#### ALFRED GALICHON

Work addresses: NYU Economics, 19 W 4<sup>th</sup> St., New York, NY 10012 (USA)

NYU Paris, 57 boulevard Saint-Germain, 75005 Paris (France)

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**Citizenship:** France (US permanent resident)

**Date of birth:** May 4, 1977

## **ACADEMIC EMPLOYMENT**

Leadership:

2018- New York University in Paris, site director.

2012-2014 Sciences Po, Paris, scientific director of the Master program in Finance

and Strategy.

Permanent positions:

2015- New York University, full professor of economics (Faculty of Arts &

Science) and of mathematics (Courant Institute); affiliate faculty, Center for

Data Science.

2012-2016 Sciences Po, Paris, full professor of economics.

2007-2012 Ecole polytechnique, assistant professor, then full professor of

economics.

Visiting and affiliated positions:

2018 Fall 2017
 Sciences Po, Paris, affiliated professor of economics.
 Toulouse School of Economics, visiting fellow.

2014-2015 Massachusetts Institute of Technology, visiting professor of economics.

Spring 2011 Columbia University, Alliance visiting professor of economics.

Spring 2010 University of Chicago, visiting assistant professor of econometrics and

statistics, Booth School of Business.

## **EDUCATION**

2010 Habilitation (Economics), Université Paris-Dauphine.

Habilitation advisor: Ivar Ekeland.

2007 Ph.D. (Economics), Harvard University.

Doctoral advisor: Guido Imbens.

2003 M.Sc. (Ingénieur au corps des Mines), Ecole des Mines de Paris.
2000 B.Sc. (Mathematics and Economics), Ecole Polytechnique (X97).

## RESEARCH FUNDINGS (as principal investigator)

2020-2026 "EQUIPRICE. Equilibrium methods for resource allocation and dynamic

pricing." European Research Council (ERC) Consolidator Grant no.

866274. Amount awarded: €1,809,595.

2017-2020 "Optimal and equilibrium transport: theory and applications to economics

and data science." National Science Foundation (NSF) Grant DMS-

1716489. Amount awarded: \$299,988.

"ECOMATCH. Matching Markets: Theoretical and Empirical Investigations." European Research Council (ERC) Starting Grant no. 313699. Amount awarded: €1,119,000.

### **HONORS, FELLOWSHIPS AND AWARDS**

- Sir John Hicks lecture, Society for the Advancement of Economic Theory, 2021.
- Fellow of the Econometric Society (since 2020).
- **Economic Theory fellow** (since 2019).
- Young Leader of the French-American foundation, 2018.
- Edmond Malinvaud Prize, Association Française de Science Economique, 2015.
- **IZA Research fellow** (since 2014).
- **CEPR Research fellow** (2013-2019).
- Nominated for the 2010 *Le Monde-*Cercle des Economistes prize of the **Best French Economist under 40**.
- Arthur Sachs Fellowship, 2003-2004.
- Harvard Club of France Fellowship, 2003-2004.

## **ACADEMIC RESEARCH**

## Monographs:

- *Mathematical methods of discrete choice models* (2025). Princeton University Press (under contract).
- Optimal Transport Methods in Economics (2016). Princeton University Press, 184 pp.

### Published and forthcoming papers:

- 49. "Matching Function Equilibria with Partial Assignment: Existence, Uniqueness and Estimation." With Liang Chen, Eugene Choo, and Simon Weber. Revise and resubmit, *Journal of Labor Economics*.
- 48. "The matching problem with linear transfers is equivalent to a hide-and-seek game." With Antoine Jacquet. Accepted conditional on minor revisions, *Games and Economic Behavior*.
- 47. "Assortative matching on income." With Pierre-André Chiappori, Carlo Fiorio and Stefano Verzillo. Conditionally accepted for publication, *Econometrica*.
- 46. "Inverse Isotonicity for Equilibrium Problems." With Larry Samuelson and Lucas Vernet. Forthcoming, *Theoretical Economics*.
- 45. "The existence of equilibrium flows" (2024). With Larry Samuelson and Lucas Vernet. *Journal of Mechanism and Institution Design* 9, issue 1, pages 55-81 (special issue in honor of Vincent Crawford).
- 44. "Estimating separable matching models" (2024). With Bernard Salanié. *Journal of Applied Econometrics* 39 (6), pp. 1021-1044.
- 43. "Stable and extremely unequal" (2023). With Octavia Ghelfi and Marc Henry. *Economics Letters* 226, 111101.
- 42. "SISTA: learning optimal transport costs under sparsity constraints" (2023). With Guillaume Carlier, Arnaud Dupuy and Yifei Sun. *Communications on Pure and Applied Mathematics* 76 (9), pp. 1659-1677.

- 41. "Yogurts Choose Consumers? Identification of Random Utility Models via Two-Sided Matching" (2022). With Odran Bonnet, Yu-Wei Hsieh, Keith O'Hara and Matt Shum. *Review of Economic Studies* 89 (6), pp. 3085–3114.
- 40. "A note on the estimation of job amenities and labor productivity" (2022). With Arnaud Dupuy. *Quantitative Economics* 13 (1) pp. 153–177.
- 39. "Cupid's Invisible Hand: Social Surplus and Identification in Matching Models" (2022). With Bernard Salanié. *Review of Economic Studies* 89 (5), pp. 2600–2629.
- 38. "On the representation of the nested logit model" (2022). *Econometric Theory* 38, pp. 370—380.
- 37. "Vector quantile regression and optimal transport, from theory to numerics." (2022). With Guillaume Carlier, Victor Chernozhukov, and Gwendoline De Bie. *Empirical Economics*. 62, pp. 35–62.
- 36. "Single market nonparametric identification of multi-attribute hedonic equilibrium models" (2021). With Victor Chernozhukov, Marc Henry, and Brendan Pass. *Journal of Political Economy* 129 (3) pp. 842—870.
- 35. "Taxation in matching markets" (2020). With Arnaud Dupuy, Sonia Jaffe, and Scott Kominers. *International Economic Review* 61 no. 4, pp. 1591-1634.
- 34. "Fritz John's equation in mechanism design" (2020). Written on the occasion of Nicholas Yannelis' 65<sup>th</sup> birthday. *Economic Theory Bulletin* 9, pp. 1–5.
- 33. "Like Attract Like: A Structural Comparison of Homogamy Across Same-Sex and Different-Sex Households" (2020). With Edoardo Ciscato and Marion Goussé. *Journal of Political Economy* 128, no. 2, pp. 740-781.
- 32. "Estimating matching affinity matrix under low-rank constraints" (2019) With Arnaud Dupuy and Yifei Sun. *Information and Inference*. 8 (4), pp. 677–689.
- 31. "On Human Capital and Team Stability" (2019). With Pierre-André Chiappori and Bernard Salanié. *Journal of Human Capital* 13(2), pp. 236-259.
- 30. "Costly Concessions: An Empirical Framework for Matching with Imperfectly Transferable Utility" (2019). With Scott Kominers and Simon Weber. *Journal of Political Economy*. 127, no. 6: pp. 2875-2925.
- 29. "Vector quantile regression beyond the specified case" (2017). With Guillaume Carlier and Victor Chernozhukov. *Journal of Multivariate Analysis* 161, pp. 96-102.
- 28. "A Survey of Some Recent Applications of Optimal Transport Methods to Econometrics" (2017). *Econometrics Journal* 20 (2), pp. C1-C11.
- 27. "Monge-Kantorovich Depth, Quantiles, Ranks and Signs" (2017). With Victor Chernozhukov, Marc Hallin, and Marc Henry. *Annals of Statistics* 45 (1), pp. 223-256.
- 26. "Ordinal and Cardinal Solution Concepts for Two-Sided Matching" (2017). With Federico Echenique. *Games and Economic Behavior* 101, pp. 63-77.
- 25. "Matching in Closed-Form" (2016). With Raicho Bojilov. *Economic Theory* 61(4), pp. 587-609.
- 24. "Vector Quantile Regression: an optimal transport approach" (2016). With Guillaume Carlier and Victor Chernozhukov. *Annals of Statistics* 44 (3), pp. 1165—1192.
- 23. "Duality in dynamic discrete choice models" (2016). With Khai Chiong and Matt Shum. *Quantitative Economics* 7(1), pp. 83—115.
- 22. "Local utility and risk aversion" (2016). With Arthur Charpentier and Marc Henry. *Mathematics of Operations Research* 41(2), pp. 466—476.
- 21. "Canonical correlation and assortative matching: a remark" (2015). With Arnaud Dupuy. *Annals of Economics and Statistics* 119-120, pp. 375—383.
- 20. "Personality traits and the marriage market" (2014). With Arnaud Dupuy. *Journal of Political Economy* 122 (6), pp. 1271-1319. Winner of the 2015 E. Malinvaud prize.

- 19. "Entropy methods for identifying hedonic models" (2014). With Arnaud Dupuy and Marc Henry. *Mathematics and Financial Economics* 8, pp. 405–416 (special issue in celebration of Ivar Ekeland's 70<sup>th</sup> birthday).
- 18. "Extreme dependence for multivariate data" (2014). With Damien Bosc. *Quantitative Finance* 14(7), pp. 1187-1199.
- 17. "Variational representations for N-cyclically monotone vector fields". With Nassif Ghoussoub (2014). *Pacific Journal of Mathematics*, 269 (2), pp. 323-340.
- 16. "A stochastic control approach to No-Arbitrage bounds given marginals, with an application to Lookback options" (2014). With Pierre Henry-Labordère and Nizar Touzi. *Annals of Applied Probability*, Vol. 24, No. 1, 312-336.
- 15. "Dilation Bootstrap: A methodology for constructing confidence regions with partially identified models" (2013). With Marc Henry. *Journal of Econometrics* 177, 109–115.
- 14. "The Housing Problem and Revealed Preference Theory: Duality and an Application" (2013). With Ivar Ekeland. *Economic Theory* 54(3), 425–441.
- 13. "Ambiguïté, identification partielle et politique environnementale" (2013). With Marc Henry. *Revue économique* 64, 603–613, special issue in the honor of Claude Henry.
- 12. "Pareto efficiency for the concave order and multivariate comonotonicity" (2012). With Guillaume Carlier and Rose-Anne Dana. *Journal of Economic Theory* 147(1), 207–229.
- 11. "Dual theory of choice under multivariate risks" (2012). With Marc Henry. *Journal of Economic Theory* 147(4) 1501–1516.
- 10. "Exponential convergence for a convexifying equation" (2012). With Guillaume Carlier. *Control, Optimisation and Calculus of Variations* 18(3), pp. 611–620.
- 9. "Comonotonic measures of multivariate risks" (2012). With Ivar Ekeland and Marc Henry. *Mathematical Finance* 22 (1), pp. 109-132.
- 8. "Set identification in models with multiple equilibria" (2011). With Marc Henry. *Review of Economic Studies* 78(4), pp. 1264-1298.
- 7. "Quantile and Probability Curves without Crossing" (2010). With Victor Chernozhukov and Ivan Fernandez-Val. *Econometrica* 78(3), pp. 1093-1125.
- 6. "Rearranging Edgeworth-Cornish-Fisher Expansions" (2010). With Victor Chernozhukov and Ivan Fernandez-Val. *Economic Theory* 42(2) pp. 355-337.
- 5. "The VaR at Risk" (2010). *International Journal on Theoretical and Applied Finance* 13, No. 4, pp. 503-506.
- 4. "From Knothe's transport to Brenier's map and a continuation method for optimal transport" (2010). With Guillaume Carlier and Filippo Santambrogio. *SIAM Journal on Mathematical Analysis* 41 (6), pp. 2554-2576.
- 3. "Optimal transportation and the falsifiability of incompletely specified economic models" (2010). With Ivar Ekeland and Marc Henry. *Economic Theory* 42(2), pp. 419-435.
- 2. "Improving Point and Interval Estimators of Monotone Functions By Rearrangement" (2009). With Victor Chernozhukov and Ivan Fernandez-Val. *Biometrika* 96, pp. 559-575.
- 1. "Test of non-identifying restrictions and confidence regions for partially identified parameters" (2009). With Marc Henry. *Journal of Econometrics* 152(2), pp. 186-196.

# Conference proceedings:

- "The unreasonable effectiveness of optimal transport in economics." In preparation, Proceedings of the 2020 World Congress of the Econometric Society. Advances in Economics and Econometrics.
- 2. "The econometrics and some properties of separable matching models" (2017). With Bernard Salanié. *American Economic Review: Papers and Proceedings* 107(5), pp. 251-255.
- 1. "The Nonlinear Bernstein-Schrodinger Equation in Economics" (2015). With Scott Kominers and Simon Weber. Proceedings of the Second Conference "Geometric Science

of Information," F. Nielsen and F. Barbaresco, eds. *Springer Lecture Notes in Computer Science* 9389, pp. 51-59.

# Book chapters:

- 4. "Hedonic and matching models," with Bernard Salanié. In preparation for the *Handbook of Econometrics*, edited by S. Durlauf, L. Hansen, J. Heckman and R. Matzkin.
- 3. "Matching with imperfectly transferable utility." With Simon Weber. Forthcoming in the *Handbook of the Economics of Matching*, edited by Che, Chiappori and Salanié.
- 2. "Structural estimation of matching markets with transferable utility" (2022). With Bernard Salanié. In *Online and Matching-Based Market Design*, edited by F. Echenique, N. Immorlica and V. Vazirani. Cambridge University Press.
- 1. "Identification of Matching Complementarities: A Geometric Viewpoint" (2013). In *Advances in Econometrics* vol. 31: Structural Econometric Models, edited by E. Choo and M. Shum.

## **Essays:**

- 2. **Smoke and Mirrors, Inc. Accounting for Capitalism**, with Matthieu Autret and Nicolas Véron, Ithaca: Cornell University Press, 2006.
- 1. *L'Information financière en crise : Comptabilité et Capitalisme*, with Matthieu Autret and Nicolas Véron, Paris: Odile Jacob, 2004.

# **DOCTORAL SUPERVISION (as main advisor)**

- 14. Enzo di Pasquale (NYU, Economics, expected defense Spring 2025).
- 13. Leon Guzman (NYU, Economics; defended May 2024). Initial placement: economist, Federal Trade Commission.
- 12. Pauline Corblet (Sciences Po, Economics; defended May 2022). Initial placement: assistant professor, NYU Abu Dhabi.
- 11. Octavia Ghelfi (NYU, Economics; co-advised with Alessandro Lizzeri; defended April 2021). Initial placement: economist, Amazon.
- 10. Lucas Vernet (Sciences Po, Economics; defended January 2019). Initial placement: economist, Banque de France.
- 9. Keith O'Hara (NYU, Economics; defended September 2018). Initial placement: economist, Amazon.
- 8. Jean-Baptiste Vilain (co-advised with Philippe Février; Sciences Po, Economics; defended June 2018). Initial placement: data scientist, Veltys.
- 7. Monty Essid (co-advised with Bob Kohn; NYU, Mathematics; defended June 2018). Initial placement: senior quantitative researcher associate, Morgan Stanley.
- 6. Mathilde Poulhès (co-advised with Denis Fougère; Sciences Po, Economics; defended June 2018). Initial placement: research scientist, SSP Lab.
- 5. Odran Bonnet (Sciences Po, Economics; defended June 2018). Initial placement: administrateur, INSEE.
- 4. Yifei Sun (co-advised with Eero Simoncelli; NYU, Mathematics; defended April 2018). Initial placement: research scientist, Facebook.
- 3. Simon Weber (Sciences Po, Economics; defended September 2017). Initial placement: research scholar, Becker Friedman Institute, University of Chicago.
- 2. Flavien Léger (co-advised with Nader Masmoudi; NYU, Mathematics; defended May 2017). Initial placement: postdoctoral scholar, UCLA Mathematics.

1. Damien Bosc (Ecole Polytechnique, Economics; defended June 2012). Initial placement: research engineer, EDF R&D.

## **OTHER PROFESSIONAL ACTIVITIES**

#### **Editorial boards**

- Co-Editor, *Economic Theory* (2016-2023).
- Associate Editor, Annals of Economics and Statistics (2009-present), Economic Theory (2011-2016), Review of Economic Studies (2012-2016), Econometric Journal (2018-present).

## Program committees:

- Program committee member, 9th annual conference of the International Association of Applied Econometrics (IAAE), Kings College, London, June 21—24, 2022.
- Program committee co-chair, Society for the Advancement of Economic Theory (SAET) Meetings (2013).
- Program committee member, European Economic Association (2013, 2014, 2015).
- Program committee member, Econometric Society European Meetings (2012, 2013).

## Organized conferences and seminars:

- 23. Co-organizer, "Rice Paris Econometrics Conference," Paris, June 14-15, 2024 (with Jeremy Fox, Matt Thirkettle and Xun Tang).
- 22. Co-organizer, "Optimal Transport Workshop," Cargese, April 8–12th, 2024 (with Pierre Jacob and Antoine Jacquet).
- 21. Co-organizer, "Econometrics and Optimal Transport Workshop," University of Seattle, June 12-14, 2023 (with Yanqin Fan, Marc Henry, Brendan Pass and Soumik Pal).
- 20. Co-organizer, "Optimization-Conscious Econometrics Conference II," University of Chicago June 9-10, 2023 (with Guillaume Pouliot, Roger Koenker and Rahul Mazumder).
- 19. Co-organizer, workshop "New perspectives on substitutes," Paris, June 2-3, 2023 (with Larry Samuelson).
- 18. Co-organizer, "Paris workshop on optimal transport with applications to economics and statistics", Paris, October 20-21, 2021 (with Guillaume Carlier and Flavien Léger).
- 17. Co-organizer, "Competitive Equilibrium With Gross Substitutes", ICERM, Brown, May 8-12, 2020.
- 16. Co-organizer, "Economics Meets the Mathematical Sciences" workshop, Fields Institute, Toronto, April 10-12, 2019 (with Robert McCann and Xianwen Shi).
- 15. Co-organizer, "conference on machine learning and optimization in economics," Cemmap, University College London, March 2018 (with Simon Lee).
- 14. Co-organizer, "Econometrics Meets Theory," NYU CRATE Conference, April 7-8, 2017 (with Isabelle Perrigne and Quang Vuong).
- 13. Co-organizer, "Optimal Transportation, Equilibrium, and Applications to Economics" workshop, New York University, April 29-30, 2016 (with Robert McCann).
- 12. Co-organizer, "Optimization, Transportation and Equilibrium in Economics" conference, Fields Institute, Toronto, September 15-19 2014 (with Pierre-André Chiappori, Robert McCann, and Xianwen Shi).

- 11. Co-organizer, "Matching, theory and estimation" Sept 26-27, 2013 (with Jean-Marc Robin).
- 10. Co-chair, SAET meetings, Paris, 2013 (with Bernard Cornet and Nicholas Yannelis).
- 9. Co-organizer, workshop "estimation of complementarities in matching and networks", Sciences Po, October 5-6, 2012 (with Marc Henry and Jean-Marc Robin).
- 8. Co-organizer, Roy seminar on Economic Theory (with Pierre Fleckinger, Laurent Lamy, and David Martimort, 2011-2012).
- 7. Co-organizer, conference "The life and work of Maurice Allais, from one century to the next", May 30, 2011 (with Pierre-Noel Giraud).
- 6. Co-organizer, "ParisTech-Journal of Economic Theory symposium on Inequality and Risk measurement," June 25-26, 2010 (with Thibault Gajdos, Jean-Michel Grandmont, Brian Hill, Karl Shell and John Weymark).
- 5. Co-organizer, summer school "Stats in the Chateau", HEC (Paris), September 2009 (with P. Alquier, V. Czellar, E. Gautier, G. Stoltz).
- 4. Co-organizer, workshop "Optimization, Transportation and Equilibrium in Economics", Ecole des Mines de Paris, July 6-8th 2009 (with G. Carlier, F. Santambrogio, T. Tomala).
- 3. Co-organizer, workshop "Dynamic and multivariate risk measures", Institut Henri Poincaré, Paris, Oct 16-17, 2008 (with R.-A. Dana)
- 2. Co-organizer, X-HEC seminar in Economic Theory (with N. Houy, E. Perez, and T. Tomala, 2008-2011).
- 1. Co-organizer, weekly workshop "Optimal transport methods for quantitative finance," Institut Henri Poincaré (with R. Cont, 2009-2010).

## **TEACHING**

### Invited lectures, short courses:

- "Cemmap masterclass on Optimal Transport and Applications to Econometrics." University College London, June 3-4, 2024.
- "Lectures on Optimal Transport and economic applications." Università degli Studi di Milano, Milan, October 26-27, 2023 and June 6-7, 2024.
- "An introduction to optimal transport and related tools in economics."
   Optimization-Conscious Econometrics Summer School, University of Chicago, June 4-7 2023.
- "Lectures on optimal transport and its applications to economics."

  Quantitative Economics workshop, **CREST**, September 14, 2022.
- Quantitative Economics workshop, CREST, September 14, 2022.
   "The econometrics of optimal transport."
   Short course, PIMS summer school on Optimal Transport and related areas, University of
- Washington, Seattle, June 20-July 1, 2022.
  "Two lectures on matching models for family economics"
  Invited online lectures in Professor Ismael Mourifié's course, Department of Economics,
- University of Toronto, April 1 and April 8, 2022.
  "Short course on optimal transport methods for economic models."
  14th European summer school in financial mathematics, Edinburgh, August 30-
- "Optimization methods in econometrics." Lecture series, **INSEAD**, June 2021.

September 3, 2021.

- "Online lectures on optimal transport and applications to quantile regression." Short course, IRTG 1792, **Humboldt-University**, Berlin, November 18-19, 2020.
- "Matching models with general transfers."

Mini-course, Summer school "Optimal transport and economics," **Hausdorff Center,** Bonn, July 2018.

"Economic applications of optimal transport".

Short course, Summer school "Optimal transport: numerical methods and applications," **Lake Como School of Advanced Studies**, May 2018.

• "Optimal transport and applications to economics, statistics and finance."

CFM-Imperial distinguished lectures, Imperial College, London, March 2018.

• "Optimal Transport Methods in Economics."

Lecture series, Toulouse School of Economics, November 2017.

• "CORE Lectures on the Econometrics of matching markets."

Lecture series, CORE, Université Catholique de Louvain, June 2016.

• "Matching Models: Theory and Estimation."

Lecture series, CEMFI, Madrid, July 2015.

• "Estimation of Matching Models with and without Transferable Utility."

Mini-course, thematic workshop on Optimization, Transportation and Equilibrium in Economics, **Fields Institute**, Toronto, September, 2014.

• "Estimation of Matching Models."

Toulouse School of Economics, June 2014.

• "Labor Market as a Matching Market: Theory and Empirics."

Ensae-CREST OFPR, PhD short course, 10h, spring 2012.

### PhD courses:

• Topics in Computational Economics (co-taught with Tom Sargent).

NYU Econ (NY), spring 2025.

• Applied Microeconometrics.

NYU Econ (NY), spring 2024, spring 2025.

• Topics in Economics: matching models.

NYU Econ (NY), spring 2023.

• "Microeconomics I: general equilibrium."

NYU Econ (NY). Fall 2022.

• "math+econ+code masterclass on optimal transport and economic applications."

**NYU** and **Sciences Po**, 30h, winter 2018, winter 2019, summer 2019, winter 2020, winter 2021, winter 2022, winter 2023.

• "math+econ+code masterclass on equilibrium transport and equilibrium transport and matching models in economics."

NYU and Sciences Po, 30h, summer 2018, summer 2020, summer 2021, summer 2022.

• "Multinomial Choice and Matching: Theory and Applications."

Sciences Po, PhD course, 24h, spring 2018.

• "Matching models and their applications."

NYU Economics and Mathematics Departments, PhD course, 28h, spring 2016, and 2017.

"New Econometric Methods, part 2: Optimal Transport Methods in Economics"

**MIT** 14.386, PhD course (half), 14h, spring 2015.

• "Linear Programming and Economic Applications."

Sciences Po, PhD short course, 8h, summer 2014.

• "Matching Markets: Theory and Applications."

Sciences Po KECD 2175, PhD course, 24h, spring 2013, spring 2014.

• "Theoretical and Empirical Aspects of Matching Markets."

Columbia University G6232, PhD course, 30h, spring 2011.

#### Master level courses:

• "Data and Computation II"

NYU Econ (A&S and Stern, MSQE) NY, January 2023, January 2024, January 2025.

• "Introduction to causal inference for data scientists."

**NYU** Center for Data Science DS-GA 3001, spring 2017.

• "Statistical Methods in Economics, part 2."

MIT 14.381, MSc course (half), 20h, fall 2014.

"Decision Under Risk."

Sciences Po KFIN 2655A/16243, Master (M2) level course, 24h, Fall 2013.

• 'Financial Markets."

Ecole Polytechnique Eco 559/584, Master (M1) level course, 32h, 2007-2011.

• "Asset Pricing and Economics of Uncertainty."

Ecole Polytechnique Eco 558/550/550A, Master (M1) level course, 32h, 2007-2010.

### **MBA** courses:

• "Business statistics."

Chicago Booth 41000, MBA course, 30h, spring 2010.

## Undergraduate courses:

• "Linear and Nonlinear Optimization."

NYU Math (Paris). Spring 2022, Fall 2023, Fall 2024.

• *'Introduction to Econometrics.''* (co-taught with Maxime Tô) **NYU** UA-9266, undergraduate course, 40h, fall 2020.

• "Advanced Econometrics."

MIT 14.36, undergraduate course, 26h, spring 2015.

• "Economics of the Firm."

Ecole Polytechnique Eco 433, undergraduate course, 32h, fall 2011.

### SEMINAR AND CONFERENCE PRESENTATIONS

### **Invited seminar presentations:**

2023-2024: Stockholm School of Economics, University College London, London School of Economics, Brown University, Chamberlain seminar (online), Northwestern University, University of Chicago, University of Bonn.

2022-2023: Rome "Tor Vergata," Stockholm School of Economics, Montreal (Concordia, McGill, University of Montreal, and UQAM), Syracuse University (online), Essec (Cergy), Toulouse School of Economics

**2021-2022:** INRIA (Paris), Tsinghua SEM (Beijing, online), University of Michigan (online), GATE (Lyon-St. Etienne online)

**2020-2021:** Columbia University, Johns Hopkins University.

**2019-2020:** Université Laval, Norwegian Business School, Oslo.

**2018-2019:** European Union Joint Research Center, Ispra, Italy, Central European University, Budapest, Paris-Sorbonne University, NYU Shanghai, NYU Abu Dhabi

2017-2018: Toulouse School of Economics, University College London, University of Southern California, Cal'Tech, University of California San Diego, Yale, Princeton, London School of Economics, Séminaire Pluridisciplinaire d'Optimisation de Toulouse, Université libre de Bruxelles, Duke, Wharton, Sciences Po

2016-2017: Sciences Po, Wharton, Duke, SPOT, Université Libre de Bruxelles, London School of Economics, Yale, Princeton, UC San Diego, CalTech, University of Southern California, University College London, TSE.

**2016-2017:** INRIA Paris, Columbia (Statistics), Microsoft Research New York, Urbana Champaign, Columbia GSB, Penn State University.

**2015-2016:** University of Toronto, University of Southern California, Penn State University, Fields Institute, Universidade de Lisboa.

2014-2015: Louvain-la-Neuve, Chicago, UPenn, Zurich, London School of Economics, UCL, Boston University, Berkeley, Stanford, Harvard-MIT, UCLA, CalTech, NYU, Carnegie Mellon, Princeton, Yale, Columbia.

**2013-2014:** Aalto, LSE, Séminaire Malinvaud, Séminaire Roy, EPFL, Austrian Central Bank, Harvard-MIT.

2012-2013: Imperial College, ULB, Chicago, Lugano, Montréal, Queen Mary, ETH.

2011-2012: Stanford GSB, Columbia, Séminaire Malinvaud, Alicante, Tilburg, Imperial College, Aix-Marseille, Séminaire Parisien d'Optimisation, Columbia, University College London, University of British Columbia.

**2010-2011:** UCLA, UC Riverside, UC San Diego, Northwestern, Chicago, Vanderbilt, Chicago Booth, CalTech.

**2009-2010:** PSE, Columbia, Séminaire Bachelier, Freiburg, TSE.

2008-2009: Columbia, LUISS, Collegio Carlo Alberto.

2007-2008: TSE, HEC Genève, Séminaire Bachelier, Séminaire Malinvaud.

## Invited conference presentations:

- August 15-16, conference 'Econometrics in Rio', Rio de Janeiro, Brazil.
- August 12-13, 2024, BIRS conference on 'optimal transport and dynamics', Oaxaca, Mexico.
- June 20, 2023, session on "Computational Optimal Transport," Foundations of Computational Mathematics (FOCM) conference, Paris.
- May 10-11, 2023, conference on family economics, Ravello, Italy.
- January 6-8, 2023, session on "Optimal Transport meets Econometrics," Econometric Society winter meeting, New Orleans.
- September 8-9, workshop on discrete choice, University of Copenhagen.
- June 23-24 2022. Keynote speaker, Workshop in gender and family economics, Université de Cergy-Pontoise.
- June 8-10, 2022, Hi!Paris Symposium on AI and Social Sciences, Institut Polytechnique de Paris and HEC Paris.
- May 16-20, 2022, Workshop on Applied Optimal Transport, Institute for Mathematical and Statistical Innovation, Chicago.
- September 14-17, 2021, GFMUL workshop on "Schrödinger's problem and Optimal Transport: a multidisciplinary perspective", Lisbon, Portugal (online).
- June 17-18, 2021, Conference on Econometrics of Games, Matching and Networks, Toulouse School of Economics.
- June 13-16, 2021, Sir John Hicks lecture, 20th conference of the Society for the Advancement of Economic Theory, Seoul.
- June 8-11, 2021, GFMUL workshop on "Schrödinger's problem and Optimal Transport: a multidisciplinary perspective", Lisbon, Portugal.
- December 6, 2020, session on "Optimal transport and applications" at the online Canadian Mathematical Society's Winter Meeting. Semi-plenary invited lecture, Word Congress of the Econometric Society, Milan, 2020.

- August 17-21, 2020, Invited talk, plenary session on "Developments in Modern Econometrics", World Congress of the Econometric Society, Milan.
- January 8-9, 2020, Workshop on generalized entropy, University of Copenhagen
- November 15-16, 2019, "Optimization-Conscious Econometrics Conference," University of Chicago
- September 27-28, 2019, Conference on optimal transport and its applications in Economics, Yale University
- June 23-29, 2019, workshop "People in Optimal Transport and Applications," Cortona, Italy
- June 7-8, 2019, Conference "Economic Applications of Quantile Regression 2.0", Nova School of Business and Economics, Cascais, Portugal
- June 3-7, 2019, workshop "Optimal Transport in Analysis and Probability," Erwin Schrödinger Institute, Vienna
- April 10-12, 2019, workshop on Economics meets the Mathematical Sciences, Fields Institute, Toronto
- March 25-29, 2019, Workshop on optimal transport, thematic semester on "Calculus of Variations", IMT, Toulouse
- June 26-29, 2018, keynote speaker, 5th annual conference of the International Association of Applied Econometrics (IAAE), Montreal
- June 25, 2018, SWET-EWGET Conference in the honor of Nicholas Yannelis, Paris
- June 12, 2018, Conference on "Insurance, Actuarial Science, Data and Models", Fédération Française de l'Assurance, Paris
- June 4-6, 2018, Modern mathematical methods for data analysis, Université de Liège
- April 13-14, 2018, Market design conference, Columbia University
- December 13, 2017, Workshop on "Mean Field Games, Spatial Economics, Equilibrium and Collective Decision", ENS Paris-Saclay
- November 30-December 1, 2017, keynote speaker, 9th French econometrics conference, CREST, Palaiseau, France
- June 26-29, 2018, keynote speaker, 5th annual conference of the International Association of Applied Econometrics (IAAE), Montreal.
- June 25, 2018, SWET-EWGET Conference in the honor of Nicholas Yannelis, Paris.
- June 12, 2018, Conference on "Insurance, Actuarial Science, Data and Models", Fédération Française de l'Assurance, Paris.
- June 4-6, 2018, Modern mathematical methods for data analysis, Université de Liège.
- April 13, 2018, Market design conference, Columbia University.
- December 13, 2017, Workshop on "Mean Field Games, Spatial Economics, Equilibrium and Collective Decision", ENS Paris-Saclay.
- November 30, 2017, keynote speaker, 9th French econometrics conference, CREST, Palaiseau, France.
- June 5, 2017, Cowles conference on economic theory, Yale university.
- April 21-22, 2017, "CEMMAP UCL and Vanderbilt conference on Econometrics and Models of Strategic Interactions," Vanderbilt university.
- April 9-14, 2017, Workshop "Generated Jacobian Equations: from Geometric Optics to Economics," Banff International Research Station.
- March 31, 2015, *Econometrics Journal* special invited session, Royal Economic Society Conference 2015, Manchester.
- March 6, 2015, "Big Data Finance" Conference, Courant Institute, New York University.

- September 15-17, 2014, Conference on Optimization, Transportation and Equilibrium in Economics, Fields Institute, Toronto.
- June 19, 2014, Conference in honor of Ivar Ekeland's 70th birthday, Université Paris Dauphine.
- June 11, 2013, Workshop "Advances in Mechanism Design," Paris School of Economics.
- June 6, 2013, Workshop on Economic Theory, University of Manchester.
- April 22-26, 2013, Workshop "Partial Identification," Oberwolfach.
- February 19, 2013, Conference in honor of Rose-Anne Dana, Dauphine.
- November 26-30, 2012, Workshop "Frontiers in Quantile Regression", Oberwolfach.
- May 21-25, 2012, French Statistical Society, Brussels.
- December 7, 2011, ESRC Seminar on testability in game theory, Warwick.
- Nov 25, 2010, Workshop "Recent Advances in Revealed Preference," Université Paris-Dauphine.
- Sept 24, 2010, Conference on "Partial Identification and Revealed Preference," Montreal.
- March 16, 2010, Conference on "Large portfolio, Concentration and Granularity," Paris.
- March 20, 2009, 2nd International Financial Research Forum, Paris.
- Oct 24, 2008, Circq conference on "Inference with Incomplete Models," Montreal.
- Oct 17, 2009, Workshop on "Dynamic and Multivariate Risk Measures," IHP, Paris.
- Jul 18, 2008, Workshop on "Optimization, Transport and Equilibrium," UBC, Vancouver.
- June 26, 2008, Conference on "Risk, Decision and Uncertainty", Oxford.
- June 12, 2008, Workshop on "Nonsmooth Inference, Analysis and Dependence," Goteborg.
- May 20, 2008, Workshop on "New Directions in Quantitative Finance," Paris.
- March 28, 2008, Conference on "Inference in Partially Identified Models and Applications," UCL, London.
- Nov 9, 2007, Workshop on "Model Validation, Predictive Ability and Model Risk," Banque de France, Paris.
- June 25, 2007, Workshop on "Optimization, Transport and Equilibrium," Columbia University.