JIAHUI XIN

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RESEARCH INTERESTS

Adaptive Clinical Trial Design; Covariate- and Response-Adaptive Randomization; Robust Causal Inference; Precision Medicine; Markov Decision Process.

EDUCATION

- **University of Cambridge, MRC Biostatistics Unit** *Jan. 2026 – Present*
  Visiting Ph.D. Student Cambridge, UK
  ◦ Hosted by **Dr. David Robertson**.
  ◦ Working on exact inference for covariate-adjusted response-adaptive (CARA) designs in clinical trials, in collaboration with Drs. David Robertson and Stef Baas.

- **Renmin University of China, Institute of Statistics and Big Data** *Sept. 2021 – June 2026 (Expected)*
  Ph.D. Candidate in Statistics Beijing, China
  ◦ GPA: 3.84/4.0
  ◦ Supervised by **Prof. Wei Ma**.

- **University of Science and Technology of China, Special Class for the Gifted Young** *Sept. 2016 – June 2021*
  B.S. in Statistics Hefei, China
  ◦ Major GPA: 3.95/4.3, Total GPA: 3.75/4.3
  ◦ Initially majored in Physics (Sept. 2017 – June 2018).

PAPERS

[1] On the Achievability of Efficiency Bounds for Covariate-Adjusted Response-Adaptive Randomization.
Jiahui Xin and Wei Ma.
Statistical Methods in Medical Research, 2025.

[2] Cross-Validation Model Averaging under Covariate-Adaptive Randomization.
Fuyi Tu, **Jiahui Xin** and Wei Ma.
Under review at *Statistica Sinica*.

[3] Covariate-Adaptive Randomization with Many Strata: Asymptotic Theory and Statistical Inference.
Jiahui Xin, Hanzhong Liu, Feifang Hu and Wei Ma.
Manuscript in preparation for submission to *Biometrika*; early version available on arXiv:2405.18856.

[4] Covariate-Adaptive Enrollment for Single-Arm Trials Using External Controls.
Jiahui Xin, Hengjia Fang, Zhiyue Huang, Satoshi Yoshida and Wei Ma.
Working paper.

TALKS

- **Drug Information Association, Quantitative Science Forum** 2025
  Invited Speaker Nanjing, China
- **Chinese Statistical Association of Young Statisticians, Ph.D. Student Forum** 2025
  Travel Award & Oral Presentation Jinan, China
- **National Graduate Student Statistics Forum, Biostatistics and Epidemiology Section** 2024
  Selected Paper & Oral Presentation Beijing, China

INTERNSHIP EXPERIENCE

- **Astellas Pharma [🌐] (Clinical Biometrics Function)** *June 2025 – Aug. 2025*
  Clinical Biostatistics Intern, Adaptive Strategy Beijing, China
  ◦ Mentors: **Dr. Zhiyue Huang and Satoshi Yoshida**.
  ◦ Developed adaptive enrollment strategies for single-arm survival trials under practical covariate shift.
  ◦ Presented project results in internal seminars, including the summer internship presentation, a China–Japan joint statistics meeting, and a "Mike Smith" series meeting within the Clinical Biometrics Function.

- **Honor Device [🌐] (R&D Management Department)** *July 2021*
  R&D Intern, Audio Augmentation Nanjing, China
  ◦ Mentor: **Dr. Lei Fang**.
  ◦ Augmented synthetic speech with room-reverberation simulation to boost automatic speech recognition robustness.

SPECIALIZED TRAINING

- **Causal Analyses of Complex Experiments** *Dec. 2025*
  Yau Mathematical Sciences Center, Tsinghua University Short course by Prof. Peng Ding (UC Berkeley)
- **Causal Inference and A/B Testing** *July 2024 – Aug. 2024*
  Guanghua School of Management, Peking University Business Analysis Workshop by Tencent
- **Reinforcement Learning** *Dec. 2023*
  Institute of Statistics and Big Data, Renmin University of China Short course by Prof. Chengchun Shi (LSE)
- **Topics and Recent Advances in Causal Inference** *June, July & Dec. 2023*
  Yau Mathematical Sciences Center, Tsinghua University Short course by Prof. Peng Ding (UC Berkeley)
- **Semiparametric Learning** *July 2023*
  Institute of Statistics and Big Data, Renmin University of China Short course by Prof. Yanyuan Ma (Penn State)

TEACHING ASSISTANT EXPERIENCE

- **Renmin University of China** *Spring 2025*
  Adaptive Design and Reinforcement Learning Beijing, China
- **Renmin University of China** *Fall 2024*
  Advanced Statistical Computation Beijing, China
- **Renmin University of China** *Spring 2024*
  Advanced Applied Statistics and Data Analysis Beijing, China
- **Renmin University of China** *Fall 2022*
  Statistical Models and Inference Beijing, China
- **University of Science and Technology of China** *Spring 2020*
  Complex Analysis Hefei, China
- **University of Science and Technology of China** *Spring 2019*
  Optics and Atomic Physics Hefei, China

SKILLS

- **Programming & Tools:** R, Rcpp, Python, Linux, Git
- **Methods & Areas:** Adaptive Clinical Trial Design, Covariate- and Response-Adaptive Randomization, A/B Testing, Causal Inference, Markov Decision Processes.
- **Related Coursework:** Reinforcement Learning

REFEREES

- **Dr. Wei Ma [🌐]** *Oct. 2022 – Present*
  Ph.D. Supervisor
  ◦ Associate Professor
    Institute of Statistics and Big Data
    Renmin University of China
    59 Zhongguancun Street
    Beijing 100872, China
    Email: mawei@ruc.edu.cn

- **Dr. Hanzhong Liu [🌐]** *Jan. 2023 – Present*
  Collaborator
  ◦ Associate Professor
    Department of Statistics and Data Science
    Tsinghua University
    30 Shuangqing Road
    Beijing 100084, China
    Phone: +86 10 6278 0575
    Email: lhz2016@tsinghua.edu.cn

- **Dr. Feifang Hu [🌐]** *July 2025 – Present*
  Collaborator
  ◦ Professor and Department Chair
    Department of Statistics
    George Washington University
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    Washington, DC 20052, USA
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