

# Guy Aridor

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## Education

Ph.D. Economics, Columbia University, 2016-2022 (expected).

Fields: Industrial Organization, Economics of Digitization

B.A. Economics, Computer Science, Mathematics, Boston University, 2014

College Prize for Excellence in Economics

Honors in Economics, *summa cum laude*

## Working Papers

1. The Effect of Privacy Regulation on the Data Industry: Empirical Evidence from GDPR, [Draft](#)  
(w/ Yeon-Koo Che, Tobias Salz)

*Submitted*, Abstract at ACM EC'21

*Short Abstract:* We use novel data from the online travel industry to characterize the causal impact of GDPR on the data that firms can collect as well as their advertising revenues and ability to predict consumer behavior.

2. Competing Bandits: The Perils of Exploration under Competition, [Draft](#)  
(w/ Yishay Mansour, Alex Slivkins, Steven Wu)

*Submitted*, an earlier version *The Perils of Exploration under Competition: A Computational Modeling Approach* (w/ Kevin Liu, Alex Slivkins, Steven Wu) was at ACM EC '19, [Abstract](#)

*Short Abstract:* We study the tension between exploration and competition and ask whether competition incentivizes the adoption of better exploration algorithms.

3. Recommenders' Originals: Integrated Recommender Systems and Vertical Foreclosure, [Draft](#)  
(w/ Duarte Gonçalves)

*Revision requested at International Journal of Industrial Organization*

*Short Abstract:* We characterize the equilibrium effects of the increased tendency for online platforms to both produce their own content and utilize recommender systems.

4. Adaptive Efficient Coding: A Variational Autoencoder Approach, [Draft](#)  
(w/ Francesco Grechi, Michael Woodford)

*Short Abstract:* We study a model of neural coding that is based on the structure of a variational auto-encoder.

## Refereed Conference Proceedings

5. Deconstructing the Filter Bubble: User Decision-Making and Recommender Systems  
(w/ Duarte Gonçalves, Shan Sikdar)

*14th ACM Conference on Recommender Systems 2020 (RecSys '20)*, [Proceedings Link](#)

*Short Abstract:* We study a model of user decision making in the context of recommender systems. We show that user beliefs and risk-aversion levels are important for rationalizing existing empirical evidence and emphasize the usefulness of belief data in recommender system design and evaluation.

## Works In Progress

### 6. Measuring Competition in the Attention Economy: Evidence from Social Media

*Data collection completed*, [Pre-Registration Link](#)

*Short abstract:* I install parental control software on 400 participant's Android smartphones. I use this and surveys to collect comprehensive data on how participants spend their time as well as restrict access to prominent social media applications. I use the resulting data to evaluate market definition and market power in modern zero-price attention markets.

### 7. The Value of Recommender Systems: Decomposing the Informational and Discovery Gains

(w/ Duarte Gonçalves, Ruoyan Kong, Daniel Kluver, Joseph Konstan)

*Data collection in progress*, [Pre-Registration Link](#)

*Short abstract:* We conduct a longitudinal field experiment on the movie recommendation platform MovieLens. We randomize the movies shown as recommendations and elicit beliefs about unseen movies. We decompose the RS impact into its informational and product discovery components.

## Presentations

### The Effect of Privacy Regulation on the Data Industry: Empirical Evidence from GDPR

(\*)ACM Conference on Economics and Computation, July 2021, Budapest / Online

(\*)Statistical Methods for Computational Advertising, October 2021, Online / BIRS

FTC PrivacyCon, July 2020, Online

Big Tech & Antitrust - Competition Policy in the Digital Age, October 2020, Yale Law / Online

International Industrial Organization Conference, March 2020, Drexel / *cancelled due to COVID-19*

### Competing Bandits: The Perils of Exploration under Competition

(\*)INFORMS Annual Meeting, October 2021, Online

MIT Conference on Digital Experimentation, November 2020, Online

Conference on Web and Internet Economics Poster Session, December 2019, Columbia University

ACM Conference on Economics and Computation, June 2019, Phoenix

ACM EC Workshop on ML in the Presence of Strategic Behavior, June 2019, Phoenix

### Measuring Competition in the Attention Economy: Evidence from Social Media

(\*)International Conference on Computational Social Science, July 2021, Zurich / Online

### Deconstructing the Filter Bubble: User Decision-Making and Recommender Systems

ACM Conference on Recommender Systems, September 2020, Online

ICML Workshop on Participatory Approaches to Machine Learning, July 2020, Online

### Recommenders' Originals: Integrated Recommender Systems and Vertical Foreclosure

(\*)World Congress of Game Theory, July 2021, Budapest / Online

Young Economists Symposium, August 2019, Columbia University

### Training Data Poisoning for Imperfect Information Games

Poster at Annual Machine Learning Symposium, January 2019, New York Academy of Sciences

## Research Grants and Fellowships

Program for Economic Research Award for Field or Experimental Research, Columbia University, 2021

Amount: \$19,625.00

Program for Economic Research Summer Fellowship, Columbia University, 2018,2020

College Prize for Excellence in Economics, Boston University, 2014

Hariri Institute for Computing Summer Research Award, Boston University, 2013

Tuition Exchange Scholarship, Boston University, 2010-2014

## Work Experience

Software Engineer at HubSpot, 2015-2016

Software Engineer at Nutonian, 2014-2015

Co-founder at RequestNow, 2012-2014

Received initial funding from Rough Draft Ventures

## Research Assistant

Yeon-Koo Che (Columbia University, Economics), Fall 2019-Fall 2020

Tobias Salz (Columbia University, Economics), Summer, Fall 2018

Michael Woodford (Columbia University, Economics), Summer 2017

Henry Lam (Boston University, Mathematics), Summer 2013

Robert King (Boston University, Economics), Summer 2012

## Invited Summer School / Instructional Workshops

NBER Economics of Digitization Tutorial, 2021

NBER Young Scholars Workshop on the Economics of Artificial Intelligence, 2018

Summer School on Cognitive Foundations of Economic Behavior, 2018

## Teaching Experience

“Data TA” - help honors thesis students with programming and econometrics (Spring 2018, 2020)

Teaching Assistant for Introduction to Econometrics for Simon Lee (Spring 2019)

Teaching Assistant for Economic Growth and Development for Xavier Sala-i-Martin (Fall 2017)

## Miscellaneous

*Nationality:* Israel, United States

*Programming Languages:* Julia, Python, JavaScript, Java, C++, SQL, R, MATLAB, STATA

*Human Languages:* English (native), Hebrew (intermediate)

*Open-Source Software:* PlanOut.js, react-experiments, Scientist4J (~ 1 million total downloads)

BattleHack Boston Winner / 3rd Place World Finals, 2014