VCU Discrete Mathematics Seminar

Coloring Squares of Planar Graphs with Girth 5

Prof Daniel Cranston
VCU!

Tuesday, March 15
12:30–1:20
4145 Harris Hall

The *square* of a graph G is formed from G by adding an edge between each pair of vertices at distance 2 in G. Nearly 40 years ago Wegner conjectured the maximum chromatic number of certain classes of squares of graphs. In particular, his conjecture for planar graphs has been highly influential and spurred a rich line of results, and even new conjectures.

We will retrace this history, which leads to a recent result on the chromatic numbers of squares of planar graphs with shortest cycle of length 5.

This is joint work with Marthe Bonamy and Luke Postle.