

Thomas Bourany

Graduate student in Economics and Mathematics

30 years old – French citizen

Department of Economics

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📁 <https://thomasbourany.github.io>

Research Interests

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

Education

- 2024 (Expected) **The University of Chicago, Chicago, IL.**
PH.D. IN ECONOMICS, Field sequences : Macroeconomics, Trade and Growth
○ PhD Committee: Mikhaïl Golosov (Chair), Lars Hansen, Esteban Rossi-Hansberg, Greg Kaplan
- 2018 **UPMC – Sorbonne Université, Paris, France.**
M.SC. – MATHEMATICS AND APPLICATIONS
○ Mathematics of modelling (2nd year) : *Optimal control, Mean Field Games & Numerics*
○ Course in probability and stochastic calculus (1st year) & "Big Data Certificate" (*machine learning*)
- 2016 **Sciences Po, École Polytechnique & Ensaë, Paris, France.**
M.A. IN ECONOMICS, ECONOMICS AND PUBLIC POLICY (Joint program in three institutions)
- 2014 **Sciences Po. & UPMC–Sorbonne Université, Paris, France.**
DUAL BACHELOR IN SCIENCES AND SOCIAL SCIENCES
○ Bachelor in Social Sciences, "Diplôme du Collège universitaire" (Sciences Po Paris)
○ Bachelor in Sciences, Mathematics (UPMC-Sorbonne Paris)
○ Exchange program (Indian Institute of Technology, Madras, Chennai, India)

Research Papers and Work in Progress

- *The Inequality of Climate Change, Local Cost of Carbon and Optimal Policy* [In progress, 2023]
- *The Inequality of Climate Change, Uncertainty and Economic and Climate risk* [In progress, 2023]
- *Supply chain disruption and risk in international trade*, joint with I. Cuevas [In progress 2023]
- *Redistribution and the wage-price spirals: Optimal fiscal and monetary policy*, joint w/ Pr. F. LeGrand, X. Ragot [In progress 2023]
- *Inequality and Aggregate Uncertainty In Heterogeneous Agent Models*, joint w/ Pr. A. Bhandari, D. Evans & M. Golosov [In progress, 2021]
- *Forward-Backward SDE for Macroeconomics*, w/ M. Laurière [In progress, 2022]
- *Energy shocks and aggregate fluctuations* [In progress, 2021]
- ▷ PRE-PHD
 - *Wealth distribution over the business cycle: A Mean Field Game with common noise*, 2018
 - *Fiscal policy in a monetary union: Optimal policy and cross-country spillovers*, 2016
 - *Fiscal policy and imperfect tax compliance over the business cycle*, 2015

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"

Teaching

- 2020-2022 **The University of Chicago, Lecturer, Chicago, IL.**
- Mathematical Methods in Economics (Econ 30400, *Graduate*) :
Master program (~ 50 students) and PhD program (~ 25 students), Summer 2020 & 2021.
- 2021-2022 **The University of Chicago – Booth School of Business, Teaching Assistant, Chicago, IL.**
- Applied Macroeconomics: Heterogeneity and Macro (Busn 33949, *PhD*) – Joe Vavra & Rohan Kekre
 - International Financial Policy (Busn 33502, *MBA*) – Rohan Kekre
 - Money and Banking (Busn 33401, *MBA*) – Kilian Huber
- 2019 **The University of Chicago, The College, Teaching Assistant, Chicago, IL.**
- 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 weekly sessions for ~ 25 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 ~ 75 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)

Research Experience

- Jan. – Jun. 2019 **The University of Chicago, Chicago, U.S.**
RESEARCH ASSISTANT (part-time) for Professor G. Kaplan and Professor M. Golosov
- 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*"

Seminar and Conference Presentations

- PhD seminars (AMT/Capital Theory), *University of Chicago, 2021*
- Fiscal Affairs Department Seminar, *International Monetary Fund, 2019*
- Reading Group on Probabilistic Approaches to Mean Field Games, *Université Paris Diderot, 2018*
- Workshop on Macroeconomic Implications of Micro Heterogeneity, *OFCE – Sciences Po, 2018*
- PhD Internal Seminar, *Sciences Po, 2017*
- DGEI Internal Conference, *Banque de France, 2015*

Computer Skills

- **Matlab, Dynare, Julia**, Advanced, (*3 recent projects each*)
- **Stata, Python, R**, Good level (*2 courses and 2 projects each*)
- **LaTeX, Microsoft Office**

Languages

- **French:** Native
- **English:** Fluent (TOEFL IBT 106/120)
- **Hindi & Persian:** Beginner