

Hamilton Paths in Domination Reconfiguration Graphs

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The *domination reconfiguration graph* of a graph G , denoted $\mathcal{D}(G)$, has a vertex corresponding to each dominating set of G and two vertices of $\mathcal{D}(G)$ are adjacent if and only if the corresponding dominating sets differ by the deletion or addition of a single vertex.

We are interested in properties of domination reconfiguration graphs. For example, it is easy to see that they are always connected and bipartite. While none has a Hamilton cycle, we explore families of graphs whose reconfiguration graphs have Hamilton paths.

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