

## Current Position

Nov. 2021 - **"La Sapienza" University of Rome,**  
Current *Phd in Methodological Statistics*, Dept. of Statistical Sciences  
Research interests **Statistical Inference**, Bayesian methods, Decision-theoretic statistics, Analysis and design of clinical trials

## Education

Ongoing **Phd in Methodological Statistics**, *"La Sapienza" University of Rome*, Dept. of Statistical Sciences  
Advisors: Fulvio De Santis & Stefania Gubbiotti

Jul 2021 **Master in Statistical Sciences**, *"La Sapienza" University of Rome*, Dept. of Statistical Sciences, Final Mark: 110 cum laude/110  
Thesis: "A dynamic power prior approach to non-inferiority clinical trials with normal means and unknown variances"  
Advisor: Fulvio De Santis, Co-advisor: Stefania Gubbiotti

Jul 2019 **Bachelor in Statistics, Finance and Insurances**, *"La Sapienza" University of Rome*, Dept. of Statistical Sciences, Final Mark: 110 cum laude/110  
Thesis: "The overlap of range-preserving confidence intervals to assess equality of means"  
Advisor: Fulvio De Santis, Co-advisor: Stefania Gubbiotti

## Student Visits and Internships

Sep 2023 - **Biostatistics intern**,  
Nov 2023 *Novartis Basel, Switzerland*,  
Supervisors: Matt Wiley, Lukas Andreas Widmer, Sebastian Weber (BLRM Simplification Team)  
Project: "Investigation of the between-studies heterogeneity parameter of the Bayesian Logistic Regression Model in Phase 1 trials when borrowing multiple external data"

Oct 2022 - **Sponsored Research Fellow**,  
Feb 2023 *Dana Farber Cancer Institute of Harvard University, Boston, Massachusetts, USA*,  
Supervisors: Lorenzo Trippa & Massimiliano Russo (Trippa's Lab)  
Project: "Toxicity Adaptive Lists dEsign (TALE): a practical design for phase-I drug combination trials in oncology"

Gen 2020- **Erasmus+ Programme**,  
Jun 2020 *University of Paris-Dauphine, Paris, France*,  
Dept. of Mathématiques et Informatique de la Décision et des Organisations

## Teaching activities

2022 - **Teaching Assistant**, *"La Sapienza" University of Rome*, Dept. of Statistical Sciences

Ongoing

- Statistical Inference (Bachelor's course) - Spring 2022, Spring 2023, Spring 2024 - Instructor: Fulvio De Santis;
- Statistical Decision Theory (Master's course) - Winter 2022 - Instructor: Fulvio De Santis.

## Scholarships, Awards and Grants

### Society Memberships:

- Member of SIS (Italian Statistical Society) since 2023
- Member of  $\gamma$ -SIS (the young group of the Italian Statistical Society) since 2023

2021-2024 **Three-year fully-funded PhD Scholarship**, Dept. of Statistical Sciences, *"La Sapienza" University of Rome*

## A.Y. 2023/2024

- *Young Investigators grant*, "La Sapienza" University of Rome,  
Role: Participant, PI: Susanna Gentile - Project title: Innovative Bayesian methodologies for early stage clinical trials

## A.Y. 2022/2023

- *European COST Action Grant*, VISAVET Health Surveillance Center, Universidad Complutense Madrid, Spain, to cover the expenses of the 2023 Advanced Training School on Bayesian methods
- *University Research Project*, "La Sapienza" University of Rome,  
Role: Participant, PI: Stefania Gubbiotti - Project title: Bayesian methods for consensus and evidence in clinical trials
- *Young Investigators grant*, "La Sapienza" University of Rome,  
Role: PI - Project title: Bayesian dynamic approaches for historical control in Phase 1 and Phase 3 clinical trials
- *PLS scholarship of the duration of 6 months*, "La Sapienza" University of Rome, Dept. of Statistical Sciences,  
Role: academic support in the Scientific Degrees Project - Referent: Gubbiotti Stefania

## A.Y. 2020/2021

- *ERASMUS+ Scholarship of 6 months*

## A.Y. 2019/2020

- *Exams Bonus*, "La Sapienza" University of Rome  
Reduction in University fees for being one of the top 5% students in the Master's degree programme;
- *150h of student-collaboration scholarship*, "La Sapienza" University of Rome, Dept. of Statistical Sciences,  
Role: Computer Lab Assistant

## A.Y. 2017/2018

- *Exams Bonus*, "La Sapienza" University of Rome  
Reduction in University fees for being one of the top 5% students in the Bachelor's degree programme

## Editorial activities

- Jun 2023 - **Referee**, 1 review in 2023 for the Biometrical Journal; 1 review in 2023 for Statistical Methods & Applications (SMA)  
Ongoing

## Talks, Conferences, Congresses

- Oct 2023 **IBIG Forum 2023**, Milan, Italy  
Contribute: "A decision theoretic approach to assess the probability of success of an experiment"
- Sep 2023 **Italian Bayesian Day**, "La Sapienza" University of Rome, Roma, Italy  
Contribute: "Borrowing historical information using dynamic power prior"
- Sep 2023 **ODS 2023 - International Conference on Optimization and Decision Science**, Ischia, Italy  
Contribute: "On the Bayes risk induced by alternative design priors for sample size choice"
- Jun 2023 **SEAS IN 2023 - Statistical LEarning Sustainability and Impact Evaluation**, Marche Polytechnic University, Ancona, Italy  
Poster presentation: "On Bayesian power analysis in reliability"
- Jun 2023 **Phd Day - X edition**, "La Sapienza" University of Rome, Rome, Italy  
Talk: "On the Bayes risk induced by alternative design priors for sample size choice"
- Jun 2022 **SIS2022 - 51st Scientific Meeting of the Italian Statistical Society**, University of Campania "Luigi Vanvitelli", Caserta, Italy  
Talk: "A dynamic power prior approach to non-inferiority trials for normal means with unknown variance"
- Jun 2022 **Phd Day - IX edition**, "La Sapienza" University of Rome, Rome, Italy  
Talk: "Toxicity Adaptive Lists dESign (TALE): a practical design for phase-I drug combination trials in oncology"

## Publications

### International Journals

Nov. 2023 **10.1002/pst.2349**, 2023, A dynamic power prior approach to non-inferiority trials for normal means - Pharmaceutical Statistics ,  
Francesco Mariani, Fulvio De Santis, Stefania Gubbiotti

### Proceedings

Dec. 2023 **11573/1696303**, 2023, On the Bayes risk induced by alternative design priors for sample size choice ,  
Fulvio De Santis, Stefania Gubbiotti, Francesco Mariani

Sep. 2023 **11573/1688601**, 2023, On Bayesian power analysis in reliability ,  
Fulvio De Santis, Stefania Gubbiotti, Francesco Mariani

Sep. 2022 **11573/1656190**, 2022, A dynamic power prior approach to non-inferiority trials for normal means with unknown variance ,  
Francesco Mariani, Fulvio De Santis, Stefania Gubbiotti

### Other Certifications and Courses

Sep 2023 **DIcon 2023 - Development Innovation 2023: Innovating in a Changing World**, *Conference*, Novartis Pharma, Basel, Switzerland

Sep 2023 **CEN 2023 - Central European Network**, *Conference*, University of Basel, Switzerland

Jul 2023 **Advanced Training School on Bayesian methods**, *Workshop*, Universidad Complutense Madrid, Spain, Professors: Giles Innocent, Matthew Denwood, Julio Alvarez

May 2023 **Dose-finding and adaptive methods in clinical research**, *Workshop*, Polytechnic of Turin, Italy, Professors: Thomas Jaki, Pavel Mozgunov

Apr 2021 **IELTS**, Overall score: 7.5 (level C1)

Sep 2021 **Machine Learning Using SAS Viya**, SAS

Nov 2020 **Machine Learning**, Coursera

### Skills

Advanced IT R (Rstudio, Rmarkdown, Rshiny), Latex, Jags  
knowledge:

Basic IT SAS, SAS Viya, Java, Python, Winbugs, Gretl, SQL, Matlab  
knowledge:

Languages Italian (native speaker), English (IELTS C1),

Tuesday 5<sup>th</sup> March, 2024