# CHENKAI WANG

Email: wangck2022@mail.sustech.edu.cn ⋄ Web: chenkai-wang.github.io ⋄ Last Updated: June 27, 2025

## 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+). Learning from expert factors: 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).