

# Robert Baluja

Department of Economics, University of Arizona

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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*

### University of California, San Diego

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

La Jolla, CA

*2020*

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## 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. The damages from such changes will be spatially heterogeneous, implying that migration can be a valuable form of adaptation. Its value and responsiveness to different policy levers are open empirical questions. To provide answers, I specify and estimate a dynamic life-cycle model of migration within Mexico, with individuals aware of a non-stationary and spatially heterogeneous 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 2038 under a variety of counterfactual scenarios. Under business-as-usual, I find that migration reduces climate damages in Mexico by 29%, with large heterogeneity across space. I further find that migration rates are highly responsive to reductions in their costs: a permanent 1% such decrease leads to an increase in migration rates of around 5.4%. Similarly, I find that a one-time moving subsidy of \$200, to be used at any point in the life-cycle, generates \$1.6 billion in net welfare gains, with much of the value coming from the option value of never-movers. This highlights the importance of considering the dynamic option value of future opportunities when designing policy to aid costly adaptation.*

### PFAS-Contaminated Drinking Water Harms Infants

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

*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

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## VISITS

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

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## 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

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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**

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 (Native), Spanish (Conversational)