

Robert Baluja

Department of Economics, University of Arizona

Email: RobertBaluja@gmail.com

RESEARCH FIELDS

Environmental Economics, Industrial Organization, Labor Economics

EDUCATION

University of Arizona

Ph.D. (M.A. en route) - Economics

Tucson, AZ

Expected 2025

University of California, San Diego

B.S. - Mathematics & Economics; Summa Cum Laude

La Jolla, CA

2020

WORKING PAPERS

Escape the Heat: The Dynamics of Migration as Adaptation to Climate Change

Climate change will lead to large changes in global weather patterns and extreme events. To understand the effectiveness of migration in limiting exposure to future climate damages, I specify and estimate a dynamic lifecycle model of migration within Mexico. I combine the lifecycle model with a non-stationary and spatially heterogeneous model of the climate. Estimation makes use of a rich sample of life histories, covering the years 1950–2019, and follows a nested full-solution pseudo-maximum likelihood routine. I combine the estimated model with full-count census data to simulate forward population movements through 2080 under a variety of counterfactual scenarios. First, I find that predicted warming under a business-as-usual climate scenario will cause the lifetime value of migration to be over 65% higher for today's infants than today's young adults living in Mexico. Moreover, the ability to migrate domestically reduces expected lifetime climate damages, with this reduction increasing in the degree of warming: today's young adults face 29% lower lifetime climate damages because of their ability to migrate whereas today's infants face 33% lower lifetime damages from the same. I conclude by using the model to understand how the dynamic structure of a policy can lead to very different choices and welfare outcomes for the affected population. I find that policies that both exploit the option value of future opportunities and allow for individuals to choose the timing of adoption can induce large net welfare improvements.

PFAS-Contaminated Drinking Water Harms Infants

with Bo Guo, Wesley Howden, Ashley Langer, and Derek Lemoine

In revision for *Science*

There is evidence of widespread human exposure to per- and polyfluoroalkyl substances (PFAS) but limited evidence of human health impacts. Using data on all New Hampshire births from 2010–2019, we show that receiving water that has flowed beneath a PFAS-contaminated site increases first-year infant mortality by 161% [95% CI: 70–251%], the chance of a birth before 28 weeks of gestational age by 120% [95% CI: 30–210%], and the chance of birthweight below 1,000 g by 152% [95% CI: 48–257%]. Extrapolating to the contiguous U.S., PFAS contamination imposes annual social costs of approximately \$8 billion. These health costs are substantially larger than the cost of removing PFAS from the public water supply.

PRESENTATIONS

2024: AERE Summer Conference, University of Arizona Econometrics Lunch

2023: AERE@OSWEET, AERE@WEAI, AZ ENREE Workshop, Columbia University IO Colloquium, Sacramento Economics Roundtable, 2nd Summer School on the Economics of Migration

2022: CU Environmental & Resource Economics Workshop

2019: UCSD Faculty Mentor Program Symposium, UCSD Undergraduate Research Conference

VISITS

2023: PER-IO Graduate Student Visitor, Department of Economics, Columbia University

GRANTS AND AWARDS

2024: Dror Research Excellence Award, AERE Travel Scholarship, GPSC Travel Grant

2023: AEA Mentoring Program Travel Grant

2022: Steve Manos Prize for Best Second-Year Paper, GPSC Travel Grant

2020: Phi Beta Kappa

RESEARCH EXPERIENCE

Research Assistant

Prof. Ashley Langer

University of Arizona

Spring 2022 - Present

Research Assistant

Prof. Derek Lemoine

University of Arizona

Spring 2022 - Fall 2023

Research Assistant

Prof. Philip Roeder

University of California, San Diego

Spring 2019

TEACHING

Instructor of Record

Microeconomic Analysis for Business Decisions - Spring 2025 (Online)

Macroeconomic and Global Institutions and Policy - Summer 2024 (Online)

Basic Economic Issues - Summer 2023 (In-Person)

Teaching Assistant

Environmental Economics - Spring 2024

Economics of Sports - Spring 2023

Mathematical Economics (PhD) - Fall 2021, Fall 2022

Math Camp (PhD) - Summer 2022

Economics of Strategy - Fall 2020, Spring 2021

Climate Science & Economics: How Should Policy Control Warming? - Fall 2021

Basic Economic Issues - Fall 2020

SKILLS SUMMARY

Programming Languages: Julia, Python, R

(Non-Programming) Languages: English (Native), Spanish (Conversational)