MIT Economics

NANCY WANG

OFFICE CONTACT INFORMATION
MIT Department of Economics
77 Massachusetts Avenue, E52-301
Cambridge, MA 02139
wangn@mit.edu
https://economics.mit.edu/people/phd-students/nancy-wang

HOME CONTACT INFORMATION
362 Memorial Drive
Cambridge, MA 02139
Mobile: 717-982-7268

MIT PLACEMENT OFFICER
Professor Stephen Morris
semorris@mit.edu
617-253-5193

MIT PLACEMENT ADMINISTRATOR
Mrs. Shannon Robinson
shmay@mit.edu
617-324-5857

DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2027
DISSERTATION: "Essays in Behavioral and Digital Economics"

DISSERTATION COMMITTEE AND REFERENCES

Professor David Autor
MIT Department of Economics
77 Massachusetts Avenue, E52-438
Cambridge, MA 02139
617-258-7698
dautor@mit.edu

Professor Esther Duflo
University of Zurich
Department of Economics
Schonberggasse 1, 8001 Zurich
+41 44 634 34 46
esther.duflo@econ.uzh.ch

Professor Frank Schilbach
MIT Department of Economics
77 Massachusetts Avenue, E52-560
Cambridge, MA 02139
617-253-9299
fschilb@mit.edu

Professor Daron Acemoglu
MIT Department of Economics
77 Massachusetts Avenue, E52-446
Cambridge, MA 02139
617-253-1927
daron@mit.edu

PRIOR EDUCATION

Massachusetts Institute of Technology (MIT) 2019
SB Chemical-Biological Engineering and SB Mathematical Economics

CITIZENSHIP USA **GENDER:** Female

FIELDS

Primary Field: Behavioral
Secondary Fields: Algorithms, Media/Digital, Applied Micro

TEACHING EXPERIENCE

PhD Foundations of Behavioral Economics (14.164), MIT Fall 2026
TA to Professors Drew Fudenberg and Ben Enke

Principles of Microeconomics (14.01), MIT Fall 2025
TA to Professor Jonathan Gruber

Entrepreneurship Workshop, MIT Global Teaching Labs 2019

	Topics in Biology, Statistics, and Physics, MIT Global Teaching Labs	2018
	Physics II: Electricity and Magnetism (8.02) TA to Professor Jesse Thaler	2016
RELEVANT POSITIONS	RA to Professor Alexander Wolitzky	2022
	RA to Professors Frank Schilbach and Nina Roussille	2022
	RA to Professors Daniel Benjamin, David Cesarini, David Laibson, and Patrick Turley	2019-21
	Summer Analyst, Goldman Sachs	2018
FELLOWSHIPS, HONORS, AND AWARDS	Association for Comparative Economic Studies Research Award	2025
	Jerry A. Hausman Graduate Dissertation Fellowship	2024-25
	J-PAL North America US Health Care Delivery Initiative ($50,000)	2024
	Institute for Humane Studies Grant	2024
	George & Obie Shultz Fund Grant	2022-25
	Finalist for P.D. Soros Fellowship for New Americans	2022
	National Science Foundation Graduate Research Fellowship	2021-26
	Phi Beta Kappa	2019
	MIT Lourdes C. and Wing S. Fong Memorial Prize	2019
	1st Place in MIT Undergraduate Economics Competition (best paper)	2019
	Tau Beta Pi Engineering Honor Society	2019
	National Merit Scholar	2015

PROFESSIONAL ACTIVITIES

Conference Presentations: 2026 – Behavioral Economics Annual Meeting (Yale); Caltech Behavioral and Experimental Workshop; CEPR Workshop on Media, Technology, Politics, and Society (EIEF); North East Universities Gender Day (Princeton); Advances with Field Experiments.
2025 – North East Universities Gender Day (Yale).

Service: MIT Baker House Graduate Resident Advisor, MIT Graduate Economics Association President, MIT Economics Third Year Lunch Organizer, Harvard and MIT Application Assistance and Mentoring Program

RESEARCH PAPERS

"Algorithms and Parasitic Content" (Job Market Paper)
(with Hannah Solheim)

To shed light on how recommendation algorithms are optimized to maintain user attention with content that makes users worse off, we introduce the concept of *parasitic content* and show its relevance in two experiments. We first define parasitic content in a dual-self model of a user interacting with an algorithm. Parasitic content is a user-specific temptation good, targeted to a user tagged as susceptible based on her consumption of related, non-tempting content. We study this phenomenon in an eight-week online field experiment, where 424 young women were incentivized to use randomly assigned TikTok accounts seeded with varying levels of body-positive engagement. Leveraging second-by-second watch histories spanning 1.38 million videos, we find that body-positive seeding

caused the algorithm to serve not only more body-positive *but also* more weight-loss content, and worsened body image by 0.27 standard deviations. To disentangle the roles of body-positive and weight-loss content in this decline, we conducted a mechanism experiment with 1,000 young women. Weight-loss content worsened body image and mood, while body-positive content improved them. Consistent with weight-loss content being a temptation good, nearly half of participants preferred ex ante to avoid being exposed to it—37% of whom were willing to pay to do so—yet consumed it when served. Thus, for many young women, weight-loss content is parasitic to body-positive content on TikTok. Watch histories from the field experiment further demonstrate that weight-loss content served in response to body-positive seeding increased ad revenue and per-video watch time. By learning how consumption of one good predicts consumption of others, algorithms can identify and deliver personalized temptations, increasing revenue at the expense of user well-being.

"Firms Believing Women Get Less Means They Do"
(with Nagisa Tadjfar)

This paper examines an employer-driven mechanism behind the early-career gender earnings gap using novel data on MIT graduates' job offers and negotiation process. We document three key findings. First, women receive lower initial compensation offers than men within an employer-occupation. Second, this gap is entirely concentrated in non-salary components—signing bonus and equity—with no gap in base salary. Third, we find no gender differences in job search, and women negotiate as frequently and successfully as men. These findings also generalize to a national sample of high-skill workers in a dataset from Levels.fyi. To understand these patterns, we develop a model showing that a small number of discriminatory firms leads all firms in the market to lowball women in equilibrium. This market-wide gender gap is sustained through outside offers and cannot be closed by changes in worker behavior. We validate this mechanism using an incentivized resume evaluation experiment with recruiters, where we find that firms expect other firms to offer women less. Our results highlight the role of firm behavior—rather than worker decisions alone—in perpetuating gender pay disparities.

RESEARCH IN PROGRESS

"Autoplay and Engagement: Evidence from YouTube"

Many online video platforms reduce frictions to continue consuming content by using design features such as autoplay, which automatically begins the next suggested video after the previous video ends. I study how these features affect users' time on the platform by leveraging the 2015 redesign of YouTube's recommendation system, which was among the first major deployments of autoplay by a social media platform. Using data on browsing behavior for a panel of over 40,000 U.S. households, I employ an interrupted time series design around the date of the platform redesign. I find that the change in recommendation system increased weekly time on YouTube by 10-14 minutes—a 5-7% increase over the pre-change weekly average. Placebo tests

using weeks adjacent to the change show no such effect. These results suggest that seemingly small changes in platform design can lower behavioral frictions and increase consumption online.

"Confidence in Ability and Job Search"
(with Maxim Massenkoff and Nagisa Tadjfar)

Can a credible ability signal to high-skill workers augment job search behavior and improve worker allocation across firms? We partner with a large online interviewing platform that screens workers for employers in the tech sector and identifies exceptional users as "one of the best-performing coders on the platform," communicates this fact to the worker, and subsequently offers them access to interview with select firms. Using a fuzzy regression discontinuity design around the exogenous performance threshold used to identify these users, we find evidence of increased and more ambitious job search as a result of the signal. Workers just above the threshold are 20pp more likely to switch jobs within a year, with effects concentrated among workers with less than 5 years of experience. Workers from lower-ranked universities who did not previously work at an elite firm see improved labor market outcomes 2-5 years after first using the platform—these workers are 21pp more likely to work at an elite tech firm and work at companies with 12% higher expected compensation. We find that more than 85% of job switches occur off-platform, suggesting that access to interviews on the platform did not mediate these effects. Instead, our findings are consistent with increased and more ambitious worker search after receiving a credible signal about their ability, particularly among groups that were previously less likely to have considered these opportunities. Our next steps include generating measures of worker self-confidence from self-assessment and video recordings of interviews and characterizing worker-firm match quality.

PUBLICATIONS

"Polygenic Prediction Within and Between Families from a 3-Million-Person GWAS of Educational Attainment" *Nature Genetics, 2022.*
Aysu Okbay, Yeda Wu, **Nancy Wang**, Hariharan Jayashankar, Michael Bennett, Seyed Moeen Nehzati, …, David Cesarini, Patrick Turley, Peter M. Visscher, Jonathan P. Beauchamp, Daniel J. Benjamin, Alexander I. Young.

"Problems with Using Polygenic Scores to Select Embryos" *New England Journal of Medicine, 2021.*
Patrick Turley, Michelle N. Meyer, **Nancy Wang**, David Cesarini, Evelynn Hammonds, Alicia R. Martin, Benjamin M. Neale, Heidi L. Rehm, Louise Wilkins-Haug, Daniel J. Benjamin, Steven Hyman, David Laibson, Peter M. Visscher.

"Resource profile and user guide of the Polygenic Index Repository" *Nature Human Behaviour, 2021.*

Joel Becker, Casper A.P. Burik, Grant Goldman, **Nancy Wang**, Hariharan Jayashankar, Michael Bennett, …, David Cesarini, Daniel J. Benjamin, Patrick Turley, Aysu Okbay.

"3D-printed gastric resident electronics" *Advanced Materials Technologies, 2019.*
Yong Lin Kong, Xingyu Zou, Caitlin A. McCandler, Ameya R. Kirtane, Shen Ning, Jianlin Zhou, …, **Nancy Wang**, …, Robert Langer, Giovanni Traverso.