

Andrea Mascaretti

Postdoctoral Researcher at SISSA

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mascaretti

Profile

Quantitative researcher with expertise in Bayesian modelling, probabilistic inference, and statistical learning, with applications to text analysis, neuroscience, and complex systems. Experienced in research collaborations and interdisciplinary data-driven projects.

Experience

May 2024 – present **Postdoctoral Researcher, SISSA**, Trieste, Italy

Topic: Semantic information in deep transformer models.

Jun 2019 – Jun 2020 **Research Fellow, Politecnico di Milano**, Milan, Italy

Department of Mathematics. Project SAFARI-NJEMA: data-driven public transport development.

Education

Oct 2020 – Apr 2024 **Ph.D. in Statistical Sciences, University of Padua**, Padua, Italy

Thesis: Bayesian Sparse Model for Complex Data. Visiting PhD Student at Rice University, Houston (Oct 2022 – Mar 2023). Consulting: Vittoria Assicurazioni.

Mar 2016 – Apr 2019 **M.Sc. in Mathematical Engineering, Politecnico di Milano**, Milan, Italy

Erasmus: Universidade Nova de Lisboa.

Sep 2012 – Sep 2015 **B.Sc. in Management Engineering, Politecnico di Milano**, Milan, Italy

Selected Publications

Mascaretti, A. et al. *Heterogeneity of technological structures between EU countries: An application of complex systems methods to Input–Output Tables*. *Expert Systems with Applications* 206 (2022): 117875.

Acevedo, S., Mascaretti, A. et al. *A quantitative analysis of semantic information in deep representations of text and images*. *arXiv preprint arXiv:2505.17101* (2025).

Mascaretti, A. and Friel, N. *Bayesian Global-Local Deconvolution of Neurological Data*. In *Advances in Neural Data Science*, pp. 75–89, Springer, 2025.

Skills & Languages

Technical: Python, JAX, R, Stan, Git, Linux, SLURM.

Languages: Italian (Native), English (Proficient; TOEFL 115/120, CPE), Spanish (Intermediate), French (Intermediate).