MOHAMMAD POURMOHAMMADI

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EDUCATION

University of Geneva (UNIGE) 2021 - Present
PhD in Finance - Joint Program with the Swiss Finance Institute Geneva, Switzerland

Bocconi University 2019 - 2021
MSc in Finance - (Top of the class 2021) Milan, Italy

Sharif University of Technology (SUT) 2015 - 2019
Bachelor of Applied Mathematics - (Top of the class 2019) Tehran, Iran

WORKING PAPERS

"Universal Portfolio Shrinkage" [SSRN]
(with Bryan Kelly, Semyon Malamud, and Fabio Trojani)

"Non-linear Shrinkage for Regressions: Goldilocks Meets Heisenberg"

"Complexity for Factor Mimicking Portfolios"

"Universal Kernel Shrinkage"
(with Bryan Kelly, Semyon Malamud, and Fabio Trojani)

"Impact of FOMC Cycle on Market Uncertainty: Evidence From Interest Rate Derivatives" [SSRN]
(with Indradeap Chatterjee, Marina Di Giacinto and Claudio Tebaldi)

"Horizon Based Pricing of Financial and Economic Shocks"
(with Claudio Tebaldi)

AWARDS AND HONORS

Swiss Finance Institute Leman PhD student fellowship (30k CHF) 2021
Merit Scholarship Bocconi (30k Eur) 2019
Silver medal Iranian National Mathematics Olympiad 2014

PROFESSIONAL ACTIVITIES

University of Geneva 2022-2023
- Organizer of the Brown Bag Seminar Series Geneva, Switzerland

Hercle Financial 2020-2022
- Academic Consultant for Market Making in Crypto Markets Milan, Italy

Innocenzo Gasparini Institute for Economic Research (IGIER) 2020-2021
- Visiting Research Student focusing on Frequency risk in Financial Markets Milan, Italy

RiskLab Middle East 2018-2019
- Research Assistant focusing on Stochastic Portfolio Theory Tehran, Iran

PRESENTATIONS

European Finance Association (Discussant), SFI research days (Discussant),
Geneva Brown Bag, EPFL SFI workshop 2023

TEACHING

Financial Econometrics, MSc. in Wealth Management, UNIGE 2023
Introduction to Python, MSc. in Wealth Management, UNIGE 2023
Financial Institutions, SFI PhD course 2022
Models and Empirical Methods for Asset Pricing, MSc. in Wealth Management, UNIGE 2022
Probability and Statistics, BSc. in Electrical Engineering, SUT 2018
Linear Algebra, BSc. in Electrical Engineering, SUT 2018

SUMMER SCHOOLS AND ADVANCED COURSES

Advanced Econometrics, University of St. Gallen, UNSG 2023
Deep Learning for Solving and Estimating Dynamic Models, University of Lausanne, UNIL 2023
Effective High-Performance Computing & Data Analytics, CSCS-USI Summer University 2022
Tools and Concepts for the Modern Economist, University of Lugano, USI 2022
Human Decisions, under Uncertainty, University of Geneva, UNIGE 2022

SKILLS & INTERESTS

Software: Python (expert), HPC (expert), MATLAB (advanced), R (advanced), Java (advanced)
Mathematics: Random Matrix Theory (expert), Linear Algebra (expert), Analysis (advanced), Stochastic Calculus (advanced), Optimization (advanced)
Languages: English (native), Farsi (mother tongue)

SOFTWARE DEVELOPMENT

universal_portfolio_shrinkage
A package for non-linear shrinkage of portfolios with OOS Sharpe Ratios objective.

universal_kernel_shrinkage
A package for non-linear shrinkage of kernel regressions with OOS MSE objective.

universal_regression_shrinkage
A package for non-linear shrinkage of Regression problems. It features four objectives: Covariance Shrinkage, Estimation Error Shrinkage, OOS MSE Shrinkage, and OOS Market Timing Shrinkage.

big_data_lwnls
Big data implementation of Ledoit and Wolf 2020 for calculating portfolio weights.

REFERENCES

Prof. Bryan Kelly
Professor of Finance
Yale University
bryan.kelly@yale.edu

Prof. Claudio Tebaldi
Associate Professor of Finance
Bocconi University
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Prof. Semyon Malamud
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