

# Lidia André

POSTDOCTORAL RESEARCH FELLOW

Université de Namur, 5000 Namur, Belgium

✉ lidia.andre@unamur.be | 🏠 <https://lidiandre.github.io> | 💻 <https://github.com/lidiandre> | 📞 0000-0002-0887-0882

## Education

### Lancaster University

United Kingdom

#### PHD STATISTICS

2021 - 2025

- Thesis: "Modelling and inference for the body and tail regions of multivariate data"
- Supervisors: Professor Jennifer Wadsworth

### Lancaster University

United Kingdom

#### MRES STATISTICS AND OPERATIONAL RESEARCH, GRADE: DISTINCTION

2020 - 2021

- Project: "Dependence Models for Actuarial Data"
- Supervisors: Professor Jennifer Wadsworth, Dr. Adrian O'Hagan (UCD, Ireland)

### Faculty of Sciences, University of Lisbon

Portugal

#### MSC STATISTICS AND OPERATIONAL RESEARCH, GRADE: 18/20

2017 - 2019

- Dissertation: "Copula Models for Dependence: Comparing Classical and Bayesian Approaches"
- Supervisors: Dr. Patrícia de Zea Bermudez

### University of Bologna

Italy

#### MSC STATISTICAL SCIENCES - ERASMUS PROGRAMME

2017 - 2018

- Analysis of Categorical Data: 24/30
- Survey Sampling: 24/30
- Systems and Algorithms for Data Science: 30/30

### Lisbon School of Economics & Management, University of Lisbon

Portugal

#### BSC MATHEMATICS APPLIED TO ECONOMICS AND MANAGEMENT, GRADE: 15/20

2014 - 2017

## Professional Experience

2025— **Postdoctoral Research Fellow: X-vine models for multivariate extremes**, Université de Namur

2024 **Research Associate: Computational Skills Project**, Lancaster University

2021 - 2023 **Graduate Teaching Assistant**, Department of Mathematics and Statistics, Lancaster University

**Research Fellow:** Spatial distribution of a fish species where the focus was on assessing whether including

2019 - 2020 Preferential Sampling would improve the estimation of such distribution, Portuguese Institute for Sea and Atmosphere, Portugal

2012 - 2017 **Monitor at Summer Camp (for children aged 3-10)**, Junta de Freguesia de Carnide, Lisboa, Portugal

## Interests

Statistics of Extremes, Computational Statistics, Machine Learning, High Dimension Statistics

## Publications

### PUBLISHED

**André, L. M.**, Campbell, R., D'Arcy, E., Farrell, A., Healy, D., Kakampakou, L., Murphy, C., Murphy-Barltrop, C.J.R., Speers, M. (2024). Extreme value methods for estimating rare events in Utopia. *Extremes*.

**André, L. M.**, Wadsworth, J. L., O'Hagan, A. (2024). Joint modelling of the body and tail of bivariate data. *Computational Statistics & Data Analysis*.

**André, L. M.**, Figueiredo, I., Carvalho, M. L., Simões, P., Natário, I. (2020). Spatial Modelling of Black Scabbardfish Fishery Off the Portuguese Coast. *ICCSA 2020*.

**André, L. M.**, de Zea Bermudez, P. (2020). Modelling dependence between observed and simulated wind speed data using copulas. *Stochastic Environmental Research Risk Assessment*.

## IN REVIEW

**André, L. M.**, Tawn, J. A. (2025). Gaussian mixture copulas for flexible dependence modelling in the body and tails of joint distributions. *In review and submitted to Computation Statistics & Data Analysis. Preprint in <https://arxiv.org/pdf/2503.06255>*

**André, L. M.**, Wadsworth, J. L., Huser, R. (2025). Neural Bayes inference for complex bivariate extremal dependence models. *In review and submitted to Extremes. Preprint in <https://arxiv.org/pdf/2503.23156>*

## Awards

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2025 **Prémio SPE 2025**, Sociedade Portuguesa de Estatística

2023 **23rd European Young Statisticians Meeting**, European Regional Committee of the Bernoulli Society

2019 **XXIV Congresso da Sociedade Portuguesa de Estatística (Scholarship)**, Sociedade Portuguesa de Estatística

## Teaching Experience

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MATH101: **Calculus** (Autumn 2021)

MATH102: **Further Calculus** (Autumn 2021)

MATH235: **Statistics II** (Spring 2022, 2023)

MATH331: **Bayesian Statistics** (Autumn 2021, 2022)

MATH403: **Statistical Foundations I** (Autumn 2023)

MATH502: **Statistical Fundamentals II** (Autumn 2021, 2022)

STOR605: **Inference** (Autumn 2021)

## Skills and Activities

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### COMPUTING SKILLS

**Primary:** R (and R packaging) and Julia

**Frequent use:** LaTeX, HPC, SLURM, GitHub

**Brief knowledge:** Python, MATLAB, C++, SPSS, SQL, JAGS, WinBUGS, OpenBUGS, GiveWin, TSP

### LANGUAGES

Native **Portuguese**, Proficiency

C2 **English**, IELTS Academic: Band score 7.5

A2 **Italian**, Alma Mater Studiorum Università di Bologna

A1 **Spanish**, COMPETIR - Formação e Serviços, SA

### COMMITTEES (*O - Organiser; CO - Co-Organiser; OC - Organising Committee; CM - Committee Member*)

2023 - 2024 **Lancaster Extremes research group**, O

2022 - 2023 **STOR-i computing research group**, CO

2022 - 2023 **STOR-i Extremes Workshop**, OC

2022 - 2023 **STOR-i Womens+ Network**, CM

### SUPERVISION

July 2022 **Rui Zhang**, STOR-i Intern

*Lancaster University*