

The George Washington University Combinatorics Seminar

Wednesday, February 20, 5:00 - 6:00 p.m.

**Monroe Hall, Room 267
2115 G Street, N.W., Washington, D.C.**

The Whitney algebra of a matroid

William Schmitt (The George Washington University)

The Whitney algebra is the analog for a matroid of the exterior algebra of a vector space. In this talk we describe the construction of the Whitney algebra and investigate its basic properties. In particular, it is a universal object with respect to vector representations of a matroid, and it is equipped with an operation that corresponds, under any representation, to Grassman's regressive product, simultaneously giving the join and meet of any pair of flats. This is joint work with Henry Crapo.