Martin Mugnier

Ph.D. Candidate in Economics at CREST, ENSAE Paris, Institut Polytechnique de Paris
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Personal Information: 07/19/1995, French
Ph.D. Supervisor: Xavier D'Haultfœuille Xavier.D'Haultfoeuille@ensae.fr

Primary Fields of Research: Theoretical Econometrics, Analysis of Longitudinal (Panel) Data
Secondary Fields of Research: Mathematical Statistics, High-Dimensional Statistics

Education

Postgraduate Studies

Sep. 2019 – **CREST, ENSAE Paris, Institut Polytechnique de Paris**, France
Ph.D. Candidate in Economics
• Dissertation title: "Nonlinear Panel Data Models and High-Dimensional Statistics"

2018 – 2019 **Université Paris-Saclay**, France
M.Sc. in Applied Mathematics (*with honors*)
• Major in Mathematical Statistics and Machine Learning Theory

2017 – 2019 **ENSAE Paris**, France
Ingénieur Économiste-Statisticien, Graduate Program
• Major in Data Science and Statistical Learning

2016 – 2017 **École Polytechnique, HEC Paris, ENSAE Paris, ENS Paris-Saclay**, France
Master in Economics (1st year) (*with highest honors*)

2015 – 2019 **École Normale Supérieure Paris-Saclay**, France
M.Sc. in Economics and Management
• Civil servant student (*"normalien"*)

Graduate Studies

2015 – 2016 **Université Paris 1 Panthéon-Sorbonne and ENS Paris-Saclay**, France
B.Sc. in Economics (*with honors*)

2013 – 2015 **Toulouse School of Economics & Lycée Ozenne**, France
Licences 1 & 2 in Economics and Management (*ranked 7th out of 722 & 1st out of 274*)
• Preparatory classes for the national competitive examination for admission to the ENS Paris-Saclay (option D2): two-year undergraduate intensive course in mathematics, economics, and management.

Working Papers

2019 "Fixed Effects Binary Choice Models with Three or More Periods" (*with Xavier D'Haultfœuille and Laurent Davezies*)

Work in Progress

2020	Unobserved Clusters of Time-Varying Heterogeneity in Nonlinear Panel Data Models
2020	Identification and (Fast) Estimation of Nonlinear Panel Models with Additively Separable Two-way Fixed Effects (*with Ao Wang*)
2020	Asymptotic Properties of Empirical Quantile-Based Estimators (*with Xavier D'Haultfœuille and Jérémy L'Hour*)
2019	Linking Patents to Firms: Insights with French Firms (*with Matthieu Lequien, Loriane Py and Paul Trichelair*)

Grants & Awards

2021 – 2022	EUR Data Science for Economics, Finance and Management International Mobility Grant
2019 – 2022	French Ministry of Higher Education, Research and Innovation, Full Doctoral Scholarship
2015 – 2019	École Normale Supérieure Paris-Saclay, Full Scholarship
2017	Hackaton Ernst & Young-Genius ENSAE, 2nd Prize – Deep Learning Challenge

Teaching Experience

Undergraduate Courses (Principal Instructor)

Fall '19	Linear Algebra and Python (*24 hrs*), HEC Paris & ENSAE Paris

Undergraduate TA sessions at ENSAE Paris

Fall '20, '21	Mathematical Fundations of Probability Theory (*21 hrs*), prof. Cristina Butucea
Spring '21	Differentiable Optimization (*21 hrs*), prof. Guillaume Lecué

Graduate TA sessions at ENSAE Paris

Spring '20, '21	Econometrics II (*18 hrs*), prof. Mickael Visser
Fall '20, '21	Mathematical Statistics I (*18 hrs*), prof. Arnak Dalalyan
Spring '20, '21	Mathematical Statistics II (*11 hrs*), prof. Matthieu Lerasle

Professional Experience

April – Sep. 2019	**CREST, Microeconometrics Lab**, Palaiseau, France (*4 months*) Research assistant to Pr. Xavier D'Haultfœuille. • Theoretical econometrics • Conducted research on statistical identification in discrete choice models with high-dimensional fixed effects.
June – Sep. 2018	**Banque de France, DGSEI, SEPS**, Paris, France (*4 months*) Research intern, supervised by Matthieu Lequien and Loriane Py. • Designed a machine learning based agorithm to fuzzy-match patent data from the PATSTAT Global database to SIRENE, the national register of French firms held by Insee.
2017 – 2018	**Société Générale, Inspection Générale**, Paris, France (*8 months*) ENSAE Team Project in Applied Statistics (part-time internship), supervised by Clément Sentis and Walid Amrane. • Designed predictive algorithms to forecast and anticipate credit risk and defaults in a portfolio of medium-sized firms for a subsidiary in Africa.
April – July	**Toulouse School of Economics, IAST**, Toulouse, France (*4 months*)

2017	Research assistant to Senior Scholar Daniel-Li Chen (IAST/NBER). • Collected, cleaned and explored very large datasets. Designed and implemented econometric specifications to capture psychocognitive bias in decision-making in U.S. Courts such as cognitive caseload, time-effects, sequential-contrast effects, date of birth effects • Research assistance on the project "The Impact of Financial Payments from Pharmaceutical Industries on Prescribing Behaviors and Patient Outcomes".
May – July 2016	**French Treasury, French Embassy in Colombia, Regional Economic Service**, Bogotá, Colombia (*2 months*) Economist intern, supervised by Laurent Charpin. • Performed a statistical analysis aiming to highlight promising sectors for French exports • Produced a report from personal research and many interviews conducted in Spanish.
2016 – 2017	**C'efficace**, Paris, France (2 years) Individual teacher. • Taught courses in Economics, Marketing and Mathematics to high-school and undergraduate students.

Programming Skills & Languages

Prog. skills	Python***, R**, Stata**, SAS**, LaTeX***, Microsoft Office**, HTML/CSS*
Languages	English (fluent, TOEIC : 915/990), Spanish (intermediate), French (native)

Conferences & Seminars

Seminars	CREST Ph.D. Seminar (10/2021, 12/2020, 07/2020), CREST Microeconometrics Seminar (09/2021), Hadamard Doctoral School Ph.D. Seminar (02/2021), EPFL Workshop on Computational Methods in Social Science (07/2019)
Conferences	European Winter Meeting of the Econometric Society (12/2021), Bristol Econometric Study Group (09/2021), EEA Congress (08/2021), China Meeting of the Econometric Society (07/2021), Asian Meeting of the Econometric Society (06/2021), African Meeting of the Econometrics Society (06/2021), IAAE Annual Conference (06/2021, 2020 cancelled), 50èmes Journées de la Statistique (2020 cancelled)
Co-organizer of	CREST Ph.D. Seminar (2019-2021), CREST Statistics·Econometrics·Machine-Learning Seminar (2019-), CREST Econometric Reading Group (2020)

Other Duties

2020 – 2021	Ph.D.s' representative on the Board of Directors of Groupe des Écoles Nationales d'Économie et Statistique (Genes)

References

Xavier D'Haultfœuille
Professor of Economics
CREST, 5 avenue Henry Le Chatelier,
91120 Palaiseau, France
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Daniel-Li Chen
Professor of Economics & CNRS Research Director
Toulouse School of Economics, 1 Esplanade de l'Université,
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