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Markkanen (tmarkkanen@springfieldcollege.edu). *Controlling Domination in Infinite*
Graphs.

A set of vertices in a graph is *dominating* if every vertex not in that set is adjacent to a vertex in the set. A partition of the vertices into dominating sets is called a *domatic partition*. Motivated by questions in effective graph theory, we are interested in ways the structure of infinite graphs might control the number and types of domatic partitions present in the graphs. For example, we will show that you can build a graph which contains an infinite set of vertices which must all belong to the same dominating set in any domatic partition of a particular size. In this talk we will explore a variety of results of this sort as well as consider what happens for related notions of domination, such as total, independent, or paired domatic partitions. (Received September 16, 2014)