



The University of Chicago
Department of Statistics

Master's Seminar

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Detection of Relationship Errors in Inbred Pedigrees

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ABSTRACT

Accurate pedigree information is a prerequisite for valid linkage analysis. Without correctly specified relationships, loss of power to detect linkage or false-positive evidence for linkage may result. Genome-screen data can be used to detect relationship errors, and several statistical methods to do this in outbred relationships have been developed. In this talk, we discuss the adaptation of one of these methods, the conditional expected identity-by-descent (EIBD) test, developed by McPeck and Sun (2000), to several inbred relationships. We examine the power of three versions of the test against alternate inbred as well as outbred relationships. Finally, we apply the method to a data set of inbred Pakistani families.