

Slippery Rock University
Department of Mathematics and Statistics

Presents

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**“Maximum Nullity and Zero
Forcing Number of a Graph”**

Abstract

The maximum nullity of a graph G is the maximum nullity over all real symmetric matrices whose off-diagonal sparsity pattern is the same as that of the adjacency matrix of G . The zero forcing number of G is the minimum number of initially colored vertices required to color all vertices of the graph by applying an iterative color change rule. In 2008, it was shown that the maximum nullity of a graph could be bounded above by the zero forcing number of the graph. During this time, the problem of characterizing graphs whose maximum nullity is the same as the zero forcing number was also posed. In this talk, we will discuss some techniques which can be used to determine if the maximum nullity is the same as the zero forcing number for some families of graphs.

Thursday, February 20th

VSC 103

4:00 p.m.

Students are welcome!