

CONTACT INFORMATION	Vrije Universiteit Amsterdam School of Business and Economics Department of Econometrics and Data Science De Boelelaan 1105 1081 HV Amsterdam, The Netherlands  Date of birth: 30/01/1989 Citizenship: Italian	✉: <a href="mailto:matte.iaco@gmail.com">matte.iaco@gmail.com</a> 📧 <a href="mailto:matteo.iacopini1@gmail.com">matteo.iacopini1@gmail.com</a> web 🌐: <a href="https://matteoiacopini.github.io">https://matteoiacopini.github.io</a> 🆔 <a href="https://orcid.org/0000-0002-3551-4891">orcid.org/0000-0002-3551-4891</a> 🌐 <a href="https://www.researchgate.net">www.researchgate.net</a> 📄 <a href="https://scholar.google.it">scholar.google.it</a>
RESEARCH INTERESTS	Tensor calculus - Bayesian Statistics - High-dimensional data - Econometrics - Functional data analysis - Nonparametric statistics - Graphical models - Copula models.	
REFERENCES	<b>Monica Billio</b> – <i>Full Professor</i> Department of Economics, Ca’ Foscari University of Venice Cannaregio 873/b, 30121 Venice - Italy E-mail: <a href="mailto:billio@unive.it">billio@unive.it</a>  <b>Federico Bassetti</b> – <i>Full Professor</i> Department of Mathematics, Polytechnic University of Milan Piazza Leonardo da Vinci 32, 20133 Milan - Italy E-mail: <a href="mailto:federico.bassetti@polimi.it">federico.bassetti@polimi.it</a>	<b>Roberto Casarin</b> – <i>Full Professor</i> Department of Economics, Ca’ Foscari University of Venice Cannaregio 873/b, 30121 Venice - Italy E-mail: <a href="mailto:r.casarin@unive.it">r.casarin@unive.it</a>  <b>André Lucas</b> – <i>Full Professor</i> Department of Econometrics and Data Science, Vrije Universiteit Amsterdam De Boelelaan 1105, 1081HV Amsterdam - The Netherlands E-mail: <a href="mailto:a.lucas@vu.nl">a.lucas@vu.nl</a>
POSITIONS	<ul style="list-style-type: none"><li>- (10/2020 - present) <b>Research Fellow (Marie Skłodowska-Curie fellowship)</b>. Vrije Universiteit Amsterdam, Department of Econometrics and Data Science, The Netherlands</li><li>- (04/2019 - 03/2020) <b>Research Fellow</b>. Scuola Normale Superiore of Pisa, Italy</li><li>- (07/2018 – 03/2019) <b>Research Fellow</b>. Ca’ Foscari University of Venice, Department of Economics, Italy</li></ul>	
EDUCATION	<b>joint Ph.D. in Economics</b> , at Ca’ Foscari University of Venice, Italy, and <b>Ph.D. in Applied Mathematics</b> at Université Paris I - Panthéon-Sorbonne, France (09/2014 – 07/2018) Thesis: <i>Essays on the Econometric modelling of Temporal Networks</i> . Supervisors: M. Billio, R. Casarin, D. Guégan.	
VISITING PERIODS	<ul style="list-style-type: none"><li>▶ Palacky University in Olomuc (Czech Republic), Department of Mathematical Analysis and Applications of Mathematics: 29 October - 2 November 2019</li><li>▶ Vrije University of Amsterdam (The Netherlands), Department of Econometrics and Operations Research: 16-20 September 2019; 19-23 March 2019; 28-31 January 2019</li><li>▶ Polytechnic University of Milan (Italy), Department of Mathematics: 15-17 July 2019; 6-10 May 2019</li><li>▶ Ca’ Foscari University of Venice (Italy), Department of Economics: 24-26 July 2019; 11-14 June 2019; 28-31 May 2019</li><li>▶ University of Pavia (Italy), Department of Mathematics: 9-13 April 2018</li><li>▶ Université Paris I - Panthéon-Sorbonne (France): September 2016 - June 2017</li></ul>	
JOB MARKET PAPER	<b>“Bayesian dynamic tensor regression”</b> (with Billio, M., Casarin, R. and S. Kaufmann) High- and multi-dimensional array data are becoming increasingly available. They admit a natural representation as tensors and call for appropriate statistical tools. We propose a new linear autoregressive tensor process (ART) for tensor-valued data, that encompasses some well-known time series models as special cases. We study its properties and derive the associated impulse response function. We exploit the PARAFAC low rank decomposition for providing a parsimonious parametrization and develop a Bayesian inference allowing for shrinking effects. We apply the ART model to time series of multilayer networks and study the propagation of shocks across nodes, layers and time.	
PUBLICATIONS	<b>Published</b>  15. Billio, M., Casarin, R., Iacopini, M. and Kaufmann, S. (2022), “Bayesian dynamic tensor regression”, <i>Journal of Business and Economic Statistics</i> (forthcoming), (article)	

14. Iacopini, M., Ravazzolo, F. and Rossini, L. (2022), “Proper scoring rules for evaluating density forecasts with asymmetric loss functions”, *Journal of Business and Economic Statistics* (forthcoming), (article)
13. Billio, M., Casarin, R., Costola, M. and Iacopini, M. (2021), “Matrix-variate Smooth Transition Models for Temporal Networks”, in Arashi, M., Bekker, A., Che, D., and Ferreira, J., *Innovations in Multivariate Statistical Modeling: navigating theoretical and multidisciplinary domains*, chapter XX, pages XX, Springer Emerging Topics in Statistics and Biostatistics. (forthcoming)
12. Billio, M., Casarin, R., Costola, M. and Iacopini, M. (2021), “COVID-19 spreading in financial networks: A semiparametric matrix regression model”, *Econometrics and Statistics* (forthcoming), (article)
11. Costola, M., Iacopini, M. and Santagiustina, C.R.M.A. (2021), “On the “momentum” of meme stocks”, *Economics Letters*, 207, 110021, (article)
10. Billio, M., Casarin, R., Costola, M. and Iacopini, M. (2021), “A matrix-variate  $t$  model for networks”, *Frontiers in Artificial Intelligence* 4, 49, (article)
9. Iacopini, M. and Santagiustina, C.R.M.A. (2021), “Filtering the intensity of public concern from social media count data with jumps”, *Journal of the Royal Statistical Society: Series A*, 184:1283–1302, (article)
8. Costola, M., Iacopini, M. and Santagiustina, C. (2020), “Google search volumes and the financial markets during the COVID-19 outbreak”, *Finance Research Letters*, 42:101884, (article)
7. Iacopini, M., Ravazzolo, F. and Rossini, L. (2020), “A discussion on: On a Class of Objective Priors from Scoring Rules by F. Leisen, C. Villa and S. G. Walker”, *Bayesian Analysis*, 15(4):1392–1393.
6. Casarin, R., Iacopini, M., Molina, G., ter Horst, E., Espinasa, R., Sucre, C. and Rigobon, R. (2020), “Multilayer network analysis of oil linkages”, *The Econometrics Journal*, utaa003, (article)
5. Iacopini, M. and Tonellato, S. (2018), “A discussion on: Using stacking to average Bayesian predictive distributions by Y. Yao, A. Vehtari, D. Simpson and A. Gelman”, *Bayesian Analysis*, 13(3):994–996.
4. Billio, M., Casarin, R. and Iacopini, M., (2018), “Bayesian tensor regression models”, In *Mathematical and Statistical Methods for Actuarial Sciences and Finance. MAF 2018*. Eds. Corazza, M., Durbán, M., Grané, A., Perna, C., Sibillo, M., Springer, 149–153.
3. Billio, M., Casarin, R. and Iacopini, M., (2018), “Bayesian tensor binary regression”, In *Mathematical and Statistical Methods for Actuarial Sciences and Finance. MAF 2018*. Eds. Corazza, M., Durbán, M., Grané, A., Perna, C., Sibillo, M., Springer, 143–147.
2. Casarin, R., Iacopini, M. and Rossini, L., (2017), “A discussion on: Sparse graphs using exchangeable random measures by F. Caron and E. B. Fox”, *Journal of the Royal Statistical Society: Series B*, 79(5):51–53.
1. Billio, M., Casarin, R. and Iacopini, M., (2017), “Bayesian tensor regression models”, In *Proceedings of the Conference of the Italian Statistical Society. Statistics and Data Science: new challenges, new generations*. Eds. Alessandra Petrucci and Rosanna Verde, Firenze University Press, 179–186.

#### Manuscripts Submitted and under Review

3. Billio, M., Casarin, R. and Iacopini, M., (20XX), “Bayesian Markov switching tensor regression for time-varying networks”, *arXiv preprint 1711.00097* (under review)
2. Bianchi, D., Iacopini, M. and Rossini, L. (20XX), “Stablecoins and Cryptocurrency Returns: Evidence from large Bayesian VARs”. Available at SSRN: <https://dx.doi.org/10.2139/ssrn.3605451> (under review)
1. Santagiustina, C.R.M.A. and Iacopini, M. (20XX), “Visualizing and comparing distributions with half-disk density strips” (submitted)

#### Working Papers

2. Iacopini, M. and Rossini, L. (2019), “Bayesian nonparametric graphical models for time-varying parameters VAR”, *arXiv preprint 1906.02140*
1. Guégan, D. and Iacopini, M. (2018), “Nonparametric forecasting of multivariate probability density functions”, *arXiv preprint 1803.06823*

## Others

1. *Iacopini, M.*, (2016), “Basics of optimization theory with applications in MATLAB and R”, Quaderni di didattica, Department of Economics, Ca’ Foscari University of Venice.

## Work in Progress

2. Bassetti, F., Casarin, R. and Iacopini, M. (20XX), “Bayesian nonparametric inference for measure-valued Autoregressive Gamma processes”
1. Bassetti, F., Casarin, R., Epifani, I. and Iacopini, M. (20XX), “Measure-valued Compound Autoregressive processes”

## SCHOLARSHIPS AND GRANTS

- 
- [Marie Skłodowska-Curie Individual Fellowship](#) financed by the European Commission (October 2020–September 2022)
  - [Research Fellowship](#) financed by INDAM at Scuola Normale Superiore of Pisa (April 2019–March 2020)
  - [Research Fellowship](#) from Ca’ Foscari University of Venice (September 2017–March 2019)
  - co-editor of the [financing proposal](#) (competition won) “Bando Label Scientifico UIF/UFI 2018” from Université Franco-Italienne (2018)
  - [Ph.D. scholarship](#) at Ca’ Foscari University of Venice financed by the Ministry of Education, University and Research - MIUR (September 2014–August 2017)
  - co-editor of the [financing proposal](#) (competition won) “Bando Visiting Professor UIF 2017” from Université Franco-Italienne (2017)
  - co-editor of the [financing proposal](#) (competition won) “Bando Label Scientifico UIF/UFI 2017” from Université Franco-Italienne (2017)
  - winner of the [grant](#) “Bando Vinci 2016” from Université Franco-Italienne (2016–2017)
  - “Percorso di Eccellenza” scholarship from University of Pisa (2011–2012)
  - “Percorso di Eccellenza” scholarship from University of Pisa (2008–2011)
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## PRESENTATIONS **Invited Seminars**

[Seminar](#) at Department of Mathematical Analysis and Applications of Mathematics, Palacky University in Olomouc, Czech Republic, (November 1, 2019) – [Seminar](#) at School of Business and Economics, University of Maastricht, The Netherlands (April 26, 2019) – [Seminar](#) at Department of Econometrics and Operations Research, Vrije University of Amsterdam, The Netherlands (March 21, 2019) – [Seminar](#) at School of Business and Economics, University of Maastricht, The Netherlands (January 22, 2019) – [Seminar](#) at Department of Mathematics, Polytechnic University of Milan, Italy (November 8, 2018)

## **Contributed Presentations**

[3<sup>rd</sup> IWEEE](#). Rimini, Italy (January 20–21, 2022) – [CFENetwork](#). London, United Kingdom (December 18–20, 2021) – [4<sup>th</sup> Annual Workshop on Financial Econometrics](#). Örebro, Sweden (November 15–16, 2021) – [11<sup>th</sup> ESOBE](#). Madrid, Spain (September 2–3, 2021) – [IAAE 2021](#). Rotterdam, The Netherlands (June 22–25, 2021) – [12<sup>th</sup> BISP](#). Milan, Italy (May 27–28, 2021) – [Dynamic Econometrics Conference](#). Virtual (March 18–19, 2021) – [11<sup>th</sup> EC<sup>2</sup>](#). Paris, France (December 11–12, 2020) – [Annual Meeting of the Econometrics Society](#). Milan, Italy (August 17–21, 2020) – [2<sup>nd</sup> IWEEE](#). Venice, Italy (January 23–24, 2020) – [8<sup>th</sup> CoDaWork](#). Terrassa, Spain (June 4–7, 2019) – [4<sup>th</sup> Workshop on High-Dimensional Time Series in Macroeconomics and Finance](#). Wien, Austria (May 16–17, 2019) – [8<sup>th</sup> ICEEE](#). Lecce, Italy (January 24–26, 2019) – [12<sup>th</sup> CFENetwork](#). Pisa, Italy (December 14–16, 2018) – [29<sup>th</sup> EC<sup>2</sup>](#). Rome, Italy (December 13–14, 2018) – [6<sup>th</sup> SIdE Workshop for PhD students in Econometrics and Empirical Economics](#). Perugia, Italy (August 23–24, 2018) – [49<sup>th</sup> SIS](#). Palermo, Italy (June 20–22, 2018) – [12<sup>th</sup> RCEA Bayesian Workshop](#). Rimini, Italy (June 14–15, 2018) – [1<sup>st</sup> QFFE](#). Marseille, France (May 30 – June 1, 2018) – [8<sup>th</sup> MAF](#). Madrid, Spain (April 4–6, 2018) – [11<sup>th</sup> CFENetwork](#). London, United Kingdom (December 16–18, 2017) – [8<sup>th</sup> ESOBE](#). Maastricht, Netherlands (October 26–27, 2017) – [41<sup>st</sup> AMASES](#). Cagliari, Italy (September 14–16, 2017) – [1<sup>st</sup> EcoSta](#). Hong Kong, Hong Kong (June 15–17, 2017) – [3<sup>rd</sup> Workshop on High-Dimensional Time Series in Macroeconomics and Finance](#). Wien, Austria (June 8–9, 2017) – [7<sup>th</sup> ICEEE](#). Messina, Italy (January 25–27, 2017) – [10<sup>th</sup> CFENetwork](#). Seville, Spain (December 9–11, 2016) – [22<sup>nd</sup> COMPSTAT](#). Oviedo, Spain (August 23–26, 2016)

## **Poster Presentations**

[BNP 12](#). Oxford, United Kingdom (June 24–28, 2019) – [4<sup>th</sup> BAYSM](#). Warwick, United Kingdom (July 2–3, 2018) – [ISBA 2018](#). Edinburgh, United Kingdom (June 24–29, 2018) – [BNP 11](#). Paris, France (June 26–30, 2017) – [BISP-10](#). Milan, Italy (June 13–15, 2017) – [7<sup>th</sup> ESOBE](#). Venice, Italy (October 27–28, 2016)

## SERVICE TO PROFESSION

### **Scientific and Organising Committee of Scientific Events**

- Workshop “[3<sup>rd</sup> Italian-French Statistics Seminar \(IFSS\)](#)”. Italy (2020).
- Workshop “[1<sup>st</sup> EDEEM Doctoral Summer Workshop in Economics](#)”. Venice, Italy (June 13–14, 2019).

- “*Reading group on Stochastic Modelling*”. Venice, Italy (A.Y. 2018-2019)
- Workshop “*2<sup>nd</sup> Italian-French Statistics Seminar (IFSS)*”. Grenoble, France (September 6-7, 2018).
- Workshop on “*Advances in Bayesian modelling*”. Venice, Italy (July 5, 2018)
- Workshop “*1<sup>st</sup> Italian-French Statistics Seminar (IFSS)*”. Venice, Italy (October 16-17, 2017).

#### Organizer of Scientific Events

- Organizer and chair of the session “*Bayesian High-dimensional Sparse Models*” at *12<sup>th</sup> Annual RCEA Bayesian Workshop*. Rimini, Italy (June 14-15, 2018)
- Chair of the session “*Network Econometrics*” at *8<sup>th</sup> MAF - International Conference on Mathematical and Statistical Methods for Actuarial Sciences and Finance*. Madrid, Spain (April 4-6, 2018)

#### Discussant

- Workshop on Forecasting in Finance and Macroeconomics. Bozen, Italy (September 12, 2016)
- European Doctorate in Economics Erasmus Mundus (EDEEM) Summer Meeting. Venice, Italy (July 16-18, 2015)

#### Referee

Journal of Econometrics, Journal of Business & Economic Statistics, Journal of Financial Risk and Management, Bayesian Analysis, Journal of Financial Stability, International Journal of Forecasting, Econometrics & Statistics, Studies in Nonlinear Dynamics & Econometrics.

#### TEACHING EXPERIENCE

Italian Econometric Society (SIde)

- Teacher – *Summer School in Network Econometrics* (Graduate – English), June 2021  
Ca’ Foscari University of Venice, Department of Economics
- Teacher – *Mathematics pre-course* (Graduate – English), A.y. 2019/20, 2018/19
- Tutor – *Optimization* (Graduate Course - PhD and Master – English), A.y. 2018/19, 2017/18, 2015/16
- Teacher – *Introduction to Trigonometry* (Undergraduate – English), A.y. 2017/18
- Teaching Assistant – *Mathematics for Economics* (Undergraduate – Italian), A.y. 2017/18
- Teaching Assistant – *Statistics* (Undergraduate – English), A.y. 2017/18
- Tutor – *Econometrics* (Graduate – English), A.y. 2015/16
- Tutor – *Econometrics* (Undergraduate – Italian), A.y. 2015/16

#### POST- GRADUATE FORMATION

- CIRM “*Masterclass in Bayesian Statistics*”. Marseille Luminy, France (22-26 October, 2018)
- SIde Summer School on “*Recent Developments in Financial Econometrics*”. Perugia, Italy (July 23-27, 2018)
- *37<sup>th</sup> Finnish Summer School on Probability and Statistics*. Lammi, Finland (May 30 - June 3, 2016)
- Course on “*Data Analysis and Programming with R*”. Bozen, Italy (November 18-20, 2015)
- Course on “*Bayesian Methods in Economics and Finance*”. Perugia, Italy (September 7-11, 2015)
- SIde Summer School on “*Big Data and High-Dimensional Econometric models*”. Perugia, Italy (June 29 - July 3, 2015)
- SIde Summer School on “*The Econometrics of Systemic Risk and Tail Correlations*”. Perugia, Italy (July 14-19, 2014)

LANGUAGES & PROGRAMMING – **Languages:** *Italian* (Mother Tongue) – *English* (Fluent, IELTS(C1), GRE) – *French* (Fluent, DELF(B2)) – *Spanish* (Basic)

#### SKILLS

**Programming Skills:** MATLAB, R, L<sup>A</sup>T<sub>E</sub>X, Office (advanced); STATA13, C++, HTML5 (basic)