

1050-05-138

**Mike Newman\*** ([mnewman@uottawa.ca](mailto:mnewman@uottawa.ca)), Department of Mathematics and Statistics, 585 King Edwards Ave, Ottawa, Ontario K1N 6N5, Canada. *Partition Graphs*. Preliminary report.

Partition graphs are graphs whose vertices are partitions of an  $n$ -set, and where adjacency means that each class of one partition intersects each class of the other. These graphs are natural candidates for eigenspace techniques. Surprisingly few exact results have been established on these graphs. We will describe some of the important results, as well as recent work and indicate some strategies for better understanding these graphs. (Received March 02, 2009)