

# Patrick Turley

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## 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

- 1/2021– Assistant Professor (Research) of Economics  
Center for Economics and Social Research, University of Southern California  
Department of Economics, University of Southern California
- 8/2019–12/2020 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

- “Genomic analysis of diet composition finds novel loci and associations with health and lifestyle” [8<sup>th</sup> author out of 46] with S. Fleur W. Meddens, Ronald de Vlamming, et al. *Molecular Psychiatry*, 2020, 1-14.
- “Genomic relationships, novel loci, and pleiotropic mechanisms across eight psychiatric disorders” [94<sup>th</sup> author out of 150] with Phil H. Lee, Verneri Anttila, et al. *Cell*, 2019, 179(7), 1469-1482.
- “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 Verneri 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 Maghziyan, 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

- “The Polygenic Index Repository: Resource Profile and User Guide” [starred last author] with Joel Becker, Casper A.P. Burik, et al. *Revise and Resubmit*.
- “Mendelian imputation of parental genotypes for genome-wide estimation of direct and indirect genetic effects” [7<sup>th</sup> author of 8] with Alexander I. Young, Seyed Moeen Mehzati et al. *bioRxiv*. <https://www.biorxiv.org/content/10.1101/2020.07.02.185199v1>
- “Challenges With Embryo Selection Using Polygenic Scores” [starred 1<sup>st</sup> author] with Michelle Meyers, David Cesarini, et al. *Under review*.
- “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>
- “The Great Equalizer? The Effect of Education on the Relationship between Early-life Disadvantages and Later-life SES” [joint authorship] with Silvia H. Barcellos and Leandro Carvalho.
- “Multi-Ancestry Meta-Analysis Yields Novel Genetic Discoveries and Ancestry-specific Associations” [first author] with Alicia Martin, Grant Goldman, et al.

## Research Grants

- 7/2019 – 6/2024 National Institute on Aging/National Institutes of Health (PI)  
K99/R00, 1K99AG062787  
“Genome-wide Analysis of Late-onset Alzheimer’s Disease Using Intergenerational, Multi-trait, and Cross-ancestry Data”
- 4/2020 – 3/2022 National Institute on Aging/National Institutes of Health (PI)  
R21, R21AG067585  
“Estimating Assortative Mating, its History, and its Future Effect on Genetic Variance for Health, Behavioral, and Ancestry Phenotypes Using Cross-sectional Data”

## Professional Activities

Organizing Committee (2021), *Equity in Biomedicine Seminar Series, The Broad Institute*  
Director, *Behavioral and Health Genomics Center, CESR, University of Southern California*  
Steering Committee, Methods Working Group Chair, *Social Science Genetic Association Consortium*  
PRS Working Group, *C-FoS Alzheimer’s Disease Consortium*  
Group Member, *Wrestling with Social/Behavioral Genomics: Risks, Potential Benefits, and Ethical Responsibilities Working Group*

Referee: Quarterly Journal of Economics, Biometrika, Nature Genetics, Nature Human Behavior, Nature Neuroscience, Nature Communications, PNAS, eLife, Science Advances, Psychological Science, Bioinformatics, American Journal of Human Genetics, European Journal of Human Genetics, Scientific Reports, Genetics, Genetic Epidemiology, PLOS Genetics, Communications Biology, Demography, Economics of Education Review, 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, 2021, Santa Barbara, CA.

Program in Quantitative Genetics Working Group [Co-organizer], 2018-2019, Harvard School of Public Health.

### **Conference Presentations, Posters, and Invited Talks**

- 2021 Center for Economic and Social Research, USC, Research Seminar Series, Virtual Meeting
- 2020 Genomics for Health Conference, Arbeitsgemeinschaft fur Gen-Diagnostik, Virtual Meeting
- American Society of Human Genetics Meeting, Virtual Meeting
- Geisinger Health Systems, Research Seminar Series, Danville, PA
- 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)