

# Pietro Maria Sparago

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## CONTACT INFORMATION

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## CURRENT RESEARCH INTERESTS

Stochastic processes in finance: modelling and microfoundations, simulation, limit theorems, fundamental equations, statistics (time series econometrics, signal processing). Mathematical finance: model-free pricing (estimation of state prices and state price densities, model-free hedging), volatility modelling.

## EDUCATION

**London School of Economics and Political Science**, London, United Kingdom

MSc, Quantitative Methods for Risk Management. Graduation: July 2022.

- Department of Statistics. Received unconditional offer for the MPhil/PhD in Statistics.
- SSLC Student Representative.
- Elective coursework from the Department of Mathematics: Probability and Measure (MA411), Mathematics of Black and Scholes Theory (MA415), The Foundations of Interest Rate and Credit Risk Theory (MA416), Research Topics in Financial Mathematics (MA422).
- Elective coursework from the Department of Statistics: Probability and Mathematical Statistics I & II (PhD courses) (ST452/ST453).
- Compulsory coursework in stochastic processes, statistical risk management and computational methods for finance and insurance.

**Bocconi University**, Milan, Italy

MSc, Finance (110/110 *Cum Laude*), April 2020.

Major in Quantitative Finance and Asset Management.

- Department of Finance.
- Dissertation Topic: “*Low Frequency Financial Econometrics*”

Research thesis on the econometrics of frequency decompositions of discrete time series. Discussion and derivation of the low frequency Fourier synthesis of finite samples. Treatment of a time-scale decomposition of discrete time series. Derivation of the equally weighted periodogram (EWP) estimator of long-run variance for autocorrelation-robust tests. Spectral density-based estimation of long-run variance.

- Thesis advisor: Claudio Tebaldi, PhD.
- Relevant coursework in mathematical finance and applied stochastic processes, econometrics, financial statistics, time series analysis, applied machine learning, risk management, financial economics and corporate finance.

- GPA 29.43/30 (98%)

**Bocconi University**, Milan, Italy

BSc, Management, October 2017.

- Department of Management and Technology.
- Relevant coursework in pure and applied mathematics, statistics, introductory financial mathematics, accounting, economics (macro, micro and competition) and organizational theory.
- GPA 27.39/30 (91%)

RELEVANT  
WORKING  
EXPERIENCE

**Bocconi University**, Milan, Italy

**September, 2020 - February, 2021**

*MSc Teaching Assistant*

- 20135 - Theory of Finance 2020/2021.  
TA work includes: preparation of exam drafts and assignment questions, management of the online learning portal of the course.

COMPUTER  
SKILLS

Python scientific programming: numpy, scipy. Data visualization: matplotlib.  
Some experience with R, C++, Matlab and KNIME.  
Databases: some experience with SQL for MS Access.  
Proficient in typesetting using L<sup>A</sup>T<sub>E</sub>X.  
Spreadsheets and macros with MS Excel.

LANGUAGES  
(OTHER THAN  
ITALIAN)

English C1 (IELTS 8, R9 L8.5 W7 S7.5, October 2020)  
Spanish B1 (MSc curricular exam. 30/30)