Speaker: Casey Donoven (Binghamton)

Title: Intersection Numbers and Minimal Subbases

Combinatorics Seminar,

Given a finite semigroup S, define $\Phi(S)$ to be the intersection of all maximal subsemigroups of S, also known as the Frattini subsemigroup of S. The intersection number of S is the minimum number of maximal subsemigroups whose intersection is $\Phi(S)$. I will speak about a particular example of a semigroup with an interesting intersection number. In this example, the intersection number is equivalent to the minimum size of a subbasis of the discrete topology on a finite set, which is known.