

# Xuxi (Norman) Guo

## Research Interests

- FinTech: AI, Machine Learning, Neural Network
- Investments: Hedge Funds, Mutual Funds
- Corporate Finance: Financial Analysts

## Education

- 2016-Present **Ph.D. in Finance**, Georgia State University, Atlanta, GA.  
2013–2015 **M.S. in Finance**, Bentley University, MA.  
2009–2013 **B.S. in Finance**, South China Normal University, China.

## Publication

- [1] **Hedging Performance of Multiscale Hedge Ratios**, with Jahangir Sultan, Antonios Alexandridis, and Mohammad Hasan, *Journal of Futures Markets*, 2019, 39(12):1613–32.

## Working Papers

- [4] **Dynamic Return Patterns and Mutual Fund Performance (Job market Paper).**  
[3] **Analyst Skill and Crowd Wisdom: Information Aggregation from Machine Learning**, with Sean Cao, Houping Xiao, and Baozhong Yang.  
*Semi-finalist of the FMA 2021 Best Paper*  
Presentations: University of Arizona, University of Georgia, Iowa State University, Xiamen University, Huazhong University of Science and Technology, FMA 2021, SFA 2021  
[2] **The Impact of AI Adoption on Hedge Fund Performance**, with Zhen Shi.  
Presentations: GFA 2021, FMA 2021, SFA 2021  
[1] **Why do actively managed mutual funds hold ETFs? Evidence on liquidity management.**  
Presentation: FMA 2019, Georgia State University

## Selected Work in Progress

- [1] **What do Buy Side Analysts Say? Evidence from Hedge Funds.**

## Academic Experience

- 2021-Present **Instructor of Blockchain and Business Disruption**, Georgia State University.  
○ Blockchain Technologies, Cryptocurrencies, Ethereum and Programming  
2019-Present **Instructor of Corporate Finance**, Georgia State University.  
2018-Present **CEAR Scholar**, Center for the Economic Analysis of Risk.  
2018–2019 **Teaching Assistant**, Georgia State University.  
○ Block chain and Business Disruption(Fall 2018)  
2016–2019 **Graduate Research Assistant**, Georgia State University.  
2014–2016 **Graduate Research Assistant**, Bentley University.

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## Fellowships and Awards

- 2021 **FMA Semi-finalist of the Best Paper.**  
2021 **Charles A. William Scholarship**, *J. Mack Robinson College of Business, GSU.*  
2021 **GTA Teaching Excellence Award**, *J. Mack Robinson College of Business, GSU.*  
2020 **Planas Family Ph.D. Scholarship**, *J. Mack Robinson College of Business, GSU.*  
2018 **GSU Doctoral Student Travel Grant.**  
2018-Present **CEAR Scholarship**, *GSU.*  
2013 **National Scholarship of China.**

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## Conference and Seminar Presentations

- 2021 GFA, FMA, SFA, Atlanta Finance PhD Meeting  
2019 FMA  
2018 Georgia State University

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## Professional Services

- Chair FMA 2019, FMA 2020  
Discussant Research Conference on Financial Economics in Honor of Jayant Kale 2020, FMA 2021, FMA 2020, FMA 2019  
Review FMA 2019, FMA 2020

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## Professional Affiliations

- American Finance Association
- Financial Management Association

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## Credentials & Skills

- Business CFA Level III Candidate, SAS (Certified)  
Computer TensorFlow, PyTorch, Python, SAS, Stata, LATEX, Matlab, Eviews

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## Work Experience

- 2015 **Curriculum Lead and Lecturer of CFA Exam**, *Utoollearning Inc.*, Waltham, MA.  
2014–2015 **Financial Analyst**, *CHB Skyline*, Weston, MA.

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## References

### **Baozhong Yang**

H. Talmage Dobbs Jr Chair in Finance and  
Associate Professor of Finance  
J. Mack Robinson College of Business  
Georgia State University  
✉ [bzyang@gsu.edu](mailto:bzyang@gsu.edu)  
☎ (404) 413 7350

### **Zhen Shi**

Associate Professor of Finance  
J. Mack Robinson College of Business  
Georgia State University  
✉ [zshi@gsu.edu](mailto:zshi@gsu.edu)  
☎ (404) 413-7349

### **Vikas Agarwal**

Bank of America Distinguished Chair and  
Professor of Finance  
J. Mack Robinson College of Business  
Georgia State University  
✉ [vagarwal@gsu.edu](mailto:vagarwal@gsu.edu)  
☎ (404) 413-7326

### **Will Cong**

Rudd Family Professor of Management and  
Associate Professor of Finance  
SC Johnson College of Business  
Cornell University  
✉ [will.cong@cornell.edu](mailto:will.cong@cornell.edu)  
☎ (607) 255-7859

- [5] **Dynamic Return Patterns and Mutual Fund Performance (Job market Paper).**  
In this paper, we apply a state-of-the-art deep learning model to understand and predict dynamic patterns in mutual fund returns. As a unique feature, the model predicts a sequence of future returns, rather than a single return. The model can also dynamically adapt its focus on the most informative variables during different time periods. A long-short portfolio based on the model's prediction generates a 2.8% annualized Carhart 4-factor alpha. This abnormal performance is persistent for up to four years. The model improves the prediction of future fund alphas substantially by increasing the R-squared by more than 25% in a predictive regression that includes other fund skill measures as well as fund and time fixed effects. By decomposing the model's power into time-series and cross-sectional components, we find that time-series patterns contribute to more than half of the model's performance. Furthermore, the model predicts far more accurately for a group of funds that are smaller, more liquid, and less volatile, suggesting that such funds adopt more stable strategies. Finally, we find evidence that the model captures dynamic features of mutual fund strategies related to company fundamentals and macroeconomic states.
- [4] **Analyst Skill and Crowd Wisdom: Information Aggregation from Machine Learning**, with Sean Cao, Houping Xiao, and Baozhong Yang.  
In this study, we use machine learning (ML) to provide a novel methodology to identify analyst skill, and effectively aggregate forecasting opinions of analysts to form a crowd wisdom-based earnings forecast for each stock and at each given quarter. We find that the ML-based forecast consensus contains more valuable information than the mean consensus used in the literature when predicting subsequent earnings.
- [3] **The Impact of AI Adoption on Hedge Fund Performance**, with Zhen Shi.  
We examine the impact of AI adoption on hedge fund performance. We find that AI adoption improves hedge fund performance by 2.64% annually. The increase in performance is more pronounced for funds that employ a greater number of AI employees or AI employees with a Ph.D. degree. AI use also reduces fund risk and increases shape ratio and information ratio. The adoption of AI is associated with a greater number of holdings in the portfolio and less concentration in the local stocks. The findings improve our understanding of the determinants of hedge fund performance in the era of technology.
- [2] **Why do actively managed mutual funds hold ETFs? Evidence on liquidity management.**  
We uncover a particular type of trading strategy of exchange traded funds (ETFs) undertaken by investment managers — equity fund managers use index ETFs to manage fund flows. Our results show that funds that do not use index ETFs exhibit lower returns when they experience fund flow. The performance of funds that use index ETFs, however, is independent of investor's liquidity demands. We also find that index ETFs can help attenuate cash sensitivity on both fund inflow and outflow. However, this effect of relief on cash disappear during market downturn.
- [1] **Hedging Performance of Multiscale Hedge Ratios**, with Jahangir Sultan, Antonios Alexandridis, and Mohammad Hasan, *Journal of Futures Markets* 39(12):1613–32.  
In this study, we combine the wavelet multiscale model to improve the hedging performance of multiple classes of assets. The wavelet transformation decomposes time-series data into orthogonal components with different frequencies (scales) to accommodate structural changes, discontinuity, and regime shifts. The hedging performance is further improved after combining neural network. Based on the in-sample and out-of-sample portfolio variances, the wavelet network model produces the lowest variances. Overall, the wavelet multiscale model and neural network offer improvements over traditional hedging models.