# Ewen GALLIC

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http://egallic.fr/

## RESEARCH INTERESTS

Applied Econometrics, Machine Learning, Environmental Economics

## CURRENT AND PREVIOUS POSITION

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|---|---|
| 2018 – | Assistant Professor, Aix-Marseille University & Aix-Marseille School of Economics (AMSE), Marseille, France |
| 2017 – 2018 | Postdoctoral researcher, Institut Louis Bachelier and CREM UMR CNRS 6211, Rennes (France). |
| 2013 – 2017 | Teaching and Research Assistant, University of Rennes 1 and CREM UMR CNRS 6211, Rennes (France). |
| 2013 – 2016 | Doctoral Scholarship from Ministry of Research, Rennes (France). |

## EDUCATION

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| 2013 – 2017 | Ph.D. student in Economics, University of Rennes 1, France. |
| | Advisor: Catherine BENJAMIN. |
| | Thesis title: "*Climate Change and Agriculture*". |
| | Committee:    ◦ Pascale Combes-Motel – Université d'Auvergne |
| |        ◦ Jean-Paul Chavas – University of Wisconsin (rapporteur) |
| |        ◦ Jean-Christophe Poutineau – CREM, Université de Rennes 1 |
| |        ◦ Katheline Schubert – Paris School of Economics, Université Paris 1 Panthéon–Sorbonne |
| |        ◦ Alban Thomas – INRA, Toulouse School of Economics (rapporteur) |
| 2012 – 2013 | Master of Statistics and Econometrics (with Highest Honours), University of Rennes 1, France. |
| 2011 – 2012 | MSc in Statistics and Econometrics, University of Rennes 1, France, Study Abroad: University of Montreal, Qc, Canada. |
| 2008 – 2011 | B.S in Economics, University of Rennes 1, France. |

## PUBLISHED ARTICLES

- Gallic, E., Lubrano, M., & Michel, P. (2021). Optimal lockdowns for COVID-19 pandemics: Analyzing the efficiency of sanitary policies in Europe. *Journal of Public Economic Theory*, 1–24. doi: 10.1111/jpet.12556

- Charpentier, A & Gallic, E (2020). La démographie historique peut-elle tirer profit des données collaboratives des sites de généalogie ?. *Population*, 75(2-3), 391-421. doi : 10.3917/popu.2002.0391

- Gallic, E & Vermandel, G. (2020). Weather Shocks. *European Economic Review*, 124, 103409. doi: 10.1016/j.euroecorev.2020.103409

- Charpentier, A & Gallic, E (2019). Using collaborative genealogy data to study migration: a research note. *The History of the Family*, 25:1, 1-21. doi: 10.1080/1081602X.2019.1641130

- Gallic, E, Poutineau, J.-C. & Vermandel, G (2017). L'impact de la crise financière sur la performance de la politique monétaire conventionnelle de la zone Euro. *Revue Économique*, 68(HS1), 63-86. doi: 10.3917/reco.hs02.0063

- Charpentier, A. & Gallic, E. (2015). Kernel density estimation based on Ripley's correction. *GeoInformatica*, 1-22. doi: 10.1007/s10707-015-0232-z

## WORKING PAPERS

- *Optimal Transport for Counterfactual Estimation: A Method for Causal Inference.* (2023), with A. CHARPENTIER and E. FLACHAIRE, arXiv:2301.07755.

- *Modeling Joint Lives within Families.* (2020), with O. CABRIGNAC and A. CHARPENTIER, halshs-02871927.

- *Airbnb in Paris : Quel impact sur l'industrie hôtelière ?* (2018), joint with V. MALARDÉ, hal-01838059

- *Recovering the French Party Space from Twitter Data* (2015), joint with F. BRIATTE, halshs-01511384.

## Work in Progress

○ *The Dynamic Effects of Weather Shocks on Agricultural Production*, with C. Crofils and G. Vermandel

○ *Impact of socio-economic determinants on the speed of epidemic diseases. A comparative analysis*, with G. Dufrénot, P. Michel, N. M. Bonou, S. Gnaba and I. Slaoui

○ *Distances Between Text Documents. Application to the French Job Market* with P. Michel and M. Raux

○ *The imaginary healthy patient*, joint with A. Ba, P. Michel, A. Paraponaris, J. Spinnato

## Other scientific output

○ Introductory book on R (in French).

○ Slides accompanying the chapters of the book: getting started, data, tables, functions, loops and vectorization, plots with ggplot2, linear regression.

○ e-Book «Python for economists».

○ Crash course on R.

○ R *Package* «kdeborder» to correct border bias in the estimation of kernel densities for point processes.

## Conferences, Workshops and Seminars

| 2021 | **Seminar**, LEM<br>*The Imaginary Healthy Patient*<br>Lille, France, 2 February. |
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| 2020 | **Seminar**, LEMNA<br>*The Imaginary Healthy Patient*<br>Nantes, France, 12 February. |
| 2019 | **Seminar**, Lundis de l'INED<br>Discussion of the article "*La grande régression*" by Julien Boelaert<br>Paris, France, 17 June.<br><br>**Thematic School**, TEPP-CNRS Evaluation of Public Policy,<br>*Étude de la démographie française du XIXe siècle à partir de données collaboratives de généalogie.*<br>Aussois, France, 18–22 March. |
| 2018 | **Conference**, 7th R Meeting,<br>*Étude de la démographie française du XIXe siècle à partir de données collaboratives de généalogie*<br>Rennes, France, 5–7 April.<br><br>**Conferences**, Chairs Days: Insurance, Actuarial Science, Data and Models,<br>*Étude de la démographie française du XIXe siècle à partir de données collaboratives de généalogie* (Poster)<br>Paris, France, 11–12 June.<br><br>**Seminar** of the «History and Population» (UR11) unit of the The French Institute for Demographic Studies,<br>*Étude de la démographie française du XIXe siècle à partir de données collaboratives de généalogie*<br>Paris, France, 12 April.<br><br>**Conference**, Environmental Economics : a focus on Natural Resources,<br>*Weather Shocks, Climate Change and Business Cycles*<br>Orléans, France, 5–6 April.<br><br>**Thematic School**, TEPP-CNRS Evaluation of Public Policy,<br>*Étude de la démographie française du XIXe siècle à partir de données collaboratives de généalogie*, (Poster).<br>Aussois, France, 19–23 March. |
| 2017 | **Conférence**, X international, interdisciplinary conference on spatial statistics, geographical epidemiology and geographical aspects of public health (GEOMED 2017), *Spatial Aspects of Collaborative Demography via Genealogical Data*<br>Porto, Portugal, 7–9 septembre. |

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| 2016 | **Seminaire** of the GAINS,<br>*Climate Shocks and Business Cycles.*<br>Le Mans, France, 6 September. |
| | **Workshop**, 3rd International MACroeconomics workshop (IMAC),<br>*Climate Shocks and Business Cycles*<br>Rennes, France, 1-2 December. |
| | **Conference**, 33rd International Symposium on Money, Banking and Finance,<br>*Climate Shocks and Business Cycles*<br>Clermont-Ferrand, France, 7–8 July. |
| | **Conference**, 65th Annual Meeting of the French Economic Association,<br>*Climate Shocks and Business Cycles*<br>Nancy, France, 27–29 June. |
| | **Conference**, Conference on Sustainable Resource Use and Economic Dynamics (SURED 2016),<br>*Climate Shocks and Business Cycles*<br>Banyuls-sur-Mer, France, 6–9 June. |
| | **Workshop**, 4$^{\mathrm{e}}$ Workshop Microéconomie Appliquée,<br>*Climate Shocks and Business Cycles*<br>Rennes, France, 20 May. |
| | **Doctoral Workshop**,<br>*Climate Shocks and Business Cycles*<br>Rennes, France, 28 avril. |
| | **Workshop**, 5th French Association of Environmental and Ressource Economists (FAERE) Thematic Workshop,<br>*Effects of Climate Change on Agriculture: a European case study*<br>Rennes, France, 24–25 March. |
| | **Thematic School**, TEPP-CNRS Evaluation of Public Policy,<br>*Climate Shocks and Business Cycles* (Poster)<br>Aussois, France, 14–18 March. |
| | **Internal Doctoral Seminar**,<br>*Climate Shocks and Business Cycles*<br>Rennes, France, 10–11 March. |
| 2015 | **Conference**, 64th Annual Meeting of the French Economic Association,<br>*Effects of Climate Change on Agricultural Profits: a French Case Study*<br>Rennes, France, 22–24 June. |
| | **Internal Doctoral Seminar**,<br>*Climate Change in India: How to Protect Farmers?*<br>Rennes, France, 19–20 February. |
| | **Conference**, Société Française d'Economie Rurale,<br>*Climate Change in India: How to Protect Farmers?* (Poster),<br>Rennes, France, 12–13 February. |
| 2014 | **Conference**, Environment and Natural Resources Management in Developing and Transition Economies,<br>*Economic Impact of Climate Variability in India: a Ricardian Analysis*<br>Clermont-Ferrand, France, 08–10 October. |
| | **Internal Doctoral Seminar**,<br>Discussion of an article.<br>Rennes, France, 13–14 February. |
| | **Seminar**, 30min' INSIDE,<br>*Economics and Climate Change: Should Indian Farmers Rejoice for Climate Change?*<br>Seminar aimed at undergrad students<br>Rennes, 03 December. |

| 2013 | **Workshop**, Analyse de données spatio-temporelles en océano-météo, *Climate Change and Agriculture: Impacts on Wheat and Corn Yields in France* Landéda, France, 28–29 November. |
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| | **Conference**, R meeting, *Kernel Density Estimation Based on Ripley's Correction*(Poster and lightning talk, winner of the poster contest), Lyon, France, 27–28 June 2013. |
| 2012 | **Seminar**, Séminaire Quantact, Presentation of work completed during a research internship. Montreal, 16 July. |

## TEACHING ACTIVITIES

### Computer science

○ **IT**, 22 hours of tutorials (2021,2022), $3^{rd}$ year of Bachelor in Economics, Aix-Marseille University
Book of the course: http://egallic.fr/Enseignement/R/Book/avant-propos.html
Hands-on sessions: http://egallic.fr/Enseignement/L3_EcoFi/TD/

○ **Programmation pour les big data : SQL, NoSQL, Python**, 24 hours of lectures/tutorials (2018, 2019, 2020), $2^{nd}$ year of Magistère, Aix-Marseille Université / Aix-Marseille School of Economics.
Book of the course:: http://egallic.fr/Enseignement/Python/propos-liminaires.html.
*Introduction to Python, Relational databases, SQL, nonrelational databases, MongoDB*

○ **Programming for big data: SQL, NoSQL**, 12 hours of lectures/tutorials (2018, 2019, 2020), Master $2^{nd}$ year, track Econometrics, Big Data and Statistics, Aix-Marseille Université / Aix-Marseille School of Economics.
*Introduction to Python, Relational databases, SQL, nonrelational databases, MongoDB*
*Introduction to R*

○ **Introduction to R**, 20 hours of lectures/tutorial (2014, 2015, 2016)
Graduate (1st year), University of Rennes 1.
Lesson notes (in French) : http://egallic.fr/Enseignement/R/m1_stat_eco_logiciel_R.pdf.
*Data manipulation, user-defined functions, graphics, statistical methods, …*

○ **Introduction to Web APIs**, 1 day practical work for R. SUIRE (2014)
Graduate (2nd year), University of Rennes 1.
*Basic operation, practical case with Twitter APIs.*

### Statistics, Econometrics

○ **Machine learning and statistical learning**, 24 hours (2018, 2019, 2020, 2021, 2022), Master $2^{nd}$ year, track Econometrics, Big Data and Statistics, Aix-Marseille Université.
Slides: http://egallic.fr/cours-de-machine-learning/
*machine learning/statistical learning methods, supervised learning (regression learning, classification methods), unsupervised learning, ethics*

○ **Statistique**, 24 hours of lectures (2018, 2019, 2020, 2021, 2022), $2^{nd}$ year of Bachelor in Economics, Aix-Marseille Université.
*Probability distributions, sampling theory, hypothesis testing.*

○ **Statistics**, 18 hours tutorials, for T. KARCHER (2012, 2013, 2014, 2015, 2016)
Undergraduate (2nd year), University of Rennes 1.
*Introduction to probability, random variables, theoretical distributions, approximations of probability distribution functions, sampling distributions, confidence intervals, …*

○ **Econometrics** 12 hours tutorials, for T. KARCHER, (2013, 2014, 2016)
Undergraduate (3rd year), University of Rennes 1.
*OLS, hypothesis testing, multicolinearity, heteroskedasticity, autocorrelation in residuals, variable choice, dummy variables, …*

## Economics

- **Group projects**, 12 hours tutorials (2022), $3^{rd}$ year of Bachelor in Economics, Aix-Marseille Université.

- **Monetary Economics and Finance**, 12 hours tutorials for J.C. POUTINEAU (2015, 2016)
  Undergraduate (2nd year), University of Rennes 1.
  *Credit multiplier, AS-AD and IS-LM models, Taylor rule, monetary policy, macroeconomic equilibrium, expectiations, …*

- **Introduction to Macroeconomics** (in English), 12 hours tutorials for C. BENJAMIN (2016)
  Undergraduate (1st year), University of Rennes 1.
  *Fundamental principles of macroeconomics, System of National Accounts, …*

- **Microeconomics**, 16 hours tutorials for O. L'HARIDON (2016)
  Undergraduate (1st year), University of Rennes 1.
  *Fundamental principles of microeconomics, buyers, sellers and equilibrium, consumer's behaviour, behaviour of firms, market and competition, …*

- **Methodology**, 10 hours tutorials, for C. GUÉGUEN (2013)
  Undergraduate (1st year), University of Rennes 1.
  *Document research, problematization, …*

## Supervision of students

- **End of study project** (2018, 2019, 2020, 2021, 2022).
  *Supervision of groups of 2 to 5 students working for 6 months on a project in data science submitted by a company (ST Microelectronic, Janssen, Progexia, Airbus Helicopters.*

- Supervision of students in the Master 2 Economics course in Econometrics, Big Data, Statistics, Aix-Marseille University.

## PARTICIPATION IN COLLECTIVE TASKS

### Research

- Co-organization of the general seminar of the research unit (AMSE), with A. SEROR (2020–2023)

- Co-organization of the "Big Data and Econometrics" seminar of the research unit (AMSE), with P. MICHEL (2018–2020)

- Participation in Selection Committees: Université Paris 1/IEDES/UMR Développement et Sociétés (2021), Université de Lorraine/BETA (2020)

- Refereeing duties: *Journal of Environmental Economics and Management, Journal of Public Economic Theory, BMC Health Services Research, Economics Bulletin.*

### Teaching

- Pedagogical responsibility for the Economics-Finance course in the 3rd year of the Bachelor's degree in Economics and Management, Aix-Marseille University (2020–)

## LANGUAGES

ENGLISH: Fluent
FRENCH: Mothertongue

## COMPUTER SKILLS

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| Programming Languages: | R (expert), Python (advanced), MATLAB, SAS, java. |
| Markup Languages: | LaTeX, R Markdown, HTML, CSS. |
| Databases: | SQL (advanced). |
| Office Software: | Ms Office (Word, Excel, PowerPoint, Access), LibreOffice. |

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