

Adele Ravagnani

(she/her)

PHD CANDIDATE · QUANTITATIVE FINANCE

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Born in Rivoli (Italy) on May 25, 1996

Education

Scuola Normale Superiore

PHD IN COMPUTATIONAL METHODS AND MATHEMATICAL MODELS FOR SCIENCES AND FINANCE

- GPA: 30/30 cum laude
- Supervisor: Prof. Fabrizio Lillo (Department of Mathematics, Università di Bologna & Scuola Normale Superiore)

Pisa, Italy

2020 - present

Collegio Carlo Alberto

MSC IN STATISTICS AND APPLIED MATHEMATICS (SENIOR ALLIEVI HONORS PROGRAM)

- Grade: *with distinction*

Turin, Italy

2018 - 2020

Politecnico di Torino

MSC IN PHYSICS OF COMPLEX SYSTEMS

- Grade: *110/110 cum laude*
- Thesis: *Phase transition in vehicular traffic: a Boltzmann-type kinetic approach*
- Supervisors: Prof. Andrea Tosin (Department of Mathematical Sciences G. L. Lagrange, Politecnico di Torino) and Prof. Mattia Zanella (Department of Mathematics, Università degli Studi di Pavia)

Turin, Italy

2018 - 2020

Sorbonne Université

ERASMUS+ PROGRAMME, M2 PHYSICS OF COMPLEX SYSTEMS

Paris, France

2019 - 2020

Collegio Carlo Alberto

DIPLOMA IN ECONOMICS (JUNIOR ALLIEVI HONORS PROGRAM)

Turin, Italy

2015 - 2018

Università degli Studi di Torino

BSC IN PHYSICS

- Grade: *110/110 cum laude*
- Thesis: *The two-dimensional Ising model: Vdovichenko's solution*
- Supervisor: Prof. Marco Billò (Department of Theoretical Physics, Università degli Studi di Torino)

Turin, Italy

2015 - 2018

Research experience

2021 - 2024 **Visiting PhD Student**, CONSOB - Commissione Nazionale per le Società e la Borsa (Rome, Italy)

2023 **Visiting PhD Student**, École Polytechnique (Palaiseau, France)

2021 **Visiting PhD Student**, A2A S.p.A. (remote)

2020 **Research Intern**, LINKS Foundation (Turin, Italy)

Publications

PEER-REVIEWED

(A1) Mazzarisi P., **Ravagnani A.**, Deriu P., Lillo F., Medda F., Russo A.. "A machine learning approach to support decision in insider trading detection," *EPJ Data Science*. 13, 66, 2024. doi.org/10.1140/epjds/s13688-024-00500-2

PREPRINTS

(P2) **Ravagnani A.**, Lillo F., Deriu P., Mazzarisi P., Medda F., Russo A.. "Dimensionality reduction techniques to support insider trading detection," *CONSOB Fintech Series No. 12*, 2024. Available at SSRN: ssrn.com/abstract=4742484

(P1) Deriu P., Lillo F., Mazzarisi P., Medda F., **Ravagnani A.**, Russo A.. "How Covid mobility restrictions modified the population of investors in Italian stock markets," *CONSOB Fintech Series No. 10*, 2022. Available at SSRN: ssrn.com/abstract=4176182

IN PREPARATION

- Ravagnani A.**, Lillo F.. "At the root of the concave meta orders' impact: a simulation-based approach of the Limit Order Book"

Presentations

- (VIX) **Invited seminar** at the Department of Mathematics for Economic, Financial and Actuarial Sciences - Catholic University of the Sacred Heart, November 2024, about (A1) and (P2)
- (VIII) **XLVIII Annual Meeting of the Italian Association for Mathematics Applied to Social and Economic Sciences**, University of Naples Federico II, September 2024, about (P2)
- (VII) **33rd European Conference on Operational Research**, Technical University of Denmark, June 2024, about (P2)
- (VI) **XXV Workshop on Quantitative Finance**, University of Bologna, April 2024, about (P2)
- (V) **International Fintech Research Conference**, Parthenope University of Naples, November 2023, about (A1)
- (IV) **XLVII Annual Meeting of the Italian Association for Mathematics Applied to Social and Economic Sciences**, University of Milano-Bicocca, September 2023, about (A1)
- (III) **SIAM Conference on Financial Mathematics and Engineering**, Philadelphia, June 2023, about (A1)
- (II) **XXIV Workshop on Quantitative Finance**, University of Cassino and Southern Lazio, April 2023, about (A1)
- (I) **3rd One-Day International Workshop on Machine Learning for Finance**, Ca' Foscari University of Venice, December 2021, about the project: Lam D. K., Ravagnani A., Tsaknaki I.-Y., Bormetti G., Lillo F.. "Short-term prediction of CO₂ emission futures price with limit order book data," 2021

Awards & Scholarships

- 2020 - present **PhD scholarship**, Italian Ministry of Education, University and Research (MIUR) & Scuola Normale Superiore
- 2023 **SIAM Travel Award**, Society for Industrial and Applied Mathematics
Erasmus+ Traineeship scholarship, EU & Scuola Normale Superiore
- 2015 - 2020 **Merit-based scholarship (tuition + living expenses)**, Collegio Carlo Alberto
- 2019 **Merit-based scholarship**, Fondazione Cecilia Gilardi
Erasmus+ scholarship, EU & Politecnico di Torino
- 2017 **Awarded participation in L'Astrofisica su Mediterranea - cultural exchange among university students of Mediterranean areas through Astrophysics**, National Institute for Astrophysics (INAF) & Progetto Mediterranea
- 2015 **Albo Nazionale delle Eccellenze – Diplomati con 100 e Lode A.S. 2014/2015 (honor roll of top students in Italian high schools)**, Italian Ministry of Education, University and Research (MIUR)
Merit-based scholarship, Università della Terza Età - sede di Collegno
Winner of Allievo dell'anno (high school contest for the best student of the year), Associazione ex allievi Liceo Marie Curie

Schools

- 2023 **Ethos + Tekhne: a new generation of AI researchers**, Scuola Normale Superiore
- 2022 **Machine Learning of Dynamic Processes and Time Series Analysis**, Scuola Normale Superiore
- 2022 **Machine Learning in Finance**, CEMFI
- 2018 **Introduction to Complex Systems**, Utrecht University

Teaching experience

- 2020 - 2021 **Teaching Assistant for the undergraduate course *Complements of Mathematics for Chemists and Biologists***, Scuola Normale Superiore

Additional work experience

- 2015 - 2019 **Technology and Environment Editor**, Neos Magazine (remote)
- 2015 **Photography Assistant**, Hoot Media Photography (Richmond, USA)
- 2014 **Customer Services Assistant**, Moto Hospitality (Exeter, UK)

Personal Skills

LANGUAGES

Italian	Native, C2
English	Advanced, C1
French	Elementary, A2

COMPUTER SKILLS

Python, LaTeX (daily use), MATLAB, Julia, C++, Stata, Java, Mathematica (past use)

Dichiarazione sostitutiva di certificazione e dell’atto di notorietà ai sensi degli artt. 46 e 47 e degli artt. 75 e 76 del DPR 445/2000 e successive modificazioni ed integrazioni.

La sottoscritta Ravagnani Adele, nata a Rivoli il 25 maggio 1996, sotto la propria responsabilità, ai sensi e per gli effetti degli articoli 46 e 47 del DPR 445/2000, consapevole di quanto prescritto dagli articoli 75 e 76 del medesimo DPR, rispettivamente sulla responsabilità penale prevista per chi rende false dichiarazioni e sulla decadenza dai benefici eventualmente conseguenti al provvedimento emanato sulla base di dichiarazioni non veritiere, dichiara che le informazioni riportate nel seguente curriculum vitae, corrispondono a verità.

Pisa, 21 novembre 2024

