

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**
Georgia Statistics Day (GSD)
- 2022 **Outstanding Master's Project Award**
Department of Biostatistics & Bioinformatics, Duke University School of Medicine
- 2022 **Overall Academic Excellence Award**
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.

2. Matsouaka RA, **Liu Y**, and Zhou Y (2023+). Overlap, matching, or entropy weights: what are we weighting for?

**** Received Travel Grant from ASA BIOP RISW 2023, Student Poster Prize from GSD 2022, and Outstanding Master's Project Award from Duke.**

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 (3rd place of 47).**
- 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

- ST 370: Probability and Statistics for Engineers NCSU, 2023–
- ST 512: Statistical Methods for Researchers II NCSU, Summer 2023
- ST 311: Introduction to Statistics NCSU, 2022–2023

MENTORING

Research Mentoring (during PhD period)

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

ADDITIONAL INFORMATION

Professional Memberships

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

Skills

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