APPLIED MATHEMATICS COLLOQUIUM

CHEEGER INEQUALITIES FOR DIRECTED GRAPHS

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ABSTRACT:

We consider Laplacians for directed graphs and derive the analogues of Cheeger inequalities which relate the eigenvalues of the Laplacian to other invariants for directed graphs. Several versions of these inequalities are examined including one version which extends an isoperimetric inequality of Lovasz and Simonovits. These techniques can be used to deal with various problems arising in the study of non-reversible Markov chains and in particular, random walks on directed graphs.

MONDAY, OCTOBER 17, 2005
4:30 PM
Building 2, Room 105

Reception at 4:00 PM in Building 4, Room 174.
(Math Majors Lounge)