### FACUNDO DANZA

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## **UNIVERSIDAD ORT URUGUAY**

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#### **Academic Positions**

2024 -

Assistant Professor of Economics, Universidad ORT Uruguay

#### **Education**

PhD in Economics, New York University, 2018–2024 Thesis Title: *Essays on Climate Adaptation*MA in Economics, Universidad de Montevideo, 2015–2019
BA in Economics, Universidad de Montevideo, 2012–2015

### **Teaching and Research Fields**

Environmental and Resource Economics, Agricultural Economics, Energy Economics, Applied Microeconomics

### **Teaching Experience**

Spring 2025 (ongoing)	Mathematical Economics, Universidad ORT Uruguay, Instructor
Fall 2024	Intermediate Microeconomics, Universidad ORT Uruguay,
	Instructor
Fall 2022	Labor Economics, New York University, Course Assistant
Spring 2022	Introduction to Econometrics, New York University, Teaching Assistant
Fall 2021, Spring 2021, Fall 2020	Statistics, New York University, Teaching Assistant
Fall 2017, Fall 2016	Public Economics, Universidad de Montevideo, Teaching Assistant
<b>Research Experience</b>	
2021	New York University, Graduate Assistant, Prof. Alfred Galichon
2017-2018	Universidad de Montevideo, Research Assistant, Prof. Alejandro
	Cid and Prof. Juan Dubra
2014–2016	Universidad de Montevideo, Research Assistant, Prof. Ana I. Balsa and Prof. Marcelo Caffera

#### Honors, Scholarships, and Fellowships

2023-2024	Sixth Year Funding, Department of Economics, New York
	University
2023	Data Grant for the project "Optimal and Sustainable

	Groundwater Use: Evidence from Nebraska," CV Starr Center, New York University
2023	Research Grant for the project "The Impact of Solar Panel
	Installation on Electricity Consumption and Production: A
	Firm's Perspective," CAF – Development Bank of Latin
	America and the Caribbean
2022	Research Grant for the project "Illegal Migration and Weather
	Shocks: Evidence from Rural Mexico," CAF – Development
	Bank of Latin America and the Caribbean
2018-2023	MacCracken Fellowship, New York University
2016-2018	Excellence Scholarship, Universidad de Montevideo

## **Conferences and Seminars**

1<sup>st</sup> LAERE Congress (2025); Workshop on Environmental Economics at RIDGE (2024); LACEA-LAMES (2024); 6<sup>th</sup> Workshop on Environmental Economics and Climate Change at UCA (2024); XXXIX JAE del Banco Central del Uruguay (2024); 28<sup>th</sup> EAERE Conference (2024); 10<sup>th</sup> AWEEE (2024); 98<sup>th</sup> AES Conference (2024); Universidad ORT Uruguay (2024); NCSU (2024); NHH (2024); NYU (2023); Universidad de Montevideo (2023); Academic Workshop on Sustainable Development in Latin America and the Caribbean at CAF (2022).

## **Working Papers**

## **Optimal and Sustainable Groundwater Use: Evidence from Nebraska** [Submitted]

Abstract: The agricultural sector is the primary water consumer in the US. Groundwater is one of its main sources, with 65% of irrigated farmland relying on groundwater for their water supply. Groundwater use presents a common pool problem: if a farmer pumps groundwater, she decreases the aquifer's water table and thus increases the cost of pumping for farmers in the same aquifer. Studying such a problem is challenging due to a lack of markets and data on groundwater use. In this paper, I leverage detailed farmer-level data on (ground)water use, crop choices, and crop yields to study the equilibrium implications of the current groundwater costs. I focus on the Ogallala Aquifer in Nebraska. In order to estimate the effect of water costs on water use and crop choices, I combine a crop-growth model with an economic model. I use the crop-growth model to recover the precise relation between water use and crop yields. I use the economic model to estimate the marginal cost of water for farmers. I then quantify how farmers respond to water costs by switching which crop they plant or changing the water use per planted crop. I find that farmers are inelastic to water costs: a 10% increase in the water cost would decrease water use by 3%. Moreover, I find that farmers adapt to higher water costs by both reducing the water use per planted crop and fallowing the land. Lastly, I utilize my estimates to compute the optimal and sustainable tax on groundwater use.

Presented at: 1<sup>st</sup> LAERE Congress; Workshop on Environmental Economics at RIDGE; LACEA-LAMES; 6<sup>th</sup> Workshop on Environmental Economics and Climate Change at UCA; XXXIX JAE del BCU; 28<sup>th</sup> EAERE Conference; 98<sup>th</sup> AES Conference; Universidad ORT Uruguay, NCSU; NHH; NYU; Universidad de Montevideo.

## The Impact of Solar Panel Installation on Electricity Consumption and Production: A Firm's Perspective (with Natalia D'Agosti) [Submitted]

**Abstract:** Since 2010, the Uruguayan government has fostered the installation of solar panels among firms to promote the production of small-scale renewable electricity. Under this policy, firms that have installed solar panels are allowed to feed any surplus electricity into the grid. Using a novel data set on firm-level electricity consumption and grid injection, we study the economic and environmental

consequences of this policy. First, we find that installing a solar panel reduces the amount of electricity extracted from the grid. Second, we find that it increases the electricity injected into the grid. Third, we find that it reduces CO2 emissions only marginally. Fourth, we provide evidence of a rebound effect, which ranges from 20% to 26%. Lastly, we propose an alternative policy that allows firms to store their excess electricity in batteries rather than immediately injecting it into the grid. This policy would further reduce CO2 emissions by 2.7%, incentivizing the injection of electricity at night, when fossil-fuel-based facilities meet the demand at the margin.

Presented (by me or my coauthor) at: 29<sup>th</sup> EAERE Conference; LACEA-LAMES; 10<sup>th</sup> AWEEE; ACREEF Workshop; SETI; FSR Climate Conference; Workshop on Fair Energy Transition in Latin America and the Caribbean at CAF; University of Edinburgh; Rutgers University; NYU; Universidad Católica del Uruguay; Universidad de Montevideo.

# *Illegal Migration and Weather Shocks: Evidence from Rural Mexico* (with Eungik Lee) [Revision requested at Environmental and Resource Economics]

Weather shocks pose many challenges for workers in developing countries. International migration can work as a coping mechanism for this reality. The legal status of migrants is critical to understand the effect of these shocks on workers' well-being. In this paper, we study the effect of weather shocks on legal and illegal migration from rural Mexico to the United States. First, we find that weather shocks in the wet season increase migration. The increase is entirely driven by illegal migrants. Second, we propose a mechanism to explain this result: the effect of weather on agricultural production. We find that weather shocks decrease total harvested land and corn production. Third, we show that young and unwealthy workers are more sensitive to weather shocks. Lastly, we use our estimates to have a first glance at climate change's impact on migration. We find that climate change would increase illegal migration significantly.

Presented (by me or my coauthor) at: Academic Workshop on Sustainable Development in Latin America and the Caribbean at CAF; NYU.

#### **Other Information**

Programming Skills: Selected Courses:

Languages: Citizenships:

#### **References**

Professor Daniel Waldinger 19 West Fourth St., 6<sup>th</sup> Floor New York, NY 10012-1119 212-998-8967 (office) danielwaldinger@nyu.edu

Professor Christopher Flinn 19 West Fourth St., 6<sup>th</sup> Floor New York, NY 10012-1119 212-998-8967 (office) christopher.flinn@nyu.edu DSSAT, Git, Latex, MatLab, Python, R Sloan/Berkeley Summer School in Environmental and Energy Economics, 2022 English (proficient), Spanish (native) Italian, Uruguayan

> Professor Paul T. Scott 44 West Fourth St., 7<sup>th</sup> Floor New York, NY 10012-1119 347-844-3269 (mobile) pts3@stern.nyu.edu

> Professor Timothy Roeper 19 West Fourth St., 5<sup>th</sup> Floor New York, NY 10012-1119 212-998-8967 (office) tar310@nyu.edu