

NORTHWESTERN UNIVERSITY

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CONTACT INFORMATION

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PERSONAL INFORMATION

Citizenship: Italian

RESEARCH FIELDS

Primary: Macroeconomics, Economic Growth
Secondary: Economics of Innovation, Economic Geography

DOCTORAL STUDIES

Ph.D., Economics, Northwestern University, Evanston, Illinois
Dissertation: "The Geography of Unconventional Innovation"
Committee Chairperson: Professor Matthias Doepke
Date of Completion: July 2016 (expected)

PREDOCTORAL STUDIES

M.A.: Economics, Northwestern University, Evanston, Illinois, 2011
M.Sc.: Economics, Bocconi University, Milan, Italy, 2010, *Cum Laude*
B.A.: Economics, Bocconi University, Milan, Italy, 2007, *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

Teaching Assistant, Northwestern University, Years 2012-2014
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); 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

2015: Federal Reserve Bank of Chicago M&M Workshop, SED Meeting in Warsaw, Northwestern Macro Lunch, World Congress of the Econometric Society in Montreal

2014: North American Econometric Society Summer Meeting in Minneapolis, Federal Reserve Bank of St. Louis, Northwestern Macro Lunch

PROFESSIONAL ACTIVITIES

Refereeing: Review of Economic Dynamics

JOB MARKET PAPER

“The Geography of Unconventional Innovation” with Enrico Berkes

This paper studies the role of population density as a driver of innovation. Using a newly assembled dataset of georeferenced patents in the U.S., we show that overall innovation activity is not concentrated in high-density areas as commonly believed. However, when we restrict attention to unconventional innovations – innovations based on unusual combinations of existing knowledge – we show that these are indeed more prevalent in high-density areas. To interpret this relation, we propose the view that informal interactions in densely populated areas help knowledge flows between distant fields, but are less relevant for flows between close fields. We then provide evidence supportive of this view. 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.

OTHER PAPERS AND WORK IN PROGRESS

“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.

“Does Innovation Potential Affect Local Development?” with Enrico Berkes (*in progress*)

We propose a method to estimate the effect of innovativeness on real economic outcomes across local labor markets in the United States. We implement an automatized algorithm to match the universe of contracts issued by U.S. federal agencies in the period 2000-2015 with the patenting activity of contractors. We then use the observed tree of patent citations in the pre-sample period (1980-1999) to instrument the propagation of the induced increase in patenting throughout the network of technology classes and U.S. locations. We show that this network is stable over time, and hence allows us to construct a strong instrument for local innovation potential. We argue that once the channel of input-output linkages is accounted for, the estimated shocks are orthogonal to other disturbances that affect the local economy and can be used to assess the impact of innovativeness on outcomes such as wages, employment, social and geographical mobility and inequality.

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

“Inspiration or Perspiration? Technological Interdependence and Equilibrium World Values” with Matteo Li Bergolis (*in progress*)

LANGUAGES

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

REFERENCES

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