Daniela Corbetta

CURRICULUM VITAE

Institut de Mathématiques de Toulouse
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Current position

Postdoctoral Researcher
Institut de Mathématiques de Toulouse

Education

October 2022 – January 2026
PhD in Statistics
Department of Statistical Sciences, University of Padova
Thesis: *Advances in selective inference: from hierarchical conformal prediction to high-dimensional post-hoc methodologies with applications to scRNA-seq data*
Supervisors: Davide Risso and Livio Finos

October 2019 – March 2022
Master's Degree in Statistical Sciences
Department of Statistical Sciences, University of Padova
Thesis (in italian): *Procrustes analysis for spatial transcriptomics data*
Supervisors: Livio Finos, Davide Risso, Angela Andreella
Final mark: 110/110 cum laude

October 2016 - September 2019
Bachelor's Degree in Statistics for Technology and Science
Department of Statistical Sciences, University of Padova
Thesis (in Italian): *Meta-analysis in presence of competitive risks*
Supervisor: Giuliana Cortese
Final mark: 110/110 cum laude

Visiting periods

November 2024 - May 2025
Visiting PhD student
Institut de Mathématiques de Toulouse
Supervisor: Pierre Neuvial

February 2024 - July 2024
Visiting PhD student
Center for Computational Biomedicine, Harvard University
Supervisors: Robert Gentleman and Ludwig Geistlinger

Work Experience

October 2025 - January 2026
Research Fellow, Department of Statistical Sciences, University of Padova (Italy)

August 2021 - September 2022
Statistical programmer, Alira Health, Bologna (Italy)

Awards

- Best poster award - Retreat of the Department of Statistical Sciences, University of Padova (September 2025)
- SAS Curiosity Cup 2022 - Data preparation winner and data analysis runner up

Computer skills

- Languages: R (advanced), SAS (advanced), Python (intermediate);
- Other: Latex (advanced), GitHub (basic).

Languages

Italian (native); English (fluent); French (basic).

Teaching

2025	*Multidimensional Data Analysis* (laboratory sessions), Department of Statistical Sciences, University of Padova

Thesis supervision

2025	**Paolo Della Penna**, Master's thesis in Statistical Sciences (co-supervisor), Department of Statistical Sciences, University of Padova

Conference presentations

- Oral presentation: *High-Dimensional Linear Model Inference with Conditional Resampling for Gene Discovery*, Statistical Methods for Post Genomic Data, Grenoble (France), 30 January 2026;
- Oral presentation: *Conformal inference for cell-type prediction with graph-structured constraints*, Mathematics of Single-Cell Data-Analysis Workshop, Marseille (France), 1 July 2025;
- Oral presentation: *Inference for high-dimensional linear models with conditional resampling*, High-Dimensional Statistical Inference Workshop, Venice (Italy), 27 May 2025;
- Poster presentation: *Conformal inference for cell type prediction leveraging the cell ontology*, Lorenzo Bernardi e la Statistica Sociale, Padova (Italy), 18 October 2024;
- Oral presentation: *Conformal inference for cell type prediction leveraging the cell ontology*, Ascona workshop: Spatial and temporal statistical modeling in molecular biology, Ascona (Switzerland), 8-13 September 2024;
- Oral presentation: *Conformal inference for cell type prediction leveraging the cell ontology*, European Bioconductor Conference, Oxford, 4-6 September 2024;
- Poster presentation: *Alignment of Spatial Transcriptomics data with the alignProMises R package*, European Bioconductor Conference, Ghent (Belgium), 20-22 September 2023;
- Oral presentation: *Procrustes analysis for spatial transcriptomics data*, 44th ISCB conference, Milan (Italy), 27-31 August 2023;
- Poster presentation: *Procrustes analysis for high-dimensional data*, useR! 2022 (online), 20-23 June 2022.

Software

- Contributor of MerfishData (Bioconductor)
- Author of alignProMises (Github) and scConform (Github)

Publications

- Corbetta D., Finos L., Risso D. (2024), Conformal inference for cell type prediction with graph-structured constraints, Book of the Short Papers SIS 2024, ISBN 9783031643507

- Corbetta D., Finos L., Geistlinger L., Risso D. (2025+), Conformal inference for cell type annotation with graph-structured constraints (arXiv)