

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

Brian Caffo

Johns Hopkins Bloomberg School of Public Health

Fingerprinting With Repeated Resting State Functional MRI Data

Tuesday, September 12, 2017

10:20 a.m. - 11:10 am

Refreshments 10:00 am

C405 Wells Hall

Abstract

In the context of resting state functional MRI (rs-fMRI), fingerprinting is the practice of matching a set of subjects to themselves using only rs-fMRI correlations. The quality of the matching is then validated using the subjects' IDs. A statistical inference on this matching is often performed using permutation tests. We discuss many aspects of this process in this talk. First, we discuss desired invariances in the matching process and distance metric. Secondly, we discuss matching statistics and strategies and the resulting null distributions they induce. Thirdly, we discuss variations on the null hypothesis, which is typically left unspecified despite the calculation of a permutation based null distribution. We discuss these topics in the context of the rich history of this problem, spanning over two centuries from Montmort's matching problem.

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