

Coralys M. Colón-Morales

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EDUCATION

- Ph.D. Industrial and Systems Engineering - *Candidate*** *August 2018 – present*
University of Florida (UF), Gainesville, FL
Advisor: Dr. Michelle Alvarado, GPA: 3.97
- M.S. Industrial and Systems Engineering** *May 2021*
University of Florida (UF), Gainesville, FL
- B.S. Industrial Engineering (Magna Cum Laude)** *June 2018*
University of Puerto Rico at Mayaguez (UPRM)

RESEARCH INTERESTS

My research interests include healthcare systems modeling, health data analytics, stochastic programming, and simulation. Current applications include:

- Data analytics on survey and subject data (IRB201900070) to understand the sources of health insurance information used by consumers to support their employer provided plan, and further support the development of decision aids.
- Integrated stochastic programming and simulation models applied to the scheduling of skin cancer surgeries with patient re-entrance.

EXPERIENCE

- Research Assistant** *August 2018 – present*
HEALTH-Engine Laboratory, University of Florida
Under supervision of Dr. Michelle Alvarado
- Supply Network Planning Coop** *Jan. 2018 – July 2018*
Ethicon LLC, Johnson & Johnson, Guaynabo, PR
- Teaching Assistant** *Aug. 2017 – Jan. 2018*
INN4040: “Facilities Planning and Design” Course
University of Puerto Rico at Mayaguez (UPRM)
Department of Industrial Engineering
- Lean Transformation Coop** *Aug. 2015 – Dec. 2015*
United Technologies (UTC) Aerospace Systems
Santa Isabel, PR
- Research Assistant** *Jan. 2015 – July 2015*
“Monitoring Effectiveness of SEA on Farmers from Dairy Farms”
University of Puerto Rico at Mayaguez (UPRM)
Under supervision of Dr. Betzabé Rodríguez

PROFESSIONAL AFFILIATIONS

- INFORMS (Fall 2019 – present)
 - Women of Color (WoC) in ORMS Community
 - Minorities Issues Forum (MIF)
- Industrial and Systems Engineering Graduate Student Organization (ISE GSO)
2019-2020: Recruitment Director
 - University of Puerto Rico at Mayaguez Virtual Career Fair 2020
 - University of Florida Spring Visit 2020
 - University of Florida Junior Preview 2020
 - University of Puerto Rico at Mayaguez Career Fair 2019
- Institute of Industrial and Systems Engineers (IISE)
2018: Member (UF)
- Industrial Engineering Honor Society Alpha Pi Mu (APM)
2017: President (UPRM) (3rd place Outstanding Chapter Award)
2016: Activities Coordinator (UPRM) (3rd place Outstanding Chapter Award)

PUBLICATIONS

Accepted

1. **Colón-Morales, C.**, Giang, W.C.W. and Alvarado, M., (2021) “Informed Decision-making for Health Insurance Enrollment, A Survey Study”. *Journal of Medical Internet Research (JMIR) Formative Research* 5(8):e27477; DOI: 10.2196/27477
2. Giang, W.C.W., Bland, E., Chen, J., **Colón-Morales, C.** and Alvarado, M., (2020) “User interactions with health insurance decision aids: A user study with retrospective think-aloud”. Submitted to *Journal of Medical Internet Research (JMIR) Human Factors* 8(4):e27628; DOI: 10.2196/27628
3. Marçal-Lopes, J., **Colón-Morales, C.** and Alvarado, M., (2020) “Optimization methods for large-scale vaccine supply chains: a rapid review”. Submitted to *Annals of Operations Research, Special Issue: Scalable Optimization and Decision Making in Operations Research*, DOI: 10.1007/s10479-022-04720-5

Conference Proceedings

4. **Colón-Morales, C.**, Giang, W.C.W. and Alvarado, M., “Effectiveness of Health Insurance Enrollment Decision Aids”. *Proceedings of the 2020 IISE Annual Conference*, pp. 1276-1281
5. Feng, H., Alvarado, M., Li, Z. and **Colón-Morales, C.**, “A Simulation Study of Outpatient Surgery Clinic with Patient Re-entrance”. Submitted to *Proceedings of the 2020 Winter Simulation Conference*, pp. 910-921; DOI: 10.1109/WSC48552.2020.9384110

PRESENTATIONS

1. **Colón-Morales, C.**, Alvarado, M., Feng, H. and Konda, S., “Appointment Scheduling of Skin Cancer Surgeries with Patient Re-entrance” *IISE Annual Conference and Expo, Orlando, FL. May 18-21, 2019*
2. **Colón-Morales, C.**, Alvarado, M. and Feng, H., “Scheduling of Skin Cancer Surgery Appointments with Patient Re-entrance” *INFORMS Healthcare, July 27-29, 2019*

3. **Colón-Morales, C.**, Giang, W.C.W. and Alvarado, M., “Effectiveness of Health Insurance Enrollment Decision Aids” *IISE Annual Conference and Expo, Nov. 1-3, 2020*
4. **Colón-Morales, C.** and Alvarado, M., “Skin Cancer Surgery Appointment Scheduling with Patient Reentrance” *INFORMS Annual Meeting, Nov 8-11, 2020*

AWARDS

- Graduate School Preeminence Award 2018
- Honorable Mention (2nd place) 2021 MIF Poster Competition at INFORMS Annual Meeting
- NSF Travel Grant (from Dr. Illya Hicks) to attend INFORMS Annual Meeting 2021

SERVICE TO PROFESSION

- UF Graduate School Recruitment (Spring 2019 – Spring 2021)
- Graduate student mentor for Summer Undergraduate Research at Florida (SURF) Program (Summer 2019)
- Mentor for undergraduate students:
 - Student research credits – Fall 2019
 - Honor’s Thesis student – Fall 2018
- Participated in the review process for Journal of Simulation (Fall 2019) and IISE (Spring 2020)

COMPUTER SKILLS

Microsoft Office, GAMS, R Studio, AMPL, Java, CPLEX, Simio, Arena, AutoCad, SketchUp

GRADUATE COURSES

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| - Systems Simulation | - Categorical Data Methods |
| - Lean Six Sigma Methodology | - Stochastic models and Analysis |
| - Fundamentals of Mathematical Programming | - Linear Programming and Network Optimization |
| - Applied Probability Methods | - Stochastic Programming |
| - Fundamentals of Probability and Statistical Theory | - Model and Methods for Health Systems Engineering |
| - Advanced Calculus I & II | - Data Mining with Social Data |
| - Machine Learning | |

LANGUAGES

- English (Advanced)
- Spanish (Native Proficiency)