

# Patrick Turley

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paturley@broadinstitute.org

## Education

- 9/2010 – 5/2016 Ph.D., Economics, Harvard University  
Thesis: *Essays in Economics and Education*
- 9/2003 – 4/2010 BA, Economics and Mathematics, Brigham Young University  
Valedictorian and University Honors  
Thesis: *Partially Adaptive Estimation of Truncated Regression Models: A Comparison with Several Semiparametric Estimators*

## Professional Positions

- 8/2019 – Instructor  
Analytic and Translational Genetics Unit, Massachusetts General Hospital  
Broad Institute and Harvard and MIT
- 7/2016 – 8/2019 Research Fellow  
Analytic and Translational Genetics Unit, Massachusetts General Hospital  
Broad Institute and Harvard and MIT

## Awards, Honors, and Fellowships

- 6/2019 UK Biobank Early Career Researcher of the Year
- 9/2015 – 5/2016 Roger L. Martin Cornerstone Graduate Student Fellowship
- 9/2010 – 5/2013 National Science Foundation Graduate Research Fellowship

## Publications

- “GWAS of risk tolerance and risky behaviors in over one million individuals identify hundreds of loci and reveal shared genetic influences” [88<sup>th</sup> author out of 97] with Richard K Linner, Pietro Biroli, et al. *Nature Genetics*, 2019, **51**(1), 245-257.
- “Identification of common genetic risk variants for autism spectrum disorder” [65<sup>th</sup> author of 76] With Jakob Grove, Stephan Ripke, et al. *Nature Genetics*, 2019, **51**(3), 431-444.
- “Discovery of the first genome-wide significant risk loci for attention-deficit/hyperactivity disorder” [41<sup>st</sup> author of 71] with Ditte Demontis, Raymond K Walters, et al. *Nature Genetics*, 2019, **51**(1), 63-75.
- “Education can Reduce Health Differences Related to Genetic Risk of Obesity: Evidence from a British Reform” [joint authorship] with Silvia H. Barcellos and Leandro Carvalho. *Proceedings of the National Academy of Science*, 2018, **115**(42), E9765-E9772.
- “Imprint of assortative mating on the human genome” [8<sup>th</sup> author of 14] with Loic Yengo, Matthew R Robinson, et al. *Nature Human Behavior*, 2018, **2**, 948-954.
- “Gene Discovery and Polygenic Prediction from a 1.1-million-person GWAS of Educational Attainment” [starred last author] with James J. Lee, Robbee Wedow et al. *Nature Genetics*, 2018, **50**, 1112-1121.

“Analysis of shared heritability in common disorders of the brain” [16<sup>th</sup> author of 150] with Verner Anttila, Brendan Bulik-Sullivan, et al. *Science*, 2018, **360**(6395).

“Multi-trait analysis of genome-wide association summary statistics using MTAG” [first author] with Raymond Walters, Omeed Maghzian, et al. *Nature Genetics*, 2018, **50**(2), 229-237.

“Was that SMART: Institutional Financial Incentives and Field of Study” [joint authorship] with Jeff Denning. *Journal of Human Resources*, 2017, **52**(1), 152-186.

“Genome-wide association study identifies 74 loci associated with educational attainment” [starred first author] with Aysu Okbay, Jonathan Beauchamp, et al. *Nature*, 2016, **533**, 539-542.

“Genetic variants associated with subjective well-being, depressive symptoms, and neuroticism identified through genome-wide analyses” [starred 1<sup>st</sup> author] with Aysu Okbay, Bart M.L. Baselmans, et al. *Nature Genetics*, 2016, **48**, 624-633.

“Common Genetic Variants Associated with Cognitive Performance Identified Using the Proxy-phenotype Method” with Cornelius Rietveld, Tonu Esko, et al. *Proceedings of the National Academy of Science*, 2014, **111**(38), 13790-13794.

“Skewness and Kurtosis Properties of Income Distribution Models” with James McDonald and Jeff Sorensen. *Review of Income and Wealth*, 2013, **59**(2), 360-374.

“Distributional Characteristics: Just a Few More Moments” with James McDonald. *The American Statistician*, 2011, **65**(2), 96-103.

## Working Papers

“Challenges With Embryo Selection Using Polygenic Scores” [starred 1<sup>st</sup> author] with Michelle Meyers, David Cesarini, et al. *Under review*.

“Genomic analysis of diet composition finds novel loci and associations with health and lifestyle” [8<sup>th</sup> author of 44] with Fleur W Meddens, Ronald de Vlamming, et al. *bioRxiv*.  
<https://www.biorxiv.org/content/early/2018/08/02/383406>

“Distributional Effects of Education on Health” [joint authorship] with Silvia H. Barcellos and Leandro Carvalho. *NBER Working Paper*, No. 25898.  
<https://www.nber.org/papers/w25898>

## Research Grants

3/2017 – 2/2022 National Institute on Aging/National Institute of Health, K99/R00 Pathway to Independence Award, “Genome-wide Analysis of Late-onset Alzheimer’s Disease Using Intergenerational, Multi-trait, and Cross-ancestry Data” (PI)

## Professional Activities

Steering Committee, Methods Working Group Chair, *Social Science Genetic Association Consortium*  
 PRS Working Group, *C-FoS Alzheimer’s Disease Consortium*

Referee: Quarterly Journal of Economics, Economics of Education Review, Biometrika, Nature Communications, eLife, Science Advances, Psychological Science, Bioinformatics, European Journal of Human Genetics, Scientific Reports, Genetics, Genetic Epidemiology, Communications Biology, Review of Income and Wealth, American Journal of Health Economics

Grant reviewer: National Science Foundation, Russell Sage Foundation, Nuffield Foundation

Discussant: American Economic Association Annual Meetings, Population Association of America Annual Meeting, Behavioral Genetics Association Annual Meeting

Dissertation Committee Member for Bart Baselmans, Department of Biological Psychology, Vrije Universiteit Amsterdam, December 2018

### **Teaching Experience**

8/2019                      Genoeconomics, Department of Economics, Aarhus University  
Visiting Faculty (with Daniel Benjamin)  
6/2016 – 6/2019      Summer Institute in Social Science Genomics, Russell Sage Foundation  
Visiting Faculty  
10/2017                   Integrating Genetics and the Social Sciences, UC Boulder  
Invited Lecturer, Statistical Genetics Workshop  
9/2012 – 12/2012      Microeconomic Theory, Harvard University  
Teaching fellow for Professor Edward Glaeser  
1/2008 – 4/2008      Honors Economic Principles and Problems, BYU  
Teaching assistant for Professor Larry Wimmer

### **Workshop Organizer**

Russell Sage Foundation Summer Institute in Social-Science Genomics [Co-organizer], June 2019, Santa Barbara, CA.  
Program in Quantitative Genetics Working Group [Co-organizer], 2018-2019, Harvard School of Public Health.

### **Conference Presentations and Invited Talks**

2019    American Society of Human Genetics Meeting, Houston, TX  
Harvard Medical School, Department of Health Care Policy Seminar Series  
Behavior Genetics Association Meeting, Karolinska Institutet, Stockholm, Sweden  
2018    Behavior Genetics Association Meeting, The Broad Institute  
Population Association of America Meeting, Denver, CO  
NBER Summer Institute (Health), Cambridge, MA  
Depression Working Group Meeting, Psychiatric Genetics Consortium  
Medical and Population Genetics Research Seminar, The Broad Institute  
2017    Boston College, Center for Retirement Research Seminar Series  
Polygenic Prediction and its Application in Social Science Conference, USC  
2016    Conference on Genetics and Social Science, University of Southern California  
NBER Summer Institute (Health), Cambridge, MA  
University of Southern California, CESR Seminar Series  
2015    Integrating Genetics and the Social Sciences, University of Colorado Boulder  
Stanford Institute for Theoretical Economics, Stanford University  
Stanley Center, Broad Institute at Harvard and MIT  
2014    Integrating Genetics and the Social Sciences, University of Colorado Boulder

### **Languages**

English (native), French (fluent)