Arthur Thomas July 2025

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EMPLOYMENT

2022- **Assistant Professor (Maître de Conférences)**, *Université Paris-Dauphine, France*

2021- **Associated Researcher** in the Climate Economics Chair, *Université Paris-Dauphine, France.*

2017- **Associated Researcher** in the Chair of the Economics of Natural Gas, *Paris Dauphine-PSL University, IFP School, Mines Paris Tech-PSL University, and Toulouse School of Economics. The German Institute for Economic Research (DIW).*

2020-2022 **Teaching and Research Fellow for Computer Science**, *CREST ENSAE, Paris.*

VISITING RESEARCHER

OCT. 2024 **Visiting Professor,** *Department of Economics at York University, Toronto, Canada. Invited by Prof. Jasiak*

FEB-APR. 2024 **Visiting Professor,** *Department of Quantitative Economics at Maastricht University, School of Business and Economics, Netherland. Founded by University Paris Dauphine Grant for « Jeunes Chercheurs et Chercheuses ». Invited by Prof. Hecq*

GRANTS AND AWARDS

2024-2025 ***PSL Global Seed Fund. Partners:*** *University Paris Dauphine PSL, Maastricht University (Alain Hecq), Tor Vergata University of Rome (Gianluca Cubbada) and York University, Toronto (Joann Jasiak).*

2023-2024 ***Paris-Dauphine Grant for Jeunes Chercheurs et Chercheuses***

EDUCATION

2017 - 2020 **PhD in economics**, Nantes University, France
Title: "The Econometrics of Energy Demand: Identification and Forecast", under the supervision of Benoît Sévi (Nantes-University) and Olivier Massol (IFP School and City, University of London)
Committee: K. Abadir (Imperial College London, referee), D. Bunn (London Business School), D. Korobilis (University of Glasgow, referee), O.Massol (IFP School and City, University of London, supervisor), V. Mignon (Université Paris-Nanterre, chairman), B. Sévi (Nantes University, supervisor)

2014 - 2017 **M.Sc. in Statistics**, École Nationale de la Statistique et de l'Analyse de l'Information (ENSAI), France

2012 – 2014 **Preparatory classes (MP)**, Lycée Henry Poincaré (Nancy), France

PUBLICATIONS

Bruguet, M., Thomas, A., & Le Saout, R. (2025). Weather Effects in Energy Seasonal Adjustment: An Application to France Energy Consumption. *The Energy Journal, 0(0).*

Bardon P., Massol O., Thomas A. (2025). Greening Aviation with Sustainable Aviation Fuels: Insights from decarbonization scenarios. *Journal of Environmental Management, vol. 374.*

Thomas, A., Massol, O., & Sévi, B. (2022). How are Day-ahead Prices Informative for Predicting the Next Day's Consumption of Natural Gas? Evidence from France. *The Energy Journal, 43(5), 1-26.*

WORKING PAPERS

Gilles De Truchis Fries Sébastien, Arthur Thomas (2025). Forecasting extreme trajectories using semi-norm representations. [Paper][Working paper]

Gilles De Truchis Fries Sébastien, Arthur Thomas (2025). Prediction of bubbles in presence of α-stable aggregates moving averages.

Yannick Le Pen, Zakaria Moussa, Arthur Thomas (2025). Regime Switching for Dynamic EquiCorrelation. [Paper]

Olivier Massol, Eduard Civel, Arthur Thomas (2025). Unfair Trade in the Circular Economy? Price Dynamics in Chinese and European Waste to Biofuel Industries (2025). [Working paper]

Gilles De Truchis, Elena Dumitrescu, Sébastien Fries, Arthur Thomas (2024). Bet on a bubble asset? An optimal portfolio allocation strategy. [Paper]

Zakaria Moussa, Arthur Thomas (2024). Identifying Oil Supply News Shocks and Their Effects on the Global Oil Market, USAEE Working Paper No. 21-490, Jun. 26, 2023. [Working paper]

Zakaria Moussa, Benoît Sévi, Arthur Thomas (2021). Real-time demand in U.S. natural gas price forecasting: the role of temperature data, USAEE Working Paper No. 21-507, 21 Sep 2021. [Working paper]

ONGOING WORK

Olivier Massol, Eduardo S. Marques, Arthur Thomas (2025). Disentangling Drivers of EU Allowance Prices: A Mixed Causal and Non-Causal Time Series Approach.

Gilles De Truchis, Arthur Thomas, Ludivine Vaudree (2025), Deconvolution and Filtering of Non-Causal Alpha-Stable Processes.

Elena Dumitrescu, Julien Peignon, Arthur Thomas (2025). Tail-aware density forecasting of locally explosive time series: a neural network approach.

Gilles De Truchis, Fries Sébastien, Arthur Thomas (2025). Multivariate seminorm representation for α-stable moving average processes and path prediction.

REFEREE REPORTS

25 reports since 2018 in the following journals: Annals of Economics and Statistics; Empirical Economics; The Energy Journal; Energy Economics; European Economic Review; Journal of Times Series Analysis; Journal of Banking and Finance; Nature Energy; Resource and Energy Economics; Revue Economique; Revue Française d'Economie; Revue Française d'Economie Politique.

ACADEMICS RESPONSIBILITIES

2025	**Organizer of the 1st International Noncausal Econometrics workshop.** This workshop was held on June 13th and 14th 2025 in Paris. Co-organized with the University of Orléans and University Paris II Panthéon-Assas. [Program]
2025	**Organizer of an invited session at 19th International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics)**, CFE-CMStatistics 2025, Birkbeck, University of London.
2025	**Organizer of the 43rd IAEE International Conference,** *Paris, France*
2025	**External member in a recruiting committee for Assistant professor** (sections 5 and 26) AMSE, *Marseille*
2024	**Member of recruiting committee for Assistant professor** LEDa, *Dauphine -PSL*
2023-2025	**Organizer of the LEDa seminar (link),** *Dauphine -PSL*
2023	**Member of the working group on causality**, CEREMADE, LAMSADE, LEDa, *Dauphine-PSL*
2023,2025	**Organizer of the Journée portes ouvertes (JPO) du LEDa,** *Dauphine -PSL*
2023	**Organizers of the Annual Doctoral Conference of the Association for the Development of Research in Economics and Statistics (ADRES),** *Dauphine-PSL*
2023-2024	**Organizer of a LEDa cross-disciplinary seminar on theoretical quantitative techniques (Econometrics seminar link),** *Dauphine-PSL*
2020	**Organizers of the 37th International Conference of the French Finance Association (AFFI),** *Nantes, France.*
2018 -	**Member of the "Les Jeunes Econometres" working group**

SELECTED CONFERENCES AND WORKSHOPS

2025	**Rencontres Statistiques du CEREMADE**, *University Paris Dauphine – PSL.*
	13th Annual Conference of the International Association for Applied Econometrics (IAAE) 2025, *University of Torino, Torino.*
	46th IAEE International Conference 2025, *Paris France.*
	17th Annual SoFiE Conference, *ESSEC Campus of Cergy, France.*
	7th edition of QFFE 2025, *AMSE, Marseille, France.*
	15th Workshop in Time Series Econometrics, *Zaragoza.*
	18th Financial risk international forum, *Institut Louis-Bachelier .Paris.*

2024	**Econometrics seminar series,** *York university, Toronto.*
	18th International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics), *King's College London, Invited session.*
	39th Annual Meeting of the Canadian Econometrics Study Group (CESG), *York university, Toronto.*
	Séminaire FDD-FiME, *Institut Henri Poincaré.*
	4th Italian Workshop of Econometrics and Empirical Economics, *Free University of Bolzano, Italy.*
	Maastricht Econometric Seminars *Department of Quantitative Economics at Maastricht University,School of Business and Economics, Netherland.*
	Internal seminar LEDa, *University Paris Dauphine-PSL, France.*
	6th edition of QFFE 2024, *AMSE, Marseille, France*
	44th International Symposium on Forecasting, *Dijon France*
2023	**Workshop on noncausal models,** *Maastricht University, Netherland*
	CREST Finance seminar, *ENSAE, France*
	17th International Conference on Computational and Financial Econometrics, *HTW Berlin, University of Applied Science,Germany, invited session.*
	22ème Journée d'Économétrie – Développements Récents de l'Econométrie Appliquée à la Finance, *Nanterre, France*
2022	**FiME Summer School on "Big Data and Finance",** *University Paris Dauphine, CREST, Institut Louis-Bachelier, France*
	Internal seminar LEDa, *University Paris Dauphine-PSL, France*
	Big Data and Econometrics seminar, *AMSE, France*
	16th International Conference on Computational and Financial Econometrics, *King's College London, UK*
	21ème Journée d'Économétrie – Développements Récents de l'Econométrie Appliquée à la Finance, *Nanterre, France*
	Séminaire de recherche du LEO, *Orléans, France*
	4th edition of QFFE 2022, *AMSE, Marseille, France*
	Research seminar of the ACSS-PSL Institute
2021.	**7th RCEA Times series workshop**, *University of Milano-Bicocca*.

PhD Students

2025 –	**Aymen Bahrouni,** *PhD student at Dauphine, co-supervised with P. Geoffron*. **"De la finance verte à la formation du prix de l'électricité",** *PhD funded by the LEDa, University Paris Dauphine-PSL.*
2025 –	**Julien Peignon,** *PhD student at Dauphine, co-supervised with F. Rossi (CEREMADE)*. **"Improving the prediction of extreme events with machine learning, signal**

processing and non-causal econometrics" *funded by the ENS Paris – Saclay. PhD in both mathematics and economics.*

2023 – **Marie Bruguet,** *PhD student at Dauphine, co-supervised with A. Creti*, **"Measuring and evaluating sufficiency and efficiency in French residential energy consumption",** *COFRA funded by the French Ministry of Ecological Transition. [website]*

SUPERVISED MASTER STUDENTS (SINCE 2022)

2023. Lux, Boudon (M2-QEA), research assistant funded by Dauphine -PSL Graduate Program, jointly with F. Tripier (Univ. Dauphine) and Z. Moussa (Univ. Nantes), *Noncausality, monetary shocks, prices, wages, and profits*.

Janna Bengouirah (M2-QEA), *Noncausal portfolio optimization*.

Eddy Darragi (M2-QEA), *estimating residential consumption elasticities prices under subsidies in time of crisis*, jointly with M. Bruguet.

REINHARC Simon, RAFATJAH Matthieu and BRUNET Charles (M1-MIDO) *Study of available bootstrap methods for estimating MAR(p,q) mixed-causal models by (quasi-) maximum likelihood*.

BEAUVARLET Quentin and BLASCO Anaïs (M1-MIDO). *Study of available methods for forecasting MARMA(p,q,r,s) models with α-stable distribution.*

2022. Anastasia Schenckery, Axel Sauvaget and Mathieu Navarro (M1-MIDO), *Study of the predictive density of causal and non-causal ARMA models using machine learning approaches.*

Karen Arban and Axelle Roques (M1-IEF), *Speculative bubbles*

Iannis Reuter (M2-AID), *Measuring the temperature sensitivity of energy consumption* jointly with R. Le Saout (CREST).

MEMBER OF PHD COMMITTEES

2025 Peter MacKenzie (York University, Toronto), *Bridging the digital divide and mitigating cyber security risks in Canada.*

2023 Francesco Giancaterini (Maastricht University), *Essays on Univariate and Multivariate Noncausal Processes.*

COMPUTER SKILLS

Julia (expert), EViews (expert), Gretl, LaTeX, MATLAB (expert), Python (expert), R (expert), SAS (expert), Shiny (advanced), SPARK, STATA, Parallel Computing.

TEACHING

- **Econometrics for Energy Economists (Master 2 EFC, Paris Dauphine 2026-)**
- **Noncausal econometrics (PhD lecture SDOSE, Paris Dauphine and Mines PSL in English, 2024-)**
- **Computer Science Project (Master 2 Digital Economics, in English, 2023-)**
- **Topics in Advanced Economic Analysis (Master 1 QEA in English, 2023-)**
- **Machine Learning for Quantitative Finance (Master 2 272 IEF, 2022-)**
- **Applied Time Series (Master 1 IEF and Master 1 AID, 2022-)**
- PSL-WEEK : Machine Learning and AI for Economics and Finance (2022)