Alireza Moslemihaghighi

Personal Information

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Qualifications

PhD in Finance *August 2024- 2028 (Expected)*
PhD in Economics and Finance, Bocconi University, Milan, Italy

MSc in Financial Economics *September 2021- February 2024*
MSc in Theoretical Economics, Sharif University of Technology, Tehran, Iran

BSc in Electrical Engineering *September 2015- February 2020*
BSc in Electrical Engineering, Sharif University of Technology, Tehran, Iran

Awards & Honors

- **PhD Merit Fellowship (5 Years)**, Bocconi University, 2024
- **Best Student Award**, Economics Department, Sharif University of Technology, 2023
- **Ranked 9th (Economics) and 16th (Computer Science)** in National MSc Entrance Exams, and **40th in BSc Entrance Exam**, Iran, 2021 & 2015
- **Merit Scholarship (4 Years)**, National Elites Foundation, Iran, 2016
- **Member**, National Elites Foundation, Iran, 2016

Research Interests

Asset Pricing – MacroFinance – AI in Finance – Quantitative Finance

Publications

- **A Flexible Approach to Interference Cancellation in Distributed Sensor Networks**, *IEEE Communications Letters*, 2021

Research Contributions

- **Academic Referee**, *Economics Letters* (Elsevier)
- **Solutions Manual for** *High-Dimensional Statistics : A Non-Asymptotic Viewpoint* by Martin J. Wainwright (Unpublished)

Working Papers & Projects

- **International beliefs network and currencies**, with M. Croce, R. Colacito, F. Gerding.
  We construct a multicountry model in which bilateral trade imbalances must be financed through international intermediaries who are subject to trading frictions. Multiple intermediaries can intermediate the same country-pair imbalance and they are allowed to differ in their beliefs about the future external debt capacity of each country. By no arbitrage, currency adjustments are determined by the entire network of intermediary expectations, with more weight given to intermediaries featuring higher local centrality. We use this model to test novel empirical predictions linking exchange rates and current account imbalances to survey data from Consens Economics across G-10 currencies and China from 1990 to 2023.
- **Artificial intelligence and the transformation of skilled work**, with M. Croce, S. Raymond.
  We develop a macroeconomic model to study how artificial intelligence reshapes the allocation and accumulation of skilled labor across junior and senior roles. The framework emphasizes that junior work contributes not only to current production, but also to the formation of future senior expertise. We use the model to examine how AI adoption affects human capital, career progression, and the composition of skilled employment, and to evaluate policies that align private incentives with the broader social value of training, data creation, and workforce development.

Academic Experience

Research Assistant Bocconi University *Dec 2024- Present*
Research Assistant to Prof. Ottaviano, Prof. Goedker, and at the FinTech Lab, conducting research on international trade, financial networks and intermediary behavior.

Research Assistant TEIAS, Tehran Institute for Advanced Studies *Jul 2019-Aug 2021*
Topic : High-Dimensional Statistics

Teaching Assistant Sharif University of Technology *Sep 2017-Feb 2018*
Analog Circuits, Numerical Analysis, Electrical Engineering Principles

Teaching Assistant Bocconi University *2025-2026*
Mathematical Modeling for Finance, Microeconomics I, Principles of Finance, Behavioral and Experimental Finance

Language Skills

English : Advanced | Persian : Native

Technical Skills

Programming : Python (Excellent), Julia (Good), MATLAB (Excellent), C/C++ (Intermediate)

Scientific & Tools : LaTeX , Git, Microsoft Office

Operating Systems : Windows, Linux

Selected Courses

Finance : Asset Pricing, Financial Engineering, Continuous-Time Finance, Financial Machine Learning, Corporate Finance, Market Microstructure

Econometrics : Microeconometrics, Time-Series Econometrics, Applied Econometrics

Statistics & ML : High-Dimensional Probability, Causal Inference, Theory of Machine Learning, Stochastic Processes, Natural Language Processing, Statistical Mechanics and Methods for Complex Systems, Computer Vision

Mathematics & Computation : Combinatorial Optimization, Matroid Theory, Computational Intelligence, Computational Neuroscience

Economics : International Trade, Theory of Choice, Game Theory, Mechanism Design