

# Lingjie Wei

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## EDUCATION

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### Sichuan University, School of Mathematics

Expected June 2024

*B.S. Statistics*

*Chengdu, China*

- GPA: 3.83/4.00
- Rank: 3/22
- Core Courses: Mathematical Analysis-2(98), Nonparametric Statistics(97), Statistical Computational Method(96), Time Series Analysis(96), Mathematical Analysis-1(95), Advanced Algebra-1(95), Stochastic Calculus and its applications(95), Seminar on Mathematics(95), Mathematical Modeling and Experiment(94), Numerical Analysis(94), Regression Analysis(94), Ordinary Differential Equations(93), Real Analysis(92), Multivariable Statistical Analysis(92), Econometrics(92), Mathematical Statistics(90), Advanced Algebra-2(90)

## RESEARCH INTERESTS

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- Subgroup Analysis
- Causal Inference
- Precision Medicine

## RESEARCH & PROJECTS

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### Summer Research Program

Jul. 2023 – Oct. 2023

*The Hong Kong University of Science and Technology, Department of Mathematics*

*Hong Kong, China*

- Supervised by Prof. Xinzhou Guo to study an innovative statistical inference framework for combination therapy
- Researched the therapeutic advancements and mechanisms about combination therapy in cancer treatment
- Utilized the matching method to establish a valid hypothesis test, accessing whether the effectiveness of combination therapy is driven by interaction effect or patient-level heterogeneity

### China Multi-Ethnic Cohort Research Group

Nov. 2022 – Jun. 2023

*Sichuan University, West China School of Public Health*

*Chengdu, China*

- Collaborated with Prof. Xing Zhao and 4 PhD students in China Multi-Ethnic Cohort (CMEC) research group researching the methodology of causal inference and observational study in epidemiology cohort studies
- Focused on estimating causal effects under the exposure to air pollution by Propensity Score Matching
- Developed the extended algorithm for multisite scenarios to address heterogeneity and in-comparability

### Sparklet Undergraduate Research Program

Sept. 2022 – Dec. 2022

*Sichuan University, School of Mathematics*

*Chengdu, China*

- Guided by Prof. Yonghong Zhao in School of Mathematics and collaborated with a team of 4 and Prof. Yongkang Wu in West China Hospital to design a temperature calibration device
- Applied Generalized Ridge and Stepwise Regression for temperature calibration for thermometers used in hospitals
- Compiled study results with one patent authorized by China National Intellectual Property Administration

### The Interdisciplinary Contest in Modeling (Leader, Honorable Mention)

Feb. 2021

*Consortium for Mathematics and Its Application*

*United States*

- Established a data-set about higher education system and utilized Python to apply Principal Component Analysis and Grey System Model for analyzing and predicting the health of education system
- Quantified the structure of higher education system and provided suggestions for strengthening education quality
- Completed a 30-page report in English within 4 days and awarded with *Honorable Mention*

### China Undergraduate Mathematical Contest in Modeling (Leader, First Prize)

Sept. 2020

*China Society for Industrial and Applied Mathematics*

*China*

- Conducted data cleaning for over 300,000 rows using SQL independently and set up variables collaboratively
- Applied Logistic Regression and Monte Carlo Optimization in MATLAB to quantify credit risk and profitability
- Accomplished a 29-page report within 3 days and awarded with *First Prize* (top 5%)

## PUBLICATION

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Wu Y., Zhao Y., **Wei L.**, et.al, "Temperature Correction Method, Device, Equipment, and Storage Medium", Invention Patent, CN115824427B, authorized

## EXTRA-CURRICULAR ACTIVITIES & VOLUNTEER WORK

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- President of Mathematics Enthusiasts Association** Sept. 2020 – Jun. 2022  
*Sichuan University* Chengdu, China
- Served as president, leading a team of 20 to manage and coordinate activities for over 2,000 association members
  - Organized over 30 math-related educational events, including lectures, tutorials, and contest training
  - Awarded with *Top 10 Student Association* (top 2% in Sichuan University) in 2022
- Founder of One-to-one Mathematics Tutorial Classroom** Sept. 2021 – Jun. 2022  
*Sichuan University* Chengdu, China
- Organized 12 pre-exam tutorials for math courses, including Calculus, Linear Algebra and Probability & Statistics
  - Provided more than 50 hours of volunteer service to STEM students in Sichuan University
  - Awarded with *Top 10 Volunteer Service Program of Sichuan University* in 2022
- Summer Social Practice Program** Jul. 2021  
*Sichuan University* Chengdu, China
- Participated in the "Pursuing Revolutionary Memory and Inheriting Revolutionary Genes" social practice program at Jianchuan Museum and Guojiaqiao community
  - Conducted historical surveys on the evolution of Sichuan community in the 20th century
  - Awarded with *School Level Approval Summer Social Practice Program* in Sichuan University in 2021
- Epidemic Prevention and Control Volunteer Service** Feb. 2020  
*Committee of Communist Youth League* Fujian, China
- Played a vital role as the community volunteer during the early days of the COVID-19 outbreak in China
  - Collaborated closely with community officials, processed residents' information, conducted over 400 surveys on individuals from high-risk regions

## INTERNATIONAL EXPOSURE

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- Summer Research Program, The Hong Kong University of Science and Technology 2023
- Talk *Discrete Mean Estimates and Landau-Siegel Zero*, Yitang Zhang, University of California, Santa Barbara 2022
- International Course *Univeristy Immersion Program*, Sichuan University 2022
- International Conference *Online Forum on Modern Number Theory and Related Fields*, Sichuan University 2020
- Lecture *Secret of Great Communication*, Farland Chang, Sichan Univeristy - Pittsburgh Institute 2019
- Lecture *Chinese Merchant in Upper Egypt Region*, Peter Hessler, Sichan Univeristy - Pittsburgh Institute 2019

## AWARDS & HONORS

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- Excellent Graduate*, Sichuan University 2023
- Second Prize* of Chinese Mathematics Competition 2023
- Excellent Student Leader*, Sichuan University 2023
- Comprehensive Scholarship*, Sichuan University 2022-2023
- Reading Star Scholarship* (only 10 per year), Sichuan University 2022
- President of *Top 10 Student Association* (top 2%), Sichuan University 2022
- Excellent Association Leader*, Sichuan University 2022
- Honorable Mention* of Mathematical Contest in Modeling 2021
- National Scholarship* (1/187), Ministry of Education, China 2021
- First Prize* of China Undergraduate Mathematical Contest in Modeling 2020
- Excellent Student*, Sichuan University 2020

## TECHNICAL SKILLS

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- Languages:** English (IELTS: overall 7.5), Mandarin, Cantonese
- Computer:** R, SAS, Python, C, Stata, Matlab, SQL, SPSS