

Matteo Courthoud

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Education

Fall 2021	Visiting Scholar at Yale University, Department of Economics
2017 – present	PhD in Economics - University of Zurich, Zurich (CH) Supervisor: Prof. Gregory Crawford
2014 – 2016	MSc in Economics, cum laude - Bocconi University, Milan (IT) Thesis: <i>“The Relationship between Innovation and Competition: a Theoretical Analysis”</i> . Advisor: Prof. Chiara Fumagalli
2011 – 2014	BSc in Economics - Bocconi University, Milan (IT) Thesis: <i>“The Economics of Bitcoin”</i> . Advisor: Prof. Antonella Trigari

Research Interests

Industrial Organization, Competition Policy, Computational Theory, Algorithmic Pricing.

Working Papers

[Foreclosure Complementarities: Exclusionary Bundling and Predatory Pricing](#) with Gregory Crawford

We use a computational model of market dynamics to investigate the interplay between two foreclosure practices, exclusionary bundling and predatory pricing. We show that the two practices are complementary and we investigate potential policy interventions to prevent market monopolization.

[Algorithmic Collusion Detection](#)

I show that algorithms can learn reward-punishment schemes that are fully independent from the rival's actions and I propose a model-free test for algorithmic collusion based on historical data.

[Approximation Methods for Large Dynamic Stochastic Games](#)

I compare existing approximation methods to compute Markov Perfect Equilibrium in dynamic stochastic games with large state spaces. I also propose a new approximation method called “Games with Random Order” which outperforms existing ones in terms of approximation accuracy.

Work Experience

Winter 2019	Instructor for PhD Programming Course at UZH – Python Programming
2016-2017	Research Assistant in Bocconi University <ul style="list-style-type: none">- prof. Paolo Pinotti. Tasks: web scraping and data analysis- prof. Anna Gibert. Tasks: data collection and analysis- prof. Eliana La Ferrara. Tasks: data analysis and economic modeling
Spring 2016	Intern at EU Commission, Brussels (BE), DG-COMP, Chief Economist Office Tasks: data and economic analysis for Halliburton - Baker Hughes merger

Teaching Assistant Experience

Fall 2020	Machine Learning for Economic Analysis (MSc), University of Zurich
Fall 2018, Fall 2019	Econometrics for Research Students (PhD), University of Zurich
Spring 2017	Markets, Organizations and Incentives (BSc), Bocconi University
Fall 2016	Industrial Organization (BSc), Bocconi University

Thesis Supervisions

Jannick Sicher, MSc (2021)	Adversarial Approach to Algorithmic Collusion Detection
Tim Herter, MSc (2020)	The Effect of U.S. Food Aid on Underweight
Andrin Pluss, BSc (2020)	Merger Simulation and Competition Models
Yuming Pan, MSc (2019)	The Impact of Free Legal Aid on Criminal Activities

Programming

Python	Daily working knowledge: data analysis and visualization, machine learning, dynamic programming, reinforcement learning, web scraping
MATLAB	Daily working knowledge: computational theory, econometric analysis, dynamic programming, demand estimation, data analysis and visualization
R, Stata, Julia	Advanced knowledge: data analysis and visualization

Awards

2021: Swiss National Science Foundation (SNF) Doc.Mobility Scholarship for visiting **Yale University**

Languages

Italian (*mother tongue*), English (*fluent C2*), French (*advanced C1*), German and Spanish (*B1*)

References

Gregory Crawford

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Damian Kozbur

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