

Jieru Shi

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<https://herashi.github.io/>

EDUCATION	Ph.D. in Biostatistics , University of Michigan	Aug 2020–Aug 2023
	M.S. in Biostatistics , University of Michigan	Aug 2018–Apr 2020
	B.S. in Statistics Sichuan University	Sep 2014–Jun 2018
	• Exchange student, Statistics, City University of Hong Kong	Jan–May 2016
ACADEMIC	Postdoctoral Research Associate , StatsLab, University of Cambridge	Sep 2023–present
APPOINTMENTS	Supervised by Qingyuan Zhao on causal inference	
	Graduate Research Assistant , University of Michigan	May 2022–May 2023
	Principal Investigators: Brahmajee K. Nallamothu & Jessica R. Golbus	
	• The Virtual AppLication-Supported ENvironment To INcrease Exercise During Cardiac Rehabilitation Study (VALENTINE) Study	
	Graduate Student Consultant , University of Michigan	Sep 2021–May 2022
TEACHING	Director: Kerby Shedden	
	• Consulting for Statistics, Computing and Analytic Research (CSCAR)	
	Graduate Research Assistant , University of Michigan	Aug 2020–Aug 2021
	Principal Investigators: Srijan Sen & Amy Bohnert	
	• The PROviding Mental health Precision Treatment (PROMPT) Precision Health Study	
TEACHING	Statistics	Jan–Mar 2024
	• Part IB Supervision in DPMMS, University of Cambridge.	
	Graphical Models: Statistical Learning and Causal Inference	Jan 2024
	• Guest lecture in Cambridge Part III Systems Biology, Modelling, and Analysis of Networks.	
	Causal Inference	Oct–Dec 2023
	• Part III Example Class in DPMMS, University of Cambridge.	
	Statistical Modeling	Oct–Dec 2023
PUBLICATIONS	• Part II Supervision in DPMMS, University of Cambridge.	
	Time-Varying Causal Effect Estimation in Mobile Health Studies	Nov 2022
	• Guest lecture in BIOS 653, Biostatistics, University of Michigan.	
	[1] J Shi , Z Wu, W Dempsey, “Assessing time-varying causal effect moderation in the presence of cluster-level treatment effect heterogeneity and interference”. <i>Biometrika</i> , Volume 110, Issue 3, 2023, Pages 645–662, doi: 10.1093/biomet/asac065 .	
	[2] J Shi , Z Wu, W Dempsey, “Estimating time-varying direct and indirect causal excursion effects for binary outcomes”. 2022, <i>arXiv</i> : 2212.01472 [stats.ME]	
	[3] J Shi , Z Wu, W Dempsey, “Incorporating auxiliary variables to improve the efficiency of time-varying treatment effect estimation”. 2023, <i>arXiv</i> : 2306.17260 [stats.ME] (Journal of the American Statistical Association, Reject & Resubmit)	
	[4] J Shi , W Dempsey, “A meta-learning method for estimation of causal excursion effects to assess time-varying moderation”. 2023, <i>arXiv</i> : 2306.16297 [stats.ME]	
	[5] Huch, E. K., Shi, J. , Abbott, M. R., Golbus, J. R., Moreno, A., & Dempsey, W. H. “Debiased machine learning and network cohesion for doubly-robust differential reward models in contextual bandits”. 2023, <i>arXiv</i> : 2312.06403 [stats.ML] (Submitted to the International Conference on Machine Learning, 2024)	

- [6] Golbus, J. R., Gupta, K., Luff, E., **Shi, J.**, Dempsey, W., ... & Nallamothu, B. K. "A randomized trial of a mobile health intervention to augment cardiac rehabilitation". 2023, *npj Digit. Med.* 6, 173. doi: [10.1038/s41746-023-00921-9](https://doi.org/10.1038/s41746-023-00921-9).
- [7] **Shi, J.**, Golbus, J. R., Gupta, K., Luff, E., Dempsey, W., Boyden, T., ... & Nallamothu, B. K. "Text messages to promote physical activity in patients with cardiovascular disease: a micro-randomized trial of a just-in-time adaptive intervention". 2023, *Circulation: Cardiovascular Quality and Outcomes* (In press).
- [8] Gupta, K., **Shi, J.**, Dempsey, W., Mukherjee, B., Kheterpal, S., Klasnja, P., ... & Golbus, J. "Contextually tailored text messages to augment cardiac rehabilitation: the Virtual AppLIcation-supported ENvironment To INcrease Exercise (VALENTINE) study". *Cardiovascular Digital Health Journal*, 4(5), S4-S5. doi: [10.1016/j.cvdhj.2023.08.010](https://doi.org/10.1016/j.cvdhj.2023.08.010)

TALKS AND PRESENTATIONS

- [1] *Causal Inference Reading Group at the University of Cambridge* (Feb 2024), "Estimating time-varying direct and indirect causal excursion effects for binary outcomes".
- [2] *International Conference of Statistics and Data Science (ICSIDS)* (contributed talk, Dec 2023), "A meta-learning method for estimation of causal excursion effects to assess time-varying moderation".
- [3] *American Causal Inference Conference (ACIC)* (poster, May 2023), "A meta-learning method for estimation of causal excursion effects to assess time-varying moderation".
- [4] *Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS)* (contributed talk, Mar 2023), "A meta-learning method for estimation of causal excursion effects to assess time-varying moderation".
- [5] *ENAR Spring Meeting* (contributed talk, Mar 2023), "Estimating time-varying direct and indirect causal excursion effects for binary outcomes".
- [6] *e-HAIL Symposium: Artificial Intelligence and Health, University of Michigan*, (poster, Sep 2022), "The Virtual AppLIcation-Supported ENvironment To INcrease Exercise (VALENTINE) during cardiac rehabilitation study".
- [7] *Joint Statistical Meeting, Washington D.C.*, (contributed talk, Aug 2022), "Assessing time-varying causal effect moderation in the presence of cluster-level treatment effect heterogeneity".
- [8] *American Causal Inference Conference (ACIC)* (poster, May 2022), "Assessing time-varying causal effect moderation in the presence of cluster-level treatment effect heterogeneity".
- [9] *Joint Statistical Meeting, virtual*, (contributed talk, Aug 2021), "Assessing time-varying causal effect moderation in the presence of cluster-level treatment effect heterogeneity".

SERVICES

- Local Organization Committee Member** Jun 2023
 - International Chinese Statistical Association (ICSA) 2023 Applied Statistics Symposium
- Organizer** Sep 2022–Apr 2023
 - Graduate Student Working Group in the Biostatistics Department, University of Michigan
- Program Committee Member** Dec 2021
 - Causal Inference Challenges in Sequential Decision Making Workshop at NeurIPS
- Program Co-Organizer** Dec 2020
 - Machine Learning for Mobile Health Workshop at NeurIPS

AWARDS

- Honorable Mention** Mar 2023
 - The oral presentation session, 2023 Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS) at Ann Arbor, MI.
- Student Travel Award Recipient** Jan 2023
 - 2023 the 14th International Conference on Health Policy Statistics (ICHPS) at Scottsdale, AZ.
- Junior Researcher Travel Grant** May 2022
 - American Causal Inference Conference (ACIC) at Berkeley, CA.

Rackham Travel Grant

- Joint Statistics Meeting (JSM) at Washington, D.C.
- Joint Statistics Meeting (JSM), virtual.

Aug 2022

Aug 2020

LANGUAGES

Mandarin Chinese (*native*), **English** (*working proficiency*)