Stanford University
Department of Statistics

DEPARTMENTAL SEMINAR

4:30pm, Tuesday, June 26, 2018
Sloan Mathematics Center Room 380C
Refreshments served at 4pm in Sequoia Lounge.

Speaker:  Yue Wang, University of Washington Seattle

Title:  An Impossibility Theorem of Quantifying Causal Effect

Abstract:

We consider how to quantify the causal effect from a random variable to a response variable. We show that with multiple Markov boundaries, conditional mutual information will produce 0, while causal strength and part mutual information, which claim to behave better, are not well defined, and have other problems. The reason is that the quantitative causal inference with multiple Markov boundaries is an ill-posed problem. We will give a criterion and some applicable algorithms to determine whether a distribution has non-unique Markov boundaries.