

# Palermo S. Penano

Email [palermopenano@yahoo.ca](mailto:palermopenano@yahoo.ca)

GitHub [palpen](#)

Phone 416-543-5371

**Education** *Ph.D Candidate, Economics (ABD)*  
University of Toronto, Toronto, ON 2012 - 2017

*M.A. (Doctoral-Stream), Economics*  
University of Toronto, Toronto, ON 2012

*B.A., Accounting and Economics*  
York University, Toronto, ON 2011

**Awards** University of Toronto Fellowship 2011 - 2015

**Research** *Specialization:* Economic Development, Urban Economics, and International Trade

Research in Progress

- Project: “National Highway Systems in Large Developing Countries and Firm-level Productivity”
- Research seeks to understand the mechanisms through which large national highways affect firm-level productivity
- Cleaned and organized detailed panel data on highway construction in India and China
- Used Baidu Maps and Google Maps/Places API to geolocate over a million firms in India and China at the street level
- Tools: ArcGIS, Git, Python, QGIS, Stata

Unpublished Manuscripts

- “Castes, Gender, and Economic Growth in India” (Second-year paper)
- “Trade and Ethnic Inequality: Evidence from India”

**Research Assistantships** *Professor Natalie Bau* November 2015 - Present  
University of Toronto

Project: Impact of FDI Reforms on Misallocation of Firm Production Resources

- Digitized scanned handbooks on foreign direct investment (FDI) reforms in India
- Scraped detailed firm-level FDI data from Indian government website
- Estimated firm-level productivity using frontier techniques in the literature
- Regression analysis on the effects of FDI reforms on capital misallocation
- Tools: Bash, Git, Stata

Project: Infrastructure and Economic Growth: The Role of Airports

- Automated the geocoding procedure of raw firm addresses using Google Maps/Places API
- Cleaned and processed raw balance sheet and infrastructure projects data in India
- Regression analysis on effects of airports on firm growth and productivity
- Tools: ArcGIS, Bash, Git, Python, Stata

*Professor Eduardo Souza-Rodrigues* April 2014 - November 2015  
University of Toronto

Project: Land use Classification of the Amazon Jungle in Brazil

- Calculated various spatial statistics using geospatial data (shapefiles and rasters) of the Amazon jungle
- Automated various geo-processing tasks using Python (including its implementation using parallel processors)

- Created a time series of the maximum, observed, and minimum level of deforestation in the Amazon rainforest from raw and highly detailed shapefiles
- Constructed a network database using the Network Analyst tool in ArcGIS to calculate bilateral municipality-level transportation costs
- Tools: ArcGIS (raster and network analysis), Bash/PowerShell, Git, Python, Stata

*Professor Mitchell Hoffman*  
University of Toronto

September 2013 - April 2014

Project: Supervisors and worker productivity & Salaries and State Politicians

- Regression analysis using large administrative datasets
- Assisted in editing a paper for review in a top journal
- Created geospatial data on all districts bordering a state boundary in the U.S.A.
- Tools: ArcGIS, Git, Python, Stata

*Professor David Seim*  
University of Toronto

March 2014 - April 2014

Project: Television and Obesity in Sweden

- Data entry used for calculating extent of TV antenna signals in Sweden
- Tools: ArcGIS

*Professor Gillian Hamilton*  
University of Toronto

May 2012 - August 2012

Project: Historical Agricultural Practices and Fertility

- Regression analysis, wrote a referee report, searched and found datasets for project
- Tools: Stata

## Teaching

**Instructor**, University of Toronto

*International Trade Theory, 3rd-year*

Summer 2016

- Taught a fast-tracked upper-level undergraduate course

**Teaching Assistantships**, University of Toronto

2011 - 2017

*Graduate level*

- Math Camp (M.A. Economics)
- 1st-Year Statistics (M.B.A., Rotman)
- Microeconomics for Global Affairs (MGA, Munk School of Global Affairs)

*Undergraduate level*

- International Trade, Applied Econometrics, Empirical Methods in Microeconomics, History of Economic Thought, Microeconomic Theory for Commerce (ECO 204), Public Economics, Intermediate Microeconomics, Personnel Economics, Economics of Organizations, Health Economics, Environmental Economics, Principles of Macroeconomics

*Duties:*

- Conducted tutorials, grading of exams, essays and term papers, held office hours, proctored exams

## Computer Skills

ArcGIS (including raster and network analysis), Git/GitHub, MATLAB, Microsoft Excel, Python (Pandas, NumPy, SciKit-Learn), QGIS, Stata, LaTeX, Lyx, Bash / PowerShell scripting

## Additional Courses

- Data Structures and Algorithms Specialization (in progress), Coursera
- Applied Data Science with Python Specialization (in progress), Coursera
- Machine Learning by Andrew Ng ([lecture notes](#)), Coursera

**Other Interests**    Basketball (open-division intramural), indoor/outdoor rock climbing, data science/coding side projects ([GitHub](#))