Jose Betancourt

Email:
jose.betancourtvalencia@yale.edu
GitHub: github.com/jbetancourt015
Website: jbetancourt.com

Education

Universidad de los Andes — Bogotá, Colombia
B.A. in Economics, B.Sc. in Physics — 2017–2022
Minors in Mathematics and Chinese Culture
Magna Cum Laude in Economics, Cum Laude in Natural Sciences
GPA: 4.75/5.00 and 4.71/5.00

Yale University — New Haven, CT, USA
Pre-doctoral Research Fellow — 2021–2023
Audited courses

Research Experience

Tobin Center - Yale University — New Haven, CT, USA
Predoctoral Research Assistant - Dynamic pricing and airline research project — Fall 2021 - Present

- Developed simulation and equilibrium-solving routines in Python for a project led professors Kevin Williams and Aniko Öry focused on competition in airline markets. Additionally, I assisted professors Williams and Öry with various other projects dealing with Big Data and game theoretical problems.

Universidad de los Andes — Bogotá, Colombia
Research Assistant - Homophily in student networks project — Spring 2021 - Summer 2021

- Assisted professor Tomás Rodríguez with data manipulation and theoretical aspects of network formation analysis.

Undergraduate Research Assistant - Inequalities in air quality project — Spring 2020 - Fall 2020

- Assisted professor Jorge Bonilla with data manipulation, evaluation of the economic impact of air quality and inequality index calculations.

Teaching Experience

Universidad de los Andes — Bogotá, Colombia
Teaching Assistant - Game Theory — Spring 2021

- Gave recitations to undergraduate students on game theory topics focused on economics.

Undergraduate Teaching Assistant - Econometrics 2 — Fall 2019

- Aided students in topics related to statistical theory, along with data manipulation and analysis.

Undergraduate Teaching Assistant - Physics Aid Center — Spring 2018 - Spring 2021

- Aided students with problems in the fields of Mechanics, Electromagnetism, Thermodynamics and Modern Physics.

Publications

1. **Betancourt, J. M.,** Rodríguez, F. J., Quiroga, L. & Johnson, N. F. Ladder of Loschmidt anomalies in the deep strong-coupling regime of a qubit-oscillator system. *Physical Review A* **104,** 043712 (Oct. 2021).
2. Mejía, G. M., **Betancourt, J. M.,** Forero, C. D., Avilán, N., Rodríguez, F. J., Quiroga, L. & Johnson, N. F. Dynamics of a round object moving along curved surfaces with friction. *American Journal of Physics* **88,** 229. ISSN: 0002-9505 (Feb. 2020).

Work in progress

- **Potential Games in Stochastic Network Formation Models**.
- **Dynamic Price Competition and Market Features**, with Aniko Öry and Kevin Williams.
- **The distributional effects of universal basic income: an agent-based approach**, with Juan Pablo Bonilla.
- **Public opinion dynamics in multiplex networks**, with František Kalvas, Stan Rhodes, Marjorie Cantine, Elizabeth Randolph, Elle Pattenden, Julien Otis-Laperriere, Ryan McGranaghan and Yunjo Lee.

Awards

- Otto de Greiff contest for best undergraduate thesis (Natural Sciences) - Nomination (2022).
- International Physicist's Tournament - **Best Opponent** (2021), Fifth Place (2021).
- Colombian Physics Olympiad, University category - First Place (2019)
- Colombian National Economics Olympiad - Second Place (2019)
- International Physics Olympiad - **Silver Medal** (2017), **Bronze Medal** (2016)
- American Junior Science Olympiad - Gold Medal (2016), Bronze Medal (2014)
- International Junior Science Olympiad - Silver Medal (2015), Bronze Medal (2014)
- Iberoamerican Physics Olympiad - Gold Medal (2015)

Languages

Spanish (Native), English (Fluent), German (Basic), Chinese (Basic).