ALESSANDRO SDINO

alessandro.sdino99@gmail.com ⋄ https://www.linkedin.com/in/alessandro-sdino/ ⋄ alessandrosdino.com

Education

Scuola Normale Superiore Pisa, Italy
PhD in Computational Methods and Mathematical Models for Sciences and Finance November 2026 - Current Affiliation

- *Incoming*

Università Bocconi Milan, Italy
Specialized Master Program in Quantitative Finance and Risk Management September 2024 - November 2025

- Final grade: **110 cum laude** (equivalent to 4.0/4.0 GPA)
- Relevant coursework: Derivatives, Fixed Income, Credit and Market Risk, Computational Methods, Machine Learning, Data Driven Investments, Time Series Econometrics, Financial Statement Analysis and Accounting, Mathematical Finance, Probability and Stochastic Calculus, Market Microstructure, Practice of FX Markets, Structured Products.
- Final project: internship report on algorithmic market making on Italian government bonds.
- **Class representative** in charge of communication with program directors, administrators and within the student body, finding common ground in academic environment. **Valedictorian**.

Ludwig-Maximillians-Universität Munich, Germany
MSc in Physics October 2021 - February 2024

- Final grade: **1.10**/1.00 (equivalent to 3.9/4.0 GPA)
- Relevant coursework: High Energy (QFT, Standard Model, GUT), Cosmology, GR, Advanced Statistical Physics.
- Thesis on: "Hamiltonian Formulation of Gauge Theories of the Higher-Dimensional Lorentz Group", Advisor Prof. V. Mukhanov.
- Worked as **teaching assistant** for two semesters.

Università Federico II Naples, Italy
Bachelor in Physics September 2018 - October 2021

- Final grade: **110 cum laude** (equivalent to 4.0/4.0 GPA)
- Relevant coursework: PDEs, Complex Calculus, Distributions, Functional Analysis, Differential Geometry, Dynamical Systems.
- Thesis on "Inonu-Wigner Contractions" of the Lorentz group towards the Galilei group and Caroll group.
- **Scholarship recipient**.

Publications and Research Interest

Market Segmentation and Equity Risk Premium in the Era of Passive Investing *Working Paper*
In Preparation

We analyse the effects of passive investments in the publicly traded equity market suggesting that fundamental measures of risk aversion like the ERP are systematically biased due to the market segmentation.

Optimization methods for entry and exit points in relative value trading *Student Association Paper*
13 April 2025

Co-developed article which applies relative value trading to currencies after purchasing power parity de-trending and analytical optimization of entry/exit points. Link

Systematic Credit Trading using Recurrent Neural Networks *Student Association Paper*
30 March 2025

Co-developed article which employs RNN to select the best performing corporate bonds. Link

Teaching Experience

Theoretical Mechanics LMU Munich
Teaching Assistant to Prof. Mukhanov February 2023 - June 2023

- Taught analytical mechanics (Lagrangian and Hamiltonian formalisms) to Bachelor's students, every other week. Hands-on approach on problem sets.

Advanced Quantum Mechanics LMU Munich
Teaching Assistant to Prof. Mukhanov October 2022 - February 2023

- Taught quantum mechanics (including advanced topics such as **path integrals and many-worlds interpretation**) to first-year Master's students, every week. My approach encompassed both some theoretical lectures to expand on the Professor recitations and the discussion of problem sets.

Professional Experience

Mediobanca Milan, Italy
Algo Trader Intern July 2025 - December 2025

- Automated **P&L** attribution system for Italian government bond trading desk using Python, integrating market data (in Parquet format), repo financing costs, drift-to-par calculations, and accrued interest adjustments across multiple bond types.
- Quantitatively analysed the **market microstructure**, combining **econometric methods and machine learning** (random forests) to identify bid-ask spread drivers and diagnose algorithmic market-making performance, directly refining trading strategy.
- Developed **latency measurement** framework **for high-frequency trading** system by matching generated quote sequences with market data, characterizing full distribution statistics to optimize simulation parameters for algorithmic strategy development.
- Analysed the **yield curve dynamics** and bid-ask spread behavior using regression models and machine learning techniques (including **calibrated random forest**), uncovering key drivers related to DV01, time-to-maturity, and other bond characteristics.
- Developed **relative value trading strategies** on the basis of the predicted G-spread and real G-spread dislocations, under constraints of local DV01 neutrality, considering optimal entry/exit points, and modelling transaction costs.

Languages and IT Skills

Languages: Italian (Native) | English (**Fluent**, C1 **IELTS 8.0**/9.0) | German (Intermediate B2.2) | Spanish | French
IT Skills: **Python** | R | Wolfram Mathematica | Microsoft Office | **Bloomberg** | Refinitiv (LSEG) | SPSS | LaTeX

Conferences and Workshops

- *Future of Finance* by Bloomberg (Milan, 12 November 2025) about the current and future economic situation in Italy.
- *The Quantitative Research Data Landscape* - Annual Seminar by Bloomberg (Milan, 18 September 2025) about research data and real time automation on the platform.
- *Tracking Global Macro Trends and Market Reaction*, by Bloomberg (Milan, 4 September 2025)
- *Academy Euronext Group* (hosted by Borsa Italiana, Palazzo Mezzanotte, Milan): Professors Quillico (Corporate Finance, 17.7), De Giorgio (Credit Markets and Debt Instruments, 22.7), Barillaro (Options and Derivatives, 24.7)
- *The Quantum Gravity Swampland and its consequences for the observable world* by the Arnold Sommerfeld School of (Ludwig-Maximillians-Universität) (9-13 October 2023)

Additional Information

- Bloomberg Market Concepts certificate earned in 2025.
- Coursera certificate for the course on ”Pricing Options with Mathematical Models” by Prof. Cvitanic of Caltech (April 2024).
- Former member of the student associations "Bocconi d’inchiostro" and "Bocconi Student Investment Club".
- Practiced Karate for 15+ years.