Andreas Maggiori

Contact Information

EMAIL: andreas.maggiori@gmail.com
LINKS:

Professional Experience

10/2023-Present | **Postdoctoral Research Scientist, Columbia University**
Mentors: Eric Balkanski and Will Ma

05/2022-08/2022 | **Research Intern, Google Zurich**
Hosted by Ehsan Kazemi, I worked on abuse video detection using deep learning, active learning and clustering techniques.

07/2021-10/2021 | **Research Intern, Google Zurich**
Hosted by Nikos Parotsidis, I worked on improving the performance of distributed clustering algorithms. Part of this work was published at ICML 2022.

Education

09/2018-09/2023 | **École Polytechnique Fédérale de Lausanne (EPFL), Switzerland**
PhD in Computer Science
Thesis: *Beyond worst-case analysis, with or without predictions*
Advisors: Rüdiger Urbanke and Ola Svensson

09/2011-10/2017 | **National Technical University of Athens, Greece**
Diploma (5-year joint degree; 300 ECTS),
Electrical and Computer Engineering (ECE)
Grade: 9.12 / 10 (approx. best 3%)
Thesis: Using Machine Learning Techniques to Infer Players' Valuations in Online Ad Auctions
Advisor: Dimitris Fotakis

Research Interests

keywords: ML robustness, online algorithms, matching, scheduling, graph algorithms, AI safety

I am interested in how machine learning can be incorporated into the design of online algorithms with the goal of outperforming classical methods when accurate ML predictions are available while maintaining robustness against adversarial and/or biased ML predictions. I have worked on graph clustering, graph matching, online scheduling, and various optimal stopping theory problems. More recently, I started working on AI safety for LLMs.

Programming Skills

Programming Languages (Excellent):	Python, C++, SQL
Programming Languages (Familiar with):	C, MATLAB
ML Frameworks (Familiar with):	PyTorch, scikit-learn, HuggingFace

Publications

Authors are in alphabetical order.

1. Fair and Consistent Correlation Clustering
ALT 2025
E. Balkanski, I. Chatzitheodorou, A. Maggiori

2. Data-Driven Solution Portfolios
ITCS 2025
M. Drygala, S. Lattanzi, A. Maggiori, M. Stouras, O. Svensson, S. Vassilvitskii

3. Fair Secretaries with Unfair Predictions
NeurIPS 2024
E. Balkanski, W. Ma, A. Maggiori

4. Dynamic Correlation Clustering in Sublinear Update Time
ICML 2024 (spotlight presentation - 3% acceptance rate)
V. Cohen-Addad, S. Lattanzi, A. Maggiori, N. Parotsidis

5. Online and Consistent Correlation Clustering
ICML 2022
V. Cohen-Addad, S. Lattanzi, A. Maggiori, N. Parotsidis

6. An Improved Analysis of Greedy for Online Steiner Forest
SODA 2022
É. Bamas, M. Drygala, A. Maggiori

7. The Primal-Dual method for Learning Augmented Algorithms
NeurIPS 2020 (oral talk - 1% acceptance rate)
É. Bamas, A. Maggiori, O. Svensson

8. Learning Augmented Energy Minimization via Speed Scaling
NeurIPS 2020 (spotlight presentation - 3% acceptance rate)
É. Bamas, A. Maggiori, L. Rohwedder, O. Svensson

9. Online Matching with General Arrivals
FOCS 2019
B. Gamlath, M. Kapralov, A. Maggiori, O. Svensson, D. Wajc

Invited Talks

- Fair Secretaries with Unfair Predictions

11/2024	**Drexel University**, USA
11/2024	**University of Massachusetts, Amherst (UMass)**, USA
10/2024	**Yale SOM Operations Seminar, Yale University**, USA
09/2024	**Rutgers/DIMACS Theory of Computing Seminar, Rutgers University**, USA
07/2024	**INFORMS Revenue Management and Pricing Section Conference, UCLA**, USA
07/2024	**Workshop on Algorithms with Predictions, Columbia University**, USA
06/2024	**INFORMS Workshop on Market Design, Yale University**, USA

- Data-Driven Solution Portfolios

10/2024	**NYU Theory Seminar, New York University**, USA

- Online and Consistent Correlation Clustering

06/2023	**INFORMS Applied Probability Society Conference, Nancy**, France
09/2022	**University of Massachusetts, Amherst (UMass)**, USA

- The Primal-Dual method for Learning Augmented Algorithms

09/2022	**Simons Institute for the Theory of Computing, UC Berkeley**, USA
09/2022	**University of Massachusetts, Amherst (UMass)**, USA
06/2021	**Google Zurich**, Switzerland

Awards

2023-2025:	DSI fellowship of Columbia University
2023-2025:	SNSF PostDoc Mobility fellowship (declined due to conflict with DSI fellowship)
2018-2019:	EDIC fellowship of EPFL
2017:	1st in the NTUA hub at the Google Hashcode programming competition (170 in the world) with the team *Veni Vidi Vsync*
2013:	Bronze medal at SEEMOUS (South Eastern European Mathematical Olympiad for University Students) competition [results]
2010:	Bronze medal in the Euclid phase of high school mathematics competition organized by the Hellenic Mathematical Society
2008, 2010:	Twice finalist in the Archimedes high school mathematics competition organized by the Hellenic Mathematical Society

Teaching Experience

I organized a study group on how continuous optimization methods can be used to tackle combinatorial problems. The study group website, including notes and recorded lectures, is available here.

I co-organized the ALPS (ALgorithms with PredictionS) workshop at EPFL in May 2022, along with Étienne Bamas and Adam Polak.

I was a teaching assistant for the following courses:

- NTUA: Algorithms and Complexity, Discrete Mathematics
- EPFL: Theory of Computation, Machine Learning, Learning Theory, Algorithms, Advanced Probability and Applications, Foundations of Data Science

Languages

Greek *(Native)*, Italian *(Native)*, English (*C2*), French (*C2*), Spanish (*B2*)