

# Matteo Courthoud

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Github: <https://github.com/matteocourthoud>

## Education

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Fall 2021	<b>Visiting Scholar</b> at Yale University, Department of Economics Host: Steven Berry
2017 – present	<b>PhD</b> in Economics - University of Zurich, Zurich (CH) Supervisor: Gregory Crawford
2014 – 2016	<b>MSc</b> in Economics, cum laude - Bocconi University, Milan (IT) Thesis: <i>“The relationship between innovation and competition: a theoretical analysis”</i> . Advisor: Chiara Fumagalli.
2011 – 2014	<b>BSc</b> in Economics - Bocconi University, Milan (IT) Thesis: <i>“The economics of Bitcoin”</i> . Advisor: Antonella Trigari

## Research Interests

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Industrial Organization, Competition Policy, Machine Learning, Artificial Intelligence.

## Working Papers

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### Foreclosure Complementarities: Exclusionary Bundling and Predatory Pricing

with Gregory Crawford

We use a computational model of industry dynamics to study exclusionary bundling and predatory pricing. We show that the two foreclosure practices are complementary and we investigate policies.

### Algorithmic Collusion Detection

I show that pricing algorithms can learn reward-punishment schemes without observing rival's actions and I propose a model-free test for algorithmic collusion based on observational data.

### Algorithmic Collusion in Online Marketplaces

I show that profit maximizing online marketplaces, by algorithmically controlling consumers' attention, have the incentives and ability to influence algorithmic pricing collusion.

### 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 and propose a new one: games with random order.

## Talks

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2021	European Winter meeting of the Econometric Society, Industrial Organization Prospectus Workshop (Yale University), 2 <sup>nd</sup> AI and Policy Conference, Swiss IO Day, Annual Congress of the Swiss Society of Economics and Statistics
2019, 2020	Microeconomics Theory Seminar (University of Zürich), Applied Microeconomics Seminar (University of Zürich)

## Teaching

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Fall 2021	<b>Instructor</b> Empirical Industrial Organization (PhD), University of Zurich
Fall 2020, 2021	<b>T.A.</b> <a href="#">Machine Learning for Economic Analysis</a> (MSc), University of Zurich
Winter 2020	<b>Instructor</b> <a href="#">Programming Course</a> (PhD), University of Zurich
Fall 2018, 2019	<b>T.A.</b> <a href="#">Econometrics for Research Students</a> (PhD), University of Zurich
Spring 2017	<b>T.A.</b> Markets, Organizations and Incentives (BSc), Bocconi University
Fall 2016	<b>T.A.</b> Industrial Organization (BSc), Bocconi University

## Other Professional Activities

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2021	<b>Referee</b> for the Journal of Competition Law and Economics
2016-2017	<b>R.A.</b> for Paolo Pinotti, Eliana La Ferrara, Anna Gibert, at Bocconi University
Spring 2016	<b>Intern</b> at EU Commission, Brussels (BE), DG-COMP, Chief Economist Office

## Thesis Supervisions

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

## Programming

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Python, Julia, R, MATLAB, Git, Unix (*daily*), Stata, SQL (*frequently*), Go, C++, Objective-C, CSS (*rarely*)

## References

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