

Daniel Romero Rodriguez

Assistant Professor of Data Science and Analytics
SUNY Poly, USA

Email: romerod2@sunypoly.edu – Phone: 7856157859

EDUCATION

Doctor of Philosophy in Industrial Engineering <i>University of South Florida, Tampa, Florida, United States.</i>	May 2018
Master of Science in Industrial and Systems Engineering <i>University of South Florida, Tampa, FL, United States</i>	Dec. 2016
Master of Science in Industrial Engineering <i>Universidad del Norte, Barranquilla, Colombia.</i>	Sep. 2010
Bachelor of Science in Industrial Engineering <i>Universidad del Norte, Barranquilla, Colombia.</i>	Sep. 2008

ACADEMIC EXPERIENCE

Assistant Professor Data Science and Analytics Master's program SUNY Polytechnic Institute	Since 2024
Assistant Professor Department of Industrial Engineering Universidad del Norte	2018-2024
Instructor and Teaching Assistant Department of Industrial and Management Systems Engineering University of South Florida	2013 – 2018
Assistant Professor Department of Industrial Engineering. Universidad Autonoma del Caribe, Colombia	2010 – 2016
Teaching Assistant Department of Industrial Engineering Universidad del Norte	2008-2010

COURSE AND CURRICULUM DEVELOPMENT

Curriculum Development and Academic Program Committees

- Ph.D. in Artificial Intelligence and Data Science
Committee Member, SUNY Polytechnic Institute
2024–Present
Engaged in the design and development of a new interdisciplinary doctoral program in Artificial Intelligence and Data Science. Program launch anticipated for Fall 2026.
- B.Sc. in Artificial Intelligence and Data Science
Co-Chair, Curriculum Development Committee, SUNY Polytechnic Institute
2025–Present
Leading efforts in the creation of a new undergraduate program in AI and Data Science. Responsible for coordinating curriculum design and academic planning. The program is expected to launch in Fall 2026.

Taught courses at SUNY Poly

Graduate Courses

- Data analytics tools (Online, Fall 2024)
- Big Data Analytics and Platforms (Online, Fall 2024, Fall 2025)
- Visual analytics and Communication (in-person and online, Spring 2025, Summer 2025)
- Intro to Machine Learning (Fall 2025)

Taught courses at Universidad del Norte

Graduate Courses

- Data Science and Analytics (Spring 2023, Fall 2024, Spring 2025)
- Big Data Analytics (Fall 2025)
- Optimization (Fall 2023, Fall 2024)
- Final Project (Fall 2023, Spring 2024, Fall 2024)
- Demand Planning and Inventory Management (Fall 2023)

Undergraduate Courses

- Data Analysis I (*Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020*)
- Data Analysis II (Spring 2019-Fall 2024)
- Information Systems Design (Spring 2023)
- Quantitative methods for decision making (Fall 2022)

Taught courses at the University of South Florida

- Engineering Economics (Summer 2014, Summer 2015, Summer 2016, Summer 2017, *Spring 2018*)
- Engineering Foundations
- Simulation (*Fall 2013, Fall 2014*)

Taught courses at Universidad Autonoma del Caribe

- Operations Research I (Fall 2010, Spring 2011, Fall 2011, Spring 2012)
- Operations Research II (Spring 2012, Fall 2012, Spring 2013)
- Supply Chain Management (Fall 2013, Spring 2013, Fall 2014, Spring 2015, Fall 2015, Spring 2016)
- Production Control and Planning

TEACHING TRAINING

Certificate in College Pedagogy	2018
CEDU - Universidad del Norte	

RESEARCH TRAINING

Data Science for All (DS4A). Graduated with honors	2021
Correlation One. Funded by the Colombian Ministry of Technology	

Graduate Certificate in Global Logistics	2010
Massachusetts Institute of Technology	

PUBLICATIONS IN REFEREED JOURNALS

González-Solano, F., **Romero-Rodriguez, D.**, & Galindo-Pacheco, G. (2025). A Bayesian network and DEMATEL-ISM based approach for evaluating resilience: A case study in inland waterway port. *Ocean & Coastal Management*, 270. <https://doi.org/10.1016/j.ocecoaman.2025.107881>

Ardila-Rueda, W., Savachkin, A., **Romero-Rodriguez, D.**, & Navarro, J. (2025). Balancing the costs and benefits of resilience-based decision making. *Decision Support Systems*, 114425.

González-Solano, F., Galindo, G., González-Ramírez, R. G., López-Ospina, H., & **Romero-Rodriguez, D.** (2024). Prioritizing port resilience drivers and strategies: a case study of Chilean ports. *Maritime Policy & Management*, 1–25. <https://doi.org/10.1080/03088839.2024.2409242>

Romero D Walter Silva, Alex Savachkin, Tapas Das & Julio Daza (2022) Resilience as a measure of preparedness for pandemic influenza outbreaks, *Health Systems*, DOI: [10.1080/20476965.2022.2062462](https://doi.org/10.1080/20476965.2022.2062462)

Galindo G, Navarro J, Reales J, Castro J, **Romero D**, Rodriguez A. S, et al. (2022) Immigrants resettlement in developing countries: A data-driven decision tool applied to the case of Venezuelan immigrants in Colombia. *PLoS ONE* 17(1): e0262781. <https://doi.org/10.1371/journal.pone.0262781>

Chams-Anturi, O., Soto-Ferrari, M., Gomez, A., Escorcía-Caballero, J., & **Romero-Rodriguez, D.**, & Casile, M. (2022). A Comprehensive Business Process Management Application to Evaluate and Improve the Importations Practices on Big-box Stores. *Operations and Supply Chain Management: An International Journal*, 15(2), 164-173.

Soto Ferrari, M, **Romero Rodriguez, D**, Escorcía Caballero, J, Daza Escorcía, J y Chams-Anturi, O. (2021). A discrete-event simulation approach to assess the benefits of parking technologies in hospitals. *International Forum of Management Scholars (INFOMS)*

Romero-Rodriguez, D., Savachkin, A., Ardila-Rueda, W., Sierra-Altamiranda, A., Daza-Escorcía, JM. (2019). Multi-Stage Recovery Resilience: A Case Study of the Dique Canal. In: Paternina-Arboleda, C., Voß, S. (eds) *Computational Logistics. ICCL 2019. Lecture Notes in Computer Science*, vol 11756. Springer, Cham. https://doi.org/10.1007/978-3-030-31140-7_2

PEER REVIEWED BOOK CHAPTERS

Savachkin, A., Ardila-Rueda, W., **Romero-Rodriguez, D.**, Hua, K., Cruz, J.N.D.L. (2025). Assessment and Optimization of System Resilience: A Critical Review. In: Borowik, G., Chmaj, G., Waszkowski, R. (eds) Models and Methods for Systems Engineering. Studies in Big Data, vol 165. Springer, Cham. https://doi.org/10.1007/978-3-031-76440-0_20

González-Solano, F., Galindo-Pacheco, G., **Romero-Rodríguez, D.** (2023). Analysis of Failure Modes and Port Disruptions in Port Terminal Operations: A Case Study in the Port Area of Barranquilla, Colombia. Supply Chain Management Strategies and Methodologies. Lecture Notes in Logistics. Springer, Cham. https://doi.org/10.1007/978-3-031-32032-3_9

PRESENTATIONS

Using Disruption Intensity to Measure System Resilience. INFORMS Annual Meeting, Seattle, 2024.

A Data-driven Algorithm To Relocate Immigrants: A Challenge With Data Changes And Concept Drift. INFORMS Annual Meeting, Phoenix, AZ. 2023

A Bi-objective model for system resilience. INFORMS Annual Meeting, Houston, 2017.

MANUSCRIPTS IN PROGRESS

Romero D, Jubiz M.A, Llinas B. An Analytical Framework to Assess Students' Resilience Using Bayesian and Markov Chain Analysis. Expected submission Jan-2026

Navarro J, **Romero D**, Galindo G. A framework for supply chain resilience during a pandemic. Expected submission Feb-2026

Romero D., Pal, A., Savachkin, A. Strategic Budget Allocation to Maximize Resilience Capabilities: A Multi-Objective Approach. Manuscript in preparation

Romero D. Imbalanced classification algorithms and strategies evaluation: A comparative analysis.

HONORS, AWARDS, AND FELLOWSHIPS

Industrial and Management Systems Engineering Innovative Teaching Award, USF	2018
Teaching award of excellence, Universidad del Norte	2011
Distinguished student in Industrial Engineering, Universidad del Norte	2008

BOOKS

Santander-Mercado, A., Amaya, J., **Romero D** and Vilorio, C. (2014) "Diseño de Cadenas de Suministros Resilientes". Ediciones Uninorte and Ediciones de la U. ISBN 978-578-741-441-7. pp. 114.

PROJECTS AND GRANTS

(*Team leader)

Date: 2019 - 2022

Funding: peer cycle 8 NSF, USAID and NAS

Position: Researcher responsible for data science and optimization tools

Project Name: Voluntarily immigrant redistribution to increase socio-economic integration.

Description: Develop a predictive model to identify the location in Colombia where immigrants have higher chances to get a job and succeed.

Date: 2014 - 2015

Funding: Colciencias

Position: Researcher responsible for resilience metrics definition

Project Name: "Design of resilient and reliable agricultural supply chains"

Date: 2010 - 2011

Funding: Colciencias

Position: Researcher

Project Name: Design and implementation of a management model for improving the operational efficiency of global Logistics Service (MLS) and Comercial Plastider S.A, an agreement between Universidad Del Norte and Colciencias.

Date: 2009 - 2011

Funding: Colciencias - Fundación Universidad del Norte

Position: Researcher responsible for mathematical models design

Project Name: Resilient and reliable supply design

Date: 2008 - 2010

Funding: Colciencias

Position: Researcher

Project Name: Methodology for the Diagnosis of Demand Amplification in Lab Rymco S.A., agreement between Universidad Del Norte, Incubar del Caribe, Atlantico Government and Colciencias.

COMMUNITY OUTREACH

University of South Florida Engineering Expo: a student-run organization that disseminates Engineering and Sciences to K 12 students: http://expo.eng.usf.edu/	2015-2018
---	-----------

Great American Teach-in to promote Industrial Engineering in high schools.	2017
--	------

Teach Math in elementary school to reinforce learning in low-income public schools. Program of Professional Excellence (PEP)	2007
---	------

SKILLS & INTERESTS

Technical: Data Analytics, Optimization, Computer Simulation (discrete-event simulation), Mathematical Programming (linear, integer, and mixed-integer programming)

Research: Data Science, Machine Learning, Supply Chain Resilience, Physical-Social-Cyber systems Resilience

Software: Python, R, Arena, MATLAB

Language: fluent in English and Spanish (native)

REFERENCES

Jose Zayas Castro
NSF Division Director of Engineering Education and Centers
National Science Foundation
USA
Ph: (703) 292-8220
Email: josezaya@usf.edu

Alex Savachkin, Ph.D
Associate Professor & Graduate Director
Department of Industrial and Management Systems Engineering
University of South Florida
Tampa, Florida 33620
Ph:(813) 974-5577
email: alexs@usf.edu
URL: <http://imse.eng.usf.edu>

Carlos Paternina, Ph.D
Assistant Professor
Department of Industrial Engineering
San Diego State University
San Diego, USA
Ph: +1 619-594-2124
email: cpaternina@sdsu.edu