



The University of Chicago
Department of Statistics
Seminar Series

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Distance Matrix of a Tree and Beyond

MONDAY, May 9, 2011, at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue
Refreshments following the seminar in Eckhart 110.

ABSTRACT

Let T be a tree with n vertices. According to a classical result of Graham and Pollak, the determinant of the distance matrix of T is a function only of n and does not depend on the tree. A formula for the inverse of D was obtained by Graham and Lovasz. We discuss various extensions of these facts. The results generalize to arbitrary graphs if the distance is replaced by resistance distance. We briefly touch upon connections to random walks. The interplay between graphs and matrices will be a recurring theme.

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