Loiseau, Simon Murras, and Vianney Perchet – NeurIPS 2025

Equitable Auctions*

with Simon Finster, Patrick Loiseau, Simon Mauras, and Bary Pradeliski – EC 2025

Prophet Inequalities: Competing with the Top ℓ Items is Easy*

with Nicolas Gast, Patrick Loiseau and Vianney Perchet – SODA 2025

Multi-Armed Bandits with Guaranteed Revenue per Arm

with Dorian Baudry, Nadav Merlis, Hugo Richard and Vianney Perchet – AISTATS 2024

Trading-off Price for Data Quality to Achieve Fair Online Allocation*

with Nicolas Gast, Patrick Loiseau, Vianney Perchet – NeurIPS 2023

On Preemption and Learning in Stochastic Scheduling

with Nadav Merlis, Hugo Richard, Flore Sentenac, Corentin Odic and Vianney Perchet – ICML 2023

Bounding and Approximating Intersectional Fairness Through Marginal Fairness*

with Patrick Loiseau – NeurIPS 2022

Estimating the Cumulative Incidence of COVID-19 in the United States Using Influenza Surveillance, Virologic Testing, and Mortality Data: Four Complementary Approaches

with Fred S Lu, Andre T Nguyen, Nicholas B Link, Jessica T Davis, Matteo Chinazzi, Xinyue Xiong, Alessandro Vespignani, Marc Lipsitch and Mauricio Santillana – PLOS Computational Biology 2021

Avoidable Serum Potassium Testing in the Cardiac ICU: Development and Testing of a Machine-Learning Model*

with Bhaven B Patel, Francesca Sperotto, Satoshi Kimura, Marlon Delgado, Mauricio Santillana and John N Kheir – Pediatric Critical Care Medicine 2021

Awards

Best poster award at GAIMSS '24 for *Equitable Auctions*

Best poster award at Hi! PARIS Summer School '24 for *Trading-off Price for Data Quality to Achieve Fair Online Allocation*

Organizational Roles & Academic Service

Teaching

Teaching assistant – Mines Paris, in 2022, 2023 and 2024
for *Data-science* course

Invited speaker – Mines Paris, in 2022, 2023, 2024 and 2025
talk on *Fairness in Machine Learning for Applied probability and geostatistics* specialization

Events Organization

2024 - 2025 – In charge of the Inria FAIRPLAY team weekly seminar

2024 – Organization of a reading group on *Diffusion models*

2023 – Organization and creation of the Inria FAIRPLAY scientific team-retreat in the Calvados region of France

Program committee

ITCS 2027

EC 2026

Reviewing

SODA 2027, NeurIPS 2023 – 2026, FOCS 2026, ESIF 2026, Mathematics of Operations Research, STOC 2026, WINE 2025, ALT 2025, International Journal of Game Theory, ICALP 2023, EWWF 2023

Talks & Posters

Talks

Apr 2026 – CMM - Center for Mathematical Modeling - *Fair Prophets*

Dec 2025 – Tel Aviv University – *Refined Prophet Inequalities via Bounded Variance*

Oct 2025 – Séminaire d'Optimisation Parisien – *Refined Prophet Inequalities via Bounded Variance*

Nov 2025 – Hebrew University of Jerusalem – *The Price of Opportunity Fairness in Matroid Allocation Problems*

Apr 2025 – Kolmogorov Meets Turing – *Prophet Inequalities: Competing with the Top ℓ Items is Easy*

Feb 2025 – OCEAN ERC Seminar – *Equitable Auctions*

Feb 2025 – Young Statisticians and Probabilists (YSP 13) – *Trading-off Price for Data Quality to Achieve Fair Online Allocation*

Oct 2024 – Parisian Junior Game Theory Seminar – *Prophet Inequalities: Competing with the Top ℓ Items is Easy*

Apr 2024 – Criteo – *Trading-off Price for Data Quality to Achieve Fair Online Allocation*

Posters

July 2026 – Crossroads of AI & Society Workshop – *Fair Prophets*

July 2026 – EC 2026 – *Fair Prophets*

Jan 2026 – 2026 Israel AGT day – *Equitable Auctions*

Sept 2025 – 30 years at IHP – *The Price of Opportunity Fairness in Matroid Allocation Problems*

Jun 2025 – HALG 2025 – *Prophet Inequalities: Competing with the Top ℓ Items is Easy*

May 2025 – IES Cargese, From Matching to Market. A Tale of Mathematics, Economics and Computer Science – *Prophet Inequalities: Competing with the Top ℓ Items is Easy*

July 2024 – Hi! PARIS Summer School '24 – *Trading-off Price for Data Quality to Achieve Fair Online Allocation*

June 2024 – GAIMSS '24 – *Equitable Auctions*