



The University of Chicago
Department of Statistics

MASTER'S THESIS PRESENTATION

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Two Kinship Estimators and Their Applications

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ABSTRACT

In this thesis, we present the derivation of two estimators of the kinship coefficient and their properties. One estimator is similar to a sample covariance, and the other is a more robust estimator proposed by Manichaikul et al. We demonstrate how to use these estimators to screen for population heterogeneity and pedigree errors in data from a genome-wide association study with related individuals.