Garry Bowlin

Weakly Bipartite Graphs

Abstract for the Combinatorics Seminar 2006 November 21-22

A signed graph is said to be *weakly bipartite* if its clutter of negative circles is ideal. I will prove a theorem of Guenin, that a signed graph is weakly bipartite if and only if it does not contain a $-K_5$ minor. The result relies on properties of minimally non-ideal clutters and on translating these properties into properties of signed graphs. The proof is based on a paper of Schrijver. I will introduce the concept of a clutter and discuss some relevant definitions and theorems. I will also introduce the necessary signed graph theory.

This talk is the first part of Mr. Bowlin's doctoral candidacy examination. The committee consists of Laura Anderson, Fernando Guzman, Chris Hanusa, and Thomas Zaslavsky (chair).
