Ali Habibnia

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Current appointment

2018- *Assistant Professor of Big Data Economics, Department of Economics, Virginia Tech, USA*
2018- *Assistant Professor, Computational Modeling & Data Analytics, College of Science, Virginia Tech, USA*

Past appointments

2017-2019 Director, *Dataism Limited, UK*
2017 Advisor for Macro Planning, *Ministry of Economic Affairs and Finance, Iran*
2012-2017 Research Fellow, *LSE Systemic Risk Centre, UK*
2012-2017 Research Fellow, *LSE Time Series and Statistical Learning Group, UK*
2016-2018 Scientific Chair of Big Data Economics, *Tehran Institute of Advanced Studies, Iran*
2013 Quantitative Research Analyst, *Pantheon Ventures, UK*
2008-2011 Head of Equity market & Research Department, *Rahbord Investment Co, Iran*
2009-2010 Derivatives Trading Strategist, *Wise Enterprises FZCO, UAE*
2009-2010 Stock Market Analyst Intern, *Nikan Capital, Iran*

Areas of research interest

Big Data Econometrics • Deep Learning • Quantum Machine learning • Forecasting
Nonlinear Time series • Computational Finance • Network Analysis, Information Theory

Education

2017 Ph.D. in Statistics, London School of Economics

- Thesis title: Essays in High-dimensional Nonlinear Time Series Analysis
- Committee: Matteo Barigozzi, Angelos Dassios, Esfandiar Maasoumi, Qiwei Yao

2012 M.S. in Quantitative Finance, Cass Business School

- Thesis title: Volatility Forecasting with Genetic Algorithm - Support Vector Regression

2010 M.S. in Economics, University of Tehran

- Thesis title: Financial Forecasting: Neuro-Fuzzy models Vs Smooth Transition Regressions

2007 B.S. in Economics, University of Tehran

Grants, honors & awards

2015 Highly commended research prize, LSE Research Festival
2014 Doctoral Fellowship, ESRC & LSE Systemic Risk Centre
2012 PhD Scholarship, LSE Department of Statistics
2010 Recognized as a Scientific Elite, Iran National Elites Foundation
2007 Recognized as an Exceptional Talent, Iran National Organization of Exceptional Talents

Publications

Working Papers

"Forecasting in Big Data Environments: an Adaptable and Automated Shrinkage Estimation of Neural Networks (AAShNet)" *with Esfandiar Maasoumi.*

"Nonlinear Forecasting Using a Large Number of Predictors: A Deep Learning Approach",

- *35th International Symposium on Forecasting (ISF)*, Riverside, USA, 2015.
- *8th International Conference on Computational and Financial Econometrics*, Pisa, Italy, 2014.
- *Nonlinear time series analysis thresholding and beyond: In honour of Howell Tong*, LSE, 2014.
- *37th Conference in Probability and Statistics*, Nottingham, UK, 2014.

"Econometric Modeling of Systemic Risk: Going Beyond Pairwise Comparison and Allowing for Nonlinearity", *with J. Etesami & N. Kiyavash*

- *SRC Discussion Paper No 66*, March 2017.

"Past, Present and Future of Testing for Nonlinearity in Time Series"

Teaching

2020- ECON 4984: Quantitative Economics with Python, *Virginia Tech*
2019- ECON 5984: Adv Big Data Economics, *Virginia Tech*
2019- ECON 4984: Big Data Economics, *Virginia Tech*
2019- C7: Machine Learning & Data Classifiers, module for program In Business Analytics,*Virginia Tech*
2018 Linear Algebra & Probability for Machine Learning in Python, *Tehran Stock Exchange*
2018 Time Series Forecasting with Python, *Tehran Stock Exchange*
2017 Algorithmic Trading in Python, *Tehran Stock Exchange*
2017 Deep Learning & Machine Learning Applied to Trading, *Tehran Stock Exchange*
2014/15 Factor Models in Time Series with MATLAB, *Methods Summer Programme, LSE*
2014/15 Time Series and Forecasting (ST304), Applied Regression with R (ST211), *LSE*
2015 Econometrics of Monetary Policy (postgraduate), *Khatam University*
2012/13 Elementary Statistical Theory (ST102), Quantitative Methods (ST107), *LSE*
2013 Global Business Environment (MBA Course), *LBS*
2012/15 Machine Learning Applied to Finance (graduate), *University of Tehran*
2008-2016 Technical Analysis, *More than 20 times in various universities and financial institutions*
2008-2010 Econometrics (graduate), Macroeconomics I & II (undergradute), *University of Tehran.*

Invited talks

2020 Machine Learning for Econometricians, *North Carolina State University, Dept. of Economics*
2019 Adaptable and Automated Shrinkage Estimation of Neural Networks (AAShNet), *Stanford Institute for Theoretical Economics – Asset Pricing Theory and Computation Summer Workshop*
2019 Big Data and Machine Learning for Policymaking, *International Monetary Fund, SPR Department*
2018 Introduction and Overview of Applications of Artificial Intelligence and Machine Learning in Scientific Research, *Virginia Tech*
2018 Financial Time Series Analysis: Deep Learning Approach, *MathWorks Computational Finance*
2018 Text Mining & Sentiment Analysis in Trading, *Tehran Stock Exchange TSE*
2016 Machine Learning for Economic and Financial Forecasting, *The Technical Analyst*
2013 Foreign Exchange Rate Risk Measurement and Management, *IDB*
2012 Time Series Forecasting using Wavelet Kernel Support Vector Machine, *LSE*

Referee

Journal of Business and Economic Statistics, Econometrics, International Journal of Forecasting, Proceedings of the National Academy of Sciences (PNAS), Risks

Supervision

Brian D'ORAZIO (PhD co-advisor), Economics, Virginia Tech
Mohammad Mahdi BANASAZ (PhD co-advisor), Economics, Virginia Tech
Mahsa Rajabi (PH.D. 2017), Electrical & Control Engineering, K.N.Toosi University of Technology
Raheleh Shahrokhi (PH.D. 2017), Electrical Engineering, K.N.Toosi University of Technology
Emad Habibzadeh (M.S. 2016),Financial engineering, Khatam University
Fatemeh Ghasempour (M.S. 2016), Risk Management, Khatam University

IT Skills

Languages: Python, R, MATLAB, C, Spark, Hadoop, PHP, HTML.
Econometric Packages: EViews, G@RCH, OX Metrics, Stata, JMulTi.
Financial Packages: Bloomberg Terminal, AmiBroker, MetaTrader, MetaStock.

Last updated: July 6, 2020