The First IPM Conference on Algebraic Graph Theory, April 21-26, 2007, IPM, Tehran

Quadratic Forms Associated to Graphs

D. Kiani

Amirkabir University of Technology $\ensuremath{\mathcal{E}}$ IPM $Tehran,\ Iran$

Let G be a graph and A be the adjacency matrix of G. We show that G is r-partite graph for some natural number r if and only if for all (2,0,-1)-vector say x such that x.j=0, we have $x^tAx \leq 0$.