

# PIERRE AZOULAY

Massachusetts Institute of Technology  
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## EMPLOYMENT:

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 2006-present  
Assistant Professor of Strategy (2006-2007)  
Zenon S. Zannetos (1955) Career Development Assistant Professor of Strategy (2007-2009)  
Zenon S. Zannetos (1955) Career Development Associate Professor of Strategy (2009-2011)  
Associate Professor of Strategy (with tenure, 2011-2015)  
International Programs Associate Professor of Management (2015-2016)  
International Programs Professor of Management (2016-present)  
Group Head, Technological Innovation, Entrepreneurship, and Strategy (2016-2019, 2020-present)  
Cambridge, MA

COLUMBIA UNIVERSITY, 2001-2006  
Assistant Professor of Management (2001-2005)  
Associate Professor of Management (2005-2006)  
New York, NY

## OTHER AFFILIATION:

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NATIONAL BUREAU OF ECONOMIC RESEARCH, 2003-present  
Faculty Research Fellow, Productivity Program (2003-2011)  
Research Associate, Productivity, Innovation, & Entrepreneurship Program (2011-present)  
Cambridge, MA

INSTITUTE FOR PROGRESS  
Senior Fellow (2022-present)  
Washington, DC

## EDUCATION:

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
Ph.D in Management, June 2001  
Cambridge, MA

MICHIGAN STATE UNIVERSITY, 1994  
M.A. in Telecommunications  
East Lansing, MI

INSTITUT NATIONAL DES TÉLÉCOMMUNICATIONS, 1994  
Diplôme d'Études Supérieures de Gestion  
Evry, France

LYCÉE SAINT LOUIS, 1988-1991  
Classes Préparatoires Scientifiques to the Grandes Écoles  
Paris, France

## PUBLICATIONS:

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Immigration and Entrepreneurship in the United States. *American Economic Review: Insights*, **4**(1):71-88, 2022 (with Benjamin Jones, J. Daniel Kim, and Javier Miranda).

Long-term Effects from Early Exposure to Research: Evidence from the NIH "Yellow Berets." *Research Policy*, **50**(9): 104332, 2021 (with Wesley H. Greenblatt and Misty L. Heggeness).

Self-Citation, Cumulative Advantage, and Gender Inequality in Science. *Sociological Science* **7**: 152-186, 2020 (with Freda B. Lynn).

Inside Job or Deep Impact? Using Extramural Citations to Assess Economic Scholarship. *Journal of Economic Literature* **58**(1): 3-52, 2020 (with Joshua Angrist, Glenn Ellison, Ryan Reed Hill, and Susan Feng Lu).

Age and High-Growth Entrepreneurship. *American Economic Review: Insights* **2**(1): 65-82, 2020 (with Benjamin Jones, J. Daniel Kim, and Javier Miranda).

Death of the Salesman, but not the Sales Force: How Interested Promotion Skews Scientific Valuation. *American Journal of Sociology*, **125**(3): 786-845, 2019 (with J. Michael Whalen and Ezra Zuckerman).

Does Science Advance One Funeral at a Time? *American Economic Review*, **109**(8): 2889-2920, 2019 (with Christian Fons-Rosen and Joshua S. Graff Zivin).

Public R&D Investments and Private Sector Patenting: Evidence from NIH Funding Rules. *Review of Economic Studies*, **86**(1): 117-152, 2019 (with Joshua Graff Zivin, Danielle Li, and Bhaven Sampat).

Status Spillovers: The Effect of Status-Confering Prizes on the Allocation of Attention. *Administrative Science Quarterly*, **63**(4): 819-847, 2018 (with Brian Reschke and Toby E. Stuart).

The Career Effects of Scandal: Evidence from Scientific Retractions. *Research Policy*, **46**(9): 1552-1569, 2017 (with Alessandro Bonatti and Joshua L. Krieger).

Economic Research Evolves: Fields and Styles. *AER: Papers & Proceedings*, **107**(5): 293-297, 2017 (with Joshua Angrist, Glenn Ellison, Ryan Hill, and Susan Lu).

The Applied Value of Public Investments in Biomedical Research. *Science*, **356**(6333), pp. 78-81, 2017 (with Danielle Li and Bhaven N. Sampat).

The Mobility of Elite Life Scientists: Professional and Personal Determinants. *Research Policy*, **46**(3), pp. 573-590, 2017 (with Ina Ganguli and Joshua Graff Zivin).

Social Influence Given (Partially) Deliberate Matching: Career Imprints in the Creation of Academic Entrepreneurs. *American Journal of Sociology*, **122**(4), pp. 1223-1271, 2017 (with Christopher Liu and Toby Stuart).

Retractions. *Review of Economics and Statistics*, **97**(5), pp. 1118-1136, 2015. Also National Bureau of Economic Research Working Paper #18499 (with Jeffrey L. Furman, Joshua L. Krieger and Fiona E. Murray).

Matthew: Effect or Fable? *Management Science*, **60**(1), pp. 92-109, 2014.  
Also National Bureau of Economic Research Working Paper #18625 (with Toby Stuart and Yanbo Wang).

Empirical Studies of the Diffusion of Scientific and Technological Knowledge: Some Methodological Considerations. *Economia e Politica Industriale – Journal of Industrial and Business Economics*, **39**(3), pp. 73-87, 2012.

Incentives and Creativity: Evidence from the Academic Life Sciences. *RAND Journal of Economics*, **42**(3), pp. 527-554, 2011 (with Gustavo Manso and Joshua Graff Zivin).

Nasty, Brutish, and Short: Embeddedness Failure in the Pharmaceutical Industry. *Administrative Science Quarterly*, **55**(3), pp. 472-507, 2010. (with Nelson P. Repenning and Ezra W. Zuckerman)

Superstar Extinction. *Quarterly Journal of Economics*, **125**(2), pp. 549-589, 2010. (with Joshua Graff Zivin and Jialan Wang)

The Effect of Academic Patenting on the Rate, Quality, and Direction of (Public) Research Output. *Journal of Industrial Economics*, **57**(4), pp. 637-676, 2009. (with Waverly Ding and Toby Stuart)

The Anatomy of Medical School Patenting. *New England Journal of Medicine*, **357**(20), pp. 2049-2056, 2007. (with Bhaven Sampat and Ryan Michigan)

The Determinants of Faculty Patenting Behavior: Demographics or Opportunities? *Journal of Economic Behavior & Organizations*, **63**(4), pp. 599-623, 2007. (with Waverly Ding and Toby Stuart)

PublicationHarvester: An Open-Source Software Tool for Science Policy Research. *Research Policy*, **35**(7), pp. 970-974, 2006. (with Andrew Stellman and Joshua Graff Zivin)

Capturing Knowledge Within and Across Firm Boundaries: Evidence from Clinical Development. *American Economic Review*, **94**(5), pp. 1591-1612, 2004.

Consumption Externalities and Diffusion in Pharmaceutical Markets: Anti-Ulcer Drugs. *Journal of Industrial Economics*, **51**(2), pp. 243-270, 2003. (with Ernst Berndt and Robert Pindyck)

Do Pharmaceutical Sales Respond to Scientific Evidence? *Journal of Economics and Management Strategy*, **11**(4), pp. 551-594, 2002.

Entrepreneurs, Contracts, and the Failure of Young Firms. *Management Science*, **47**(3), pp. 337-358, 2001. (with Scott Shane)

## **WORKING PAPERS:**

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Who Stands on the Shoulders of Chinese (Scientific) Giants? Evidence from Chemistry. NBER Working Paper #30772 (with Shumin Qiu and Claudia Steinwender).

The Rise of For-Profit Experimental Medicine. NBER Working Paper #26892 (with Ariel Fishman).

Medical Progress and Health Care Finance: Evidence from Academic Medical Centers. NBER Working Paper #27943 (with Misty Heggeness and Jennifer Kao).

Paper Tiger? Chinese Science and Citation Home-bias (with Shumin Qiu and Claudia Steinwender).

Does Grant Peer Review Penalize Scientific Risk Taking? Evidence from the NIH (with Wesley H. Greenblatt, Roger Levy, and Suman Maity).

## **CHAPTERS IN EDITED VOLUMES AND OTHER NON-PEER REVIEWED MATERIALS:**

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Scientific Grant Funding (with Danielle Li). Chapter 4 in *Innovation and Public Policy* (edited by Austan Goolsbe and Benjamin F. Jones), pp. 117-150, 2022. Chicago: University of Chicago Press. Also NBER Working Paper #26889.

Funding Breakthrough Research: Promises and Challenges of the “ARPA Model” (with Erica Fuchs, Anna P. Goldstein, and Michael Kearney). *Innovation Policy and the Economy*, vol. 19, pp. 69-96, 2019. Also NBER Working Paper #24674.

The Diffusion of Scientific Knowledge Across Time and Space: Evidence from Professional Transitions for the Superstars of Medicine (with Joshua Graff Zivin and Bhaven Sampat). Chapter 2 in *The Rate & Direction of Inventive Activity Revisited* (edited by Joshua Lerner and Scott Stern), pp. 107-155, 2012. Chicago: University of Chicago Press.

NIH Peer Review: Challenges and Avenues for Reform (with Joshua Graff Zivin and Gustavo Manso). *Innovation Policy and the Economy*, vol. 13, pp. 1-21, 2013.

Technological Innovation and Organizations (with Joshua Lerner). Chapter 14 in *The Handbook of Organizational Economics* (edited by Robert Gibbons and John Roberts), pp. 575-603, 2012. Princeton, NJ: Princeton University Press.

Promoting Energy Innovation with Lessons from Drug Development (with Anna Goldstein, Joshua Graff Zivin, and Vladimir Bulovic). Hamilton Project Policy Proposal #2017-16, 2017.

## **PUNDITRY:**

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Turn the Scientific Method on Ourselves. *Nature*, **484**(7392), pp. 31-32, 2012.

Small-team Science is Beautiful. *Nature*, **566**(7744), pp. 330-332, 2019.

Beat COVID-19 Through Innovation. *Science*, **368**(6491), p. 553, 2020 (with Benjamin Jones).

## **SERVICE ACTIVITIES:**

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Ad-hoc Reviewer for Management Science, Science, Research Policy, Economics of Innovation and New Technology, The Review of Economics and Statistics, Administrative Science Quarterly, The Quarterly Journal of Economics, The RAND Journal of Economics, The Review of Industrial Organization, The Review of Economic Studies, Econometrica, The Journal of Political Economy, The American Economic Review, and the National Science Foundation.

Associate Editor, *Management Science*, 2011-2019.

Member of the Editorial Board, *The Review of Economics and Statistics*, 2021-present.

Member, American Economic Association and Academy of Management.

Organizer, Fall 2005 Meetings, NBER Program on Technological Progress and Productivity Measurement.

Organizer, Summer Institute 2007, 2010, 2011, 2012, and 2013 Meetings, NBER Program on Innovation Policy & the Economy.

Program Committee, International Industrial Organization Conference, 2008 and 2009.

MIT Undergraduate Practice Opportunities Program (UPOP), Strategy Module, IAP 2007 & 2008

Committee on Evaluation of the *Advanced Research Projects Agency–Energy*, The National Academies, 05/2015 to 07/2017

PhD Program Coordinator, Technological Innovation, Entrepreneurship, and Strategy, MIT Sloan, 2011-2019.

## GRANTS AND AWARDS:

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National Institutes of Health (co-PI)	\$4.362M (2013-2018)
National Science Foundation (co-PI)	\$250K (2007-2009)
National Science Foundation (co-PI)	\$347K (2011-2014)
National Science Foundation (co-PI)	\$376K (2015-2017)
National Science Foundation (co-PI)	\$428K (2017-2019)
NIH-funded International Network on the Value of Health Research	\$20K (2017-2018)
Kaufman Foundation/NBER IPE Program	\$20K (2007-2008)
Alfred P. Sloan Industry Studies Fellow	\$40K (2005-2007)
The Merck Foundation (co-investigator)	\$600K (2003-2005), Renewed (2006-2007)
Institute for Social & Economic Research & Policy (co-investigator)	\$9K (2002)
Columbia Alliance for Health Care Management (co-investigator)	\$13K (2002)
Fellowship, Industrial Performance Center	MIT (2000)
Fellowship, Crédit Suisse Holding	MIT (1998)
Prix d'Excellence, Informatique CDC, Paris	(1992)

## TEACHING:

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MBA	Competitive Strategy Innovation Strategy Entrepreneurial Strategy Organizing for Innovation
Executive MBA	Competitive Strategy Innovation Strategy Platform Strategy
Sloan Fellows	Innovation-driven Advantage Organizing for Innovation
PhD	Economics of Ideas, Innovation, and Entrepreneurship

## THESIS SUPERVISION AND ADVISING:

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Student	Program	Initial Placement
Ariel Fishman	PhD, Columbia University	Yeshiva University
Suchin Virabhak	PhD, Columbia University	Pfizer Corp.
Jialan Wang	PhD, MIT	Washington University in St. Louis
Christopher Liu	DBA, Harvard Business School	University of Toronto
Patrick Gaulé	PhD, Ecole Polytechnique Fédérale de Lausanne	CERGE-EI
Ina Ganguli	Harvard Kennedy School PhD student	Stockholm School of Economics
Danielle Li	MIT Economics PhD student	Northwestern University
Abhishek Nagaraj	MIT Sloan PhD student	University of California at Berkeley
Joshua Krieger	MIT Sloan PhD student	Harvard Business School
Jorge Guzman	MIT Sloan PhD student	Columbia University
J. Daniel Kim	MIT Sloan PhD student	University of Pennsylvania
Jennifer Kao	Harvard Kennedy School PhD student	UCLA
Samantha Zyontz	MIT Sloan PhD student	Stanford Law School (postdoc)
Hyejun Kim	MIT Sloan PhD student	HEC Paris
Ankur Chavda	MIT Sloan PhD student	HEC Paris

Caroline Fry	MIT Sloan PhD student	University of Hawaii
Ryan Hill	MIT Economics PhD Student	Brigham Young University
Carolyn Stein	MIT Economics PhD Student	University of California at Berkeley
Jane Wu	MIT Sloan PhD student	University of California at Los Angeles
Soomi Kim	MIT Sloan PhD student	Columbia University
Wesley Greenblatt	MIT Sloan PhD student	Harvard Medical School