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Causal Inference Program Opening Workshop
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SPEAKER TITLES/ABSTRACTS

Luke Keele
University of Pennsylvania

"Bracketing Bounds for Differences-in-Differences Methods"

The method of differences-in-differences (DID) is widely used to estimate causal effects. The primary advantage of DID is that it can account for time-invariant bias from unobserved confounders. However, the standard DID estimator will be biased if there is an interaction between history in the after period and the groups. That is, bias will be present if an event besides the treatment occurs at the same time and affects the treated group in a differential fashion. We present a method of bounds based on DID that accounts for an unmeasured confounder that has a differential effect in the post-treatment time period. These DID bracketing bounds are simple to implement and only require partitioning the controls into two separate groups. We also develop two key extensions for DID bracketing bounds. First, we develop a new falsification test to probe the key assumption that is necessary for the bounds estimator to provide consistent estimates of the treatment effect. Next, we develop a method of sensitivity analysis that adjusts the bounds for possible bias based on differences between the treated and control units from the pretreatment period. We apply these DID bracketing bounds and the new methods we develop to an application on the effect of voter identification laws on turnout. Specifically, we focus estimating whether the enactment of voter identification laws in Georgia and Indiana had an effect on voter turnout.