Thomas Bourany

Graduate student in Economics and Mathematics

30 years old – French citizen
Department of Economics
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Research Interests

Macroeconomics, Climate Economics, Fiscal and Monetary Policies & Macro-Finance
Computational Economics, Heterogeneous Agents Models/Mean Field Games

Education

2025 (Expected) **The University of Chicago**, *Chicago, IL*.
Ph.D. in Economics, Field sequences : Macroeconomics, Trade and Growth
○ PhD Committee: Mikhaïl Golosov (Chair), Esteban Rossi-Hansberg, Lars Hansen, Greg Kaplan

2018 **UPMC – Sorbonne Université**, *Paris, France*.
M.Sc. – Mathematics and Applications
○ Mathematics of Modeling: *Optimal & Stochastic Control, Mean Field Games, Probability and Machine Learning*

2016 **Sciences Po, École Polytechnique & Ensae**, *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 and Optimal Energy Policy* [In progress, 2023]
○ *Supply chain disruptions 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]
○ *A Perturbational Approach for Approximating Heterogeneous-Agent Models*,
   joint w/ Pr. A. Bhandari, D. Evans & M. Golosov [In progress, 2021]
○ *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.

2021-2023   **The University of Chicago – Booth School of Business**, *Teaching Assistant*, *Chicago, IL*.
- Global Strategy and Economics (Busn 33850, *EMBA*) – Guido Lorenzoni
- 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 Heterogeneous agents models 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)
Data collection and analysis (*Stata*) Construction of a new indicator for tax compliance.
Article: *"Fiscal Policy and imperfect tax compliance over the business cycle"*

Seminar and Conference Presentations

- Conference: Assessing the Economic & Environmental Consequences of Climate Change
  IMSI: Institute for Mathematical and Statistical Innovation, Chicago, 2023
- PhD seminars (Capital Theory), *University of Chicago, 2021-2023*
- Fiscal Affairs Department Seminar, *International Monetary Fund, 2019*
- Long Workshop: Probabilistic Approach to Mean Field Games, *Université Paris Diderot, 2018*
- Workshop on Macroeconomic Implications of Micro Heterogeneity, *OFCE – Sciences Po, 2018*
- PhD Internal Seminars, *Sciences Po, 2017-2022*
- 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 (TOELF IBT 106/120)
- **Hindi & Persian:** Beginner