

Roberto Ponce Lopez, PhD.

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EDUCATION

August 2012 – Sept. 2018	Massachusetts Institute of Technology (MIT) Ph.D. in Urban Studies and Planning <ul style="list-style-type: none">Fields of specialization: 1) Urban Information Systems; 2) Land Use – Transportation Interaction Models	Cambridge, MA
August 2010 – May 2012	Carnegie Mellon University (CMU) MSc. in Public Policy and Management. Graduated with highest distinction	Pittsburgh, PA
August 1999 – May 2004	Instituto Tecnológico Autónomo de México (ITAM) B.A. in Political Science. Graduated with honors	Mexico City

RELEVANT WORK AND RESEARCH

Sept. 2018 - Current	Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM)- School of Government and Public Transformation Researcher and Assistant Professor <ul style="list-style-type: none">Researching and teaching on Urban Information SystemsGained a \$50,000 USD grant from FEMSA Foundation to conduct the research <i>The Economic Cost of Urban Sprawl in Monterrey</i>Gained a \$60,000 USD grant from the Municipality of Veracruz to construct a long-term plan of urban development, including zoning specifications and land use regulations.Leader and founder of the www.mexicovid19.mx data visualization initiative to communicate the evolution of the COVID-19 pandemic in Mexico.	Monterrey, Mexico
Feb. 2017 – Aug. 2018	Research Assistant, Singapore – MIT Alliance (SMART), Future Mobility <ul style="list-style-type: none">Algorithm programming for the microsimulation Agent Based Model platform of SimMobilityUsed cellphone records to identify hot spots of activity in Singapore.Mined a database of 11 million transit records to explore the spatial dimensions of destination choice in transportation models	Cambridge, MA
Nov. 2016- Feb. 2017	Data Visualization Lead, Constitutional Studies Center, Supreme Court of Mexico <ul style="list-style-type: none">Worked as an external consultant to develop a set of seven web-based interactive visualizations to illustrate the changes of the Mexican constitution over the last 100 years. Used the library of D3 in JavaScript, combined with HTML and CSS.	Mexico City
July 2016- January 2017	Researcher, SMART, Future Mobility <ul style="list-style-type: none">Algorithm programming for the microsimulation Agent Based Model platform of SimMobilityDeveloped a virtual city for micro-simulation. Researched on non-work destinations in Singapore and the link between place desirability measured as number of non-work destinations and housing prices.	Singapore
January 2015 – July 2016	Research Assistant, SMART, Future Mobility	Cambridge, MA, USA

- Calibrate a bidding model to estimate willingness to pay for housing, which is the core component of a Land Use and Transportation Integrated model (LUTI)
- Build a hedonic model from housing transactions to forecast prices of housing
- Estimate screening probabilities for a household moving to new residential units using discrete choice models
- Extensive use of QGIS, PostreSQL, PostGIS, R, and D3.

May 2011 – Jul 2011 **Team Leader – Needs Assessment and Evaluation Lead.** Montevideo, Uruguay
TechBridgeWorld Organization

- Conduct focus groups and in depth interviews for 10 weeks in Montevideo to identify implementation challenges of the One Laptop-Per-Child platform, a program of free laptops targeting low income students of elementary school

January 2010 – July 2010 **Associate Director of Research, Office of the President of Mexico** Mexico City, Mexico

- Lead a team of 12 analysts and researchers from different backgrounds; oversee directors and manage them
- Conduct more than 120 focus groups and 50 polls to measure the impact of Federal Government's public policies on citizens' political attitudes
- Evaluate and assess effectiveness of public policies

Sept. 2009 – January 2010 **Director of GeoStatistics, Office of the President of Mexico** Mexico City, Mexico

- Combine Geographic Information Systems and Statistics to construct a cluster Mexico's municipalities according to their poverty level, infrastructure endowment, and degree of accessibility to markets

January 2007 – Sept. 2009 **Sub Director of GeoStatistics, Office of the President of Mexico** Mexico City, Mexico

- Map the spread and geographic contagion pattern of the flu virus, during the influenza emergency of 2009
- Draw maps for displaying social demographic indicators

Feb. 2003 – Aug. 2003 **Research Assistant, Instituto Nacional de Estudios Históricos de las Revoluciones de México (INEHRM)** Mexico City, Mexico

- Document through historical archives the epistolary correspondence between Mexican intellectual Alfonso Reyes and other public figures from the mid-twenty century. Work for Dr. Javier Garcíadiego

TEACHING EXPERIENCE

Spring 2020	Introduction to Programming for Social Scientists	Tecnologico de Monterrey
Spring 2019	Smart Cities and Urban Land Markets. Graduate Level. 30 hours course.	Tecnologico de Monterrey
Spring 2019	Scenario Modeling: Data Analytics. Graduate Level. 30 hours.	Tecnologico de Monterrey
Spring 2019	Research Design Seminar. Doctoral Level. 45 hours course.	Tecnologico de Monterrey
Fall 2017	Teaching Assistant, Urban Analytics and Spatial Data Management. 40 hours course.	Massachusetts Institute of Technology (MIT)
Summer 2017	Professor, Applications of Big Data in Urban Studies. 40 hours course.	Colegio de Mexico
Spring 2017	Teaching Assistant, Land Use and Transportation Planning. Prof. Christopher Zegras. Graduate level. Full term course.	MIT
Fall 2015	Professor, Theories of Urban Form. Graduate Level. 40 hours course. School of Architecture and Design.	Universidad Michoacana de San Nicolás (UMSNH)
Summer 2015	Laboratory Assistant, Demand Modelling. Prof. Moshe Ben-Akiva. Executive Education Program. 1-week course. Department of Civil Engineering.	MIT

Spring 2015	Teaching Assistant, Accounting for Local and Regional Economic Change. Prof. Amy Glasmeier. Graduate level. Full term course. Department of Urban Studies and Planning.	MIT
Fall 2014	Teaching Assistant, Applied Spatial Data Analysis and Statistics. Visiting Profesor Luc Anselin. Graduate level. 1/2 semester course. Department of Urban Studies and Planning.	MIT
Spring 2012	Teaching Assistant, Geographic Information Systems. Prof. Kristen Kurland. Graduate level. Full term course. Heinz College of Public Policy and Management.	Carnegie Mellon University (CMU)
Fall 2011	Teaching Assistant, Geographic Information Systems. Prof. Kristen Kurland. Graduate level. Full term course. Heinz College of Public Policy and Management.	CMU

CERTIFICATIONS

June 2007 – Dec. 2007	Centro de Investigación en Geografía y Geomática (CentroGeo) Diploma in Geomatics	Mexico City, Mexico
April 2005 – October 2005	Universidad Nacional Autónoma de México Instituto de Geografía. Diploma in Election Maps and Cartography	Mexico City, Mexico
August 2010 – May 2012	Institut D'Etudes Politiques de Paris (SciencesPo) Diploma in International Studies	Mexico City, Mexico

INVITED TALKS

May 22 nd , 2020	ONU-Habitat y Alcaldía de San Nicolás de los Garza, Nuevo León. Title: <i>El uso de los Sistemas de Información Urbanos como Herramienta para la Planificación Metropolitana</i>	Webinar
January 29 th , 2019	Public Deliberations on Urban Reform Title: <i>The New Metropolitan Agenda and the Cities of the State of Mexico</i>	Naucalpan, Mexico
December 5 th , 2018	Congress of the Union Title: <i>The New Metropolitan Agenda.</i>	Mexico City
January 10 th , 2017	Singapore – MIT Alliance for Research. Future Mobility Title: <i>Social Segmentation of Non-Work & Non-Residential Destinations in Singapore</i>	Singapore
September 5 ^h , 2016	Universidad Nacional Autónoma de México. Instituto de Investigaciones Jurídicas. Title: <i>Current Methodologies to Analyze, Process and Visualize Data</i>	Mexico City
October 27 th , 2015	Universidad Nacional Autónoma de México (UNAM). National School of Advanced Studies (ENES). Title of the presentation: <i>Urban Poverty, Economic Segregation, and Inequality</i>	Morelia, Mexico
October 23 rd , 2015	Universidad Michoacana de San Nicolás de Hidalgo (UMSNH). School of Architecture and Design. Title of the presentation: <i>Development across Mexican Regions and Cities</i>	Morelia, Mexico
March 28 th , 2015	Harvard Kennedy School 21 st International Development Conference Title of the presentation: <i>The Challenges of Urbanization in Latin America</i>	Cambridge, MA

FELLOWSHIPS AND AWARDS

June 2019	Best Paper Award. 2 nd International Conference in Urban Informatics. Selection Committee: Michael Batty and Michael Goodchild	Hong Kong
May 2015-current	Massachusetts Institute of Technology (MIT). Graduate Tuition Fellowship and Full Stipend	Cambridge, MA
August 2012	Consejo Nacional de Ciencia y Tecnología (CONACYT). Graduate Scholarship to pursue doctoral studies in the United States	Mexico City, Mexico
July 2012	Club-Mex of MIT Alumni. Awarded with a loan to continue studies in MIT	
August 2010	Consejo Nacional de Ciencia y Tecnología (CONACYT). Graduate Scholarship to pursue master studies in the United States	Mexico City, Mexico

PUBLICATIONS

Ponce-Lopez, R., Ferreira, J. (2020). Using Temporal and Spatial Boundaries of Urban Locations Associated with High Concentrations of Human Activity to Identify Popular Non-Work Destinations. *Cities* (submitted second revision)

Ponce-Lopez, R., Ferreira, J. (2020). Systematically Tracing Temporal and Spatial Boundaries of Locations Having High Concentrations of Human Activity to Identify Popular Non-Work Destinations. *Environmental Planning B* (under revision)

He, H., Ponce-Lopez, R., Shaw, J., Le, D. T., Ferreira, J., & Zegras, P. C. (2019). Representing Accessibility: Evidence from Vehicle Ownership Choices and Property Valuations in Singapore. *Transportation Research Record*, 0361198119825831.

Ponce-Lopez, R & Ferreira Jr., J. Characterization of Non-Work Destinations in High Density and Transit Oriented Urban Areas. (*Proceedings of the Computer for Urban Planning Conference in Adelaide, Australia on July 2017*)

Ponce-Lopez, R. (2015). What the lagoon left us. Changes of urban space in Mexico and Venice. In T. Candiano, L.F. Ortega, K. Jasso (Eds.) *Possessing Nature. 56. Esposizione Internazionale di Arte della Biennale di Venezia* (80-89). Mexico City: Instituto Nacional de Bellas Artes y Literatura.

Ponce-Lopez, R. (2010). Ciudad Juarez: A city caught between Mexico, the United States, and the global economy. *The Heinz Journal*. Volume 9, Issue 1:2.

TECHNICAL SKILLS

- Econometrics. Software: R, Biogeme
- Spatial Econometrics. Software: GeoDA, GeodaSpace
- Database Management. Software: SQL Plus, PostgreSQL, Access
- Geographic Information Systems. Software: ArcGIS, QGIS, ENVI
- Programming. Language: Python, Java, JavaScript, HTML+CSS
- Optimization and Risk Analysis. Software: Solver, Crystal Ball