

Manuele Leonelli

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 LinkedIn |  GitHub |  Google Scholar |  arXiv

School of Science and Technology, IE University, Madrid, Spain

RESEARCH SUMMARY

I am an Associate Professor of Statistics at IE University with a research focus on Bayesian networks, probabilistic graphical models, and their applications in various domains. My work bridges theory and practice, emphasizing explainability and robustness in statistical models. I have published extensively in leading journals, contributed to the development of open-source software, and collaborated with an international network of researchers.

WORK EXPERIENCE

- School of Science and Technology, IE University** 2025-Present
Associate Professor of Statistics Madrid, Spain
- School of Science and Technology, IE University** 2019-2025
Assistant Professor of Statistics Madrid, Spain
- Faculty of Medicine and Health Sciences, McGill University** 2019
Visiting Professor Montreal, Canada
- School of Mathematics and Statistics, University of Glasgow** 2017-2019
Lecturer in Statistics Glasgow, UK
- Mathematical Institute, Federal University of Rio de Janeiro** 2015-2016
PostDoctoral Researcher Rio de Janeiro, Brazil

EDUCATION

- Advance Higher Education, University of Glasgow** 2017-2018
PostGraduate Certificate in Academic Practice Glasgow, UK
- Department of Statistics, University of Warwick** 2011-2015
PhD in Statistics Coventry, UK
- Department of Statistics, University of Warwick** 2010-2011
MSc in Statistics Coventry, UK
- Department of Mathematics, University of Genova** 2007-2010
BSc in Mathematical Statistics and Data Management Genova, Italy

ACCREDITATIONS

- Agency for the Quality of the University System of Catalonia** 2019-Present
Accreditation as Lecturer Professor Barcelona, Spain
- Advance Higher Education** 2019-Present
Member (upon completion of the Postgraduate Certificate in Academic Practice) UK

FUNDING

- AEI, State Research Agency: Knowledge Generation Projects 2023** 2024-Present
Project: Semi-Parametric models for Human growth, Extremes and Recurrent Events in Survival Analysis Total Funding: €62,500
Code: PID2023-153222OB-I00
Role: Co-Principal Investigator
- University of Glasgow: Principal's Early Career Mobility Scheme** 2019
Project: Flexible spatial statistical methods for extremes Total Funding: £2,855
Role: Visiting professor at McGill University
- London Mathematical Society: Celebrating New Appointment Grant** 2018
Code: 91806 Total Funding: £600
Role: Organizer of the 1st UK Workshop on Probabilistic Reasoning using CEGs
- CAPES: Programa Nacional de Pós Doutorado** 2015-2016
Role: Postdoctoral Researcher Total Funding: R\$49,200

- [B.2] Martine J. Barons, Manuele Leonelli and Jim Q. Smith (2025). **Integrating Decision Support Systems**. Forthcoming, CRC Press.
- [B.1] Manuele Leonelli and Gherardo Varando (2025). **Staged Tree Models: With Applications in R**. Forthcoming, CRC Press.
- [S.5] Andrea Cremaschi, Dae-Jin Lee and Manuele Leonelli (2025). **Understanding support for AI regulation: A Bayesian network perspective**. Manuscript submitted for publication in *International Journal of Engineering Business Management*.
- [S.4] Alvaro Garcia Murga and Manuele Leonelli (2025). **Disentangling spatial and structural drivers of housing prices through Bayesian networks: A case study of Madrid, Barcelona, and Valencia**. Manuscript submitted for publication in *Cities*.
- [S.3] Jan Maciejowski and Manuele Leonelli (2025). **Uncovering drivers of EU carbon futures with Bayesian networks**. Manuscript submitted for publication in *Applied Energy*.
- [C.8] Andrea Cremaschi, Dae-Jin Lee and Manuele Leonelli (2025). **Will AI take my job? Evolving perceptions of automation and labor risk in Latin America**. Accepted at the 8th AAAI/ACM Conference on Artificial Intelligence, Ethics and Society.
- [J.27] Manuele Leonelli and Jim Q Smith (2025). **The diameter of a stochastic matrix: A new measure for sensitivity analysis in Bayesian networks**. *International Journal of Approximate Reasoning*, Vol. 185, 109470. DOI: 10.1016/j.ijar.2025.109470.
Journal Impact Factor (JIF): 3.2, 5-Year JIF: 3.2, Quartile: Q2, Area: Computer Science, Artificial Intelligence
- [J.26] Manuele Leonelli (2025) **Predicting and understanding shooting performance in professional biathlon: A Bayesian approach**. *International Journal of Performance Analysis in Sport (online)*. DOI: 10.1080/24748668.2025.2500155.
Journal Impact Factor (JIF): 1.9, 5-Year JIF: 2.6, Quartile: Q2, Area: Sports Sciences
- [J.25] Manuele Leonelli (2025). **bnRep: A repository of Bayesian networks from the academic literature**. *Neurocomputing*, Vol. 624, 129502. DOI: 10.1016/j.neucom.2025.129502.
Journal Impact Factor (JIF): 5.5, 5-Year JIF: 5.5, Quartile: Q1, Area: Computer Science, Artificial Intelligence
- [J.24] Rafael Ballester-Ripoll and Manuele Leonelli (2025). **Global sensitivity analysis of uncertain parameters in Bayesian networks**. *International Journal of Approximate Reasoning*. Vol. 180, 109368. DOI: 10.1016/j.ijar.2025.109368.
Journal Impact Factor (JIF): 3.2, 5-Year JIF: 3.2, Quartile: Q2, Area: Computer Science, Artificial Intelligence
- [J.23] Jack S Carter, Manuele Leonelli, Eva Riccomagno and Alessandro Ugolini (2025). **Staged trees for discrete longitudinal data**. Accepted for publication in *Metrika*.
Journal Impact Factor (JIF): 0.9, 5-Year JIF: 1.0, Quartile: Q3, Area: Statistics & Probability
- [J.22] Gherardo Varando, Federico Carli and Manuele Leonelli (2025) **Staged trees and asymmetry-labeled DAGs**. *Metrika*, (to appear). DOI: 10.1007/s00184-024-00957-1.
Journal Impact Factor (JIF): 0.9, 5-Year JIF: 1.0, Quartile: Q3, Area: Statistics & Probability
- [J.21] Lucia Serrat Lacasta, Susana de la Cruz Vigo, and Manuele Leonelli (2025). **Evaluation of factors associated with fear and anxiety in the orthodontic treatment of adult patients**. *Journal of Clinical and Experimental Dentistry*. Vol. 17, pp. e18-e28. DOI: 10.4317/jced.62265.
Journal Impact Factor (JIF): 1.56, 5-Year JIF: NA, Quartile: Q2, Area: Dentistry
- [J.20] Manuele Leonelli and Gherardo Varando (2024) **Robust learning of staged tree models: A case study in evaluating transport services**. *Socio-Economic Planning Sciences*, Vol. 95, pp. 102030. DOI: 10.1016/j.seps.2024.102030.
Journal Impact Factor (JIF): 6.2, 5-Year JIF: 5.9, Quartile: Q1, Area: Operations Research & Management Science
- [J.19] Manuele Leonelli and Gherardo Varando (2024) **Structural learning of simple staged trees**. *Data Mining and Knowledge Discovery*, Vol. 38, pp. 1520–1544. DOI: 10.1007/s10618-024-01007-0.
Journal Impact Factor (JIF): 2.8, 5-Year JIF: 5.3, Quartile: Q2, Area: Computer Science, Information Systems
- [J.18] Manuele Leonelli and Gherardo Varando (2024) **Learning and interpreting asymmetry-labeled DAGs: A case study on COVID-19 fear**. *Applied Intelligence*, Vol. 54, pp. 1734–1750. DOI: 10.1007/s10489-024-05268-6.
Journal Impact Factor (JIF): 3.4, 5-Year JIF: 3.9, Quartile: Q2, Area: Computer Science, Artificial Intelligence
- [J.17] Maria T Filigheddu, Manuele Leonelli, Gherardo Varando, Miguel Á Gómez-Bermejo, Sofía Ventura-Díaz, Luis Gorospe and Jesús Fortún (2024) **Using staged tree models for health data: Investigating invasive fungal infections by aspergillus and other filamentous fungi**. *Computational and Structural Biotechnology Journal*, Vol. 24, pp. 12-22. DOI: 10.1016/j.csbj.2023.11.013.
Journal Impact Factor (JIF): 4.4, 5-Year JIF: 5.0, Quartile: Q2, Area: Biochemistry & Molecular Biology

- [C.7] Jack S Carter, Manuele Leonelli, Eva Riccomagno and Gherardo Varando (2024). **Learning staged trees from incomplete data**. In *Proceedings of the 12th International Conference on Probabilistic Graphical Models (PGM)*, pp. 231-252. PMLR. 11-13 September 2024, De Lindenberg, Nijmegen, the Netherlands.
- [C.6] Manuele Leonelli and Gherardo Varando (2024). **Context-specific refinements of Bayesian network classifiers**. In *Proceedings of the 12th International Conference on Probabilistic Graphical Models (PGM)*, pp. 182-198. PMLR. 11-13 September 2024, De Lindenberg, Nijmegen, the Netherlands.
- [S.2] Gherardo Varando, Manuele Leonelli, Jordi Cerdà-Bautista, Vasileios Sitokonstantinou and Gustau Camps-Valls (2024) **Staged event trees for transparent estimation of treatment effects**. Manuscript submitted for publication to the *28th International Conference on Artificial Intelligence and Statistics (AISTATS)*.
- [S.1] Carlos R Gonzalez Soffner and Manuele Leonelli (2024). **An analysis of factors impacting team strengths in the Australian Football League using time-variant Bradley-Terry models**. Manuscript submitted for publication in *Annals of Operations Research*.
- [J.16] Manuele Leonelli, Ramsiya Ramanathan and Rachel L Wilkerson (2023) **Sensitivity and robustness analysis in Bayesian networks with the bnmonitor R package**. *Knowledge-Based Systems*, Vol. 278, pp. 110882. DOI: 10.1016/j.knosys.2023.110882.
Journal Impact Factor (JIF): 7.2, 5-Year JIF: 7.4, Quartile: Q1, Area: Computer Science, Artificial Intelligence
- [J.15] Rafael Ballester-Ripoll and Manuele Leonelli (2023) **The YODO algorithm: An efficient computational framework for sensitivity analysis in Bayesian networks**. *International Journal of Approximate Reasoning*, Vol. 159, pp. 108929. DOI: 10.1016/j.ijar.2023.108929.
Journal Impact Factor (JIF): 3.2, 5-Year JIF: 3.2, Quartile: Q2, Area: Computer Science, Artificial Intelligence
- [J.14] Federico Carli, Manuele Leonelli and Gherardo Varando (2023) **A new class of generative classifiers based on staged tree models**. *Knowledge-Based Systems*, Vol. 268, pp. 110488. DOI: 10.1016/j.knosys.2023.110488.
Journal Impact Factor (JIF): 7.2, 5-Year JIF: 7.4, Quartile: Q1, Area: Computer Science, Artificial Intelligence
- [C.5] Manuele Leonelli and Gherardo Varando (2023). **Context-specific causal discovery for categorical data using staged trees**. In *Proceedings of the 26th International Conference on Artificial Intelligence and Statistics (AISTATS)*, pp. 8871-8888. PMLR. 25-27 April 2023, Palau de Congressos, Valencia, Spain.
- [R.3] Fabio Crimaldi and Manuele Leonelli (2023). **AI and the creative realm: A short review of current and future applications**. *arXiv preprint arXiv:2306.01795*.
- [J.13] Manuele Leonelli and Eva Riccomagno (2022) **A geometric characterization of sensitivity analysis in monomial models**. *International Journal of Approximate Reasoning*, Vol. 151, pp. 64-84. DOI: 10.1016/j.ijar.2022.09.006.
Journal Impact Factor (JIF): 3.2, 5-Year JIF: 3.2, Quartile: Q2, Area: Computer Science, Artificial Intelligence
- [J.12] Rafael Ballester-Ripoll and Manuele Leonelli (2022) **Computing Sobol indices in probabilistic graphical models**. *Reliability Engineering & System Safety*, Vol. 225, pp. 108573. DOI: 10.1016/j.res.2022.108573.
Journal Impact Factor (JIF): 9.4, 5-Year JIF: 8.1, Quartile: Q1, Area: Operations Research & Management Science
- [J.11] Christiane Görgen, Manuele Leonelli and Orlando Marigliano (2022) **The curved exponential family of a staged tree**. *Electronic Journal of Statistics*, Vol. 16, Issue 1, pp. 2607-2620. DOI: 10.1214/22-EJS1984.
Journal Impact Factor (JIF): 1.0, 5-Year JIF: 1.2, Quartile: Q3, Area: Statistics & Probability
- [J.10] Federico Carli, Manuele Leonelli, Eva Riccomagno and Gherardo Varando (2022) **The R package stagedtrees for structural learning of stratified staged trees**. *Journal of Statistical Software*, Vol. 102, Issue 6, pp. 1-30. DOI: 10.18637/jss.v102.i06.
Journal Impact Factor (JIF): 5.4, 5-Year JIF: 8.4, Quartile: Q1, Area: Statistics & Probability
- [C.4] Manuele Leonelli and Gherardo Varando (2022). **Highly efficient structural learning of sparse staged trees**. In *Proceedings of the 11th International Conference on Probabilistic Graphical Models (PGM)*, pp. 193-204. PMLR. 5-7 September 2022, Almería, Spain.
- [C.3] Rafael Ballester-Ripoll and Manuele Leonelli (2022). **You only derive once (YODO): Automatic differentiation for efficient sensitivity analysis in Bayesian networks**. In *Proceedings of the 11th International Conference on Probabilistic Graphical Models (PGM)*, pp. 169-180. PMLR. 5-7 September 2022, Almería, Spain.
- [J.9] Chiara Lattanzi and Manuele Leonelli (2021) **A change-point approach for the identification of financial extreme regimes**. *Brazilian Journal of Probability and Statistics*, Vol. 35, Issue 4, pp. 811-837. DOI: 10.1214/21-BJPS509.
Journal Impact Factor (JIF): 0.6, 5-Year JIF: 0.8, Quartile: Q4, Area: Statistics & Probability
- [J.8] Manuele Leonelli and Dani Gamerman (2020) **Semiparametric bivariate modelling with flexible extremal dependence**. *Statistics and Computing*, Vol. 30, pp. 221-236. DOI: 10.1007/s11222-019-09878-w.
Journal Impact Factor (JIF): 1.6, 5-Year JIF: 2.0, Quartile: Q1, Area: Statistics & Probability

- [J.7] Christiane Görgen and Manuele Leonelli (2020) **Model-preserving sensitivity analysis for families of Gaussian distributions**. *Journal of Machine Learning Research*, Vol. 21, Issue 84, pp. 1–32.
Journal Impact Factor (JIF): 4.3, **5-Year JIF:** 7.0, **Quartile:** Q1, **Area:** Automation & Control Systems
- [J.6] Manuele Leonelli, Eva Riccomagno and Jim Q Smith (2020) **Coherent combination of probabilistic outputs for group decision making: An algebraic approach**. *OR Spectrum*, Vol. 42, pp. 499–528. DOI: 10.1007/s00291-020-00588-8
Journal Impact Factor (JIF): 1.4, **5-Year JIF:** 2.3, **Quartile:** Q3, **Area:** Operations Research & Management Science
- [R.2] Miguel de Carvalho, Manuele Leonelli and Alex Rossi (2020). **Tracking change-points in multivariate extremes**. *arXiv preprint arXiv:2011.05067*.
- [J.5] Manuele Leonelli (2019) **Sensitivity analysis beyond linearity**. *International Journal of Approximate Reasoning*, Vol. 113, pp. 106–118. DOI: 10.1016/j.ijar.2019.06.007.
Journal Impact Factor (JIF): 3.2, **5-Year JIF:** 3.2, **Quartile:** Q2, **Area:** Computer Science, Artificial Intelligence
- [J.4] Manuele Leonelli, Christiane Görgen and Jim Q Smith (2017) **Sensitivity analysis in multilinear probabilistic models**. *Information Sciences*, Vol. 411, pp. 84–97. DOI: 10.1016/j.ins.2017.05.010.
Journal Impact Factor (JIF): 8.1, **5-Year JIF:** 7.5, **Quartile:** Q1, **Area:** Computer Science, Information Systems
- [J.3] Manuele Leonelli and Jim Q Smith (2017) **Directed expected utility networks**. *Decision Analysis*, Vol. 14, Issue 2, pp. 108–125. DOI: 10.1287/deca.2017.0347.
Journal Impact Factor (JIF): 2.5, **5-Year JIF:** 2.0, **Quartile:** Q3, **Area:** Management
- [J.2] Manuele Leonelli, Eva Riccomagno and Jim Q Smith (2017) **A symbolic algebra for the computation of expected utilities in multiplicative influence diagrams**. *Annals of Mathematics and Artificial Intelligence*, Vol. 81, pp. 273–313. DOI: 10.1007/s10472-017-9553-y.
Journal Impact Factor (JIF): 1.2, **5-Year JIF:** 1.1, **Quartile:** Q2, **Area:** Mathematics, Applied
- [J.1] Manuele Leonelli and Jim Q Smith (2015) **Bayesian decision support for complex systems with many distributed experts**. *Annals of Operations Research*, Vol. 235, pp. 517–542. DOI: 10.1007/s10479-015-1957-7.
Journal Impact Factor (JIF): 4.4, **5-Year JIF:** 4.4, **Quartile:** Q1, **Area:** Operations Research & Management Science
- [C.2] Christiane Görgen, Manuele Leonelli and Jim Q Smith (2015). **A differential approach for staged trees**. In *Proceedings of the 13th European Conference on Symbolic and Quantitative Approaches with Uncertainty (ECSQARU)*, pp. 346–355. Springer. 15–17 July 2015, Compiègne, France.
- [R.1] Jim Q Smith, Martine J Barons and Manuele Leonelli (2015). **Coherent frameworks for statistical inference serving integrating decision support systems**. *arXiv preprint arXiv:1507.07394*.
- [C.1] Manuele Leonelli and Jim Q Smith (2013). **Using graphical models and multi-attribute utility theory for probabilistic uncertainty handling in large systems, with application to the nuclear emergency management**. In *Proceedings of the 29th International Conference on Data Engineering Workshops (ICDEW)*, pp. 181–192. IEEE. 8–12 April 2013, Brisbane, Australia.

SOFTWARE

• The stagedtrees R package

2019–Present

stagedtrees is an R package which includes several algorithms for learning the structure of staged trees and chain event graphs from data. Score-based and clustering-based algorithms are implemented, as well as various functionalities to plot the models and perform inference.

CRAN 2.3.0 downloads 238/month downloads 21K

• The bnmonitor R package

2021–Present

bnmonitor implements sensitivity and robustness methods in Bayesian networks in R. It includes methods to perform parameter variations via a variety of co-variation schemes, to compute sensitivity functions and to quantify the dissimilarity of two Bayesian networks via distances and divergences. It further includes diagnostic methods to assess the goodness of fit of a Bayesian networks to data, including global, node and parent-child monitors.

CRAN 0.2.2 downloads 510/month downloads 17K

• The bnRep R package

2024–Present

bnRep is an open-source R package offering a comprehensive collection of documented BNs, facilitating benchmarking, replicability, and education. With over 200 networks from academic publications, bnRep integrates seamlessly with bnlearn and other R packages, providing users with interactive tools for network exploration.

CRAN 0.0.2 downloads 358/month downloads 358

extrememix implements Bayesian estimation of extreme value mixture models, estimating the threshold over which a Generalized Pareto distribution can be assumed as well as high quantiles and other measures of interest in extreme value theory.

CRAN 0.0.1 downloads 148/month downloads 148

SERVICE TO PROFESSION

• PhD Examiner

- **External Examiner:** “Multivariate time-series modelling and forecasting with high-order dynamic Bayesian networks applied in industrial settings” by David Quesada López at the Universidad Politecnica de Madrid (2023).
- **External Examiner:** “Conditional preference networks: efficient dominance testing and learning” by Kathryn Laing at the University of Leeds (2020).
- **External Examiner:** “Theoretical Studies on Bayesian Network Classifiers” by Gherardo Varando at the Universidad Politecnica de Madrid (2018).
- **Internal Examiner:** “Hierarchical Hidden Markov Models with Applications to BiSulfite-Sequencing Data” by Tusharkanti Ghosh at the University of Glasgow (2018).

• Editorial and External Organizational Roles

- **Editor-In-Chief:** ISI Magazine (2025-Present)
- **Co-Chair:** 13th International Conference on Probabilistic Graphical Models, Valencia (2026).
- **Organizing Committee Member:** *trees4cat Workshop*, University of Genoa (2024).
- **Program Committee Member:** 12th International Conference on Probabilistic Graphical Models, Nijmegen (2024).
- **Program Committee Member:** 8th AAAI/ACM Conference on AI, Ethics and Society, Madrid (2025)
- **Editor:** *Bernoulli News* (2019-2023).
- **Organizer:** 1st UK Workshop on Probabilistic Modelling using Chain Event Graphs at the University of Glasgow (2019).
- **Referee:** *Annals of Applied Statistics, Bayesian Analysis, Brazilian Journal of Probability and Statistics, Communications in Statistics - Theory and Methods, Computational Statistics & Data Analysis, Engineering Reliability & System Safety, Environmental and Ecological Statistics, Environmetrics, Journal of Applied Statistics, Journal of the American Statistical Association, Information Sciences, International Journal of Approximate Reasoning, Nature Sustainability, Neural Networks, Statistical Methods & Applications, Test.*
- **Referee:** National calls for research projects, Agencia Estatal de Investigación (AEI), Spain.

• Internal Organizational Roles

- **Hiring Committee Member:** Multiple tenure-track positions in Mathematics, Statistics, and Computer Science at the School of Science and Technology, IE University (2022-2023).
- **Internship Advisor:** Bachelor in Data and Business Analytics at IE University (2019-Present).
- **Academic Tutor:** 1st and 2nd year students in the Bachelor in Data and Business Analytics, IE University (2019-Present).
- **Committee Member:** Development and approval of the *Bachelor in Applied Mathematics* at IE University (approved by ANECA - National Agency for Quality Assessment and Accreditation of Spain) (2022).
- **Organizer:** Statistics Seminar at the University of Glasgow (2018-19).
- **MSc Projects Coordinator:** MSc Statistics Projects at the University of Glasgow (2018-19).
- **Individual Academic Advisor:** BSc in Statistics at the University of Glasgow (2017-2019).

• Memberships and Outreach

- **Member:** *ELLIS Society* (only by recommendation of members of other countries and nationalities) (2023-Present).
- **Outreach Presentation:** *The Mathematics of Music* at *The Global College*, Madrid, for IB program students (2021).
- **Collaboration with Media:** Statistical expert for the newspaper *Newtral*.
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PRESENTATIONS

- **VII Latin American Meeting on Bayesian Statistics** December 2024
Contributed Presentation: A Bayesian MCMC framework for learning and reasoning with staged tree models Belo Horizonte, Brazil
- **trees4cat Workshop** October 2024
Tutorial: Software for staged tree models Genova, Italy
- **12th International Conference on Probabilistic Graphical Models** September 2024
Contributed Presentation: Learning staged trees from incomplete data Nijmegen, The Netherlands
- **Learning on Graphs Conference 2024: Madrid Meetup** November 2023
Contributed Presentation: Asymmetry-labeled DAGs: Representation, learning and causal reasoning Madrid, Spain
- **7th Workshop on Games and Decisions in Risk and Reliability** May 2023
Contributed Presentation: A global sensitivity analysis approach in Bayesian networks Madrid, Spain

<ul style="list-style-type: none"> • 11th International Conference on Probabilistic Graphical Models Contributed Presentation: Highly efficient structural learning of sparse staged trees 	September 2022 Almería, Spain
<ul style="list-style-type: none"> • Institute of Mathematical Statistics Annual Meeting Contributed Presentation: Staged trees and asymmetry-labeled DAGs 	June 2022 London, UK
<ul style="list-style-type: none"> • 7th Bayesian, Fiducial & Frequentist Conference Contributed Presentation: A conditional independence framework for coherent modularized inference 	May 2022 Toronto, Canada
<ul style="list-style-type: none"> • 13th International Conference on Computational and Methodological Statistics Contributed Presentation: Semiparametric bivariate modelling with flexible extremal dependence 	December 2020 Virtual
<ul style="list-style-type: none"> • Incontro di Statistica Matematica Contributed Presentation: Modeling dependence with diagonal distributions 	January 2020 Sestri Levante, Italy
<ul style="list-style-type: none"> • Graphical Models: Conditional Independence and Algebraic Structures Invited Presentation: Model-preserving sensitivity analysis for families of Gaussian distributions 	October 2019 Munich, Germany
<ul style="list-style-type: none"> • ISBA World Meeting Poster Presentation: Extreme changepoint estimation in financial time series 	July 2018 Edinburgh, UK
<ul style="list-style-type: none"> • 1st Italian Meeting on Probability and Mathematical Statistics Contributed Presentation: Sensitivity analysis in graphical models - A polynomial approach 	June 2017 Torino, Italy
<ul style="list-style-type: none"> • 5th Workshop on Games and Decisions in Risk and Reliability Contributed Presentation: Directed expected utility networks 	June 2017 Madrid, Spain
<ul style="list-style-type: none"> • 22nd Simpósio Nacional de Probabilidade e Estatística Contributed Presentation: Semiparametric Bayesian multivariate models for extreme exceedances 	July 2016 Porto Alegre, Brazil
<ul style="list-style-type: none"> • 13th Encontro Brasileiro de Estatística Bayesiana Contributed Presentation: Integrating probabilistic outputs for coherent group decision making 	February 2016 Belo Horizonte, Brazil
<ul style="list-style-type: none"> • 13th Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty Contributed Presentation: A differential approach for staged trees 	July 2015 Compiègne, France
<ul style="list-style-type: none"> • Algebraic Statistics 2015 Contributed Presentation: The algebra of integrated partial belief systems 	June 2015 Genova, Italy
<ul style="list-style-type: none"> • Calculating and Communicating Uncertainty Contributed Presentation: Uncertainty handling in integrating decision support systems 	January 2015 London, UK
<ul style="list-style-type: none"> • ISBA World Meeting Contributed Poster: Bayesian decision support for complex systems with many distributed experts 	November 2013 Cancun, Mexico
<ul style="list-style-type: none"> • American Nuclear Society - Winter Meeting 2013 Contributed Presentation: Dynamic uncertainty handling for coherent decision making 	November 2013 Washington DC, USA
<ul style="list-style-type: none"> • IEEE 29th International Conference on Data Engineering Workshops Contributed Presentation: Using graphical models for probabilistic uncertainty handling 	June 2015 Brisbane, Australia
<ul style="list-style-type: none"> • Invited Departmental Seminars University of Glasgow, Universidad Politecnica de Madrid, University of Leeds, University of Edinburgh, Queen Mary University, Università degli Studi di Genova, Universitat Pompeu Fabra, University of Venice, KTH Royal Institute of Technology 	2017-2024 Various Institutions

TEACHING

<ul style="list-style-type: none"> • School of Science and Technology, IE University Associate Professors of Statistics <ul style="list-style-type: none"> ◦ 2025–2026 <ul style="list-style-type: none"> * Financial Analytics (BBADBA and BDBA) – 15 lectures, three groups; * Probability for Computing Science (BCSAI) - 15 lectures, two groups. * Bayesian Statistics and Stochastic Processes (BAM) - 30 lectures, one group. 	2025–Present Madrid, Spain
<ul style="list-style-type: none"> • School of Science and Technology, IE University Assistant Professors of Statistics <ul style="list-style-type: none"> ◦ 2024–2025 <ul style="list-style-type: none"> * Customer Analytics (BBADBA and BDBA) – 15 lectures, two groups; * Discrete Mathematics for Computing (MCSBT) – 15 lectures, one group; * Financial Analytics (BBADBA and BDBA) – 15 lectures, two groups; * Big Data & Artificial Intelligence in Operations Management (MBD) – 15 lectures, three groups; * Mathematics Fundamentals (MCSBT) - 6 lectures, one group; * Probability for Computing Science (BCSAI) - 15 lectures, two groups. ◦ 2023–2024 <ul style="list-style-type: none"> * Applied Machine Learning using Graphs (BDBA) – 15 lectures, one group; * Bayesian Statistics (BDBA) – 15 lectures, one group; 	2019-2025 Madrid, Spain

- * *Discrete Mathematics for Computing* (MCSBT) – 15 lectures, one group;
- * *Machine Learning I* (MBD) – 15 lectures, one group;
- * *Mathematics Fundamentals* (MCSBT) – 6 lectures, one group;
- * *Probability for Computing Science* (BCSAI) – 15 lectures, one group;
- * *Statistics for Data Science* (MBD and SAMBD) – 15 lectures, two groups.
- **2022–2023**
 - * *Bayesian Statistics* (BDBA) – 15 lectures, one group;
 - * *Discrete Mathematics for Computing* (MCSBT) – 15 lectures, one group;
 - * *Mathematics Fundamentals* (MCSBT and MDBO) – 6 lectures, three groups;
 - * *Probability for Computing Science* (BCSAI) – 15 lectures, two groups;
 - * *Simulation and Modeling to Understand Change* (BBADBA) - 35 sessions, two groups.
- **2021–2022**
 - * *Bayesian Statistics* (BDBA) – 15 lectures, one group;
 - * *Maths for Computing* (MCSBT and MDBI) - 15 lectures, two groups;
 - * *Maths Lab* (MCSBT and MDBI) - 6 sessions, two groups;
 - * *Probability for Computing Science* (BCSAI) – 15 lectures, one group;
 - * *Simulation and Modeling to Understand Change* (BBADBA) - 35 sessions, two groups;
 - * *Statistics and Probability* (MCSBT and MDBI) - 20 sessions, two groups.
- **2020–2021**
 - * *Bayesian Statistics* (BDBA) – 15 lectures, one group;
 - * *Maths for Computing* (MCSBT and MDBI) - 15 lectures, one group;
 - * *Maths Lab* (MCSBT and MDBI) - 6 sessions, one group;
 - * *Simulation and Modeling to Understand Change* (BBADBA) - 35 sessions, two groups;
 - * *Statistics and Probability* (MCSBT and MDBI) - 20 sessions, one group.
- **2019–2020**
 - * *Fundamentals of Probability and Statistics* (BBADBA) - 35 sessions, one group;
 - * *Maths for Computing* (MCSBT and MDBI) - 20 lectures, one group;
 - * *Maths Lab* (MCSBT and MDBI) - 6 sessions, one group;
 - * *Simulation and Modeling to Understand Change* (BBADBA) - 35 sessions, one group;
- **School of Mathematics and Statistics, University of Glasgow** 2017-2019
Glasgow, UK
Lecturer in Statistics
 - **2018–2019**
 - * *Design of Experiments* (BSc and MSc in Statistics) – 24 lectures, one group;
 - * *Introduction to R programming* (BSc and MSc in Statistics) – 20 lectures, two groups.
 - **2017–2018**
 - * *Data Analysis* (MSc in Statistics) - 20 lectures, one group;
 - * *Design of Experiments* (BSc and MSc in Statistics) – 24 lectures, one group;
 - * *Introduction to Probability and Statistics* (PhD Course - College of Science) - 15 lectures, one group;
 - * *Introduction to R programming* (BSc in Statistics) – 20 lectures, one group.
 - **2016–2017**
 - * *Data Analysis* (MSc in Statistics) - 20 lectures, one group;
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- **African Institute of Mathematical Sciences** 2019
Accra, Ghana
Invited Instructor: PhD Course “Data Visualisation and Advanced Data Analysis”
- **1st LARS-IASC School on Computational Statistics and Data Science** 2018
Salvador, Brazil
Invited Instructor: PhD Course “Statistics of Extremes: Modelling, Inferences, and Applications”

SUPERVISION

- **School of Science and Technology, IE University** 2019-
Madrid, Spain
Supervised 11 undergraduate final year projects (BCSAI and BBADBA)
- **School of Mathematics and Statistics, University of Glasgow** 2017-2019
Glasgow, UK
Supervised eight undergraduate final year projects (BSc in Statistics)
Supervised six postgraduate final year projects (MSc in Statistics)

TEACHING AWARDS

- **Awards for Teaching Excellence** 2019-Present
Over 20 awards issued by IE University for teaching courses with students evaluations over 4.50. Madrid, Spain
- **Best Professor Award, SAMBD, IE University** 2024
Prize for the best professor in the Saudi Aramco MSc in Big Data Madrid, Spain

STUDENT AWARDS

- **John Copas PhD Thesis Prize** 2016
Best statistics PhD thesis at the University of Warwick Coventry, UK
- **Departmental PhD Bursary - University of Warwick** 2011-2015
PhD in Statistics Coventry, UK
- **Departmental MSc Bursary - University of Warwick** 2010-2011
MSc in Statistics Coventry, UK

ADDITIONAL INFORMATION

Languages: English (Fluent), Italian (Mother tongue), Portuguese (Intermediate), Spanish (Fluent)

Interests: Crossfit, Volleyball, Tennis