

# Marta Bonsaglio | Curriculum Vitae

Email: martabonsa@gmail.com

Date and Place of Birth: 24th August 1991, Monza, Italy

## Education

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### 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 on statistical inference, Bayesian Statistics, Data Analysis, Stochastic Processes, Survival Analysis, Computational Statistics and Machine Learning and I passed the corresponding exams. In the third and fourth years, instead, I collaborated with high-qualified researchers, facing challenging problems in theoretical and applied statistics, 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 and I am reviewer for the journals *Sankhya* and *Clinical Trials*.

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, number theory, with the aim of learning high-level competences for the formalization and the consequent mathematical analysis of problems arising from applied sciences and technologies.

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**  
*Scientific High School Diploma*  
Final mark: 100/100.

**Meda (MB), Italy**  
*Sep. 2005 – Jun. 2010*

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## Outreach and Scholarships

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**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.

## Papers.....

**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.

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## Work experience

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**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* *Oct. 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.

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## Programming Skills

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**Advanced:** L<sup>A</sup>T<sub>E</sub>X

**Good:** R, MATLAB

**Basic:** Java

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## Language Skills

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**Italian:** Mother tongue

**English:** Fluent

## Soft Skills

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**Personal attributes:** Teamwork, problem-solving, responsibility, attention to details

## Interests

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Cooking, Collecting, Crosswords, Traveling