






Jeisson Prieto

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EDUCATION

Ph.D.	<i>Applied Economics and Management</i>	Cornell University	2027 (expected)
M.Sc.	<i>Applied Mathematics</i>	Universidad Nacional de Colombia	2021
B.Eng.	<i>Computer and Systems Engineering</i>	Universidad Nacional de Colombia	2018

TOPICS AND FIELDS OF INTEREST

- Trade and Climate Change (i.e., climate change impact on maritime trade)
- Climate Change adaptation (i.e., Drought impacts on water use, Agri-food Supply Chains).
- Environmental and Resource Economics (i.e., Resource Allocation Problems, Food-Water-Energy nexus).
- Computational Sustainability (i.e., Agricultural Technology, Biodiversity Finance).

PUBLICATIONS

1. **Prieto, J.**, Malagón, R., Gomez, J., & León, E. (2021). [Urban Vulnerability Assessment for Pandemic Surveillance—The COVID-19 Case in Bogotá, Colombia](#). *Sustainability*, 13(6), 1-13.
2. Gomez, J., **Prieto, J.**, Leon, E., & Rodriguez, A. (2021). [INFEKTA—An agent-based model for transmission of infectious diseases: The COVID-19 case in Bogotá, Colombia](#). *PloS one*, 16(2), e0245787.
3. Pulido, C., **Prieto, J.**, & Gómez, F. (2019). [How The Social Interactions in Communities affect the Fear of Crime](#). *Systems Research and Behavioral Science*, 36(6), 789-798.
4. **Prieto, J.**, Gomez, J., & Leon, E. (2019). [Multi-objective evolutionary algorithm for DNA codeword design](#). In *Proceedings of the Genetic and Evolutionary Computation Conference* (pp. 604-611). ACM.
5. Gómez, F., **Prieto, J.**, Galvis, J., Moreno, F., & Vargas, J. (2019). [Identification of Super-Spreaders of Foot and Mouth Disease in the cattle transportation network: The 2018 outbreak case in Cesar \(Colombia\)](#). In *2019 4th World Conference on Complex Systems (WCCS)* (pp. 1-6). IEEE.
6. **Prieto, J.**, León, E., & Garzon, M. H. (2018). [Self-adaptive Evolutionary Algorithm for DNA Codeword Design](#). In *2018 IEEE Congress on Evolutionary Computation (CEC)* (pp. 1-8). IEEE.

WORK IN PROGRESS

1. Navigating Shallow Waters: The Economic Impact of Climate Change through Maritime Trade Disruptions in the Panama Canal (with Ariel Ortiz-Bobea).
2. Optimal Reservoir Control for Managing Conflicting Demands in the Panama Canal (with Ariel Ortiz-Bobea and Patrick M. Reed).
3. Quantifying Water Use Drivers in Agri-food Supply Chains: Integrating Supply Chain and Structural Decomposition Analysis. (with Miguel Gomez, Patrick Canning, and Sarah Rehkamp).
4. The Algorithmic Side of the INFEKTA Model for Transmission of Infectious Diseases. (with Jonatan Gomez, Arles Rodriguez, Elizabeth Leon, Duvan Pacheco, Haider Mayorga, and Omar Toledo).

CONFERENCES AND POSTERS

1. "mandatum: The Eco-Friendly Way of Shopping." In *the Doctoral Consortium on Computational Sustainability (CompSust DC 2019)*.
2. "Contiguity Networks as a Vulnerability Index for Foot-and-Mouth Disease in Cattle: The 2018 Outbreak Case in Cesar, Colombia." In International Seminar "On the threshold of Eradication of Foot-and-Mouth Disease: Pending Tasks, Pre-COSALFA 46. (Best Poster Award)
3. "Guidelines for the design of technological architectures in the context of fresh products supply chain." In IV Congreso Internacional Industria y Organizaciones, CIIO 2017.

HONORS & AWARDS

Postgraduate Fellowship in Doctoral Program 2022 - 2027
Cornell University, US.

Postgraduate Fellowship to the Best Student in Master Program 2019 - 2021
Universidad Nacional de Colombia, Colombia.

Best poster work, International Pre-COSALFA 46 Seminar Mar 2019
Centro Panamericano de Fiebre Aftosa (PANAFTOSA).

Best Undergraduate Thesis, Colombian National Contest Otto de Greiff Dec 2018
Universidad Nacional de Colombia, Colombia.

Best Undergraduate Thesis, Universidad Nacional de Colombia Jul 2018
Universidad Nacional de Colombia, Colombia.

RELEVANT WORK EXPERIENCE

Cornell University, Ithaca, NY, United States Sep 2022 - Present
Graduate Research Assistant

- Resource economics: Optimal reservoir management with conflicting demands.
- Climate change adaptation: Climate change effect in Developing Countries.
- Computational Sustainability: Resource use drivers in Agri-food supply chains.

mandatum.co, Miami, FL, United States. Feb 2021 - Present
Co-Founder and CTO

- Change e-commerce for the sustainability and economic benefit of merchants and shoppers.
- Develop web and mobile Social + Nature experience dashboards.
- Build an e-commerce platform's native apps to work with any online store.

Head of Data Science Sep 2018 - Feb 2021

- Create the most sustainable way for customers to shop for any product online.
- Develop web and mobile solutions that enable shoppers to opt-in for "solidary shopping."
- Provide consumers with information to help them decide on "The Right Price" using AI tools.

Universidad Nacional de Colombia, Bogotá, Colombia. Jul 2016 - Jul 2021
Teaching Assistance

- Professor of Basics of Computer Science - "Misión TIC 2022" (Spring 2021).

- Occasional professor of Computer programming (Spring 2020).
- Guided course of Agent-based models (Fall 2016, 2017, Spring 2018).

Graduate Research Assistant

Apr 2018 - Mar 2021

- Academic surveillance: Business Intelligence System for technology-based surveillance.
- Animal diseases: Vulnerable-based complex networks to identify highly critical regions.
- Security in Metropolitan Bogotá, Colombia: Predictive models of security.

Greenlight: Dairy Nutrition, Blacksburg, VA, USA.

Feb 2018 - Jan 2021

Data Analyst and software developer

- Implementation of mathematical models to support diet formulation.
- Development of optimization routines that aid in allocating nutrients in dairy farms.

LANGUAGES

- ***Spanish:*** Native tongue, ***English:*** Fluent, ***German:*** Basic.

REFERENCES

Ariel Ortiz-Bobea - (+1) 607 2550220 - ao332@cornell.edu

Associate Professor, Dyson School of Applied Economics & Management, Cornell University.

Miguel Gómez - (+1) 607 3517241 - mig7@cornell.edu

Robert G. Tobin Professor, Dyson School of Applied Economics & Management, Cornell University.

Jonatan Gómez - (+57) 311 8673805 - jgomezpe@unal.edu.co

Full Professor, Department of Engineering, Universidad Nacional de Colombia.