

Workshop on Policy Relevant Causal Inference

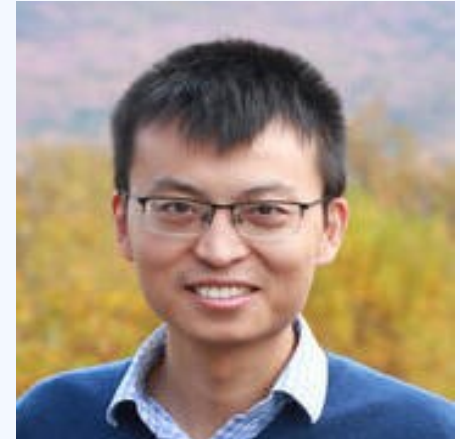
Workshop by Professor Xiang ZHOU, Harvard University



10 to 12 May 2022 (Tue to Thu)
9 - 11 am (Hong Kong time, GMT+8)



Webinar via ZOOM



Max. 30 participants*

* Priority will be given to members and alumni of the Department of Sociology and those with prior training in the counterfactual approach to causal inference.



Sign up by 12 noon, 21 April 2022 (Thu)
Registration link: <https://bit.ly/3wLBfyO>



Registration form

About the Workshop

Conventional causal parameters, such as the average treatment effect (ATE), reflect how the mean outcome in a population or subpopulation would change if all units received treatment versus control. Real-world policy changes, however, are often incremental, changing the treatment status for only a small segment of the population who are at or near “the margin of participation.” To mimic real-world policy changes, two parallel lines of literature have developed in statistics/epidemiology and in economics/sociology that define, identify, and estimate what we call interventional effects and marginal interventional effects. The goal of this workshop is to introduce these two lines of literature, unify them under a common set of notation and definitions, propose new identification and estimation results that will be illustrated with two examples.

About the Prof. Zhou

Prof. Xiang Zhou is an associate professor in the Department of Sociology at Harvard University. He is also a faculty affiliate at the Weatherhead Center for International Affairs, Harvard Institute for Quantitative Social Science, Harvard Center for Population and Development Studies, and Fairbank Center for Chinese Studies. His research broadly concerns inequality, education, causal inference, and computational methods. His work has appeared in *American Sociological Review*, *American Journal of Sociology*, *Social Forces*, *Journal of Political Economy*, *Proceedings of the National Academy of Sciences*, among other peer-reviewed journals. Before coming to Harvard, Zhou worked as a postdoctoral research associate at Princeton University. He received a PhD in Sociology and Statistics from the University of Michigan in 2015.

Organised by

Department of Sociology
The Chinese University of Hong Kong

Co-Organiser

Centre for Population Research

Enquiries

3943 6271 / sociology@cuhk.edu.hk



Department of Sociology, CUHK
Centre for Population Research

Workshop on “Policy Relevant Causal Inference”

Instructor: Xiang Zhou (Harvard University)

2/2022

Introduction

Conventional causal parameters, such as the average treatment effect (ATE), reflect how the mean outcome in a population or subpopulation would change if all units received treatment versus control. Real-world policy changes, however, are often incremental, changing the treatment status for only a small segment of the population who are at or near “the margin of participation.” To mimic real-world policy changes, two parallel lines of literature have developed in statistics/epidemiology and in economics/sociology that define, identify, and estimate what we call interventional effects and marginal interventional effects. The goal of this workshop is to introduce these two lines of literature, unify them under a common set of notation and definitions, propose new identification and estimation results that will be illustrated with two examples.

Day 1 (May 10): Causal inference with observational data

Readings:

Aronow, P.M. and Samii, C., 2016. Does regression produce representative estimates of causal effects? *American Journal of Political Science*, 60(1), pp.250-267.

Brand, J.E. and Xie, Y., 2010. Who benefits most from college? Evidence for negative selection in heterogeneous economic returns to higher education. *American Sociological Review*, 75(2), pp.273-302.

Day 2 (May 11): Instrumental variables and marginal treatment effects

Readings:

Carneiro, P., Heckman, J.J. and Vytlacil, E.J., 2011. Estimating marginal returns to education. *American Economic Review*, 101(6), pp.2754-81.

Zhou, X. and Xie, Y., 2020. Heterogeneous treatment effects in the presence of self-selection: a propensity score perspective. *Sociological Methodology*, 50(1), pp.350-385.

Day 3 (May 12): Interventional effects

Readings:

Kennedy, E.H., 2019. Nonparametric causal effects based on incremental propensity score interventions. *Journal of the American Statistical Association*, 114(526), pp.645-656.

Zhou, X and Aleksei Opacic. Working paper. Marginal interventional effects.