

# RUBEN GAETANI

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## CONTACT INFORMATION

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## ACADEMIC POSITIONS

2016 – Present: Assistant Professor of Strategy, University of Toronto  
Department of Management at UT Mississauga, Institute for Management and  
Innovation and Rotman School of Management

## PERSONAL INFORMATION

Citizenship: Italian

## RESEARCH FIELDS

Economic Growth, Economics of Innovation, Urban Economics

## EDUCATION

Ph.D., Economics, Northwestern University, Evanston, Illinois, 2016  
Dissertation: “Essays on the Economics of Innovation and Economic Growth”  
Committee Chairperson: Professor Matthias Doepke  
M.A.: Economics, Northwestern University, Evanston, Illinois, 2011  
M.Sc.: Economics, Bocconi University, Milan, Italy, 2010, *Summa Cum Laude*  
B.A.: Economics, Bocconi University, Milan, Italy, 2007, *Summa Cum Laude*

## FELLOWSHIPS AND AWARDS

Northwestern University Dissertation Scholarship, 2015  
Travel Grant, Econometric Society World Congress, 2015  
Distinguished Teaching Assistant Award, Northwestern University, 2014  
Nominated for Weinberg College Award for Outstanding Grad. Student Teaching, 2014  
Bank of Italy “Giorgio Mortara” Scholarship, 2011-2012  
Northwestern University Fellowship, 2010-2015

## TEACHING EXPERIENCE

Instructor, University of Toronto Mississauga, 2017-2018:  
Management of Technology (MMI), Management of Technological Innovation (MBiotech), Introduction to Strategic Management (Undergraduate)

Teaching Assistant, Northwestern University, Years 2012-2016:  
Macroeconomics (*Executive MBA Kellogg Miami, Prof. Janice Eberly*)  
Advanced Workshop for Central Bankers, Northwestern University  
Macroeconomics (*Graduate, Prof. Matthias Doepke*)  
Macroeconomics (*Undergraduate, Prof. Guido Lorenzoni, Prof. David Berger*);  
International Finance (*Adv. Undergraduate, Prof. Aldo Heffner*); International Trade (*Adv. Undergraduate, Prof. Kiminori Matsuyama*); Macroeconomics (*Adv. Undergraduate, Prof. Lawrence Christiano*)

## RESEARCH AND WORK EXPERIENCE

Visiting Scholar (Dissertation Intern), Federal Reserve Bank of St. Louis. June-July 2014  
Mediobanca Research Department, Milan, Italy, 2009

## PRESENTATIONS (\*: presented by coauthor)

2018: Rotman Research Roundtable on Innovation Policy, NBER Trade and Geography Conference, New York University Schack Panel on “University and the City”, European Meeting of the Urban Economic Association in Dusseldorf, SED Meeting in Mexico City, North American Econometric Society Summer Meeting in Davis, NBER Summer Institute Innovation, NBER Summer Institute Income Distribution and Macroeconomics (\*)

2017: University of Toronto (Rotman, Strategy Lunch), Ryerson University, North American Meeting of the Regional Science Association in Vancouver, European Meeting of the Urban Economic Association in Copenhagen (\*)

2016: Ohio State University, Collegio Carlo Alberto, Toulouse School of Economics, Cornerstone Research in Chicago, University of Toronto (Rotman), Federal Reserve Bank of Atlanta, Federal Reserve Board, Bates White in Washington DC, SED Meeting in Toulouse (\*), University of Toronto (Macroeconomics Workshop), University of Toronto (CEPA Lunch), Workshop for Junior Faculty in Economics at McMaster University, Conference of Swiss Economists Abroad in Bern (\*)

2015: Federal Reserve Bank of Chicago M&M Workshop, SED Meeting in Warsaw, Northwestern Macro Lunch, World Congress of the Econometric Society in Montreal, Conference of Swiss Economists Abroad in Fribourg (\*)

2014: North American Econometric Society Summer Meeting in Minneapolis (\*), Federal Reserve Bank of St. Louis, Northwestern Macro Lunch, Conference of Swiss Economists Abroad in Zurich (\*)

## PROFESSIONAL ACTIVITIES

Refereeing: Review of Economic Dynamics, The B.E. Journal of Macroeconomics

Co-organizer, IMI Junior Workshop in Health and Labor Economics (with Laura Derksen and Michel Serafinelli)

## WORKING PAPERS

**“The Geography of Unconventional Innovation”** with Enrico Berkes

Using a newly assembled dataset of U.S. patents, we show that overall innovation activity is less concentrated in high-density urban areas than commonly believed, but inventions based on atypical combinations of knowledge are indeed more prevalent in high-density cities. To interpret this relation, we propose that informal interactions in densely populated areas help knowledge flows between distant fields, but are less relevant for flows between close fields. We build a model of innovation in a spatial economy that endogenously generates the pattern observed in the data: specialized clusters emerge in low-density areas, whereas high-density cities diversify and produce unconventional ideas.

**“Income Segregation and Rise of the Knowledge Economy”** with Enrico Berkes

We analyze the effect of the rise of knowledge-based activities on spatial inequality within U.S. cities, exploiting the network of patent citations to instrument for local trends in innovation. We find that innovation intensity is responsible for 14% of the overall increase in urban segregation between 1990 and 2010. This effect is mainly driven by the clustering of employment and residence of workers in knowledge-based occupations. We develop and estimate a spatial equilibrium model to quantify the contribution of productivity and residential externalities in explaining the observed patterns. Endogenous amenities account for two thirds of the overall effect. We illustrate the relevance of the model for policy analysis by studying the impact of four proposed projects for Amazon’s HQ2 on the structure of Chicago.

**“The Economic Effects of Scientific Shocks”** with Matteo Li Bergolis

We combine data on scientific publications from the Web of Science, patent records from the USPTO and balance sheet information on publicly traded companies to measure firm-level response to the greatest scientific discoveries of our time. The publication of a groundbreaking paper is followed by a significant resource reallocation and output increase for responding firms. Measures of profitability are not affected on average, but this fact conceals large heterogeneity across different episodes. To explain these findings, we develop an endogenous growth model in which the returns to R&D investment are subject to information frictions. The model delivers a simple restriction that can be imposed on the data to separate breakthroughs from dead-end scientific discoveries. We test the model’s implications against our data: the empirical results support the idea that initial uncertainty systematically permeates the early stages of a new technology. Nevertheless, discoveries that are unprofitable for responding firms can produce positive aggregate effects through dynamic technological spillovers.

**“The University's Janus Face: The Innovation-Inequality Nexus”** with Richard Florida -  
*Martin Prosperity Institute Working Paper - In preparation for the special issue of Managerial  
and Decision Economics on The Strategic Management of University-Private Research  
Partnerships and Innovation*

The university is a key source of talent and a key driver of innovation and economic growth in a knowledge based economy. But, in performing these very economic functions it also contributes to economic and spatial inequality. Our research uses a variety of new data to examine this Janus-face of the university in innovation and inequality across US metro areas. We find evidence that the university plays a role in both regional innovation, boosting local patenting and startup companies, and in economic inequality, with higher rates of income and occupational segregation in metros with highly rated universities.

**“Employment Protection, Investment in Job-Specific Skills, and Inequality Trends in the United States and Europe”** with Matthias Doepke

Since the 1980s, the United States has experienced a sharp rise in the college wage premium. In contrast, in a number of European economies such as Germany and Italy the return to education stayed roughly the same. In this paper, we argue that differences in employment protection can account for a substantial part of these diverging trends. In our model, firms and workers can invest in relationship-specific capital: firms can create jobs that are complementary to experienced workers with long tenure, and workers can make corresponding investments in firm-specific skills. The incentives to undertake such investments are stronger when employment protection creates a common expectation of long-lasting firm-worker matches. Firms and workers also invest in relationship-specific capital in a calm economic environment where match-specific shocks are small. The diverging inequality patterns between the United States and Europe emerge from different levels of employment protection combined with an increase in “turbulence” (Ljungqvist and Sargent 1998) in the economy starting in the 1980s.

## LANGUAGES

English (fluent), Italian (native), Spanish (good)

## REFERENCES

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