

**CARLOS IVAN
RIVERA-GONZÁLEZ**

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EDUCATION

- Rensselaer Polytechnic Institute** Troy, NY
- Ph.D. in Transportation Engineering Spring 2022
Dissertation Title: A Mathematical Model for Freight-Efficient Land Use Planning
 - M.S. Economics May 2021
- Universidad de Los Andes** Bogota, Colombia
- M.S. Civil Engineering with emphasis on Transportation Engineering June 2015
Thesis Title: Transit Systems as Generators of Urban Accessibility: Soacha, Colombia
 - B.S. Civil Engineering June 2013
Thesis Title: Diseño de Redes de Drenaje Urbano-Comparación de Diseños Tradicionales Versus Diseños Futuros
- Universidad Católica de Chile** Santiago, Chile
- International student exchange program Spring 2015

RESEARCH AND TECHNICAL EXPERIENCE

University of New Mexico Albuquerque, NM
Assistant Professor August 2024- Current

University of Toronto Toronto, Canada
Post-Doctoral Fellow July 2022- July 2024

- Project manager: *Smart Freight Centre's Freight Data Warehouse*. Developed by the University of Toronto, McMaster University, York University, and Toronto Metropolitan University. PI. Matthew Roorda
- Project manager: *City Logistics for Urban Economy*. Developed by University of Toronto, McMaster University, York University, public sector partners (The Region of Peel, York Region, City of Toronto, and Transport Canada), and industry sector partners (Robert Bosch Inc., CHET, Esri Canada, Geotab Inc.). Funded by Natural Sciences and Engineering Research Council of Canada (NSERC). Project funding: 5.3 million Canadian dollars (direct funding), and 5.4 million Canadian dollars (in-kind contributions). PI. Matthew Roorda.
- Lead: *Visualizing Greenhouse Gases and Air Contaminants on the GTHA Freeways*. Funded by Transport Canada. Project funding: 10,000 dollars. PI. Matthew Roorda
- Lead: *Dashboard Visualization of GHGs and Air Contaminants on the GTHA Freeways*. Funded by Transport Canada. Project funding: 10,000 dollars. PI. Matthew Roorda
- Principal Investigator: *Transforming Urban Logistics: Demand-Centric Policy Impacts on Freight Efficient Land-Uses*. Funded by the Volvo Research and Educational Foundations (VREF) and the Urban Mobility program of the World Resources Institute (WRI) Ross Center for Sustainable Cities. Project funding: 10,000 dollars (direct funding), and 10,000 dollars (in-kind contributions).

Rensselaer Polytechnic Institute
Graduate Researcher

Troy, NY
2017 – May 2022

- Co-lead: *Collaborative Approaches to Foster Energy-Efficient Logistics in the Albany-New York City Corridor*. Funded by the Department of Energy (DoE). Project funding: 2 million dollars. PI. Jose Holguin-Veras
- Co-lead: *Effective Decision-Making Methods for Freight-Efficient Land Use*. Funded by National Cooperative Highway Research Program (NCHRP). Project funding: 500,000 dollars PI. Jose Holguin-Veras
- Team member: *Off-Hour Delivery Trusted Vendor Program*. Funded by The New York State Energy Research and Development Authority (NYSERDA). PI. Jose Holguin-Veras
- Team member: *Bangladesh Freight Study Impacts of Congestion on Logistic Costs*. Funded by The World Bank Group. PI. Jose Holguin-Veras

Secretaría Distrital de Planeación
Consultant

Bogota, Colombia
September to December 2016

- Team member: *Preliminary Studies for the Revision of Bogota's Transportation Master Plan*. Funded by Secretaría Distrital de Planeación de Bogota

Universidad de Los Andes
Graduate Researcher and Consultant

Bogota, Colombia
2013 – June 2016

- Co-lead: *Development of a Land Use Transportation Integration (LUTI) Model for the Metropolitan Area of Bogota*. Funded by Secretaría Distrital de Planeación de Bogota. P.I. Juan Pablo Bocarejo Suecun
- Co-lead: *Assessing Accessibility and Transport Subsidies in Bogota*. Funded by the World Bank Group. P.I. Juan Pablo Bocarejo Suecun
- Team member: *The Access as a Determinant Variable on Residential Location Choice of Low-Income Households in Bogotá*. Funded by Lincoln Institute of Land Policy. P.I. Juan Pablo Bocarejo Suecun

Universidad Católica de Chile
Graduate Researcher

Santiago, Chile
Spring 2015

- Team member: *Studies & Capacity Building of Bus Rapid Transit (BRT)*, developed by the BRT Centre for Excellence and the China Urban Transport Research Centre (CUSTREC). P.I. Juan Carlos Muñoz Abogabir

TEACHING EXPERIENCE, MENTORING, AND SUPERVISION ACTIVITIES

University of New Mexico
Instructor

Albuquerque, NM
Fall 2024

- Instructor of CE 382 Transportation Engineering class.

University of Toronto
Seasonal Instructor

Toronto, Canada
Spring Semester-2023

- Seasonal instructor of the grad-level class: *Freight Transportation and ITS Applications*.

University of Toronto
Post-Doctoral Fellow

Toronto, Canada
July 2022- Present

- Co-supervise two graduate and one undergraduate student as part of the project manager role for the *Smart Freight Centre's Freight Data Warehouse*
- Certificate of *Teaching in Higher Education*. Spring Semester 2023

Rensselaer Polytechnic Institute
Graduate Researcher

Troy, NY
2017 – May 2022

- Teaching assistant for the following classes: *Introduction to Civil Engineering* (one time), *Introduction to Transportation Engineering* (one time), *Capstone Project* (two times), and *Transportation Planning* (three times)
- Co-supervised three undergraduate students as part of their undergraduate research program

Universidad de Los Andes
Graduate Researcher and Consultant

Bogota, Colombia
2013 – June 2016

- Teaching assistant for the class *Forecasting Demand*. Fall semester 2015

GRANTS AWARDED

1. Co-investigator/project manager: Smart Freight Centre year 5. Total Funding: 80,000 CAD. Funding Agency: Region of Peel
2. Co-investigator/ project manager: Visualizing GHGs and Air Contaminants on GTHA Freeways. Total Funding: 10,000 CAD. Funding Agency: Transport Canada
3. Co-investigator/ project manager: Dashboard Visualization of GHGs and Air Contaminants on the GTHA Freeways. Total Funding: 10,000 CAD. Funding Agency: Transport Canada
4. Principal Investigator: Transforming Urban Logistics: Demand-Centric Policy Impacts on Freight Efficient Land-Uses. Total funding: 10,000 dollars (direct funding), and 10,000 dollars (in-kind contributions). Funding agencies: Volvo Research and Educational Foundations (VREF) and the Urban Mobility program of the World Resources Institute (WRI) Ross Center for Sustainable Cities.

PUBLICATIONS AND PRESENTATIONS

Refereed Journal Articles

1. Holguín-Veras, J., Amaral, J. C., & **Rivera-Gonzalez, C.** (2024). Using GPS Data to Assess the Effectiveness of Freight Demand Management Strategies. *Transportation Research Procedia*, 79, 21-28.
2. **Rivera-Gonzalez, C.**, & Amaral, J. C. (2024). Assessment of freight accessibility in New York City: A spatial-temporal approach. *Journal of Transport Geography*, 114, 103777.
3. **Rivera-Gonzalez, C.**, Holguin-Veras, J., Calderon, O. (2023). Supply-Chain-Focused Measures of Centrality and Spread in Metropolitan Areas. *Journal of Transport Geography*, 107, 103553
4. Arrieta-Prieto, M., Ismael, A., **Rivera-Gonzalez, C.**, & Mitchell, J. (2022). Location of Urban Micro-consolidation Centers to Reduce Social Cost of Last-Mile Deliveries of Cargo: A Heuristic Approach. *Networks* 79 (3), 292-313
5. Magalhaes, D.A., **Rivera-Gonzalez, C.** (2021). Car Users Attitudes Towards a Novel Bus System to Mitigate Urban Congestion in a Developing Country. *Transportation Policy*, 110, 452-464
6. Guzman, L. A., Oviedo, D., & **Rivera, C.** (2017). Assessing Equity in Transport Accessibility to Work and Study: The Bogotá Region. *Journal of Transport Geography*, 58, 236-246.
7. Guzman, L. A., Gomez, A. M., & **Rivera, C.** (2017). A Strategic Tour Generation Modeling within a Dynamic Land-Use and Transport Framework: A Case Study of Bogotá, Colombia. *Transportation Research Procedia*, 25, 2536-2551.

8. Bocarejo, J. P., Guzman, L. A., Portilla, I., Meléndez, D., Gómez, A. M., & **Rivera, C.** (2017). Access as a Determinant Variable in the Residential Location Choice of Low-income Households in Bogotá. *Transportation Research Procedia*, 25, 5121-5143.
9. **Rivera-Gonzalez, C.**, Holguin-Veras, J. (2023). A Facility Location Problem with Freight Tour Distribution to Support Freight-Efficient Land Use Planning. *Transportation Research Part A: Policy and Practice* (paper under review)
10. **Rivera-Gonzalez, C.**, Feng, Z., Bayanouni, H., Roorda, M. (2024) A Freight Data Repository as Foundational Pillar for Sustainable Urban Freight Research. *Transportation Research Record* (paper under review)
11. **Rivera-Gonzalez, C.**, Ahmed, U., Roorda, M.. (2024) The Evolving Landscape of Urban Logistics: A Study of the Greater Toronto and Hamilton Area. *Journal of Transport Geography* (paper under review)

Refereed Book Chapters

1. Holguín-Veras, J., **Rivera-González, C.**, Caron, B., Amaral, J. C., & Ismael, A. (2023). Integrated transportation and land-use program to improve metropolitan freight system performance. Chapter 2, 35-58.
2. Holguín-Veras, J., Ramírez-Ríos, D., Encarnación, T., Gonzalez-Feliu, J., Caspersen, E., **Rivera-González, C.**, ... & da Silva Lima, R. (2019). Metropolitan Economies and the Generation of Freight and Service Activity: An International Perspective. *Urban Logistics: Management, Policy and Innovation in a Rapidly Changing Environment*. M. Browne, S. Behrends, J. Woxenius, G. Giuliano and J. Holguín-Veras, Kogan Page Limited: 19-51.

Reports

1. **Rivera-Gonzalez, C.**, Klimczak, J., Roorda, M. (2024) Dashboard Visualization of GHGs and Air Contaminants on the GTHA Freeways
2. **Rivera-Gonzalez, C.**, Roorda, M. (2023) Visualizing GHGs and Air Contaminants on GTHA Freeways
3. National Academies of Sciences, Engineering, and Medicine. (2022). *Planning Freight-Efficient Land Uses: Methodology, Strategies, and Tools*.
4. Dappe, M. H., Kunaka, C., Lebrand, M., & Weisskopf, N. (2019). *Moving forward: Connectivity and logistics to sustain Bangladesh's success*. World Bank Publications.
5. Wang, X. C., Schmid, J., **Gonzalez, C. R.**, Rios, D. R., Miller, M., Marino, A., & Gensler, K. (2018). *Investigating Public Opinions towards Emerging Transportation Technologies and Service Forms*.
6. Guzmán, L., Oviedo, D., **Rivera, C.**, & Cárdenas, S. (2016). *Accessibility, affordability and poverty: Assessing public transport subsidies in Bogota*. Bogotá: The World Bank.

Selected Presentations and posters (24/33)

1. **Rivera-Gonzalez, C.**, Ahmed, U., Roorda, M.(2024). Evolving Landscape of Urban Logistics: A Study of the Greater Golden Horseshoe, Presentation at the World Society for Transport and Land Use Research.
2. **Rivera-Gonzalez, C.**, Ziang, F., Bayanouni, H., Carr, K., Roorda, M.J. (2024). A Freight Data Repository as Foundational Pillar for Sustainable Urban Freight Research. *Green Logistics for Greener Cities*. Szczecin (Poland). May 22-24.
3. **Rivera-Gonzalez, C.**, Roorda, M.(2024). Transforming Urban Logistics: Demand-Centric Policy Impacts on Freight Efficient Land-Uses. 59th Annual Conference of the Canadian Transportation Research Forum. Kelowna. May 12-15.
4. Klimczak, J., **Rivera-Gonzalez, C.**, Roorda, M.(2024). Gridlock in the Dugout. 59th Annual Conference of the Canadian Transportation Research Forum. Kelowna. May 12-15.
5. **Rivera-Gonzalez, C.**, Roorda, M.(2024). Transforming Urban Logistics: Demand-Centric Policy Impacts on Freight Efficient Land-Uses., Presentation at Transforming Transportation 2024, Washington D.C.
6. **Rivera-Gonzalez, C.**, Roorda, M.(2024). Transforming Urban Logistics: Demand-Centric Policy Impacts

on Freight Efficient Land-Uses., Poster at First Connections to Sustain Science in Latin America Symposium, Barranquilla, Colombia.

7. **Rivera-Gonzalez, C.**, Ahmed, U., Roorda, M.(2024). Evolving Landscape of Urban Logistics: A Study of the Greater Golden Horseshoe, Poster at Transportation Research Board, Washington, D.C.
8. **Rivera-Gonzalez, C.**, Holguin-Veras, J., Calderon, O.(2024). Distribution of Economic Activities and Freight Trips in Metropolitan Areas., Poster at Transportation Research Board, Washington, D.C.
9. **Rivera-Gonzalez, C.**, Coutinho, J. (2023). Assessment of Freight Accessibility in New York City: A Spatial-Temporal Approach. World Conference in Transportation Research. Montreal. July 16-21.
10. **Rivera-Gonzalez, C.**, Holguín-Veras, J. (2023). A Facility Location Problem with Freight Tour Distribution to Support Freight-Efficient Land Use Planning. World Conference in Transportation Research. Montreal. July 16-21.
11. Holguin-Veras, J.,Coutinho, J., **Rivera-Gonzalez, C.**(2023). The Effect of Time of Travel on the Performance of Port Related Truck Traffic. World Conference in Transportation Research. Montreal. July 16-21.
12. **Rivera-Gonzalez, C.**, Ziang, F., Bayanouni, H., Carr, K., Roorda, M.J. (2023). A Freight Data Repository as Foundational Pillar for Sustainable Urban Freight Research. 58th Annual Conference of the Canadian Transportation Research Forum. Toronto. May 8-10.
13. **Rivera-Gonzalez, C.**, Roorda, M.J. (2023). A Freight Emissions Monitoring Approach for Freeways in the GTHA. 2nd City Logistics for Urban Economy Symposium. Toronto. May 11.
14. Holguin-Veras, J., **Rivera-Gonzalez, C.** Caron, B., Calderon, O. (2022). Econometric Characterization of Spatial Distribution of Urban Freight Generation. Presentation at International Urban Freight Conference, Long Beach
15. Holguin-Veras, J., **Rivera-Gonzalez, C.**, Calderon, O., Schmid, J. (2022). Supply-chain-focused measures of centrality and spread in metropolitan areas. Presentation at International Urban Freight Conference, Long Beach
16. Holguin-Veras, J.,Coutinho, J., **Rivera-Gonzalez, C.** (2022). Characterization of the geographic patterns of fuel consumption and emissions of freight vehicles in the Albany-New York City Corridor. Presentation at International Urban Freight Conference, Long Beach
17. **Rivera-Gonzalez, C.** (2022). A Mathematical Model for Freight-Efficient Land Use Planning, Presentation at the Transportation Research Board, Washington, D.C.
18. Holguin-Veras, J.,Coutinho, J., **Rivera-Gonzalez, C.**(2022). The Effect of Time of Travel on the Performance of Port Related Truck Traffic, Poster at Transportation Research Board, Washington, D.C.
19. Holguin-Veras, J., **Rivera-Gonzalez, C.**, Perez-Guzman, S. (2021). Metrics to Understand the Influence of Land Use Policy of Freight Efficiency, Presentation at 4th VREF Conference on Urban Freight, Gothenburg
20. **Rivera-Gonzalez, C.**, Amaral, J. (2021). Assessment of Freight Accessibility in New York City: A Spatial-Temporal Approach, Presentation at 4th VREF Conference on Urban Freight, Gothenburg
21. Holguin-Veras, J., **Rivera-Gonzalez, C.**, Schmid, J. (2020). Centrality and Measures of Spread to Characterize Metropolitan Statistical Areas, Poster at Transportation Research Board, Washington, D.C.
22. Holguin-Veras, J., Encarnacion, T., **Rivera-Gonzalez, C.** (2019). Estimating fuel consumption and environmental pollution of freight activities from GPS data, Presentation at International Urban Freight Conference, Long Beach
23. Holguin-Veras, J., **Rivera-Gonzalez, C.** (2019). Spatial Patterns of Freight Intensive Sectors, Presentation at International Urban Freight Conference, Long Beach
24. Holguin-Veras, J., **Rivera-Gonzalez, C.** (2019). Effective Decision-Making Methods for Freight-Efficient Land Use, Presentation at VREF Ph.D. Students and Younger Researchers Workshop, Fortaleza (Brazil)
25. Arrieta-Prieto, M., Ismael, A., **Rivera-Gonzalez, C.** (2018). Bi-Level Optimization Method to Minimize Externalities by Means of Eco-Transfer Areas in Urban Cores, Presentation at The Institute for Operation Research and the Management Sciences, Phoenix.

Working Papers

1. **Rivera-Gonzalez, C**, Roorda, M. Transforming Urban Logistics: Demand-Centric Policy Impacts on Freight Efficient Land-Uses
2. Holguin-Veras, J., Coutinho, J., **Rivera-Gonzalez, C**. The Effect of Time of Travel on the Performance of Port-Related Truck Traffic

ADDITIONAL EXPERIENCE, AWARDS, SKILLS, AND INTERESTS

Reviewer for the Following Academic Journals

1. Journal of Transport Geography
2. Transportation Research Part A: Policy and Practice
3. Transportation Research Part D: Transport and Environment
4. Transportation Research Part E: Logistics and Transportation Review
5. Transport Reviews
6. Networks and Spatial Economics
7. Transportation Research Record
8. Journal of Urban Planning
9. Research in Transportation Business and Management
10. Transportation Planning and Technology

Awards, Skills, and Interests

- Lee Schipper Memorial Scholarship 2023 winner—awarded by the Volvo Research and Educational Foundations (VREF) and the Urban Mobility program of the World Resources Institute (WRI) Ross Center for Sustainable Cities. Link: <https://vref.se/lee-schipper-scholarship/>
- Future faculty workshops:
 - Purdue University selected me as a TrailBlazer in Engineering (TBE) fellow in 2023. Link: <https://engineering.purdue.edu/Engr/Trailblazers>
 - Northeastern University selected me to participate in the 2023 New England Future Faculty Workshop. Link: <https://faculty.northeastern.edu/advance/faculty-recruitment/future-faculty-workshop/>
- Committee member for the Standing Committee on Urban Freight Transportation (AT025) for the Transportation Research Board
- Committee member for *Freight Transportation and Logistics* for the Pan-American Society of Transportation Research
- Committee member for *Transport Planning and Management* for the Pan-American Society of Transportation Research
- Co-Chair for the 2024 CLUE Symposium (2024, May 30). Toronto, Canada.
- Co-Chair for the Fifth Smart Freight Centre Symposium (2023, November 10). Toronto, Canada.
- Nomination by the University of Toronto for the Banting Fellowship Award (2022)
- Supply Chain Data Analytics Competition winner - Hosted by the Quinlan School of Business at Loyola University Chicago. Link: <https://news.rpi.edu/approach/2021/04/21>
- Lee Schipper Memorial Scholarship 2021 Honorable Mention
- Finalist in the Traffic Control Device Channel 2022 at the Transportation Research Board
- RPI article related to my Ph.D. Journey. Link: <https://everydaymatters.rpi.edu/engineering-a-better-community-carlos-rivera/>
- Vice-president of Women Transportation Seminar RPI chapter. Academic year 2020
- Treasurer of Women Transportation Seminar RPI chapter. Academic years 2018, 2019, 2021
- Languages: Spanish (native), English (fluent)