

David McAdams

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Current positions

Professor, Fuqua School of Business (primary) and Economics Department, Duke University

Areas of expertise

Economic Theory; Game Theory; Economic Epidemiology; Market Design

Appointments held

2013-	Professor, Duke University, Fuqua School of Business and Economics Department
2021-	Affiliated Faculty, Duke Global Health Institute
2018-	Affiliated Faculty, Duke Margolis Center for Health Policy
2013-	Affiliated Faculty, Fuqua Health Sector Management Program
2008-2013	Associate Professor, Duke University, Fuqua School of Business and Economics Department
2006-2008	Associate Professor (without tenure), MIT, Sloan School of Management
2001-2006	Assistant Professor, MIT, Sloan School of Management
1999	Special Assistant to the Director, Bureau of Economics, Federal Trade Commission

Education

1996	BS in Applied Mathematics, Harvard
2001	MS in Statistics, Stanford
2001	PHD in Business, Stanford

Grants, honors & awards

2022-2024	co-PI, Carnegie Foundation grant: "Reimagining Multilateralism: Ending the Tragedy of the Global Health Commons"
2022-2024	co-PI, NSF Grant CCF-2200047: "PIPP Phase I: Modeling the Pandemic Lifecycle for Disease Control"
2022-2024	co-PI, NSF Grant DMS-2230074: "RAISE: IHBEM: Equilibrium, Network Formation, and Infectious-Disease Spread: Bridging the Divide between Mathematical Biology and Economics"

2008-2011 PI, NSF Grant SES-0820051: “Endogenous Exit from a Stochastic Partnership”
 2003-2006 PI, NSF Grant SES-0241468: “Ordinal Structure in Multi-Unit Auctions”
 2001 Stanford Institute for Economic Policy Research, Olin Dissertation Fellowship
 2001 State Farm Dissertation Award in Business
 1997 Jaedicke Scholar, Stanford Graduate School of Business
 1989 Eagle Scout

Publications

BOOKS

2020 Dixit, Avinash, Susan Skeath, and David McAdams: “[Games of Strategy](#)” (5th and 6th editions), W.W. Norton (New York, NY), 2020 and 2025.
 2014 McAdams, David: “[Game-Changer: Game Theory and the Art of Transforming Strategic Situations](#)”. W.W. Norton (New York, NY), 2014.

JOURNAL ARTICLES: ECONOMIC EPIDEMIOLOGY & PUBLIC HEALTH

2024 McAdams, David and Yangbo Song: “Adoption Epidemics and Viral Marketing,” *Theoretical Economics*, forthcoming. [Accepted version](#).
 2024 McAdams, David and Troy Day (Queens U Math & Stats): “[The Political Economy of Epidemic Management](#),” *Review of Economic Design* (2024). <https://doi.org/10.1007/s10058-024-00357-x>.
 2024 Avery, Chris. Frederick Chen, and David McAdams: “[Steady-State Social Distancing and Vaccination](#),” *American Economic Review: Insights* 6.1 (2024): 1-19 (lead article). [Accepted version](#).
 2024 Kranton, Rachel and David McAdams: “[Social connectedness and information markets](#),” *American Economic Journal: Microeconomics* 16.1 (2024): 33-62. [Accepted version](#).
 2023 McAdams, David, Yangbo Song, and Dihan Zou: “[Equilibrium Social Activity during an Epidemic](#),” *Journal of Economic Theory* 207 (2023): 105591. [Accepted version](#).
 2022 Jackson, Matthew, Suraj Malladi, and David McAdams: “Learning through the Grapevine and the Impact of the Breadth and Depth of Social Networks,” *Proceedings of the National Academy of Science*, 119 (34) e2205549119, 2022. [Accepted version](#).
 2021 Day, Troy (Queens U Math & Stats), David A. Kennedy (Penn State Biology), Andrew F. Read (Penn State Entomology), and David McAdams: “[The economics of managing evolution](#),” *PLoS Biology* 19 (11): e3001409, November 2021.
 PLOS press release: “[Game theory and economics show how to steer evolution in a better direction](#).”
 2021 McAdams, David: “[The Blossoming of Economic Epidemiology](#),” *Annual Review of Economics* 13, 2021.
 2021 Årdal, Christine (Institute of Public Health Norway), David McAdams, Astrid Wester (IPH Norway), and Sigrun Møgedal (former Norwegian Ambassador for AIDS): “[Adapting environmental surveillance for polio to the need to track antimicrobial resistance](#),” *Bulletin of the World Health Organization*, 99: 239-240, March 2021.

- 2020 McAdams, David, Kaci Kennedy McDade (Duke Center for Policy Impact in Global Health), Siddharth Dixit (Duke CPIGH), Osondu Ogbuonji (Duke CPIGH), Matthew Johnson (Duke Human Vaccine Institute), and Gavin Yamey (Duke CPIGH): “[Incentivizing Wealthy Nations to Participate in the COVID-19 Vaccine Global Access Facility \(COVAX\): A Game Theory Perspective](#),” *BMJ Global Health*, 5:e003627, November 2020.
- 2019 Årdal, Christine (IPH Norway), Manica Balasegaram (GARDP), Ramanan Laxminarayan (CD-DEP), David McAdams, Kevin Outterson (CARB-X), John H. Rex (F2G), and Nithima Sumpradit (Ministry Public Health, Thailand): “[Antibiotic development—economic, regulatory and societal challenges](#),” *Nature Reviews Microbiology* 18, 267–274, Nov 2019.
- 2019 McAdams, David, Kristofer Wollein Waldetoft (GA Tech Bio Sciences), Christine Tedijanto (Harvard Chan Center for Communicable Disease Dynamics), Marc Lipsitch (Harvard Chan CCDD), and Sam Brown (GA Tech Bio Sciences): “[Resistance diagnostics as a public health tool to combat antibiotic resistance: A model-based evaluation](#),” *PLoS Biology*, 17(5): e3000250, May 2019.
- Duke press release: “[Could Better Tests Help Reverse the Rise of Superbugs?](#)”
- Contribution: “*DM conceived the project. DM and SB developed the mathematical models. DM analyzed the models. DM and SB wrote the manuscript. DM wrote SI.A-E ...*”(bioRxiv version).
- 2017 Turner, Katy (U. Bristol Epidemiology), Hannah Christensen, Elisabeth J. Adams, David McAdams, Helen Fifer (Public Health England), Anthony McDonnell (O’Neill AMR Review), and Neil Woodford (Public Health England): “[Analysis of the potential for point-of-care test to enable individualised treatment of infections caused by antimicrobial-resistant and susceptible strains of *Neisseria gonorrhoeae*: a modelling study](#),” *BMJ Open*, July 2017, 7:e015447.
- Commissioned by the O’Neill Review on Antimicrobial Resistance and featured as a supporting document to their final report (see pg.39 of “[Tackling Drug-Resistant Infections Globally: final report and recommendations](#)”, May 19, 2016).
- Contribution: “KT, EA and HC developed the models, *following initial work by DM and NW.*”
- 2017 McAdams, David: “[Resistance Diagnosis and the Changing Epidemiology of Antibiotic Resistance](#),” *Antimicrobial Therapeutics Reviews*, 1388(1), 5-17, Jan 2017, lead article.
- 2017 McAdams, David: “[Resistance Diagnosis and the Changing Economics of Antibiotic Discovery](#),” *Antimicrobial Therapeutics Reviews*, 1388(1), Jan 2017, 18-25.
- JOURNAL ARTICLES: AUCTIONS & OTHER ECONOMICS
- 2018 Hortacsu, Ali and David McAdams: “[Empirical Work on Auctions of Multiple Objects](#),” *Journal of Economic Literature*, 56, March 2018, 157-184.
- 2017 Galik, Christopher and David McAdams: “[Supply, Demand, and Uncertainty: Implications for Prelisting Conservation Policy](#),” *Ecological Economics*, 137, July 2017, 91-98.
- 2015 McAdams, David: “[On the Benefits of Dynamic Bidding when Participation is Costly](#),” *Journal of Economic Theory*, May 2015, 959-972.
- 2013 Hu, Yingyo, David McAdams, and Matthew Shum: “[Identification of First-Price Auction Models with Non-Separable Unobserved Heterogeneity](#),” *Journal of Econometrics*, June 2013, 186-193.

- 2012 McAdams, David: “Strategic Ignorance in the Second-Price Auction,” *Economics Letters*, January 2012, 83-85
- 2011 McAdams, David: “Performance and Turnover in a Stochastic Partnership,” *American Economic Journal: Microeconomics*, November 2011, 107-42.
- 2011 Lopomo, Giuseppe, Leslie Marx, David McAdams and Brian Murray: “Carbon Allowance Auction Design: An Assessment of Options for the U.S.,” *Review of Environmental Economics and Policy*, Winter 2011, 25-43.
- 2010 Hortacsu, Ali and David McAdams: “Mechanism Choice and Strategic Bidding in Divisible Good Auctions: An Empirical Analysis of the Turkish Treasury Auction Market,” *Journal of Political Economy*, October 2010, 833-865 (lead article).
- 2008 McAdams, David: “Partial Identification and Testable Restrictions in Multi-Unit Auctions,” *Journal of Econometrics*, September 2008, 74-85.
- 2007 McAdams, David: “On the Failure of Monotonicity in Uniform-Price Auctions,” *Journal of Economic Theory*, November 2007, 137, 729-732.
- 2007 McAdams, David and Michael Schwarz: “Who Pays When Auction Rules are Bent?,” *International Journal of Industrial Organization*, October 2007, 25(5), 1144-1157.
- 2007 McAdams, David: “Uniqueness in Symmetric First-Price Auctions with Affiliation,” *Journal of Economic Theory*, September 2007, 136, 144-166.
- 2007 McAdams, David and Michael Schwarz: “Perverse Incentives in the Medicare Prescription Drug Benefit,” *Inquiry*, Summer 2007, 44(2), 157-166.
- 2007 Chapman, James, David McAdams, and Harry Paarsch: “Bounding Revenue Comparisons across Multi-Unit Auction Formats under epsilon-Best Response,” *American Economic Review, Papers and Proceedings*, May 2007, 97(2), 455-458.
- 2007 McAdams, David: “Adjustable Supply in Uniform Price Auctions: Non-Commitment as a Strategic Tool,” *Economics Letters*, April 2007, 95(1) 48-53.
- 2007 McAdams, David and Michael Schwarz: “Credible Sales Mechanisms and Intermediaries,” *American Economic Review*, March 2007, 97(1), 260-276.
- 2007 McAdams, David: “Monotonicity in Asymmetric First-Price Auctions with Affiliation,” *International Journal of Game Theory*, February 2007, 35(3), pp 427-453.
- 2006 McAdams, David: “Monotone Equilibrium in Multi-Unit Auctions,” *Review of Economic Studies*, October 2006, 73(4), pp 1039 – 1056.
- 2003 McAdams, David: “Isotone Equilibrium in Games of Incomplete Information,” *Econometrica*, August 2003, 71(4), pp 1191-1214.
- 1999 Fujishima, Yuzo, David McAdams, and Yoav Shoham: “Speeding Up the Ascending-Price Auction,” *Proceedings, Int. Journal Conf. in Artificial Intelligence*, 1999, pp 554-559.

WORKING PAPERS

“Rational Disagreement and the Fragility of Social Learning: Identification Failures with Noisy Communication” with Matthew Jackson and Suraj Malladi

Teaching

- 2003- Art & Application of Game Theory, MBA elective
- 2008- Auction Theory, Econ PhD 2nd-year course
- 2023 Microeconomic Theory, Econ PhD 1st-year Core course

Service

- 2024-25 Chair, university-wide committee on Cross-School Teaching Opportunities
- 2023-24 Co-editor, [Special Issue on “Economics of Epidemics”](#), *Review of Economic Design*.
- 2022-25 Member, Duke University Athletic Council.
- 2020 Member, Climate Change Resiliency Working Group, Duke University.
- 2019-2021 Member, Steering Committee for “Driving health progress during disease, demographic, domestic finance, and donor transitions (the ‘4Ds’)”, Duke Center for Policy Impact in Global Health.
- 2015- Member, Faculty Governance Committee, Duke Initiative for Science & Society.
- 2006- Associate Editor, International Journal of Industrial Organization.
- 2019-22 Member, Bass Connections Faculty Advisory Committee, Duke University.
- 2013-2018 Co-chair, Fuqua Honor Committee.
- 2020- Member, Academic Programs Committee, Duke University.
- 2014-2017 Member, Academic Programs Committee, Duke University.
- 2013-2015 Associate Editor, International Journal of Game Theory.
- 2008-2013 Associate Editor, Review of Economic Design.
- 2012-2014 Associate Editor, Journal of Economic Literature.

Referee for American Economic Review, Econometrica, Games and Economic Behavior, International Economic Review, International Journal of Industrial Organization, Journal of Economic Literature, Journal of Economic Theory, Journal of the European Economic Association, Journal of Finance, Management Science, National Science Foundation, PLoS Biology, RAND Journal of Economics, Review of Economic Design, Review of Economic Studies, Theoretical Economics.

Public Interest

NOTABLE SPEECHES (AVAILABLE ON PERSONAL WEBSITE)

- 2021 “[Evolution management from a game-theory perspective: Can superbugs be forever tamed?](#)”, presentation to *Club EvMed* (Virtual Evolutionary Medicine Conversations), June 2021.
- 2021 “[From Aid to Essential National Investment: Changing the Game of Global Pandemic Preparedness](#)”, presentation to Global Coordination, Partnerships, and Financing committee, National Academies of Sciences, Engineering, and Medicine, May 2021.
- 2016 “[Changing the Game of Antibody Validation](#),” keynote address at Asilomar Workshop of Global Biological Standards Institute on Antibody Validation: Standards, Policies, and Practices, on how the scientific community can work together to address the “reproducibility crisis” in biomedical science. September 2016.
- 2015 “[Taming Superbugs](#)”, keynote address at *Duke Forward: Dallas* on how we can avoid a “post-antibiotic future.” January 2015.
- 2014 “[The Future of Pest-Resistant Crops](#)”, Thomas C. Sorensen Seminar at U. Nebraska Lincoln on how to preserve the effectiveness of GM corn. October 2014.

SELECTED OTHER WRITINGS

- 2024 “[Using Game Theory to Advance the Pandemic Agreement](#)” with Gavin Yamey, *Think Global Health*, Aug 15, 2024.
- 2023 “[Why US Should Help European Efforts To Fix SEP Licensing](#)” with David Katz, *Law360*, October 19, 2023.
- 2022 “[What game theory can tell us about the war in Ukraine](#)” with Anastassia Fedyk, *Los Angeles Times*, July 24, 2022.
- 2021 “[What game theory can teach us about controlling pandemics](#)” with Gavin Yamey, *BMJ Opinion*, Oct 21, 2021.
- 2019 “[Gold Medals for Games](#)” with Avinash Dixit and Susan Skeath, essay on John Nash and Reinhard Selten’s contributions to economics, solicited by Christie’s, accompanied the catalog copy for the auction of Nash and Selten’s Nobel Prize medals in October 2019. (Scroll down a bit on the [linked Christie’s page](#). Our essay appears under “Further Details.”)
- 2017 “[Game Theory and Cooperation: How Putting Others First Can Help Everyone](#)”. *Frontiers for Young Minds*. 5:66 (inaugural article in the Mathematics category).
- 2016 “[Applying Game Theory to the Supreme Court Confirmation Fight](#)” with Avinash Dixit. *Harvard Business Review online*, September 27, 2016.
- 2015 “[Turning the Tables on Terrorist Kidnappers](#)” (published as “The Right Way to Pay Ransoms to Terrorists”). *New York Times*, February 2015.
- 2014 “[Could a top-two primary tame the Tea Party threat?](#)”. *The Monkey Cage* (Washington Post blog), June 16, 2014.
- 2014 “[Making a Market for Overdose-Halting Drugs](#)”. *New Jersey Star Ledger* op-ed, March 25th, 2014.

- 2014 [“NFL Coaches Are Too Chicken for Their Own Good.”](#) *TIME.com*, February 2014.
- 2013 [“Changing the Debt-Ceiling Game”](#). *New York Times*. October 15th, 2013 [day before a deal was reached to avoid default on the national debt].