

# Paolo Onorati

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Postdoctoral Researcher

## PERSONAL INFORMATION

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Email:	paolo.onorati@unipd.it
GitHub:	/github.com/paonrt
Current Position:	Postdoctoral Researcher, Department of Statistical Sciences, University of Padua (Italy)
Research Interests:	Asymmetric Distributions, Bayesian Inference, Classification, Copula Distributions, Extreme Values, Statistical Computing, and Time Series Analysis

## EDUCATION

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• Ph.D in "Models for Economics and Finance"	Nov 2019 – Jun 2023
<i>Sapienza University of Rome</i>	Rome, Italy
◦ Thesis: " <i>Bayesian Inference for Binary Regression Model and Hierarchical Copula Model</i> "	
◦ Supervisor: Prof. Brunero Liseo	
◦ Grade: Excellent cum laude	
• Master Degree in "Finanza e Assicurazione" (Finance and Insurance)	Oct 2016 – Jan 2019
<i>Sapienza University of Rome</i>	Rome, Italy
◦ Grade: 110/110 cum laude	
• Bachelor Degree in "Scienze Aziendali" (Economics and Business)	Sep 2013 – Dec 2016
<i>Sapienza University of Rome</i>	Rome, Italy

## WORK EXPERIENCE

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• Analyst at Deloitte	Jun 2019 – Oct 2019
<i>Deloitte Consulting S.r.l.</i>	Milan, Italy
◦ Consultant for Over-the-Counter (OTC) derivative operations at Intesa San Paolo Bank	
◦ Focus on ensuring compliance with US regulation (Dodd-Frank Act, DFA) and Hong Kong regulation (Hong Kong Monetary Authority, HKMA)	
◦ Development and maintenance of a tool for the automatic generation of reports on the compliance of OTC derivative operations	

## ACADEMIC EXPERIENCE

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### Research Experience

• Postdoctoral Researcher at University of Padua	Jan 2024 – Curr
<i>Department of Statistical Sciences</i>	Padua, Italy
◦ Winner of a competitive selection procedure for a research grant financed within the framework of project <i>Rethinking and Innovating Statistics for Extremes (RISE)</i> , code 2022FJ3SLA	
◦ Supervisor: Prof. Antonio Canale	
• Visiting Postdoc at University of Toronto	Oct 2023 – Dec 2023
<i>Department of Statistical Sciences</i>	Toronto, Canada
◦ Development of Bayesian computational methods for copula distributions and stochastic population dynamics in presence of sampling errors	
◦ Supervisor: Prof. Radu Craiu	
• Postdoctoral Researcher at Sapienza University of Rome	Nov 2022 – Oct 2023
<i>MEMOTEF Department</i>	Rome, Italy
◦ Winner of the competitive selection procedure 03/2022 - Cat. B - TIPO I - SECS-S/01 for the research project <i>Bayesian Generalized Linear Mixed Models with Applications in Demography and Official Statistics</i>	
◦ Supervisor: Prof. Brunero Liseo	

## Teaching Experience

- **Adjunct Professor at University of Padua** Sep 2024 – Jan 2025  
Padua, Italy  
*Department of Statistical Sciences*
  - Winner of the competitive selection procedure CR 799 10/06/2024 for the co-teaching of the course Statistica 2 Matricole Dispari (Statistical Inference)
  - Co-teaching with Prof. Antonio Canale; lectures in Italian
- **Teaching Assistant at Sapienza University of Rome** Sep 2024 – Curr  
Rome, Italy  
*MEMOTEF Department*
  - Winner of the competitive selection procedure 178/2024 for teaching activities and tutoring within the disciplinary scientific sector SECS-S/01 (Statistics)
  - Statistics pre-course for new students enrolled in the master's program; lectures in English
- **Teaching Assistant at Sapienza University of Rome** Sep 2023 – Dec 2023  
Rome, Italy  
*MEMOTEF Department*
  - Winner of the competitive selection procedure 1132/2023 for teaching activities and tutoring within the disciplinary scientific sector SECS-S/01 (Statistics)
  - Statistics pre-course for new students enrolled in the master's program; lectures in English
- **Lecturer for Ph.D Course in "Management Banking, and Commodity Sciences"** Apr 2023 – May 2023  
Rome, Italy  
*Department of Management, Sapienza University of Rome*
  - Lecturer of the course "Metodologia della RICERCA - Tecniche QUANTITATIVE con esercitazioni" (Research Methodology - Quantitative Techniques with Tutorials)
  - Although the course title was in Italian, the lectures were delivered in English
  - Co-teaching with Prof. Brunero Liseo and Prof. Nina Deliu
- **Teaching Assistant at Sapienza University of Rome** Feb 2022 – Dec 2022  
Rome, Italy  
*MEMOTEF Department*
  - Winner of the competitive selection procedure 1296/2021 for teaching activities and tutoring within the disciplinary scientific sector SECS-S/01 (Statistics)
  - Additional statistics course and tutoring for students who failed the exam; lectures in Italian
- **Teaching Assistant at Sapienza University of Rome** Feb 2021 – Oct 2021  
Rome, Italy  
*MEMOTEF Department*
  - Winner of the competitive selection procedure 1223/2020 for teaching activities and tutoring within the disciplinary scientific sector SECS-S/01 (Statistics)
  - Additional statistics course and tutoring for students who failed the exam; lectures in Italian
- **Teaching Assistant at Sapienza University of Rome** Mar 2020 – Dec 2020  
Rome, Italy  
*MEMOTEF Department*
  - Winner of the competitive selection procedure 80/2020 for teaching activities and tutoring within the disciplinary scientific sector SECS-S/06 (Mathematical methods of economics, finance, and actuarial sciences)
  - Additional mathematics course and tutoring for students who failed the exam; lectures in Italian

## PUBLICATIONS

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### Journal Articles

#### Published

- 2024 **P. Onorati** and B. Liseo. An extension of the unified skew-normal family of distributions and its application to Bayesian binary regression. *Journal of Computational and Graphical Statistics*, (just-accepted):1–25, 2024
- 2023 **P. Onorati**. An acceptance-rejection algorithm for the Kolmogorov distribution. *Annali del Dipartimento di Metodi e Modelli per l'Economia, il Territorio e la Finanza*, pages 11–25, 2023. ISSN 2385-0825. doi: 10.13133/2611-6634/1412
- 2022 **P. Onorati** and B. Liseo. Bayesian hierarchical copula models with a Dirichlet-Laplace prior. *Stats*, 5(4): 1062–1078, 2022b. ISSN 2571-905X
- 2019 **P. Onorati** and B. Liseo. Copule condizionate: applicazione nel calcolo del value-at-risk (conditional copulas: Application in value-at-risk computation). *Annali del Dipartimento di Metodi e Modelli per l'Economia, il Territorio e la Finanza*, pages 73–91, 2019. ISSN 2385-0825

#### Under Review

- **P. Onorati** and A. Canale. A semi-parametric Bayesian spatial model for rainfall events in geographically complex domains. *arXiv:2501.08748*, a

## In Preparation

- **P. Onorati**, S. Ruiz Suarez, and R.V. Craiu. Bayesian inference for the Gompertz model reveals population dynamics. b
- **P. Onorati** and B. Liseo. New class of modified Gaussian processes for Bayesian nonparametric binary regression. c
- **P. Onorati**, I. Antoniano-Villalobos, and A. Canale. Tuning-free objective Bayesian inference for extremes. d
- **P. Onorati** and R.V. Craiu. A rejection free Markov chain Monte Carlo algorithm for copula models. e

## Conference Proceedings

- 2025 **P. Onorati** and B. Liseo. An importance sampling algorithm for Bayesian logistic regression with scale mixture of Gaussian priors. In *Statistical Learning, Sustainability and Impact Evaluation Selected papers of the International Meeting SIS 2023*, 2025. Accepted for publication, in press
- 2025 **P. Onorati** and A. Canale. A semi-parametric spatial model for zero inflated Weibull distributions with application to extreme rainfall events. In *Methodological and Applied Statistics and Demography IV*, 2025. doi: 10.1007/978-3-031-64447-4
- 2023 **P. Onorati** and B. Liseo. An importance sampling algorithm for Bayesian logistic regression with independent Gaussian scale mixture prior. In *Book of Short Papers SIS 2023*, 2023
- 2022 **P. Onorati** and B. Liseo. Bayesian hierarchical copula model for clusters of financial time series. In *Book of Abstracts MAF 2022*, 2022a

## CONFERENCE PRESENTATIONS

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- 2024 **18th International Joint Conference on Computational and Financial Econometrics (CFE-CMStatistics 2024)**  
*King's College London, London, United Kingdom, 14–16 Dec 2024*  
Title: Tuning-free objective Bayesian inference for extremes  
Invited talk
- 2024 **52nd Scientific Meeting of the Italian Statistical Society (SIS 2024)**  
*University of Bari Aldo Moro, Bari, Italy, 17–20 Jun 2024*  
Title: A Semi-Parametric Spatial Model for Weibull Distributions with Application to Extreme Rainfall Events  
Contributed talk
- 2023 **International Meeting SIS 2023 (SIS 2023)**  
*University of Bari Aldo Moro, Bari, Italy, 17–20 Jun 2024*  
Title: An Importance Sampling Algorithm For Bayesian Logistic Regression with Independent Gaussian Scale Mixture Prior  
Contributed talk
- 2022 **10th International Conference on Mathematical and Statistical Methods for Actuarial Sciences and Finance (MAF 2022)**  
*University of Salerno, Salerno, Italy, 20–22 Apr 2022*  
Title: Bayesian Hierarchical Copula Models for Financial Clusters  
Contributed talk
- 2024 **2024 ISBA World Meeting (ISBA 2024)**  
*Ca'Foscari University of Venice, Venice, Italy, 01–07 Jul 2024*  
Title: Modified Gaussian Processes for Nonparametric Binary Regression  
Poster presentation
- 2022 **O'Bayes 2022: Objective Bayes Methodology Conference (OBayes 2022)**  
*University of California Santa Cruz, Santa Cruz, CA, USA, 06–10 Sep 2022*  
Title: Bayesian Semi-Parametric Inference for Binary Regression  
Poster presentation

## WORKSHOPS AND SEMINARS

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2024 **XIV Giornate della Ricerca Memotef 2024 (14-th Memotef Research Day 2024)**

*Sapienza University of Rome, MEMOTEF Department, Rome, Italy, 26–27 Mar 2024*

Title: Modified Gaussian processes for nonparametric binary regression

Workshop presentation

2022 **XII Giornate della Ricerca Memotef 2022 (12-th Memotef Research Day 2022)**

*Sapienza University of Rome, MEMOTEF Department, Rome, Italy, 31 May–01 Jun 2022*

Title: Bayesian Binary Regression

Workshop presentation

2023 Department of Statistical Sciences, University of Toronto

*Toronto, Canada, 12 Dec 2023*

Title: An Extension of the Unified Skew-Normal Family of Distributions and Application to Bayesian Binary Regression

Brown Bag Seminar

## AWARDS AND COMPETITIVE GRANTS

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2024 Honorable Mention for "Premio per la migliore tesi di dottorato in statistica"  
(Best Ph.D. Thesis in Statistics Award)

*Società Italiana di Statistica - SIS (Italian Statistical Society)*

Honorable Mention for the Ph.D. thesis "Bayesian Inference for Binary Regression Model and Hierarchical Copula Model"

2024 Best Poster Award at the 2024 ISBA World Meeting

*International Society for Bayesian Analysis - ISBA*

Poster title: Modified Gaussian Processes for Nonparametric Binary Regression

2022 Travel Grant for the Objective Bayes Methodology Conference (OBayes 2022)

*Objective Bayes Section of the International Society for Bayesian Analysis - ISBA*

Travel support for the participation in the conference OBayes 2022

2022 Avvio alla Ricerca (Initiation to Scientific Research)

*Sapienza University of Rome*

Winner of the competitive selection procedure D.R.n. 1418/2022 for research funding (Nov 2022)

Project title: An Extension of the Unified Skew-Normal Family of Distributions and Applications to the Bayesian Binary Regression Model

## REFEREE ACTIVITIES

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- Environmental and Ecological Statistics
- Statistical Methods & Applications
- Communications in Statistics - Simulation and Computation

## SKILLS

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**Programming Languages:** R (advanced), C (basic), MATLAB (basic)

**Markup Languages:** L<sup>A</sup>T<sub>E</sub>X(advanced), Markdown (basic)

**Other Softwares:** Slurm as User (intermediate), Linux (basic-intermediate), Git (basic), Singularity (basic)

**Languages:** Italian (native), English (B2 level)