

# Thomas Bourany

Graduated in Economics and Mathematics  
Applicant for a Graduate Program (PhD) in Economics

25 years old – French  
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📄 <https://thomasbourany.github.io>

## Research Interests

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

## Education

- 2019 (Expected) **The University of Chicago, Chicago, IL.**  
M.A. IN SOCIAL SCIENCES – ECONOMICS  
○ 1<sup>st</sup> and 2<sup>nd</sup> year PhD courses: Theory of Income I-II (F. Alvarez, N. Stokey), Public Finance (M. Golosov), Heterogeneity in Macro (T. Winberry/ R. Kekre), Advanced Macro Reading group (G. Kaplan)
- 2018 **UPMC – Sorbonne Université, Paris, France.**  
M.Sc. – MATHEMATICS AND APPLICATIONS  
○ 2<sup>nd</sup> year: Mathematics of modelling: *Optimal control, Optimization, Mean Field Games & Numerics*  
○ 1<sup>st</sup> year: Courses in probability: *Stochastic processes, calculus and control, Monte-carlo methods*  
○ "Big Data Certificate": *additional courses in statistics and programming (machine learning)*
- 2016 **Sciences Po, École Polytechnique & Ensaie, Paris, France.**  
M.A. IN ECONOMICS, ECONOMICS AND PUBLIC POLICY (Joint program in three institutions)  
○ 1<sup>st</sup> and 2<sup>nd</sup> year courses: Macroeconomics, Microeconomics, Econometrics
- 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  
○ 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 (Two-Thirds Tuition).**
- 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.**  
MASTER THESIS under the supervision of T. Winberry (Chicago Booth)  
Article: *"Credit cycles, heterogeneous firms and aggregate fluctuations"*
- 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"*

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## Teaching

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)

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## Seminar and Conference Presentations

- 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*

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## Research Papers and Work in Progress

- *Credit cycles, heterogeneous firms and aggregate fluctuations*, [In progress]
- *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

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## References

*Greg Kaplan*

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*Mikhail Golosov*

Professor, The University of Chicago  
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*Yves Achdou*

Professor, Université Paris-Diderot  
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*Xavier Ragot*

Professor, Sciences Po Paris  
xavier.ragot@sciencespo.fr

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## Computer Skills

- **Matlab, Python, Dynare**, Expert, (2 recent projects each)
- **Stata, R**, Advanced, (2 courses and 1 project each)
- **Julia, C++**, Good level, (1 course each)
- **LaTeX, Microsoft Office**

## Languages

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