Department of Mathematics and Statistics Colloquium
Tuesday, March 26, 2019
AMB 164   4:00 pm

One Light, Two Light, Red Light, Green Light

Adeline Moll

NAU Math/Stat

Abstract: In the game Switch, we begin with a graph whose vertices are initially colored green. On each turn, the designated player selects a single non-red vertex and switches it to red. Moreover, each move potentially results in a cascade effect such that if a green vertex is connected to at least two non-green vertices, then it will be switched to yellow. The game is over when there are no green vertices. In the normal play version, the winner is the player who ends the game. In the misère version, the loser is the player who ends the game. In this talk, we will summarize some of our current results for various families of graphs.

On Estimating Generalized Frobenius Numbers Using Numerical Semigroup Element Representations

Rebecca Broschat, Alyssa Stenberg and Viola McCarty

NAU Math/Stat

Abstract: Given a set $S = \{a_1, a_2, \ldots, a_n\}$ of relatively prime positive integers, the kth Frobenius number, $g_k(S)$, is the largest natural number that can be expressed as a linear combination of $\{a_1, a_2, \ldots, a_n\}$ over the nonnegative integers in precisely k distinct ways. We will present new results on estimating $g_k(S)$ by counting integer lattice points inside an associated $n-1$ dimensional polytope.

Refreshments at 3:45