Thursday, June 4th, 4:10 - 5:00 p.m.

In Surge 284

“The Rank of the Incidence Matrices of Certain Sublattices of \( \mathbb{R}^n \)”

Jennifer Oh, UC Riverside

In this talk we are interested in partially ordered sets and their incidence matrices. We will study in greater detail the partially order sets

\[ L_{\{n\}} = \{(x, y) \in \mathbb{N} \times \mathbb{N} : 0 \leq y \leq x \leq n \} \]

and determine rank and nullity of their incidence matrix. We begin by presenting necessary definitions and simple proofs to set up the incidence matrix. In particular, we will prove that the null space of an incidence matrix of \( L_{\{n\}} \) is equal to the number of elements in its maximal anti-chain.

Snacks and drinks served!

mathdept.ucr.edu/mathclub.html