

**Jingyan (Jean) Guo**  
DEPARTMENT OF ECONOMICS  
UNIVERSITY OF CALIFORNIA, RIVERSIDE

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**CONTACT INFORMATION**

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**EDUCATION**

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Ph.D., Economics, University of California, Riverside (expected completion June 2024)  
M.S., Applied Analytics, Columbia University, 2017  
B.A., Economics and Mathematics, Colby College, 2015

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**FIELDS OF INTEREST**

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Health Economics, Labor Economics, Development Economics

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**JOB MARKET PAPER**

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**“Sleep and Fatal Vehicle Crashes: Evidence from Sunset Time in the United States”**

Adequate sleep is critical for overall healthy functioning. Insufficient sleep has been linked to a decline in attention and cognitive function, which poses a potential risk for vehicle crashes. This paper aims to study the impact of sleep on fatal vehicle crashes. For the short-term analysis, I explored the variation in sunset times throughout the year in a specific location. By using sunset time as an instrument, I found that a one-hour delay in sunset leads to a decrease of approximately 48 minutes in monthly sleep duration. Additionally, a one-hour increase in monthly sleep leads to about a 2.4% reduction in fatalities. For the long-term analysis, I employed two different approaches. First, I utilized the geographical variation in sunset time across counties within a time zone. However, the results from this approach were not statistically significant. Second, I applied spatial regression discontinuity, focusing on the timing of sunset at a time-zone boundary. From 2004 to 2013, I found that employed individuals sleep less on the later sunset side of the time zone border. However, from 2014 to 2019, they sleep more on the later sunset side. Interestingly, traffic fatalities were lower on the late sunset side from 2004 to 2013 but higher from 2014 to 2019.

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**WORKING PAPERS**

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**“Caste Differences in Child Growth: Disentangling Endowment and Investment Effects”** with Joseph Cummins, Anaka Aiyar, Neha Agarwal, Vaishali Jain, Andrew Bergmann *submitted*

Using the fourth round of the Indian National Family Health Survey (NFHS- 4), and subsequently replicating our results using the fifth round (NFHS-5), we document differential child physical growth patterns across caste groups in India, demonstrating that lower caste children are born shorter and grow less quickly than children from higher-caste households. We then show that, in line with work from previous rounds of the NFHS, these differences are largely explainable by observable covariates, particularly maternal characteristics and household wealth variables. However, unlike previous research, our models reveal that the influence of these variables changes as children develop, and suggest that caste-gaps are the result of multiple channels of causal effects impacting the child growth process at different stages of development. Using age-disaggregated decomposition methods, we demonstrate that health endowment related variables largely explain birth length gaps, and that investment related variables become increasingly influential as children age. Children from low caste households thus face two margins generating height gaps as they age: a persistent endowment effect present from birth, and a post birth investment effect that exacerbates the initial deficit.

**“How does Air Pollution Affect Sleep? Survey and Social Media Evidence from the United States”** with Da Gong, Zhuocheng Shang

Using the Twitter data, American Time Use Survey (ATUS) on sleep, and satellite data on pollution, we aim to answer the following questions in our research: How does air pollution affect the sleep of people in the United States? Specially, we will use two instrument variables (IVs) including thermal inversion and Clean Air Act (CAA) to estimate the causal impact of pollution on sleep. With access to the Twitter data, our project aims to utilize tweets as a measure of sleep amount in the United States, and to study the impact of pollution on sleep. Furthermore, we will validate accuracy of measure from Twitter data by comparing it with survey data from the ATUS. The use of Twitter data has the potential to provide valuable insights into sleep patterns, especially in regions where sleep surveys are not readily available. It could be used in future studies to explore various topics on sleep quality and its associated health outcomes.

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### FELLOWSHIPS, HONORS, AND AWARDS

2023: University Teaching Certificate, Graduate Division, UC Riverside

2023: Conference Travel Grant, GSA, UC Riverside

2023: Finalist for Outstanding International Student – Graduate Award, UC Riverside

2023: Dissertation Year Fellowship, UC Riverside

2022: Conference Travel Grant, GSA, UC Riverside

2022: Finalist for Outstanding International Student – Graduate Award, UC Riverside

2019: Dean's Distinguished Fellowship, UC Riverside (2019-2024)

2015: Robert W. Pullen Award for Outstanding Research Assistant, Colby College

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### TEACHING

*Instructor, UC Riverside*

ECON102 (Intermediate Microeconomics Theory), *Summer 2022*

*Teaching Assistant, UC Riverside*

ECON102 (Intermediate Microeconomics Theory), *Summer 2021*

ECON104A (Intermediate Microeconomics Theory), *Summer 2021, Fall 2020*

ECON002 (Introductory to Macroeconomics Theory), *Spring 2021*

ECON003 (Introductory to Microeconomics Theory), *Winter 2021*

*Teaching Assistant, Colby College*

EC134 (Principles of Macroeconomics), *Spring 2013*

MA253 (Linear Algebra), *Fall 2012*

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### RELEVANT POSITIONS HELD

Graduate Student Researcher at Inland Empire Labor and Community Center (IELCC), UC Riverside, July 2023 – Present

Graduate Student Researcher at Center of Social Innovation (CSI), UC Riverside, Oct 2022 – Mar 2023

Graduate Student Researcher to Professor Joseph Cummins, UC Riverside, Oct 2021 – June 2022

Lab Manager, Los Angeles Behavioral Economics Laboratory (LABEL), University of Southern California, Sep 2018 – June 2019

Research Assistant, Colby College, Jan 2013 – May 2015

## PROFESSIONAL ACTIVITIES

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### *Presentations*

2023: Western Economic Association International (WEAI) 17th International Conference, Time Use Across the Life Course Conference at the University of Maryland, WEAI's 98th Annual Conference, Virtual Mentoring Workshop for 3rd+ Year Women & Non-Binary PhD Students in Health Economics and Health Policy (organized by Marika Cabral and Maya Rossin-Slater, and sponsored by AEA's Committee on the Status of Women in the Economics Profession (CSWEP) and ASHEcon), Applied Economics Seminars at UC Riverside

2022: Pacific Conference for Development Economics (PacDev), WEAI's 97th Annual Conference, 15th Annual All-California Labor Economics Conference (ACLEC) (Poster), Global Health Economics Doctoral Student Mentorship Workshop, Graduate Student Brown Bag Seminars at UC Riverside

### *Volunteer Service*

2022-2023: Peer Mentor, International Student Peer Mentor Program (ISPMP) at UC Riverside

2022: 15th Annual All-California Labor Economics Conference (ACLEC)

## TECHINICAL SKILLS

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STATA, LaTeX, R Studio, Python, Tableau, and JMP from SAS

## REFERENCES

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Joseph Cummins (Chair)  
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