



## **Causal Inference Program Opening Workshop December 9-11, 2019**

### **SPEAKER TITLES/ABSTRACTS**

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“On Testing Marginal versus Conditional Independence”

Motivated by the problem of causal discovery, we consider testing marginal independence versus conditional independence in the Gaussian setting. The two models are non-nested and their intersection is a union of two marginal independences. To control the error even when the two models are indistinguishable, rather than insist on a dichotomous choice, we propose a procedure that will choose either or both models. We present a procedure with uniform error guarantees, including under local alternatives.