Arthur Thomas Novembre 2023

# Université Paris-Dauphine – PSL University Bureau P121

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#### **EMPLOYMENT**

2022-	Assistant Professor (Maître de Conférences), Université Paris-Dauphine, France
2024	Visiting Professor, Department of Quantitative Economics at Maastricht University, School of Business and Economics, Netherland
2021-	<b>Associated Researcher</b> in the Climate Economics Chair, <i>Université Paris-Dauphine, France.</i>
2020-	Affiliated Member CREST-ENSAE, France
2017-	<b>Associated Researcher</b> in the Chair of the Economics of Natural Gas, <i>Paris Dauphine-PSL University, IFP School, Mines Paris Tech-PSL University, and Toulouse School of Economics. The German Institute for Economic Research (DIW).</i>

#### **EDUCATION**

2017 - 2020 **PhD in economics**, Nantes University, France

<u>Title:</u> "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)

<u>Committee:</u> 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 <u>M.Sc. in Statistics</u>, 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

Bet on a bubble asset? An optimal portfolio allocation strategy (2023), joint work with G. De Truchis (Univ. Orléans), E. Dumistrescu (Univ. Paris 2) and S. Fries (CREST and Vrije Univ).

Identifying Oil Supply News Shocks and Their Effects on the Global Oil Market (2023), joint work with Z. Moussa (Univ. Nantes), *USAEE Working Paper No. 21-490, Jun. 26, 2023*.

Greening aviation: What do we expect from Sustainable Aviation Fuels (SAF) (2023), joint work with P.Bardon and O. Massol (IFP School and City, University of London).

Real-time demand in U.S. natural gas price forecasting: the role of temperature data (2021), joint work with Z. Moussa (Univ. Nantes) and B. Sévi (Univ. Nantes), *USAEE Working Paper No. 21-507, 21 Sep 2021*.

Production intermittence in spot electricity markets: a behavioral simulations approach (2019), joint work with Albert Banal-Estañol (Univ. Pompeu Fabra and Barcelona GSE), O. Massol (IFP School and City, University of London) and Augusto Rupérez Micola (Luxembourg School of Finance).

### **ONGOING WORK**

Learning the predictive density of mixed-causal ARMA processes (2022), joint work with E. Dumistrescu (Univ. Paris 2)

#### 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; Revue Economique; Revue Française d'Economie; Revue Française d'Economie Politique.

#### **ACADEMICS RESPONSIBILITIES**

2023 - 2024	Organizer of the LEDa seminar, Dauphine -PSL
2023	<b>Member of the working group on causality</b> , CEREMADE, LAMSADE, LEDa, <i>Dauphine-PSL</i>
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-	Creation of a new LEDa cross-disciplinary seminar on theoretical quantitative techniques ( <u>Econometrics seminar link</u> ), <i>Dauphine-PSL</i>
2020	Organizer of the 43rd IAEE International Conference, Paris, France.
2020	Organizers of the 37th International Conference of the French Finance Association (AFFI), <i>Nantes, France</i> .
2018 -	Member of the "Les Jeunes Economètres" working group

### **SELECTED CONFERENCES AND WORKSHOPS**

- 2024. **4th Italian Workshop of Econometrics and Empirical Economics**: "Climate and Energy Econometrics", Bolzano Bozen, Italy, *Italian Econometric Association (SIdE-IEA)*, in collaboration with the Rimini Center for Economic Analysis (RCEA)
- 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.

Internal Friday Lunch meeting, Chaire Economie du Climat, Paris, France

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**

2022 – 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)**

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  $\alpha$ -stable distribution.

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**

- Computer Science Project (Master 2 Digital Economics, in English, 2023-)
- Topics in Advanced Economic Analysis (Master 1 QEA in English, 2023-)
- Machine Learning for Econometrics (PhD Program, 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)