

1023-05-602

John C Wierman* (wierman@jhu.edu), Dept. of Applied Mathematics & Statistics, 304 Whitehead Hall, Johns Hopkins University, Baltimore, MD 21218. *Line graphs, average degree, and percolation threshold approximation formulas.* Preliminary report.

The average degree of a line graph is a function of the average degree and second moment of the degree of the underlying graph. The site percolation threshold of a line graph is equal to the bond percolation threshold of the underlying graph. These facts lead to a new bond percolation threshold approximation formula that is considerably more accurate than previous approximation formulas. (Received September 18, 2006)