Arthur Thomas October 2024

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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).*

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). This grant will be used to organize a workshop in June 2025 in Paris dedicated exclusively to non-causal processes and to bring together all the teams working on these models in the world.*

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

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, vol. 43, n°5

Working Papers

Marie Bruguet, Ronan Le Saout, Arthur Thomas (2024). Weather Effects in Energy Seasonal Adjustment : An Application to France Energy Consumption. *Submitted*

Gilles De Truchis Fries Sébastien, Arthur Thomas (2024). Forecasting extreme trajectories using semi-norm representations.

Gilles De Truchis, Fries Sébastien, Arthur Thomas (2024). Multivariate α-stable moving averages, stable aggregates, and path prediction.

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

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. *Submitted*

Paul Bardon, Olivier Massol, Arthur Thomas (2024). Greening aviation: What do we expect from Sustainable Aviation Fuels (SAF). *Submitted*

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.

Ongoing Work

Elena Dumitrescu, Arthur Thomas (2024). Learning the predictive density of mixed-causal ARMA processes.

Yannick Le Pen, Zakaria Moussa, Arthur Thomas (2024). Regime Switching for Dynamic EquiCorrelation.

Referee Reports

20 reports since 2018 in the following journals: Annals of Economics and Statistics; Empirical Economics; The Energy Journal; Energy Economics; 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 a workshop on non-causal processes**. *Paris Dauphine -PSL, funded by a PSL Global seed fund.*
2024	**Member of recruiting committee for Assistant professo**r LEDa, *Dauphine -PSL*
2023 -	**Organizer of the LEDa seminar (link),** *Dauphine -PSL*
2023	**Member of the working group on causality**, CEREMADE, LAMSADE, LEDa, *Dauphine-PSL*
2023	**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	**Organizer of the 43rd IAEE International Conference,** *Paris, France. (postponed to 2025)*
2020	**Organizers of the 37th International Conference of the French Finance Association (AFFI),** *Nantes, France.*
2018 -	**Member of the "Les Jeunes Economètres" working group**

SELECTED CONFERENCES AND WORKSHOPS

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

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.**

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

2023. Francesco Giancaterini (Univ. Maastricht), *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

- **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)