

DOMINATION AND INDEPENDENT DOMINATION IN DIRECT PRODUCTS OF GRAPHS

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The direct product of graphs is one of the four standard graph products. In many respects this product is the most difficult one, for instance (i) no general formula for its (edge-)connectivity as a function of factor graphs is known, and (ii) determining its chromatic number reduces to (dis)proving the outstanding Hedetniemi's conjecture.

In this talk we will survey what is known about domination and independent domination in direct products. A special emphasis will be given to idomatic partitions (that is, partitions into independent sets that are at the same time dominating sets) of direct products of complete graphs.