Combinatorics Seminar

Wednesday, Feb. 25, 2009

2:00 pm in Hume 331

Dr. James Reid

Department of Mathematics
University of Mississippi

On minimally k-connected matroids

ABSTRACT

A matroid M is *minimally k-connected* if M is k- connected and, for every $e \in E(M)$, $M \backslash e$ is not k-connected. It is conjectured that every minimally k-connected matroid with $|E(M)| \geq 2(k-1)$ has a cocircuit of size k. We resolve the conjecture almost affirmatively for the case $k = 4$ by finding the unique counterexample. We also construct a counterexample to the conjecture with $2k+1$ elements for each $k \geq 5$. This is joint work with Haidong Wu and Joe Zhou.