DANIELE ANGELINI

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CURRENT POSITION

Research Fellow *November 2025 - Present*
MEMOTEF Department, Università La Sapienza

Contract Professor - Mathematical Methods for Finance *October - Present 2025*
Quantitative Finance and Data Science for Economics Master's course
Department of Economics, Università degli studi di Perugia
SSD: STAT/04-A

Teaching Assistant - Mathematics *Septmber - Present 2025*
Faculty of Economics, Università La Sapienza

EDUCATION & TRAINING

Sapienza University of Rome, MEMOTEF, Rome (Italy) *November 2022 - October 2025*
Ph.D. in Models for economics and finance
Curriculum: Mathematics for economic-financial applications
Supervisor: Prof. Sergio Bianchi

Escuela Internacional de Doctorado, University of Almería, Almería (Spain) *October 2025*
Visiting Research - Project research: Dynamic Heterogeneities in Complex Systems
Supervisor: Prof. Juan E. Trinidad Segovia

Collegio Internazionale Ca' Foscari, Venezia (Italy) *July - August 2025*
Doctoral Colloquium on Risk Analytics
Session 2: New challenges on long-run risks

Centre de Recerca Matemàtica, Barcelona (Spain) *July 2025*
5th Barcelona Summer School of Stochastic Analysis and Quantitative Finance
Courses: Rough volatility, signatures in stochastic finance, weather derivatives

New York University, Tandon School of Engineering, New York City (USA) *July 2025*
Advanced Risk of Portfolio Management, Quant Bootcamp

Ecole Supérieure d'Ingénieurs Léonard de Vinci, ESILV, Paris (France) *January - July 2024*
Visiting Research - Finance Group
Supervisor: Prof. Matthieu Garcin

Academia de Studii Economice din București, Bucarest (Romania) *May 2023*
Blinded Mobility FOReSIGHT Erasmus+ project: Artificial Intelligence

Sapienza University of Rome, Rome (Italy) *May 2019 - July 2022*
Master Degree in Theoretical Physics 109/110

Thesis: Financial market efficiency analysis with multifractional processes with random exponent and damped forced harmonic oscillator *20 July 2022*

ACADEMIC BACKGROUND

Teaching Assistant - Financial Mathematics *May - June 2025*
Faculty of Economics, Università La Sapienza

Teaching Assistant - Mathematics *May - June 2025*
Faculty of Economics, Università La Sapienza

Teaching Assistant - Black-Scholes formula & Fractional Analysis *December 2024*
Sapienza's School for Advanced Studies, SSAS

Teaching Assistant - Financial Mathematics *October - December 2024*
Faculty of Economics, Università La Sapienza

Teaching Assistant - Mathematics (Economics and Finance) *September - December 2024*
Faculty of Economics, Università La Sapienza

Teaching Assistant - Mathematics (Business sciences) *October - December 2023*
Faculty of Economics, Università La Sapienza

Teaching Assistant - Mathematics (Economics and Finance) *October - December 2023*
Faculty of Economics, Università La Sapienza

Teaching Assistant - Calculus I *February - December 2023*
Department of Electronic Engineering, Università La Sapienza

Teaching Assistant - Calculus II *February - December 2023*
Department of Electronic Engineering, Università La Sapienza

PRIZES

2025 - *Best Paper Award* in the 53th EBES Conference (Madrid)
2025 - Finalist for *Best Junior Paper*, AMASES Conference
2025 - DISF Award, Pontifical University of the Holy Cross
2023 - *Best Paper Award* in the 45th EBES Conference (Budapest)

SCOLARSHIPS & FUNDINGS

2025 - Awarded participation in DoCRA, Ca' Foscari University of Venice
2025 - Awarded partecipation in ARPM Quant Bootcamp, New York University
2025 - Awarded partecipation at H2CU College Italia (New York)
2024 - Funding for the *Starting Research* call.
2023 - Funding for the *Medium project* call. Group leader: S. Bianchi.
2023 - Funding for the *Starting Research* call.
2023 - FOReSIGHT scolarship - Erasmus+ project (Bucarest)
2022 - Scolarship Sapienza - Dottorato di ricerca

MAIN SCIENTIFIC PUBLICATIONS

Refereed Journal Articles

1. Angelini, D., & Bianchi, S. (2025). Kolmogorov–Smirnov estimation of self-similarity in long-range dependent fractional processes. Physica D: Nonlinear Phenomena, 476, 134697.
2. Bianchi, S., Pianese, A., Frezza, M., & Angelini, D. (2025). A new tool to detect financial data scaling. Frontiers in Applied Mathematics and Statistics, 11, 1527750.
3. Bianchi, S., Angelini, D., Pianese, A., & Frezza, M. (2023). Rough volatility via the Lamperti transform. Communications in Nonlinear Science and Numerical Simulation, 127, 107582.
4. Angelini, D., & Bianchi, S. (2023). Nonlinear biases in the roughness of a Fractional Stochastic Regularity Model. Chaos, Solitons & Fractals, 172, 113550.

Refereed Chapter Books

5. Bianchi, S., Angelini, D., Frezza, M., Palazzo, A. M., & Pianese, A. (2024). Fair Volatility in the Fractional Stochastic Regularity Model. In Mathematical and Statistical Methods for Actuarial Sciences and Finance (pp. 61-66). Cham: Springer Nature Switzerland.
6. Bianchi, S., & Angelini, D. (2025). Roughness in VIX index and in Realized Volatility: Rolling Window Estimation by Randomized Kolmogorov-Smirnov Distribution. In New Perspectives in Mathematical and Statistical Methods for Actuarial Sciences and Finance (pp. 1–13). Cham: Springer Nature Switzerland.

Refereed Proceedings

7. Angelini D., & Garcin M. (2025). Market information of the Fractional Stochastic Regularity Model. XLIX AMASES 2025 - Book of Abstracts, pp. 103.
8. Angelini D., & Bianchi S. (2025). Kolmogorov–Smirnov estimation of self–similarity in long–range dependent fractional processes. 5th Barcelona Summer School of Stochastic Analysis and Quantitative Finance - Contributed talks.
9. Angelini D. (2025). Integrating the implied regularity into implied volatility models: A study on free arbitrage model. 12th General AMaMeF Conference Booklet of Abstracts (p.4).
10. Angelini D. (2025). Kolmogorov-Smirnov Estimation of Self-Similarity in Long-Range Dependent Fractional Processes. Fractals Conference, contributed talks (p.1).
11. Di Sciorio, F., & Angelini, D. (2025). Integrating the implied regularity into implied volatility models: A study on free arbitrage model. Published: 13 June 2025 by MDPI in The 1st International Online Conference on Risk and Financial Management.
12. Bianchi S., Angelini D., Frezza M., & Pianese A. (2024). Kolmogorov-Smirnov Distribution and Self-Similarity of fractional Brownian motion. Book of abstract SMSA 2024 (pp. 17-18).

Paper under review

13. Bianchi S., & Angelini, D. (2025) Fair Volatility: A Framework for Reconceptualizing Financial Risk. Arxiv preprint arXiv:2509.18837.
14. Bianchi S., & Angelini, D. (2025) Rougheness Analysis of Realized Volatility and Volatility Index through Randomized Kolmogorov-Smirnov Distribution. ArXiv preprint arXiv:2509.20015.
15. Bianchi S., Angelini, D., Frezza, M., & Pianese, A. (2025). From fair price to fair volatility: Towards an Efficiency-Consistent definition of financial risk. ArXiv preprint arXiv:2508.11649.
16. Angelini, D., & Di Sciorio, F. (2025). Integrating the implied regularity into implied volatility models: A study on free arbitrage model. ArXiv preprint arXiv:2502.07518.

17. Angelini, D., & Garcin, M. (2024). Market information of the fractional stochastic regularity model. ArXiv preprint arXiv:2409.07159.

INVITED SEMINARS

1. Universidad de Almería, 29 September - 3 October, 2025.
   Title: "Rough Volatility in delampertized processes via the Kolmogorov-Smirnov test".
2. De Vinci Research Center - Axis Sèminaire Axe 3, La Dèfense, Paris. 29 February 2024.
   Title: "Market In-Efficiency".
3. Quantitative Finance Workshop at ESILV University, La Dèfense, Paris. 30 January 2024.
   Title: "A Fractional Stochastic Regularity Model and Rough Volatility via the Lamperti transform".

WORKSHOPS AND SCIENTIFIC EVENTS ORGANIZED

1. PhD Progress Workshop 2025, MEMOTEF Department, PhD in Applied Mathematics and Statistics, October 13, 2025.
   Role: **Organizer**.

INTERNATIONAL CONFERENCES

1. 53rd EBES Conference - Budapest at the Mathias Corvinus collegium, October 16-18, 2025.
   Title: "Fair Volatility: A Framework for Reconceptualizing Financial Risk"
2. AMASES XLIX annual conference. University of Florence, Florence, 11-13 September, 2025. Plenary Session: Best Junior Paper.
   Title: "Market information of the Fractional Stochastic Regularity Model" **Speaker**
3. Doctoral Colloquium on Risk Analytics - Session 2, International College Ca' Foscari, Venice, August 6, 2025.
   Title: "Self-similarity estimation using a Generalized Kolmogorov–Smirnov distribution" **Speaker**
4. Doctoral Colloquium on Risk Analytics - Session 2, International College Ca' Foscari, Venice, July 31, 2025.
   Title: "Generalized Kolmogorov–Smirnov distribution via a pseudo-fractional Brownian bridge" **Speaker**
5. 5th Barcelona summer school of Stochastic Analysis and Quantitative Finance - Centre de Recerca Matemàtica, July 21-25, 2025.
   Title: "Kolmogorov–Smirnov estimation of self–similarity in long–range dependent fractional processes" **Speaker**
6. New perspectives in Mathematical and Statistical Methods for Actuarial Sciences and Finance, Waiting for MAF 2025 - University of Salerno, Salerno June 27-28, 2025. Poster session.
   Title: "Roughness in VIX index and in Realized Volatility: Rolling Window Estimation by Randomized Kolmogorov-Smirnov Distribution" **Speaker**
7. 12th General AMaMeF Conference - University of Verona, departiment of Economics, June 23-27, 2025.
   Title: "Integrating the implied regularity into implied volatility models: A study on free arbitrage model" **Speaker**
8. Cornell Conference on Analysis, Probability, and Mathematical Physics on Fractals (Fractals 8) - Cornell University, departiment of Mathematics, Ithaca (New York), June 15-20, 2025.
   Title: "Kolmogorov-Smirnov Estimation of Self-Similarity in Long-Range Dependent Fractional Processes" **Speaker**

9. The 1st International Online Conference on Risk and Financial Management (IOCRF 2025), session Financial Innovations and Technology. SciForum, 17-18 June 2025.
   Title: "Integrating the implied regularity into implied volatility models: A study on free arbitrage model".
10. 11th International Conference Mathematical and Statistical Methods for Actuarial sciences and Finance (MAF 2024) - University of Le Havre Normandie, Le Havre Cedex, April 4-6, 2024.
    Title: "Fair volatility in the Fractional Stochastic Regularity model"
11. 15th Workshop on Stochastic Models, Statistics and Their Applications (SMSA 2024) - TU Delft, Netherlands, March 13-15, 2024.
    Title: "Kolmogorov-Smirnov Distribution and Self-Similarity of fractional Brownian motion"
12. 45th EBES Conference - Budapest at the Mathias Corvinus collegium, October 11-13, 2023.
    Title: "Hurst-Hölder Regularity and Fair Volatility"
13. 5th edition Quantitative Finance & Financial Econometrics 2023 at the Aix-Marseille School of Economics (AMSE), June 8-9, 2023.
    Title: "A Fractional Stochastic Regularity Model" **Speaker**

OTHER CONFERENCES

14. PhD Progress Workshop 2025, October 13, 2025.
    Title: "A Kolmogorov-Smirnov Approach to Self-Similarity in Dependent Processes."
15. XV edition of "Giornate della Ricerca MEMOTEF", 29-30 May 2025, Rome.
    Title: "Market information of the fractional stochastic regularity model".
16. XV Workshop SISRI - "Nulla di nuovo sotto il sole? Paradigmi e innovazione nelle scienze", 24-25 May 2025, Rome.
    Title: "Time-varying self-similarity to detect creativity in non-sentient systems".
17. XIII edition of "Giornate della Ricerca MEMOTEF", 27-28 June 2023, Rome.
    Title: "Fractional Stochastic Regularity Model".

SCHOLARLY REVIEWS

1. “Physica A: Statistical Mechanics and its Applications”: 1;
2. “IEEE Transactions on Biomedical Engineering”: 3.

PH.D. COURSES ATTENDED

1. Statistics, prof. M.Geraci, Passed
2. Probability, prof. B. Liseo, Passed
3. Mathematics, prof. A. Palestini, Passed
4. Econometrics, prof. V. Patella, Passed
5. Multivariate Statistics, N. Deliu, Passed
6. Computational tools for statistics, prof. A. Arcagni, Passed
7. Risk Measure, prof. V. Bignozzi, Passed
8. Bayesian Statistics, prof. B. Liseo, Passed
9. Computational tools for Finance, prof. I. Oliva, 30L
10. Calculus of Variations and Optimal Control, prof. S. Patrì, Passed
11. Quantile Regression, prof. L. Merlo, Passed
12. Complex Networks, prof. F. Ricca, Passed
13. Credit Risk, prof. C. Ceci, Passed
14. Machine Learning for Finance, G. Piscopo, Passed
15. Calcolo Stocastico, prof. G. Di Gesù, Passed
16. Dynamic Modeling in Finance, prof. A. Dal Forno, Passed

COMPUTER SKILLS AND LANGUAGE CERTIFICATES

Programming languages: Python, C, C++, R, MatLab, JAVA, JavaScript and Visual Basic
Machine Learning: Pandas, Numpy and Scikit-learn
Web programming languages: HTML and CSS
Database management: PostgreSQL, MongoDB, MS Access
Software & Tools: MS Office, Latex, RStudio, GNUplot
Language certificates: DELF B1

NON ACADEMIC EXPERIENCE

Math & Computer Science Teacher *February 2022 - May 2022*
Co.co.co. in Centro Studi Manzoni srls

Analyst Programmer *February 2020 - September 2020*
Internship in Nergal Consulting srl
Research and Innovation in “Smart Traffic Management and Planning”
My works in this projects were in two subprojects:
https://github.com/Daniele-Angelini/STMP-Maps
https://github.com/Daniele-Angelini/STMP-Planning