

ANGELA E. KILBY
JANUARY 2022

Contact Information
Department of Economics
Northeastern University
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EDUCATION/EMPLOYMENT HISTORY

Academic Positions	Assistant Professor of Economics Northeastern University	2017 – Present
	Affiliate Member, Institute for Experiential AI, Northeastern University	2021 – Present
	NBER/ NIA Post-Doctoral Fellow in Aging and Health Research	2016 – 2017
Education	Ph.D. Economics Massachusetts Institute of Technology <i>Dissertation:</i> “The Economics of Pain Management” <i>Advisors:</i> Jonathan Gruber, Amy Finkelstein, Heidi Williams <i>Fields:</i> Health, Public Finance, Development	2016
	S.B. Economics S.B. Political Science Massachusetts Institute of Technology	2007
Previous Relevant Positions	Co-founder and Chief Economist at Adherean, Inc.	2011 – 2013
	Research Analyst for Rachel Glennerster Jameel Poverty Action Lab	2009 – 2011
	Research Assistant to Ben Olken and Rema Hanna Jameel Poverty Action Lab and World Bank Indonesia	2008 – 2009
	Luce Scholar (Indonesia) and Researcher, Akatiga Foundation	2007 – 2008

RESEARCH/SCHOLARSHIP/CREATIVE ACTIVITY

Publications

Kilby, Angela E. “Algorithmic Fairness in Predicting Opioid Use Disorder Using Machine Learning.” In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 272. FAccT '21. New York, NY, USA: Association for Computing Machinery, 2021.
<https://doi.org/10.1145/3442188.3445891>.

Media Coverage:

Wired,

[“The Pain Was Unbearable. So Why Did Doctors Turn Her Away?”](#)

Works in Progress and Other Manuscripts

Kilby, Angela. “Opioids for the masses: Welfare tradeoffs in the regulation of narcotic pain medications.” June 2021. (under review)

Media Coverage:

The Boston Globe,

["With opioids, can you fight addiction without causing pain?"](#)

The Boston Globe,

[“Strict opioids laws hit chronic pain sufferers hard”](#)

The Chicago Tribune,

["Column: Fewer opiates mean more suffering"](#)

Quartz,

["What’s killing white, middle-aged women in America?"](#)

Marginal Revolution,

["Opioids for the masses?"](#)

Guo, Jiapei, Angela Kilby, and Mindy Marks. “The Impact of Scope-of-Practice Restrictions on Access to Medical Care.” July 2021. (under review)

Kilby, Angela and Charlie Denhart. “Location inference on social media data for agile monitoring of public health crises: An application to opioid use and abuse during the Covid-19 pandemic.” October 2021. (under review)

Kilby, Angela. “Algorithmic Fairness in Predicting Opioid Use Disorder Using Machine Learning.” January 2021.

Kilby, Angela, Zachary Finn, Byron Wallace, and Leo Beletsky. "Machine learning to predict and prevent opioid use disorder and opioid overdose: A systematic literature review." October 2021.

Kilby, Angela. "The Medicaid expansion and increased access to prescription medications: Implications for the opioid overdose crisis." 2021.

Popular Press Publications

Gruber, J. and Kilby, A. "[Opinion. The Senate health bill would make the epidemic worse. Here's how.](#)" Washington Post. July 13, 2017.

Invited and Accepted Presentations and Discussions

Northeastern University Institute for Experiential AI Expeditions in Experiential AI Series: Invited talk for "Algorithmic Fairness in Predicting Opioid Use Disorder Using Machine Learning" 2021

NBER Conference on Machine Learning in Health Care: Accepted presenter for "Algorithmic Fairness in Predicting Opioid Use Disorder using Machine Learning" 2021

Accepted presenter, American Public Health Association, "Big Data Needs Big Ethics:" Algorithmic Fairness in Predicting Opioid Use Disorder using Machine Learning 2020

Invited speaker, Bentley University Department of Economics: Algorithmic Fairness in Predicting Opioid Use Disorder using Machine Learning 2020

Presentation at Faculty Works in Progress Colloquium Series: Algorithmic Fairness in Predicting Opioid Use Disorder using Machine Learning 2019

Paper presentation at Stanford Institute for Theoretical Economics (SITE) Occupational Licensing Conference: The Impact of Scope-of-Practice Restrictions on Access to Medical Care (with Jiawei Guo and Mindy Marks) 2019

Discussant at Empirical Health Law Conference (BU 2019), "Regulating Opioid Supply in Canada through Insurance Coverage" 2019

Guest lecturer for NUSL 7447: "Economics, Econometrics, and Causal Inference" 2019

	Invited speaker: Drug Dependence Epidemiology Training (DDET) Program Fellows at Johns Hopkins School of Public Health	2017
	Discussant at 2017 ASSA, “Evaluating Behavioral Policy Applications Using Administrative Data”	2017
	Association for Public Policy Analysis and Management invited presentation, ‘Opioids for the Masses,’ in session <i>the Role of Research in making Government more Effective</i>	2016
	Invited speaker: Tri-State Occupational Medicine Association (TSOMA) annual conference	2016
	Invited speaker: Providers’ Clinical Support System For Opioid Therapies (PCSS-O)	2016
Fellowships, Honors, and Awards for Research and Scholarship	NBER/ NIA Post-Doctoral Fellowship in Aging and Health Research	2016 – 2017
	NBER Health and Aging Pre-Doctoral Fellowship	2015 – 2016
	National Science Foundation Graduate Research Fellowship	2011 – 2016
	Henry Luce Scholar	2007 – 2008
	Lemelson-MIT prize, IDEAS Competition	2007
	Political Science department Outstanding Thesis Award	2007
	Sigma Xi	2007
Ongoing Data Collaborations	Extracting geospatial data from social media to understand and characterize illicit opioid markets (collaboration with the Crime and Justice Policy Lab at the University of Pennsylvania, formerly NU Center on Crime and Community Resilience)	
	“Lost on the Frontline” – constructing a database of U.S. health care workers who died due to COVID-19 contracted on-the-job (with Kaiser Health News and the Guardian)	

GRANTS

Internal Grants

Machine learning to predict and prevent opioid use disorder: clinical value, health equity, and algorithmic fairness
PIs: Angela Kilby, Leo Beletsky, and Byron Wallace
TIER 1 grant
Status: Funded
Amount Awarded: \$49,940
Dates of award: July 1, 2020 -- March 31, 2022

TEACHING AND ADVISING

Courses

Econ 1230: Healthcare and Medical Economics	2021
Econ 3413: Health Economics and Health Care Policy (new course developed)	2020 – 2022
Econ 7200: Health Economics and Health Care Policy (new course developed)	2017 – 2021
Econ 3916: Health Economics and Health Care Policy (new course developed)	2017 – 2019
Econ 7976: Research Directed Study	2021
Econ 4971: Junior/Senior Honors Thesis	2019
Econ 4991: Research	2019
14.21 Health Economics (Undergraduate) Teaching Assistant to Professor Jeffrey Harris, MIT	2016
14.31/14.310 Data Analysis for Social Scientists (Undergraduate/Graduate). Teaching Assistant to Professors Esther Duflo and Sara Ellison, MIT	2016
14.01 Principles of Microeconomics (Undergraduate) Teaching Assistant to Professor Jeffrey Harris, MIT	2014
14.01 Principles of Microeconomics (Undergraduate) Teaching Assistant to Professor Jonathan Gruber, MIT	2013

Supervision of Graduate Students	Ph.D. Committee for Jiapei Guo	2019 – 2021
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Supervision of Undergraduate Students	Supervised Senior Honors Thesis for Jackson Reimer (completed 2019)	2017 – 2019
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Other Advising Activities	<p><i>Ph.D. research advising:</i> Zachary Finn, Philip Rubin-Streit</p> <p><i>Master's research advising:</i> Shuyuan Zhou</p> <p><i>Plus-One research advising:</i> Charles Denhart, Ciara Tenney, Maggie Rodriguez</p> <p><i>Undergraduate research advising:</i> Jackson Reimer, Jessica Ofurie, August Granath, Jennifer Goldberg, Pooja Amin, Joshua Bao, Sawyer Dixon, Advising as part of the Dean's Collaborative Research Award program</p>	
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Honors and Awards for Teaching	CSSH Outstanding Teaching award	2020
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SERVICE AND PROFESSIONAL DEVELOPMENT

Service to the Institution	Member, Faculty Search Committee in Artificial Intelligence/Technology Policy	2021 – 2022
	Northeastern University Research Computing Committee	2020 – present
	CSSH Outstanding Teaching Award Committee	2020 – present
	Chair, Department of Economics Undergraduate Research Committee (member 2019-2020)	2020 – present
	Department of Economics Seminar Committee	2017 – present

Service to the Discipline	Referee for <i>Quarterly Journal of Economics</i> , <i>American Economic Journal: Economic Policy</i> , <i>Journal of Health</i>	
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*Economics, Forum for Health Economics & Policy,
Addiction, NeurIPS (Conference on Neural Information
Processing Systems)*

**Honors and
Awards for
Service**

MIT Graduate Student Council Service Award 2013

**Professional
Development**

NUSL Workshops on Promises and Perils of PDMPs 2019

NBER Machine Learning in Health Care workshops
(invited participant) 2019

RAND Summer Institute – Workshops on Demography,
Economics, Psychology, and Epidemiology of Aging,
and the Mini-Medical School for Social Scientists
(accepted participant) 2018