Temple University Mathematics Colloquium

Harm Derksen

University of Michigan

will speak on

Polymatroids

ABSTRACT: Polymatroids can be seen as abstractions of subspace arrangements, but they also appear in Information Theory and other areas. Not all polymatroids are realizable as a subspace arrangement. Ingleton gave in 1971 a necessary inequality for a polymatroid to be realizable. More recently, Kinser gave new necessary inequalities. Similar results are known for polymatroids coming from information theory. In the second part of the talk I will discuss matroid and polymatroid invariants, such as the Tutte polynomial, the Billera-Jia-Reiner quasi-symmetric function, and an invariant recently introduced by the speaker.

Monday, November 7, 2011
Lecture at 4:00 pm
Coffee, tea, and refreshments from 3:40 pm
Room 617, Wachman Building
Department of Mathematics