Thomas Bourany

Graduate student in Economics and Mathematics

Research Interests

Macroeconomics, Macro-Finance, Fiscal and Monetary Policies Heterogeneous Agents Models, Stochastic Control and Mean Field Games

Education

2025 (Expected) The University of Chicago, Chicago, IL.

Ph.D. in Economics

2019 The University of Chicago, Chicago, IL.

M.A. IN SOCIAL SCIENCES - ECONOMICS

o 1st and 2nd year PhD courses: Theory of Income & Empirical Analysis (Core), Applied Macroeconomics.

2018 UPMC – Sorbonne Université, *Paris, France*.

M.Sc. - Mathematics and Applications

- Mathematics of modelling (2nd year): Optimal control, Mean Field Games & Numerics
- o Course in probability and stochastic calculus (1st year) & "Big Data Certificate" (machine learning)
- 2016 Sciences Po, École Polytechnique & Ensae, Paris, France.

M.A. IN ECONOMICS, ECONOMICS AND PUBLIC POLICY (Joint program in three institutions)

2013–2014 Indian Institute of Technology, Madras, *Chennai*, *India*.

EXCHANGE PROGRAM, Courses in M.Sc. Mathematics (Abstract mathematics) and Economics

2014 Sciences Po. & UPMC-Sorbonne Université, Paris, France.

DUAL BACHELOR IN SCIENCES AND SOCIAL SCIENCES

- o Bachelor in Social Sciences, "Diplôme du Collège universitaire" (Sciences Po)
- Bachelor in Sciences, Mathematics (UPMC-Sorbonne)

Research Awards and Honors

- 2018 The University of Chicago, MAPSS Merit Scholarship.
- 2016 Prize for the Best Master Thesis in Economics, Sciences Po.

"Fiscal policy in a monetary union: Optimal policy and cross-country spillovers"

2015 Prize for the Research Internship, ÉCOLE POLYTECHNIQUE.

"Fiscal policy and imperfect tax compliance over the business cycle"

Research Experience

Jan. – Jun. 2019 The University of Chicago, Chicago, U.S.

RESEARCH ASSISTANT (part-time) for Professor G. Kaplan

Mar.–Aug. 2018 Université Paris Diderot, LJLL: Applied Mathematics Laboratory, Paris, France.

RESEARCH INTERN under the supervision of Y. Achdou (Five months internship)

Developing numerical methods for Mean Field Games with aggregate uncertainty (*Matlab*)

Article: "Wealth distribution over the business cycle: A Mean Field Game with common noise"

Apr.-Aug. 2015 Banque de France, DGEI - SEMSI: International Macro Division & Forecasting, Paris, France.

RESEARCH ASSISTANT, research project led by F. Pappadà and Y. Zylberberg (Five months internship) In charge of data collection and analysis (*Stata/Excel*) Construction of a new indicator for tax compliance.

Article: "Fiscal Policy and imperfect tax compliance over the business cycle"

Teaching

2019 The University of Chicago, Teaching Assistant, Chicago, IL.

o Economic Policy Analysis (Econ 23950) - Kanit (Ken) Kuevibulvanich (Spring 2019)

2015 – 2018 Sciences Po, Teaching Assistant, Paris, France.

TA for 2 courses in the Master in Economics/PhD track:

Leading two-hours weekly sessions for 25-30 students

- Graduate Macroeconomics & finance Xavier Ragot (Fall 2016 & Fall 2017)
- Fiscal and monetary policy Jean Barthelemy (Fall 2016)

TA for 4 courses in the Master of Public Affairs:

Tutoring sessions for 50-100 students

- Macroeconomics Thomas Chaney (Fall 2016 & Spring 2018)
- Macroeconomics for public policy Xavier Ragot & Philippe Andrade (Spring 2016)
- Public Economics Mark Stabile (Fall 2015)
- Quantitative Analysis Martial Foucault (Fall 2015)

Seminar and Conference Presentations

- Fiscal Affairs Department Seminar, International Monetary Fund, 2019
- o Reading Group on Probabilistic Approaches to Mean Field Games, Université Paris Diderot, 2018
- Workshop on Macroeconomic Implications of Micro Heterogeneity, OFCE Sciences Po., 2018
- o PhD Internal Seminar, Sciences Po. 2017
- o DGEI Internal Conference, Banque de France, 2015

Research Papers and Work in Progress

- o Credit cycles, Market liquidity and heterogeneous firms, [In progress]
- Wealth distribution over the business cycle: A Mean Field Game with common noise, 2018
- o Fiscal policy in a monetary union: Optimal policy and cross-country spillovers, 2016
- Fiscal policy and imperfect tax compliance over the business cycle, 2015

Computer Skills

- Matlab, Dynare, Julia, Advanced, (2 recent projects each) French: Native
- o Stata, Python, R, Good level (2 courses and 1 project each) o English: Fluent (TOELF IBT 106/120)
- LATEX, Microsoft Office

Languages

- o Hindi & Persian: Beginner