Marco Ratta, PhD

Young researcher with strong expertise in statistical methodology and quantitative decision-making in drug development

EDUCATION

- ***PhD in Biostatistics***, Polytechnic University of Turin, Italy (expected: November 2025)
  Funded by Servier
  Supervisor: Prof. Mauro Gasparini
  Co-supervisors: Donia Skanji (Servier), Prof. Pavel Mozgunov (Saryga and MRC Cambridge), Dr. Gaëlle Saint-Hilary (Saryga)

- ***Master Degree in Mathematical Engineering***, Polytechnic University of Turin, Italy (March 2020 - September 2022) - Final mark: 110/110

- ***Bachelor Degree in Mathematical Engineering***, Polytechnic University of Turin, Italy (October 2016 - March 2020) - Final mark: 103/110

- *Admission to the college of merit "R.Einaudi"* (April 2017 – July 2023)

- *Admission to the "Young Talents" honour program* - Polythechnic Univeristy of Turin (October 2016 - March 2020)

EMPLOYMENT

From Nov 2025	**Statistical methodologist** Saryga, France
2022-2025	**University assistant professor in statistics, mathematics, and calculus courses** Polytechnic University of Turin, Italy
2021	**High school teacher of mathematics and physics**, Italy
2019	**5-month internship** at FCA Automotive, Italy
2018-2019	**Junior professor at Brixiamate**, national training camps for the Mathematics Olympiad, Italy

AWARDS

- 1st prize at "Challenge@PoliTo" artificial intelligence competition (2021)
- 1st prize in the local stage of EBEC (European BEST Engineering Competition) and admission to the national stage (2021)
- 2nd prize in the national stage of EBEC (2021)

KEY SKILLS & COMPETENCES

Statistical methodology applied to clinical trials	Programming	Languages
Quantitative Decision-Making, Benefit-Risk Assessment, Group Sequential Designs, Survival Analysis, Historical Borrowing, Surrogate endpoints, Seamless Clinical Trial Designs	R (excellent) Python (basic) MATLAB (basic) C++ (basic)	Italian (native) English (fluent) Spanish (excellent)

SCIENTIFIC PUBLICATIONS

Published:

- Fougeray R*, Vidot L*, **Ratta M***, Teng Z, Skanji D, Saint-Hilary G. Futility interim analysis based on Probability of Success using a surrogate endpoint. *Pharm stat,* 2024. doi: 10.1002/pst.2410. **The authors contributed equally to this work*.
- Fontan A, **Ratta M**, Altafini C. From populations to networks: relating diversity indices and frustration in signed graphs. *PNAS nexus*, 2024. doi: 10.1093/pnasnexus/pgae046.

Ongoing / Under Review:

- Gasparini M, Di Trani V., **Ratta M**. New, shorter small-samples intervals for Vaccine Efficacy. (under review)
- **Ratta M**, Saint-Hilary G, Barboux V, Gasparini M, Skanji D, Mozgunov P. Dual criterion approach to early conditional approval in time-to-event group sequential trials via historical borrowing. (under review)
- **Ratta M**, Saint-Hilary G, Gasparini M, Mozgunov P. On the interplay between variance of the robust component and prior weights in normal mixture priors. (under review)
- **Ratta M**, Saint-Hilary G, Teng Z, Gasparini M, Skanji D, Mozgunov P. Seamless phase 2/3 design with benefit-risk driven treatment selection. (ongoing)
- **Ratta M**, Mozgunov P, Boulet S, Ursino M. Bayesian hybrid clinical trials and how to reassess sample size. (ongoing)

CONFERENCES

- IBS-IR-EMR2025, Salerno (IT), 2025. Invited Speaker.
- ISCB45, Basel (CH), 2025. Oral Presentation.
- Italian Biostatistics Group (IBIG) Forum, Parma (IT), 2024. Invited Speaker.
- PSI Conference, Amsterdam (NE), 2024. Oral Presentation.
- ISCB44, Thessaloniki (GR), 2024. Oral Presentation.
- ISCB43, Milan (IT), 2023.
- Italian Biostatistics Group (IBIG) Forum, Milan (IT), 2023.
- Italian Biostatistics Group (IBIG) Forum, Verona (IT), 2022.