

# Patrick Baylis

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## Professional appointments

2016-Present	POSTDOCTORAL FELLOW, Stanford Institute on Food Security and the Environment
2017 (deferred)	ASSISTANT PROFESSOR, Vancouver School of Economics, University of British Columbia
2014-2016	GRADUATE STUDENT RESEARCH ASSISTANT, Lawrence Berkeley National Labs
2011-2016	GRADUATE STUDENT RESEARCHER, Energy Institute at Haas
2009-2011	SUSTAINABILITY CONSULTANT, Ackerstein Sustainability
2008-2009	MANAGEMENT CONSULTANT, Arcadia Solutions

## Education

2016	PH.D. in Agricultural and Resource Economics, University of California, Berkeley <ul style="list-style-type: none"><li>• Areas of specialization: Environmental economics and applied econometrics</li><li>• Dissertation: Essays on the Human Effects of Climate Change<ul style="list-style-type: none"><li>– Committee: <b>Max Auffhammer</b> (chair), <b>Severin Borenstein</b>, <b>Meredith Fowlie</b>, <b>Solomon Hsiang</b></li></ul></li></ul>
2012	M.S. in Agricultural and Resource Economics, University of California, Berkeley
2008	B.A. in Political Science/International Relations, Carleton College

## Research

### WORKING PAPERS

#### TEMPERATURE AND TEMPERAMENT: EVIDENCE FROM A BILLION TWEETS

I combine observations from a geographically and temporally dense corpus of more than a billion Twitter status updates with sentiment analysis and machine learning algorithms in order to understand preferences for temperature, with implications for climate change.

#### DEFAULT EFFECTS, FOLLOW-ON BEHAVIOR AND WELFARE IN RESIDENTIAL ELECTRICITY PRICING PROGRAMS (with **Peter Cappers**, **Meredith Fowlie**, **Anna Spurlock**, **Annika Todd**, and **Catherine Wolfram**)

- We study default effects in the context of a large randomized controlled trial of electricity pricing strategies. By comparing results from both opt-in and opt-out treatment groups, we estimate the effect of the program on customers who only enroll in the program when placed in an opt-out treatment group.

### WORKS IN PROGRESS

#### PROJECTING THE IMPACT OF CLIMATE CHANGE ON U.S. ELECTRICITY LOAD (with **Max Auffhammer** and **Catherine Hausman**)

- Using a panel of disaggregated electricity demand consumption data that covers the entire United States, we link a statistically estimated relationship between temperature and load to a set of 20 climate models to predict changes in electricity demand.

#### WILDFIRE AND INSURANCE IN A CHANGING CLIMATE (with **Judson Boomhower**)

- We model and empirically investigate the interaction between spatial spillovers of wildfire prevention and the competitive structure of the fire insurance industry.

#### THE PSYCHOLOGICAL IMPACTS OF CLIMATE CHANGE (with **Nick Obradovich**)

- Using large datasets on human expressions, we identify psychological channels through which climate change will impact economic outcomes.

#### THE IMPACT OF AIR POLLUTION ON COGNITIVE EXPRESSION (with **Nick Obradovich**, **Josh Graff Zivin**, and **Matt Neidell**)

- We investigate the effect of air pollution on cognitive impairment using multiple novel measures of cognitive capacity from the social media platform Twitter.

#### CRITICAL GAS: MEASURING THE BICYCLE USAGE RESPONSE TO GAS PRICES

- I construct estimates of the bike usage elasticity to changes in the price of gas, employing a novel panel dataset constructed from Google searches over time.

## Teaching

- 2013 GRADUATE STUDENT INSTRUCTOR, **ARE212: Multiple Equation Estimation**
- Graduate econometrics; **Max Auffhammer**, instructor
  - Section **material** applies economic theory to empirical data work using R
  - Received Outstanding Graduate Student Instructor award

## Presentations

- 2016 June 30: UC-Berkeley (Energy Camp)  
April 21: UC-Berkeley (Energy Institute Research in Progress Seminar)  
March 15: National Center for Atmospheric Research (Invited presentation)  
February 8: Stanford Management Science & Engineering (Invited presentation)  
February 3: University of British Columbia (Invited presentation)  
February 1: Stanford Center on Food Security and the Environment (Invited presentation)  
January 27: Pittsburgh University (Invited presentation)  
January 20: Montana State University (Invited presentation)
- 2015 October 23: UC-Berkeley (Energy Institute Seminar)  
October 17: University of Illinois (Heartland Workshop)  
September 25: UC-Berkeley (ARE Seminar)  
September 4: University of Colorado (Vail Workshop)  
July 15: UC-Berkeley (Climate Workshop)  
July 13: UC-Berkeley (Energy Institute Research in Progress Seminar)  
June 5: Associate of Environmental and Resource Economics Annual Conference (Sponsored presenter)  
April 16: UC-Berkeley (Climate Change Economics Lunch)
- 2014 October 27: UC-Berkeley (Energy Institute Research in Progress Seminar)  
April 25: UC-Berkeley (Energy Institute Research in Progress Seminar)

## Grants, Honors & Awards

- 2016 National Center for Atmospheric Research visiting researcher Giannini Foundation grant (joint with Judson Boomhower)
- 2013 Outstanding Graduate Student Instructor award

## Service

ADMISSIONS COMMITTEE, Student representative, University of California Berkeley  
MEMBER, American Economic Association  
MEMBER, Association of Environmental and Resource Economists

## Other

### REFeree

Energy Economics

### MEDIA

TEMPERATURE AND TEMPERAMENT: EVIDENCE FROM A BILLION TWEETS: Popular Science, Washington Post, Time, Weather Channel, Berkeley News, UC Newsroom, ChicagoInno