

1125-13-1187 **Patrick M Phelps*** (patrickphelps@mail.adelphi.edu) and **Branden Stone**
(bstone@adelphi.edu). *Matroids on Commutative Rings*. Preliminary report.

Matroids are a well researched topic in graph theory; they let us abstract the ideas of independence found in linear algebra. It has been shown that a matroid can be formed over a Group, using the notion of additive inverses to form independent sets. In this talk we will extend these ideas to a commutative ring. With these new matroids in hand, we will analyze the generators of the toric ideals associated to them. In particular we are concerned with the degree in which the ideals are generated. (Received September 15, 2016)