

Paolo Onorati

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Postdoctoral Researcher

PERSONAL INFORMATION

Email:	paolo.onorati@dauphine.psl.eu
GitHub:	/github.com/paonrt
Current Position:	Postdoctoral Researcher, CEREMADE, Université Paris Dauphine-PSL, Paris, France
Research Interests:	Asymmetric Distributions, Bayesian Inference, Classification, Copula Distributions, Extreme Values, Statistical Computing, and Time Series Analysis

EDUCATION

• 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, with honors	
• Master Degree in "Finanza e Assicurazione" (Finance and Insurance)	Oct 2016 – Jan 2019
<i>Sapienza University of Rome</i>	Rome, Italy
◦ Final grade: 110 out of 110, with honors	
• Bachelor Degree in "Scienze Aziendali" (Economics and Business)	Sep 2013 – Dec 2016
<i>Sapienza University of Rome</i>	Rome, Italy

INDUSTRY EXPERIENCE

• 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

Research Experience

• Postdoctoral Researcher at Université Paris Dauphine-PSL	Sep 2025 – Curr
<i>Centre de Recherche en Mathématiques de la Décision - CEREMADE</i>	Paris, France
◦ Appointed on <i>ERC Synergy project OCEAN - On Intelligence and Networks</i> , Funded by the European Union (ERC, Ocean, 101071601)	
◦ Supervisor: Prof. Christian Robert	
• Postdoctoral Researcher at University of Padua	Jan 2024 – Jun 2025
<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

Journal Articles

Published

- 2025 P. Onorati and A. Canale. **A Semi-Parametric Bayesian Spatial Model for Rainfall Events in Geographically Complex Domains.** *Journal of Agricultural, Biological and Environmental Statistics*, 30(4), 2025a. Published Online 17 December 2025
- 2025 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*, 34(4):1291–1304, 2025
- 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 the 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**, D.B. Dunson, and A. Canale. On the posterior computation under the Dirichlet-Laplace prior. *arXiv:2507.05214*, f
- **P. Onorati**, S. Ruiz Suarez, and R.V. Craiu. Likelihood-based inference for the Gompertz model with Poisson errors Dynamics. *arXiv:2510.06787*, b

In Preparation

- **P. Onorati** and B. Liseo. New class of modified Gaussian processes for Bayesian nonparametric binary regression. c
- **P. Onorati**, A. Canale, and I. Antoniano-Villalobos. Tuning-free objective Bayesian inference with an application 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 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*, 2025b. 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

- 2025 **SIS 2025 - Statistics for Innovation (SIS 2025)**
University of Genoa, Genoa, Italy, 16–18 Jun 2025
Title: Comparing Different Objective Priors for Extremes
Invited talk
- 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 **SIS 2023 - Statistical Learning, Sustainability and Impact Evaluation (SIS 2023)**
University of Ancona, Ancona, Italy, 21–23 Jun 2023
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
- 2025 **SIS Bayes 2025**
University of Padua, Padua, Italy, 04–05 Sep 2025
Title: Posterior Computation for the Dirichlet-Laplace Prior
Poster presentation
- 2025 **O'Bayes 2025: Objective Bayes Methodology Conference (OBayes 2025)**
National Technical University of Athens, Athens, Greece, 08–12 Jun 2025

Title: A New Multivariate Logistic Distribution for Fast Objective Bayesian Inference
Poster presentation

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

2025 **Extremes - RISE final workshop**

Ca'Foscari University of Venice, Department of Environmental Sciences, Informatics and Statistics, Venice, Italy, 12 Sep 2025

Title: Automatic Objective Bayesian Inference for Extremes
Workshop presentation

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

2025 **Mostly Monte Carlo Seminar Series at Paris Santé Campus**

Paris, France, 12 Dec 2025

Title: Beyond the Unified Skew-Normal: Extended Models for Bayesian Classification

Mostly Monte Carlo Seminars are organized by the reading group of Prof. Christian P. Robert (Paris Dauphine-PSL and University of Warwick), Prof. Nicholas Chopin (Institut Polytechnique de Paris), and Prof. Pierre Jacob (ESSEC Business School)

2025 Multi-study Journal Club at Dana-Farber Cancer Institute, Harvard University

Virtual (Boston-based Audience), USA, 05 Feb 2025

Title: Extensions of the Unified Skew-Normal Family for Linear and Nonparametric Bayesian Binary Regression
Multi-study Journal Club is organized by Prof. Giovanni Parmigiani (Harvard University)

2023 **Brown Bag Seminar at 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

AWARDS AND COMPETITIVE GRANTS

2025 **Premio alla Ricerca 2024 (2024 Research Award)**

Department of Statistical Sciences - University of Padua

Awarded the departmental prize for the best publication among postdoctoral fellows and PhD students

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

2025 Travel Grant for the Objective Bayes Methodology Conference (OBayes 2025)

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

Travel support for the participation in the conference OBayes 2025

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 Finanziamento Avvio alla Ricerca (Initiation to Scientific Research Grant)

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

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

SKILLS

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

Markup Languages: L^AT_EX(advanced), Markdown (basic)

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

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