

Marta Bonsaglio | Curriculum Vitae

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Education

Università Bocconi

Milan, Italy

Ph.D. in Statistics

Sep. 2017 – Present

I am a PhD candidate in Statistics, enrolled in the PhD program offered at Bocconi University. This PhD program is organized into two years of courses, and two years exclusively devoted to the doctoral thesis. During first and second years I attended several courses in statistical inference, probability theory, data analysis and I passed the corresponding exams. In the third and fourth years, instead, I collaborated with high-qualified researchers, facing challenging problems in theoretical statistics and applied mathematics, and I participated to conferences and seminars both as an auditor and as a speaker in an international environment.

My PhD thesis focuses on the analysis of the statistical properties of novel classes of randomized clinical trials, both adopting a decision-theoretic approach and Bayesian methodology as well as real-world data, combining competences in mathematical statistics and probability theory with statistical methods and programming in R.

I am also member of the following statistics initiatives: *BayesLab* research unit at Bocconi University and *Complex Data Modeling Research Network* by MiDas.

Thesis advisors: Prof. Sandra Fortini (Bocconi) and Prof. Lorenzo Trippa (Harvard University).

Università degli Studi di Milano-Bicocca

Milan, Italy

M.Sc. in Applied Mathematics

Sep. 2013 – Feb. 2016

During this master program I specialized in applied mathematics and numerical analysis, by taking courses in calculus, algebra, differential equations with the aim of learning high-level competences for the formalization and the consequent mathematical analysis of problems arising from applied sciences, finance and technologies. In my Master thesis I joined theoretical competences with programming skills in Matlab to solve differential equations modelling diffusion problems in two-dimensional domains.

Thesis supervisor: Prof. Alessandro Russo.

Thesis title: “*High-order Finite Element Methods for polygonal meshes*”.

Final mark: 110/110 cum laude.

Università degli Studi di Milano-Bicocca

Milan, Italy

B.Sc. in Mathematics

Sep. 2010 – Oct. 2013

The bachelor provided me knowledge in the fundamental fields of mathematics (algebra, analysis, geometry, probability) as well as concepts from disciplines closely linked to mathematics, such as physics and computer science.

Thesis supervisor: Prof. Alessandro Russo.

Thesis title: “*An application of Finite Element Methods*” (in Italian).

Final mark: 110/110 cum laude.

Liceo Scientifico Marie Curie

Meda (MB), Italy

Scientific High School Diploma

Sep. 2005 – Jun. 2010

Final mark: 100/100.

Outreach and Scholarships

Bocconi Summer School in Advanced Statistics and Probability **Como, Italy**
Summer School *July 2018*

I attended the Bocconi Summer School in Advanced Statistics and Probability: Graphical Models.

Bocconi University Phd Scholarship **Milan, Italy**
Scholarship *Sep. 2017 - Present*

Università degli studi di Milano-Bicocca Scholarship for Academic Achievement **Milan, Italy**
Scholarship *2010-2011*

I have been awarded with a merit-based scholarship designed to encourage students of scientific subjects.

Academic Experience

Articles.....

Bonsaglio M, FORTINI S, VENTZ S, TRIPPA L (2021+). Approximating the operating characteristics of Bayesian Uncertainty Directed Trial Designs, arXiv:2105.11177

Bonsaglio M, FORTINI S, VENTZ S, TRIPPA L (2021+). Incorporating external data in the design of novel trials (working paper)

Society membership.....

Complex Data Modeling Research Network (MiDaS).

Referee activities.....

Referee for the journals *Sankhya* and *Clinical trials*.

Work experience

Bocconi University **Milan, Italy**
Researcher in Statistics *Sep. 2017 - Present*

Scientific High School "Liceo Scientifico Marie Curie" **Meda (MB), Italy**
Teacher of Mathematics and Physics *Sep. 2016 - Jul. 2017*

I provided education to students (children and young adults). I prepared lesson plans and materials, monitored and evaluated the students' knowledge on the subjects of Mathematics and Physics through assignments, tests and examinations.

Altran **Milan, Italy**
Internship *May. 2016 - Aug. 2016*

During this internship, I have been engaged in two distinct projects concerning the development of novel technological devices in telco sector for a well-known Italian company. Concerning the first project, my main duties were to define and report KPIs relative to collected relevant data about data traffic, analyze and monitor them over real-time dashboards. Regarding the second project, my role was to measure the performance, safety and quality of an innovative smart product.

Volunteer work

2019: Volunteer for the European Researchers' Night, Milan

2015: Volunteer for Expo 2015, Milan

2012-Present: Volunteer math tutoring

Programming Skills

Advanced: L^AT_EX

Good: R, MATLAB

Basic: Java

Language Skills

Italian: Mothertongue

English: Fluent

Interests

Cooking, Collecting, Crosswords, Traveling