

# Robert Baluja

Department of Economics, University of Arizona

Email: [RobertBaluja@gmail.com](mailto:RobertBaluja@gmail.com)

Website: <https://www.robertbaluja.com>

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## RESEARCH FIELDS

Environmental Economics, Industrial Organization, Labor Economics

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## EDUCATION

### University of Arizona

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

Tucson, AZ

*Expected 2025*

### Columbia University

*PER-IO Graduate Student Visitor, Department of Economics*

New York, NY

*2020*

### University of California, San Diego

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

La Jolla, CA

*2020*

### MiraCosta Community College

*A.S. - Business Administration*

Oceanside, CA

*2018*

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## WORKING PAPERS

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

*Earth's climate is changing, which is widely expected to drive net reductions to human welfare. In this paper, I study how effectively migration will reduce experienced climate damages. To provide answers to my research questions, I develop and estimate a dynamic lifecycle model of migration within Mexico. I combine this with a non-stationary and spatially varying model of the climate, in which I allow for both fully informed and naive expectations of the future progression of climate change. Estimation of the climate model uses daily-level historical weather data and output from state-of-the-art climate simulations. Estimation of the lifecycle model uses a sample of life histories, covering the years 1950–2019, and follows a nested full solution pseudo-maximum likelihood routine. I find that climate damages from business-as-usual warming would be 28% higher if domestic migration within Mexico was no longer available as a tool of adaptation to climate change. Moreover, the fraction of the population that I estimate as forming naive expectations of the climate system would experience an average of 2% less lifetime climate damages from becoming fully informed on the climate transition. Given that most of the increased damages this population faces come from a reduced propensity to migrate, one way to reduce these losses is to subsidize migration. I find that subsidizing migration at the average level of the internality reduces their welfare losses by 8–19%. The exact value of this reduction depends on whether the policy forces people to use the subsidy in a particular period. Policies that allow individuals to choose when to use them are over twice as valuable to the affected population because they do not overly incentivize dynamically suboptimal moves. This sort of dynamically-available policy is common; examples include provisions from the recent Inflation Reduction Act and first-time homeowners tax credits.*

### 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.*

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## 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, 2<sup>nd</sup> Summer School on the Economics of Migration

**2022:** CU Environmental & Resource Economics Workshop

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

## GRANTS AND AWARDS

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**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

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**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

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**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

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**Programming Languages:** Julia, Python, R

**(Non-Programming) Languages:** English, Spanish

## REFERENCES

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**Prof. Ashley Langer**

Department of Economics

University of Arizona

alanger [at] arizona [dot] edu

**Prof. Derek Lemoine**

Department of Economics

University of Arizona

dlemoine [at] arizona [dot] edu

**Prof. Juan Pantano**

Department of Economics

University of Arizona

jpanta [at] arizona [dot] edu

**Prof. John Drabicki**

Department of Economics

University of Arizona

drabicki [at] arizona [dot] edu