# Shihao Yu

sy3119@columbia.edu · +1 347-326-2550 · www.shihaoyu.org/about/
500 W 120 Street, New York, NY 10027, United States

## ACADEMIC AFFILIATIONS

**Postdoctoral Researcher**, Columbia University, Department of Industrial Engineering and Operations Research (IEOR), Center for Digital Finance and Technologies — Oct 2022 -

Sponsor: Prof. Agostino Capponi

## EDUCATION

**PhD in Financial Economics**, Vrije Universiteit Amsterdam and Tinbergen Institute — 2017 - Jan 2023

Advisor: Prof. Albert J. Menkveld

**MPhil in Econometrics**, Vrije Universiteit Amsterdam and Tinbergen Institute, *cum laude* — 2017

**Bsc in Economics and Finance**, Southwestern University of Finance and Economics — 2015

## RESEARCH INTERESTS

Asset pricing, market microstructure, financial technology (FinTech), high-frequency trading, decentralized finance (DeFi), machine learning

## REFERENCES

| Albert J. Menkveld | Agostino Capponi | Angelo Ranaldo |
|---|---|---|
| Professor of Finance | Professor of IEOR | Professor of Finance and Systemic Risk |
| Vrije Universiteit Amsterdam | Columbia University | University of St. Gallen |
| albertjmenkveld@gmail.com | ac3827@columbia.edu | angelo.ranaldo@unisg.ch |

Placement Director: Prof. Eric Bartlesman (e.j.bartelsman@vu.nl)
Placement Assistant: Christina Månsson (c.mansson@tinbergen.nl)

## PUBLICATIONS/FORTHCOMINGS

1. Central Counterparty Exposure in Stressed Markets, with Wenqian Huang and Albert J. Menkveld [Paper]
   In **Management Science**, 2021, 67(6), 3596-3617
   A clearing house' risk exposure can increase rapidly and crowded positions among clearing members contribute disproportionately to extreme changes.

2. Non-Standard Errors, with Albert J. Menkveld and many other co-authors [Draft]
   Forthcoming in **Journal of Finance**
   Variation across researchers in the evidence-generating process leads to sizable differences in their testing results of the same set of hypotheses on financial markets.

## WORKING PAPERS

3. Does the Consolidated Feed Matter? (Job Market Paper) [Draft]
   Revise and Resubmit at **Journal of Financial and Quantitative Analysis**
   A faster consolidated feed surprisingly leads to an adverse impact on market liquidity, possibly due to increased informed algorithmic trading. A corrupted consolidated feed worsens market liquidity significantly.

4. Price Discovery on Decentralized Exchanges, with Agostino Capponi and Ruizhe Jia [Draft]
   Invited for submission at **Review of Financial Studies**; Covered by Bloomberg [Report]
   On decentralized exchanges where informed traders have to bid a fee to compete for execution priority, they turn out to follow a jump bidding strategy: placing high initial bids to signal to their competitors.

5. HFTs and Dealer Banks: Liquidity and Price Discovery in FX Trading, with Wenqian Huang, Peter O'Neill and Angelo Ranaldo [Draft]

A granular regulatory dataset reveals that high-frequency traders and dealer-banks play complementary roles in liquidity provision and price discovery in the FX market.

## WORK IN PROGRESS

6. Information Attribution via Financial Machine Learning, with Agostino Capponi [Slides]

   Time-aware neural network models and full-depth order book data perform extremely well in predicting out-of-sample short-term midquote returns.

## TEACHING

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| Finance I (undergraduate), TA, Vrije Universiteit Amsterdam, **Evaluation: 4.2/5** | 2017 - 2019, 2020 |
| Financial Data Decision Analysis (graduate), TA, Vrije Universiteit Amsterdam | 2017 - 2019 |
| Asset Pricing (graduate), TA, Tinbergen Institute, **Evaluation: 4.67/5** | 2017 |
| Math II (graduate), TA, Tinbergen Institute, **Evaluation: 4.5/5** | 2017 |
| Thesis supervision (undergraduate and graduate), Vrije Universiteit Amsterdam | 2018 - 2019, 2023 |

## RESEARCH VISITS

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| Columbia University, IEOR Department, New York, United States | June - Sep 2022 |
| Bank for International Settlements, Basel, Switzerland | Feb - May 2020 |
| Financial Conduct Authority, London, United Kingdom | Sep - Nov 2019 |

## CONFERENCES AND SEMINARS

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| SFS Cavalcade North America (scheduled) [5], AEA [Discussant], AFA* [4], Tel Aviv Finance Conference (canceled) [Discussant] | 2024 |
| EFA [4][5], NFA [5], MFA [Discussant], CICF [4], The Microstructure Exchange [5], SGF Conference [4], SFI Research Days* [5], European Summer Symposium in Financial Markets [4], Columbia-Bloomberg Machine Learning in Finance Workshop* [6], Markov Decision Process and Reinforcement Learning Workshop* [6] | 2023 |
| MI3 Plato [3], The Microstructure Exchange (Asian-Pacific version) [4] | 2022 |
| The Microstructure Exchange [3] | 2021 |
| AFA PhD Poster Session [1], ECB Macroprudential Stress Testing Conference [1] | 2020 |
| WEAI [1], The Asia-Pacific Association of Derivatives [1], The Central Bank Conference on the Microstructure of Financial Markets [1], Australasian Finance & Banking Conference [1] | 2019 |

* indicates presented by co-author. Numbers in square brackets refer to papers or discussant role.

## HONORS AND SCHOLARSHIPS

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| AFA Ph.D. Student Travel Grant ($750) | 2019 |
| "KRX Outstanding Paper Award" ($1,500) [1], Asia-Pacific Association of Derivatives | 2019 |
| Research Talent grant (€200,000), Netherlands Organization for Scientific Research (NWO) | 2017 |

## ACADEMIC SERVICE

Ad-hoc referee for The Review of Financial Studies, Management Science, Journal of Financial Stability

## OTHER SERVICES

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| PhD Council member, School of Business and Economics, Vrije Universiteit Amsterdam | 2020 - 2022 |

## PERSONAL

Fluent in English, basic in Dutch (A2), native in Chinese, history, philosophy, film, badminton, Chinese calligraphy