TEXAS STATE UNIVERSITY

The rising STAR *of Texas*

Discrete Mathematics Seminar

Time: Friday, March 4, 2022, 1:00 - 2:00 PM (Central Time)
Title: Observations on the Brauer graph of a block of a solvable group
Speaker: Dr. James Cossey, University of Akron
Room: 330 Derrick Hall

Abstract: Let p be a prime and G a finite group. There are essentially two types of representation theory of G the representations of G over the complex numbers, and the representations of G over fields of characteristic p. The block theory of a finite group is a way to study the interaction of those two types of representations. We will be focused on the Brauer graph associated with a block B an old idea that has not been studied much until recently. For a solvable group, we have recently determined a universal bound for the diameter. More recently, we have determined some easy structure theorems for the graph, and some ongoing work examines the minimal degree of a vertex in the graph.