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Cristiana Firullo

Application: NBER Digital Economics and AI Tutorial

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CONTACT INFORMATION

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GRADUATE STUDY

I am a PhD candidate in Information Science at Cornell University (2023–present), with a concentration in Economic Theory, and I expect to graduate in Spring 2027. I completed my coursework, passed the A exam in September 2025, and received an MS in Information Science along the way (December 2025). Since 2024 I have been a visiting researcher in the Department of Economics at Stanford University, as an IvyPlus Exchange Scholar hosted by Professor B. Douglas Bernheim, where I took the PhD field sequences in Industrial Organization and in Behavioral and Experimental Economics. Before the PhD, I completed a BSc in Economics (2018) and an MSc in Economic and Social Sciences (2021) at Bocconi University, and I worked for a couple of years as an economic analyst at Oxera, on antitrust and privacy matters involving digital platforms.

GRADUATE COURSEWORK

Stanford University, PhD program in Economics (exchange, 2024–25; GPA 4.0/4.0)

- ECON 257, Industrial Organization I (J. I. Cuesta, L. Einav, P. Somaini)
- ECON 258, Industrial Organization IIA (A. Yurukoglu, H. Allcott, M. Gentzkow)
- ECON 260, Industrial Organization III (L. Einav, S. Vasserman)
- ECON 278, Behavioral and Experimental Economics I (B. D. Bernheim)
- ECON 279, Behavioral and Experimental Economics II (M. Niederle)
- ECON 280, Behavioral and Experimental Economics III (B. D. Bernheim, M. Niederle)

Cornell University, PhD program in Information Science (2023–24; GPA 4.23/4.3)

- ECON 7245, Econometrics and Machine Learning
- INFO 6940, Special Topics: Digital Markets and Online Platforms
- INFO 6310, Behavior and Information Technology
- LAW 7710, Seminar: Content Moderation and Platform Regulation

Bocconi University, MSc in Economic and Social Sciences (2018–21; final grade 110/110): Advanced Microeconomics; Game Theory: Analysis of Strategic Thinking; Econometrics; Advanced Statistics for Economics and Social Sciences; Bayesian Statistical Methods; Advanced Mathematics for Economics and Social Sciences; Psychology, Economic Analysis and Behavioral Finance; Competition Law; Economic Analysis of Crime; Programming with Python. Exchange at UCLouvain (Fall 2019): Industrial Organization and Competition Policy; Advanced Course in Economics.

RESEARCH INTERESTS

My research is in the economics of digital markets. I study the incentives of firms and users who interact online, and the algorithms that stand between them, which decide what products people see, what information they find and what content they consume. My agenda has two parallel goals. The first is to understand how the incentives of users, platforms and algorithms align, and when they do not: how people adopt new technologies and respond to algorithms, and what objectives platforms give to the algorithms they design. The second is to understand when regulation is needed and when it is not, and whether outcomes can be improved through the design of defaults and choices rather than through new rules.

Three questions guide my current and future work. First, how to measure welfare in markets where services are free and the price is attention and data. Standard measures rely on prices and quantities, and work poorly when the cost to users is the time and effort they spend, and when part of that time is not freely chosen. In my job market paper I treat time and effort as the price of search, and I plan to extend this approach to compare business models whose incentives differ, such as e-commerce platforms, which earn when users find what they want, and social media, which earn from the time users spend on them. Second, how much users value privacy, separating the value of avoiding marketing, protecting their safety, receiving personalization and keeping free access to content, and what this implies for consent rules and browser-level privacy signals. Third, how the adoption of AI changes access to information and work: when an AI answer replaces a visit to a website and when it sends people onward, and how the tasks people bring to AI tools reveal how the demand for skills adjusts.

Methodologically, my work combines large online field experiments, in which software installed with consent records participants' browsing across websites and devices and changes their online environment, with national browsing panels, structural models of search and demand, and behavioral economic theory. I am particularly interested in how these tools can be used to evaluate a rule before it is adopted.

DISSERTATION

Title: Essays on Algorithms, Attention and Incentives in Digital Markets
Committee: Cristobal Cheyre (chair, Cornell), Alessandro Acquisti (MIT Sloan), B. Douglas Bernheim (Stanford), Ted O'Donoghue (Cornell), Allison Koenecke (Cornell)

The dissertation studies how algorithms that mediate between platforms and users shape what users search, choose and consume, and what this implies for their welfare. It consists of four papers.

- **The Effects of Advertising and Personalization on Search Costs: Evidence from an Online Field Experiment** (job market paper, with Cristobal Cheyre and Alessandro Acquisti). Participants browse with advertising blocked, with behaviorally targeted advertising, or with reduced tracking. Relative to those who see no ads, participants exposed to targeted advertising spend 24 percent more time per product evaluated, without evaluating more products or buying different ones. A duration-based search model shows that they need about twice as much time to acquire the same information about a product, while less personalized advertising has no such effect.
- **Consent and Choice: Experimental Evidence on User Behavior at Consent Banners** (with Francesco Decarolis, Cristobal Cheyre and Alessandro Acquisti). Using a panel of 780 U.S. users followed for up to three months, we find that users ignore two in three cookie banners, engage mostly where websites force a response, and that their choices depend on whether a one-click reject option is offered. A single signal set from early choices is consistent with about two thirds of later encounters.
- **Cursed by the Algorithm: Learning from Behavior That Does Not Reveal Welfare** (solo-authored; SSRN). A platform that learns what to offer from consumption cannot tell preference from compulsion, and offers

vulnerable users more and more of the content that triggers them until their welfare falls. Simple limits on the composition of the feed protect them without identifying who is vulnerable.

- **Beyond Search: LLM Adoption and Web Traffic Concentration** (with Samira Gholami, Cristobal Cheyre and Alessandro Acquisti; Best Student Paper Award, WISE 2025; PDF). Using Comscore data from 2019 to 2025, we find that LLM adoption complements rather than replaces search, and that users visit a larger number of websites after adopting.

OTHER PROJECTS IN PROGRESS

- **SafeFeeds** (with Miguel Risco). A field experiment in schools on how resetting recommendation algorithms and teaching teenagers how their feeds work affect their well-being.
- **Policy work** on the economic effects of the GDPR (Clifford Chance, 2025, with Francesco Decarolis) and on data protection and AI (CERRE, 2026, with Marco Bassini), presented at the European Parliament.

RESEARCH AND PROFESSIONAL EXPERIENCE

- Visiting Researcher, Department of Economics, Stanford University (2024–present)
- Affiliate, Competitiveness, Competition and Regulation unit, BAFFI-CAREFIN, Bocconi University (2026–present)
- Economic Analyst, Oxera Consulting, Oxford (2021–2023): antitrust, competition and privacy litigation involving digital platforms, payments and transport
- Research Assistant to Francesco Decarolis, IGIER, Bocconi University: competition in digital markets
- Intern, Competition Economics, Compass Lexecon, London (2019)

FELLOWSHIPS AND AWARDS

- LinkedIn PhD Fellowship (2026–27)
- Institute for Humane Studies Research Grant (2025)
- IvyPlus Exchange Scholarship, Cornell and Stanford (2024–25)
- NET Institute grant
- Research grant from Amazon Europe Core
- Best Student Paper Award, Workshop on Information Systems and Economics (WISE), 2025

SELECTED CONFERENCES AND WORKSHOPS

- ISMS Marketing Science Conference, Lisbon (2026); Platform Strategy Research Symposium, Boston University (2025, 2026); AI & Economics Summer Institute, Chicago Booth (2026)
- Workshop on Information Systems and Economics, Nashville (2025); Digital Competition Conference, Knight-Georgetown Institute, Washington DC (2026)
- Bay Area Behavioral and Experimental Economics Workshop (2025, 2026); Online Trust and Safety Conference, Stanford (2024)
- Policy: CERRE event at the European Parliament, Brussels (2026); Bitkom Privacy Conference, Berlin (2026)