THE UNIVERSITY OF CHICAGO

Department of Statistics

MASTER'S THESIS PRESENTATION

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Local Conditional Permutation Test for Independence

MONDAY, November 9, 2020, at 3:00 PM
ZOOM Meeting

ABSTRACT

We proposed a new method, the *Local Conditional Permutation Test*, for testing the conditional independence of variables X and Y given a random vector Z which may contain confounding factors. Like the Classifier CI Test(CCIT) of Rajat Sen and co-workers, our test converts the conditional independence test into a classification problem. whereas our test uses parallelized pairwise sampler to construct multiple nearly-exchangeable copies instead of just one. The experiment suggests that our method is more robust than CCIT and has better performance than CPT when the conditional distribution X|Z is far away from Gaussian.

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