Yi Liu

Curriculum Vitae

PhD Candidate
Department of Statistics
North Carolina State University

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EDUCATION

Ph.D. in Statistics, **North Carolina State University**, U.S. (GPA: 4.0/4.0) Ongoing
- Advisor: Prof. Shu Yang

Master of Biostatistics, **Duke University** School of Medicine, U.S. (GPA: 4.0/4.0) May 2022
- Thesis: Overlap, inverse probability, and matching weights: what are we weighting for?
- Advisor: Prof. Roland A. Matsouaka
- Thesis committee members: Profs. Fan Li (Duke Statistical Science) & Hwanhee Hong

B.S., Mathematics and Applied Mathematics, **Southeast University**, China Jun 2020

RESEARCH AREA

Statistical Theory & Methodology
- Causal inference; Propensity score weighting; Observational studies; Covariate adjustment and covariate-adaptive randomization in randomized controlled trials
- Conformal inference; Federated learning
- Semiparametric efficient estimation; Asymptotic statistics

AWARDS & HONORS

2023 **Student Travel Grant**
ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop (BIOP RISW)

2022 **Student Poster Prize**, 3rd place of 47 posters
Georgia Statistics Day (GSD)

2022 **Outstanding Master's Project Award**, first place of methodology thesis project
Department of Biostatistics & Bioinformatics, Duke University School of Medicine

2022 **Overall Academic Excellence Award**, based on GPA
Department of Biostatistics & Bioinformatics, Duke University School of Medicine

PUBLICATIONS

*: equal contribution.

Peer-reviewed Journal Articles

1. Matsouaka RA, **Liu Y**, and Zhou Y (2023). Variance estimation for the average treatment effects on the treated and on the controls. *Statistical Methods in Medical Research*, **32**(2):389-403.

Technical Reports / In-preparation

1. **Liu Y**, Li H, Zhou Y, and Matsouaka RA (2023+). Average treatment effect on the treated, under lack of positivity. Submitted to *Statistical Methods in Medical Research*.

2. Matsouaka RA, **Liu Y**, and Zhou Y (2023+). Overlap, matching, or entropy weights: what are we weighting for? Under review at *Communications in Statistics - Simulation and Computation*.
   ** Received Travel Grant from ASA BIOP RISW 2023, Student Poster Prize from GSD 2022, and Outstanding Master's Project Award from Duke B&B

PRESENTATIONS & TALKS

Contributed

Sep 2023 Poster Presentation
ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop (BIOP RISW)
Overlap, matching, or entropy weights: what are we weighting for?
** Received Student Travel Grant

Jun 2023 Poster Presentation
The 36th New England Statistics Symposium (NESS)
Variance estimation for weighted average treatment effect estimators.

May 2023 Research Lighting Talk
Duke Industry Statistics Symposium (DISS)
Causal inference on the treated and on the control under lack of positivity.

Oct 2022 Poster Presentation
Georgia Statistics Day (GSD)
Targeting clinical equipoise via propensity score weighting.
** Received Student Poster Prize

May 2022 Poster Presentation
The 35th New England Statistics Symposium (NESS)
Overlap, inverse probability, and matching weights: what are we weighting for?

TEACHING

Teaching Assistant

2023	Fall	ST 370	Probability and Statistics for Engineers	90+ enrolled	NC State
	Summer II	ST 512	Statistical Methods for Researchers II	20+ enrolled	NC State
	Summer I & II	ST 311	Introduction to Statistics	90+ enrolled	NC State
	Spring	ST 311	Introduction to Statistics	150+ enrolled	NC State
2022	Fall	ST 311	Introduction to Statistics	110+ enrolled	NC State

MENTORING

Independent Study Supervision (during my PhD period)

		First position
Jiajun Liu	(with Dr. Roland Matsouaka, 2022–2023)	PhD student, Duke Biostatistics
Dezhao Fu	(with Dr. Roland Matsouaka, 2022–2023)	PhD student, GWU Biostatistics

ADDITIONAL INFORMATION

Professional Memberships

- Student member, International Biometrics Society, Eastern North American Region (ENAR)
- Student member, International Chinese Statistical Association (ICSA)
- Student member, New England Statistics Symposium (NESS)

Skills

- Language: Chinese (Mandarin), English
- Computer: R, SAS, LaTeX