

CHENKAI WANG

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WORK EXPERIENCE

Southern University of Science and Technology, China Sep. 2024 - Jan. 2025
Full-time Research Assistant, Supervisor: Prof. Peng Yang Department of Computer Science and Engineering

EDUCATION

Southern University of Science and Technology, China Sep. 2022 - Jul. 2024
M.S. in Mathematics (**with distinction**) GPA: 88.6/100
Supervisor: Prof. Peng Yang Department of Statistics and Data Science

Southern University of Science and Technology, China Sep. 2017 - Jul. 2022
B.S. in Statistics GPA 3.03/4.00 (Last Year: 3.82/4.00, Last Semester: 3.92/4.00)
Supervisor: Prof. Yifang Ma Department of Statistics and Data Science

PUBLICATIONS

Article (as the first author)

Wang, C., Ren, J., & Yang, P. (2025). Alleviating Non-identifiability: a High-fidelity Calibration Objective for Financial Market Simulation with Multivariate Time Series Data. *IEEE Transactions on Computational Social Systems*. <https://doi.org/10.1109/TCSS.2025.3574236>

Articles (as a middle author)

Zhao, J., Zhang, C., **Wang, C.**, & Yang, P. (2025+). Beyond the Master: Trajectory-level Reward Shaping for Formulaic Alpha Factors Mining. *In Preparation*.

Yuan, X., Shang, Z., Wang, Z., **Wang, C.**, Shan, Z., Qi, Z., Zhu, M., Bai, C., & Li, X. (2025). Preference Aligned Diffusion Planner for Quadrupedal Locomotion Control. *IROS 2025*.

HONORS AND AWARDS

Outstanding Graduates honor, SUSTech 2024
Outstanding Graduate Student, SUSTech 2024
Excellent Student Cadre, SUSTech 2023
National Encouragement Scholarship, SUSTech 2020, 2021
Provincial Second Prize in Chinese Mathematics Competitions, Chinese Mathematical Society 2021
Provincial Third Prize in Chinese Mathematics Competitions, Chinese Mathematical Society 2020

PROJECTS

Advanced Network Science Project and Homework

Sep. 2022 - Jan. 2024

Individual Homework and Project, Prof. Yanqing Hu

Shenzhen

- Page Rank and Spam Farm in Graphs [HW 1 & 2].
- Small World Phenomena and the Greedy Algorithm [HW 3].
- ER Network and Giant Component [HW 4].
- Community Structure, Spectral Analysis, and its Generalization [HW 5].
- Added constraints to Jon Kleinberg's network model, proved the corresponding expected delivery time, and implemented greedy algorithm in Python to validate results [Final Project].

Semi-parametric regression Project: Linear-based and other applicable methods for riboflavin dataset ($n=71$, $p=4088$, regression problem)

Jan. 2023

Individual Project, Prof. CHEN XIN

Shenzhen

- Randomly split data into 80% training ($n=57$) and 20% testing ($n=14$) sets to ensure unbiased generalization evaluation.
- Applied Lasso, Elastic Net, LARs, PCA Regression, and Random Forest for model fitting, using LOOCV to generate 57 distinct data pairings and 5-fold cross-validation to optimize coefficients.
- Used features from both Lasso and LARs to build a linear model and checked for normality, independence, and homoscedasticity.
- Used the ensemble approach to combine 57 individual models, selecting the best based on MSE and error range.

INVITED TALKS

“High-Fidelity Calibration of Financial Market Simulation with Multivariate Time Series Data”

–*UltraQuant Investment (Private Equity Fund, RMB ¥3B+ AUM), Shenzhen*

June 2025

TEACHING ASSISTANTS

Southern University of Science and Technology:

MA212: Probability and Statistics, 2023 Spring, rated excellent by the lecturer: Prof. Guoliang Tian

MA204: Mathematical Statistics, 2023 Spring, rated excellent by the lecturer: Prof. GABRIELLE JING

STA217: Introduction to Data Science, 2024 Fall, rated excellent by the lecturer: Yifang Ma

MISCELLANEOUS

Languages: *English:* Fluent, TOEFL (83) *Chinese (Mandarin):* Native

Computational Skills: Python, MATLAB, \LaTeX .

Interests: Movies, Reading, Basketball, Running, Voluntary Activity (more than 80 hours).