

## **Eric Budish**

University of Chicago Booth School of Business  
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### **Academic Appointments**

University of Chicago Booth School of Business

Professor of Economics. July 2015-present.

Associate Professor of Economics. July 2013-June 2015.

Assistant Professor of Economics. July 2009-June 2013.

Research Associate, National Bureau of Economic Research. 2016-present.

Faculty Research Fellow, National Bureau of Economic Research. 2015-2016.

### **Education**

Harvard University, 2004-2009

PhD, Business Economics, "Essays on Market Design"

Dissertation Committee: Alvin Roth (chair), Susan Athey, Ariel Pakes, David Parkes

University of Oxford, Nuffield College, 2002-2004

MPhil, Economics, with Distinction

Amherst College, 1996-2000

BA, Economics and Philosophy, *summa cum laude*

### **Honors, Scholarships, and Fellowships**

Centel Foundation/Robert P. Reuss Faculty Scholar, 2018-2019

AEA-AFA Joint Luncheon Speaker, 2017

David G. Booth Faculty Fellow, 2016-2017

Leo Melamed Prize for Outstanding Research in Finance, 2015

Richard N. Rosett and David G. Booth Faculty Fellow, 2015-2016

Alfred P. Sloan Foundation Research Fellowship, 2015

Neubauer Family Faculty Fellow, Chicago Booth, 2012-2013, 2014-2015

Richard J. Herrnstein Dissertation Prize, Harvard University, 2009

Fellow, Project on Justice, Welfare and Economics at Harvard University, 2008-2009

National Science Foundation Graduate Research Fellowship, 2004-2007

George Webb Medley Economics Thesis Prize (*proxime accessit*), Oxford, 2004

Marshall Scholarship, 2002-2004

### **Published and Forthcoming Papers**

"Strategy-proofness in the Large"

(with Eduardo Azevedo)

*Review of Economic Studies*, Vol 86(1), January 2019, 81-116

Course Match: A Large-Scale Implementation of Approximate Competitive Equilibrium from Equal Incomes for Combinatorial Allocation

*Operations Research*, Vol. 65(2), March-April 2017, 314-336.

(with Gerard Cachon, Judd Kessler and Abe Othman)

“The High Frequency Trading Arms Race: Frequent Batch Auctions as a Market Design Response”

(with Peter Cramton and John Shim)

*Quarterly Journal of Economics*, 130(4), November 2015, 1547-1621 (lead article).

Winner of the 2014 AQR Insight Award

Winner of the 2015 Utah Winter Finance Conference Best Paper Award

“Do Firms Underinvest in Long-Term Research? Evidence from Cancer Clinical Trials”

(with Benjamin Roin and Heidi Williams)

*American Economic Review*, Vol 105(7), 2044-2085.

Winner of the inaugural Kauffman/iHEA Award for Health Care Entrepreneurship and Innovation Research, 2013

Winner of the Arrow Award for “best paper published in health economics” in 2015.

“Designing Random Allocation Mechanisms: Theory and Applications”

(with Yeon-Koo Che, Fuhito Kojima, and Paul Milgrom)

*American Economic Review*, Vol 103(2), April 2013, 585-623.

“The Multi-Unit Assignment Problem: Theory and Evidence From Course Allocation at Harvard”

(with Estelle Cantillon)

*American Economic Review*, Vol 102(5), August 2012, 2237-2271.

“The Combinatorial Assignment Problem: Approximate Competitive Equilibrium from Equal Incomes”

*Journal of Political Economy*, Vol 119(6), December 2011, 1061-1103.

“Finding Approximate Competitive Equilibria: Efficient and Fair Course Allocation” *Proc. Of 9<sup>th</sup> Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS 2010)*.

(with Abe Othman and Tuomas Sandholm)

“Buy Prices in Online Auctions: Irrationality on the Internet?” *Economics Letters* (2001), 72(3): 325-33.

(with Lisa N. Takeyama)

### **Working Papers**

“The Economic Limits of Bitcoin and the Blockchain”

“Bringing Real Market Participants’ Real Preferences into the Lab: An Experiment that Changed the Course Allocation Mechanism at Wharton”

(with Judd Kessler)

“Primary-Market Auctions for Event Tickets: Eliminating the Rents of ‘Bob the Broker’?”

(with Aditya Bhawe)

Revise and Resubmit, *American Economic Journal: Microeconomics*

An Improved Bound for the Shapley-Folkman Theorem  
(with Philip J. Reny)

“An Efficiency Ranking of Markets Aggregated from Single-Object Auctions”  
(with Robert Zeithammer)

Combines and Supercedes: “Sequencing Auctions with Information about Future Goods” (Zeithammer)  
and “Sequencing and Information Revelation in Auctions for Imperfect Substitutes: Understanding eBay’s Market Design” (Budish)

### **Research in Progress**

“Will the Market Fix the Market? A Theory of Stock Exchange Competition and Innovation”  
(with Robin Lee and John Shim)

“Missing Markets for Innovation: Evidence from New Uses of Existing Drugs”  
(with Benjamin Roin and Heidi Williams)

“Quantifying the High-Frequency Trading ‘Arms Race’: A Simple New Methodology and Estimates”  
(with Matteo Aquilina and Peter O’Neill)

### **Non-Refereed Papers**

“Patents and Research Investments: Assessing the Empirical Evidence”  
(with Benjamin Roin and Heidi Williams)  
*American Economic Review Papers and Proceedings*, May 2016

“Implementation Details for Frequent Batch Auctions: Slowing Down Markets to the Blink of an Eye”  
(with Peter Cramton and John Shim)  
*American Economic Review Papers and Proceedings*, May 2014

“Matching ‘versus’ Mechanism Design.” *ACM SIGecom Exchanges*, Vol. 11, No. 2, December 2012, 4-15

### **Other Writing**

European Securities and Markets Authority Comment Letter re “Call for Evidence: Periodic Auctions for Equity Instruments”, January 2019

Securities and Exchange Commission Comment Letter re Chicago Stock Exchange Liquidity Taking Access Delay, October 2016.

Department of the Treasury Comment Letter re RFI on U.S. Treasury Market Structure. April 2016.

Securities and Exchange Commission Comment Letter re Proposed Commission Interpretation Regarding Automated Quotations under Regulation NMS. April 2016.

Securities and Exchange Commission Comment Letter re Investors’ Exchange LLC Form 1 Application. Feb 2016.

“System and Method for Conducting Electronic Commerce.” US Patent #7,398,229  
(filed June 2004 by ISIS Innovation, University of Oxford)

“Google should beware the ‘Winner’s Curse’.” *Financial Times*, 3 May 2004, p. 17  
(with Paul Klemperer)

### **Teaching**

Econ 40603 / Business 33915, Market Design (Ph.D. University of Chicago; 2011, 2012, 2014)  
Business 42001, Competitive Strategy (MBA; University of Chicago; Winter 2010-2014)  
Economics 2723, Graduate Asset Pricing, Teaching Fellow for John Campbell (Harvard; Fall 2007)

### **Refereeing**

*ACM EC 2007, 2010, 2011, American Economic Review, American Economic Journal: Microeconomics, AMMA 2011, Economic Journal, Econometrica, Games and Economic Behavior, International Economic Review, International Journal of Game Theory, Journal of Economic Theory, Journal of Finance, Journal of Industrial Economics, Journal of Mathematical Economics, Journal of Political Economy, Management Science, Quarterly Journal of Economics, Rand Journal of Economics, Review of Economic Studies, Review of Economics and Statistics, STOC, Theoretical Economics*

### **Professional Activities**

Organizer, NBER IO winter meetings, Feb 2019

Board of Editors, *American Economic Review: Insights*, appointment as of journal launch Jan 2018.

Associate Editor, *Econometrica*, appointment as of July 2016.

Board of Editors, *American Economic Journal: Microeconomics*, appointment as of July 2016.

Executive Board, Initiative on Global Markets at Chicago Booth; July 2015 – present.

Simons Institute conference on Algorithmic Game Theory and Practice, Nov 2015; Co-Organizer

Midway Market Design Workshop, University of Chicago Becker Friedman Institute, July 2014; Co-Organizer

Jerusalem Summer School in Economic Theory, Matching and Market Design, 2014; Lecturer

ACM Conference on Electronic Commerce, 2014, 2015, 2017, 2018; Senior Program Committee

ACM Conference on Electronic Commerce, 2010, 2011, 2012; Program Committee

Matching and Price Theory Conference, University of Chicago Milton Friedman Institute, May 2011;  
Executive Committee

AMMA 2011, the Second Conference on Auctions, Market Mechanisms and Their Applications; Program Committee

## **External Grants**

Alfred P. Sloan Research Fellowship. Feb 2015

NSF Interface between Computer Science and Economics Collaborative Research Grant on “Understanding the Role of Intermediaries in Matching Markets.” Co-Investigators: Ali Hortacsu, Nicole Immorlica, Scott Kominers. July 2012

NBER Innovation Policy and the Economy Grant for “Do fixed patent terms distort innovation? Evidence from cancer R&D.” Collaborators: Ben Roin and Heidi Williams. Feb 2011

## **Previous Employment**

Goldman Sachs, Financial Analyst, Investment Banking Division: M&A Group. 2000-2002.

Experience: Sale of Borden Foods Corporation in four pieces (combinatorial!); sale of OTG Software to Legato Systems; Anti-Raid Team (hostile takeover preparation / defense)

## **Invited Presentations**

Econometric Society Winter Meetings, Jan 2008

NYU Stern, Jan 2009

Chicago Booth, Jan 2009

Stanford Economics / GSB, Jan 2009

Yahoo! Research, Jan 2009

LSE Economics, Jan 2009

Yale Economics / SOM, Jan 2009

Microsoft Research, Feb 2009

AMMA Conference on Auctions, Market Mechanisms, and their Applications, May 2009

NBER Conference on Market Design, May 2009

Columbia Economics / GSB, Nov 2009

Rice University, April 2010

Texas A&M, April 2010

Roth and Sotomayor: Twenty Years After, May 2010

Behavioral & Quantitative Game Theory: Conference on Future Directions, May 2010

University of Chicago Economics Department Theory Seminar, May 2010

University of California San Diego Micro Lunch, May 2010

WCU-Economics Conference, Yonsei University, Seoul, Aug 2010

World Congress of the Econometric Society, Shanghai, Aug 2010

Matching: Findings, Flaws, and Future. Northwestern, Feb 2011

Ohio State University Micro Theory Seminar, April 2011

MFI Matching and Price Theory Conference. University of Chicago, May 2011

UCLA Micro Theory Seminar, May 2011

AMMA Conference on Auctions, Market Mechanisms, and their Applications, Aug 2011

Boston College Theory Seminar, Sept 2011

NBER Conference on Market Design, Oct 2011

Duke / University of North Carolina Theory Seminar, Oct 2011

University of Michigan Theory Seminar, Nov 2011

Carnegie Mellon / University of Pittsburgh Theory Seminar, Nov 2011  
University of Montreal Theory Seminar, Nov 2011  
UC Berkeley Theory Seminar, Nov 2011  
eBay Research , Dec 2011  
Northwestern Computer Science Theory, March 2012  
University of Rochester, April 2012  
Chicago Booth Applied Theory, May 2012  
Northwestern Economic Theory, May 2012  
Frontiers of Market Design Conference, May 2012.  
ACM Conference on Electronic Commerce, June 2012.  
Duke Applied Economics Seminar, Sept 2012  
NYU Stern IO Day, Sept 2012  
Princeton Theory Seminar, Sept 2012  
Stanford Applied Micro Seminar, Sept 2012  
University of Chicago Theory Seminar, Oct 2012  
NBER Market Design Conference, Oct 2012  
University of Michigan Auctions and Matching Workshop, Nov 2012  
University of Maryland Theory Seminar, Nov 2012  
University of Pennsylvania Theory Seminar, Nov 2012  
Chicago Federal Reserve Financial Markets Group, April 2013  
Chicago Booth Finance Lunch, April 2013  
Universite Libre de Brussels / ECARES Matching in Practice workshop (keynote), May 2013  
Universite Libre de Brussels / ECARES Theory Seminar, May 2013  
University of Oxford, May 2013  
ACM EC 2013, June 2013  
Wharton Applied Economics Workshop, July 2013  
NASDAQ Brownbag Lunch, July 2013  
IEX, August 2013  
Baruch College Conference on Market Integrity, Oct 2013  
CME Group – MSRI Panel Discussion, Oct 2013  
University of Chicago Conference on BCA of Financial Regulation, Oct 2013  
Berkeley Haas Finance Seminar, Oct 2013  
NBER Market Design Working Group Meeting, Oct 2013  
NYU IO Seminar, Oct 2013  
Harvard Finance Seminar, Nov 2013  
Harvard / MIT Applied Theory Seminar, Nov 2013  
Columbia Law and Economics of Capital Markets Seminar, Nov 2013  
Columbia IO Seminar, Nov 2013  
University of Chicago Theory Seminar, Dec 2013  
American Economic Association Winter Meetings, Jan 2014  
CFTC Technology Advisory Committee Meeting, Feb 2014  
Goldman Sachs Securities Division, Feb 2014  
AQR Insight Award Conference, April 2014  
FINRA, May 2014  
SEC First Annual Conference on the Regulation of Financial Markets, May 2014  
Market Microstructure Conference, Stevanovich Center for Financial Mathematics, May 2014

NBER Market Design, June 2014  
COMSOC-2014, Fifth International Workshop on Computational Social Choice (keynote), June 2014  
NBER Industrial Organization Summer Institute, July 2014  
UK Financial Conduct Authority, August 2014  
Kellogg Management and Strategy, Sept 2014  
Stanford Theory Seminar, Oct 2014  
European Capital Markets Institute (keynote), Oct 2014  
Netherlands Authority for the Financial Markets, Nov 2014  
Columbia/Duke/MIT/Northwestern IO Theory Conference, Nov 2014  
FIA Expo Conference, Nov 2014  
Market Microstructure: Confronting Many Viewpoints, Dec 2014  
American Economic Association Winter Meetings, Jan 2015  
Utah Winter Business Finance Conference, Feb 2015  
University of Chicago Health Economics Workshop, Apr 2015  
Federal Reserve Board, Banking and Finance Seminar, May 2015  
SIFMA Equity Market Structure Conference, May 2015  
INFORMS Marketplace Innovation Workshop, Columbia, June 2015  
AMMA Conference on Auctions, Market Mechanisms and Their Applications, Keynote, Aug 2015  
Wisconsin Theory Seminar, Sept 2015  
Princeton Finance Seminar, Oct 2015  
Fed/Treasury/SEC Conference on the Evolving Structure of the US Treasury Market, Oct 2015  
MSR Conference on Designing the Digital Economy, Oct 2015  
Simons Institute Conference on Algorithmic Game Theory and Practice, Berkeley, Dec 2015  
American Economic Association Winter Meetings, Jan 2016  
FCA/LSE Conference on Financial Market Regulation, Feb 2016  
UIUC Finance Seminar, April 2016  
Boston College Theory Seminar, April 2016  
Princeton Applied Economics Seminar, May 2016  
Chicago Booth All-Faculty Seminar, October 2016  
Yale IO Seminar, November 2016  
AEA-AFA Joint Luncheon Address, January 2017  
Harvard Symposium on the Computational Economy, January 2017  
FCA Microstructure Conference, March 2017  
Berkeley IO Seminar, April 2017  
Northwestern IO Seminar, April 2017  
Harvard/MIT IO Seminar, April 2017  
Yale Theory Seminar, April 2017  
NYU Stern Joint IO/Finance Seminar, May 2017  
NBER Market Design, Oct 2017  
MIT Media Lab Digital Currency Initiative, April 2018  
ACM EC Keynote, June 2018  
NBER Monetary Economics Summer Institute, July 2018  
BFI Conference on Cryptocurrencies and Blockchains, Nov 2018  
Harvard Business School Entrepreneurial Management Seminar, Dec 2018  
AEA Panel on Blockchain: Myth and Reality, Jan 2019

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