Hadi Sehatpour

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Research Interest

My research interests lie in the application of AI-driven methods and statistical machine learning to challenges in finance, with a particular emphasis on sustainable and energy finance. I am especially interested in developing predictive models and data-driven frameworks for portfolio optimisation, time series analysis, and market structure exploration. I also have a growing interest in blockchain technologies and am partly focused on leveraging these novel tools to enhance transparency, efficiency, and accountability in sustainable finance. By integrating econometrics, mathematical modeling, and advanced machine learning techniques, my work aims to support responsible investment strategies that balance financial performance with long-term environmental goals.

EDUCATION

2022- present

PhD Candidate in Finance, University of Technology Sydney (UTS)

Thesis: Green Bond Spread Dynamics Through the Lens of Machine Learning **Supervisors:**

- Dr. Christina Nikitopoulos Sklibosios
- Dr. Kylie-Anne Richards
- Professor Dr. Gareth W. Peters
- Dr. Marta Campi

ABSTRACT: In my PhD thesis, we present a novel data-driven approach to calculate green bond spreads by incorporating information from their term structure. We then analyse the spread dynamics of green bonds using advanced quantitative and statistical machine learning methods. Through functional regression, we capture the impact of economic, environmental, and market factors over time. Additionally, using unsupervised clustering structured screening process, we identify bond characteristics that make them potentially profitable assets. This data-driven approach combines predictive modeling and clustering techniques to provide valuable insights for optimising sustainable portfolios.

2012 - 2015 Master of Industrial Management – Operations Research, University of Tehran

- University of Tehran (top 3 universities in Iran)
- Thesis: Evaluation of Conventional and renewable Fuels for Light-Duty Vehicles Using Multi-Criteria Decision Making (MCDM) Techniques (grade **HD**)

• Ranked in the top 1% of the Master's degree participants in the national entrance exam.

2005 - 2010 Bachelor of Mechanical Engineering – Fluids Mechanics, Shiraz University

- University of Shiraz (top 5 universities in Iran)
- Thesis: Investigating and Gathering Codes Related to Urban Water Supply (grade HD)
- Ranked in the **top 10%** of the Bachelor's degree participants in the national entrance exam.

AREA OF INTEREST

- AI-driven Portfolio Optimisation
- Green Bonds and Sustainable Finance
- Statistical Machine Learning
- Algorithmic and High-Frequency Trading
- Time Series Econometrics and Forecasting
- Mathematical Modeling and Energy Economics
- Energy Market and Forecasting
- FinTech and Blockchain

PUBLICATIONS

Journal Papers

- 1. Sehatpour, M. H., Abedin, B., & Kazemi, A. (2022). Talent management in government organizations: Identification of challenges and ranking the solutions to address them. International Journal of Productivity and Performance Management, 71(4), 1444-1468.
- 2. E Basirian, MH Sehatpour, "Study of factors affecting the liquidity of futures contracts, regarding order-based criteria", Journal of Contemporary Issues in Business and Government, 2021. 27, 2444–2454
- 3. Sehatpour, M. H., & Kazemi, A. (2018). Sustainable fuel portfolio optimization: Integrated fuzzy multi-objective programming and multi-criteria decision making. *Journal of Cleaner Production*, 176, 304-319.
- 4. Sehatpour, M. H., Kazemi, A., & Sehatpour, H. E. (2017). Evaluation of alternative fuels for light-duty vehicles in Iran using a multi-criteria approach. *Renewable and Sustainable Energy Reviews*, 72, 295-310.

Research Papers Under Review

1. Rajabani, N., Kazemi, A., Saghafi, F., **Sehatpour, M. H.**, Shakouri G., H. (2025). "What Drives Energy Consumption Behavior in the Residential Sector? An Integrated Approach of Value-focused Thinking and Feature Selection". (Under review in Building Research and Information)

Working Papers

- 2. Sehatpour, M. H., Campi, M., Sklibosios Nikitopoulos, C., Peters, G., & Richards, K. A. (2024). *Anatomy of Municipal Green Bond Yield Spreads*. Available at SSRN.
- 3. **Sehatpour**, **M. H**, Nikitopoulos, C.S., Peters, G.W. and Richards, K.A. Campi, M., (2025). "Determinant of green bonds yield spreads: An unsupervised machine learning approach". Work in progress.

Services

- 2025 Reviewer, Journal of Accounting Literature
- 2025 Discussant, MFS Conference
- 2024 Discussant, AFBC Conference
- 2019 Reviewer, Applied Energy

CONFERENCES

- M.H. Sehatpour, Attribute Associations of Municipal Green Bond Yield Spreads, 31st Annual Conference of the Multinational Finance Society, June 29 – July 2, 2025, Chania, Crete, Greece
- 2. M.H. Sehatpour, Anatomy of Municipal Green Bond Yield Spreads Sydney Banking and Financial Stability Conference 2024, Sydney, Australia.
- 3. M.H. Sehatpour, Anatomy of Municipal Green Bond Yield Spreads 37th Australasian Finance and Banking Conference (AFBC) 2024, Sydney, Australia.
- 4. M.H. Sehatpour, Anatomy of Municipal Green Bond Yield Spreads Quantitative Methods in Finance (QMF) Conference 2024, Sydney, Australia.

RESEARCH ASSISTANT EXPERIENCE

2025 Next-Gen AI Platform to Enable Smart Home Electrification,

Role: Model developing, coding and data gathering for electricity price forecasting

INDUSTRY WORK EXPERIENCE

2022- present **Portfolio Management Consultant** at Tadbir Entekhab Farda Investment (Remote)

2019-2022 **Executive Director of South-Region Branch** (*Fars Province*) at Saba Jahad Brokerage (Civil Servants Pension Fund Brokerage)

2015-2022 **Head of Investment Analysis, Research and Development Department** at Saba Jahad Brokerage (Civil Servants Pension Fund Brokerage)

2014 – 2021 **Stock market Analyst and Consultant** at Aban Brokerage (Remote)

2014-2015 Stock market Analyst at Mehr Eghtesad Brokerage

2012-2014 Futures and options contracts trader and analyst at Aban Brokerage

SCHOLARSHIPS, OFFERS, AWARDS AND GRANTS

Current Scholarship

• Nov 2022 - May 2026 UTS International Research Scholarship and UTS President's Scholarship.

Degree Program: C02048 Doctor of Philosophy

Scholarship Components:

- ✓ Tuition Fees Offset
- ✓ Stipend (living allowance) (AUD\$37000 at the 2025 rate *p.a.*)

Awards

- **2019 Best Article Award**, 3rd Research & Education Festival, Faculty of Management, University of Tehran (Sehatpour et al. 2017. Evaluation of alternative fuels for light-duty vehicles in Iran using a multi-criteria approach. *Renewable and Sustainable Energy Reviews*, 72, 295-310). (**500** *AUD*)
- **2018 Best Master's Thesis Award**, 2nd Research & Education Festival, Faculty of Management, University of Tehran. (**500** *AUD*).

Grants

• 2014 - 2015 - research Grant 'Alternative Fuels for light-duty vehicles' provided by Iranian Fuel Conservation Company (IFCO) in 2015 (5000 AUD)

TEACHING EXPERIENCE

- 2025 Tutor, 25410 Applied Financial Decision Making, UTS business school.
- 2025 Tutor, 25624 Financial Metrics for Decision Making, UTS business school.
- 2024 present **Tutor**, 25620 Derivetives Securities, finance discipline, UTS business school.
- 2024 present **Tutor**, 25300 Fundamentals of Business Finance, finance discipline, UTS business school.
- 2020-2021 **Training Instructor**, Fundamentals of Capital Market, Civil Servants Pension Fund.
- 2020-2021 **Training Instructor**, Investment Strategies in derivatives markets, Civil Servants Pension Fund.
- 2019-2021 **Training Instructor**, Technical and Fundamental Analysis, Civil Servants Pension Fund.

PROFESSIONAL CERTIFICATES

- 2024 Financial Investment Adviser, VETASSESS, Australia
- 2012 Basic Principals of Capital Market
- 2012 Derivatives, Securities, Commodity and Energy Market Trading

PROFESSIONAL RESEARCH ACTIVITIES

• 2021-2022 Iran's Securities & Exchange Brokers Association, Research Project: "Comparative Study of Clearing, Settlement and Depository Issues in Financial Markets."

In this research project, the details of clearing, settlement, and depository processes will be studied, and technical suggestions and the possibility of entering private companies in this field will be communicated to SEO.

- 2018 Iran's Securities & Exchange Brokers Association, Research Project: "Comparative Study of service-level agreements (SLA) in Financial Services Infrastructures."

 In this research project, the details of the contracts of data providers with brokerage companies were studied and technical suggestions were communicated to SEO.
- 2018 Iran's Securities & Exchange Brokers Association, Research Project: "Comparative Study of Brokerage Firm Ranking Criteria."
 In this research project, the ranking criteria of brokerages in different categories were

examined and the final criteria were communicated to SEO to design a brokerage ranking system to be presented to related organizations and end customers.

• 2018 Iran's Securities & Exchange Brokers Association, Research Project: "Comparative Study of Market Manipulation."

In this research project, criteria of market manipulation were studied and designed according to local constraints and international examples and communicated to SEO

SOFTWARE SKILLS

- Python (Advanced)
- R & RStudio (Advanced)
- Bash (Intermediate)
- SQL (Intermediate)
- Microsoft Office and La*TeX* (Advanced)
- Lingo and Lindo (Optomisation coding) (Advanced)

REFERENCES

Christina Nikitopoulos Sklibosios

Associate Professor, University of Technology Sydney, Finance Discipline Group, UTS Business School

Email: Christina.Nikitopoulos@uts.edu.au

Gareth W. Peters

Professor, University of California Santa Barbara, Department of Statistics and Applied Probability, Santa Barbara CA Email: garethpeters@ucsb.edu

Kylie-Anne Richards

Senior lecturer, University of Technology Sydney, Finance Discipline Group, UTS Business School Email: Kylie-Anne.Richards@uts.edu.au

Marta Campi

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