

Curriculum Vitae

Dr. Ruoxu Tan

Last updated: June 2025

EDUCATION

- Ph.D. in statistical theory 2017.3 – 2021.7
School of Mathematics and Statistics, the University of Melbourne, Melbourne, Australia.
Thesis advisor: Prof. Aurore Delaigle.
- B.Sc. in mathematics and applied mathematics 2012.9 – 2016.7
School of Mathematics, Jilin University, Changchun, China.

EMPLOYMENT

- *Assistant Professor* 2023.9 – Present
School of Mathematical Sciences and School of Economics and Management, Tongji University, Shanghai, China.
- *Postdoctoral Fellow* 2021.8 – Present
Department of Statistics and Actuarial Science, the University of Hong Kong, Hong Kong SAR, China.
Host: Prof. Guosheng Yin.
- *Research Assistant* 2021.5 – 2021.8
School of Mathematics and Statistics, the University of Melbourne, Melbourne, Australia.
Host: Prof. Aurore Delaigle.

RESEARCH INTERESTS

- Causal inference, missing data analysis
- Functional data analysis
- Manifold data analysis, manifold learning

TEACHING EXPERIENCE

Tongji University:

- 122162: Statistical Computing and Software Semester 1, 2024–2025
- 4000590000401: Big Data Analysis and Data Mining Semester 2, 2023–2024
- 50005900006: Mathematical Statistics Semester 2, 2023–2024

The University of Hong Kong:

- DASC7011: Statistical Inference for Data Science Semester 1, 2022
- STAT2601: Probability and Statistics I Semester 2, 2021

• STAT1602: Business Statistics	Semester 1, 2021
The University of Melbourne:	
• MAST20005: Statistics	Semester 2, 2020
• MAST20006: Probability for Statistics	Semester 1, 2020
• MAST20005: Statistics	Semester 2, 2019
• MAST20006: Probability for Statistics	Semester 1, 2019
• MAST20009: Vector Calculus	Semester 2, 2018

AWARDS AND CERTIFICATES

- China Scholarship Council (CSC)–University of Melbourne Ph.D. Scholarship
- The Second National Prize of Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM) 2013

PRESENTATIONS

- Contributed talk: *Causal effect of functional treatment*, the Second Joint Conference on Statistics and Data Science in China (2024), Yunnan, China.
- Invited talk: *Causal effect of functional treatment*, IMS-China International Conference on Statistics and Probability (2024), Ningxia, China.
- Invited talk: *Estimation of functional treatment effect using generalized empirical likelihood stabilized weights*, 5th International Conference on Econometrics and Statistics (EcoSta 2022), Kyoto, Japan.
- Contributed talk: *Group testing regression analysis with missing data*, Young Statisticians Conference 2019, Canberra, Australia.

PUBLICATIONS

(* denotes the corresponding author.)

- [9] Tan, R.* and Zang, Y. (2024+) Supervised manifold learning for functional data. *Submitted*.
- [8] Gu, J., Tan, R.* and Yin, G. (2024+) Delaunay weighted two-sample test for high-dimensional data by incorporating geometric information. *Submitted*.
- [7] Tan, R.* and Yin, G. (2024+) Model averaging for manifold learning. *Submitted*.
- [6] Tan, R., Huang, W.*, Zhang, Z.* and Yin, G. (2025). Causal effect of functional treatment. *Journal of Machine Learning Research*, **26**, 1–39.
- [5] Tan, R.*, Zang, Y. and Yin, G. (2024). Nonlinear dimension reduction for functional data with application to clustering. *Statistica Sinica*, **34**, 1391–1412.
- [4] Delaigle, A. and Tan, R.* (2024). Group testing regression analysis with missing data and imperfect tests. *Statistica Sinica*, **34**, 201–228.
- [3] Tan, R.* (2023). Nonparametric regression with nonignorable missing covariates and outcomes using bounded inverse weighting. *Journal of Nonparametric Statistics*, **35**, 927–946.
- [2] Delaigle, A. and Tan, R.* (2023). Group testing regression analysis with covariates and specimens subject to missingness. *Statistics in Medicine*, **42**, 731–744.
- [1] Tan, R.* (2021). Nonparametric techniques with missing data. *PhD Thesis*.