Nonrepetitive Graph Colorings

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Abstract

A Nonrepetitive coloring of a graph is a coloring of its vertices such that there are no paths for which the color pattern of the first half is repeated on the second half. In this talk we will give a brief history of nonrepetitive graph colorings, as well as bounds on the number of colors required for specific classes of graphs, such as grid graphs. For example, the $2 \times n$ grid has a nonrepetitive coloring using at most 5 colors, and 5 colors are necessary when $n$ is at least 9.