

Graduate Seminar in Statistics

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Monday, March 23, 2015

1:00 p.m., HH-3017

Computation of Identity by Descent Coefficients

Abstract:

Assessment of the relatedness between two individuals is necessary for calculating genetic risk ratios, identifying individuals at risk, and facilitating genetic counseling, which are all based on the concept of identical by descent (IBD). However, the traditional estimation of IBD coefficients only using genealogical information may be complicated and inefficient in a large pedigree. In this presentation, I will provide an introduction ranging from basic concept of IBD, its connection to generalized kinship coefficients, and two well-known algorithms for computing IBD coefficients: traditional recursive method by Karigl (1981) and Lange (1992); novel kinship graphical method by Abney (2009).