1154-11-510 **Hester Graves** and **Lindsey-Kay Lauderdale*** (llauderdale@towson.edu). *The Minimal Euclidean function on the Eisenstein Integers.* Preliminary report.

Zariski first inquired about the relationship between different Euclidean functions in a fixed Euclidean ring $R$. Motzkin and Samuel studied this relationship and determined an algorithm that established the so-called minimal Euclidean function on $R$. Their algorithm involved the construction of recursively defined subsets of $R$. However, determining these subsets is complicated in most cases, and it remains difficult to compute the value of the minimal Euclidean function on a given element of $R$ without an exhaustive search. In this talk, we will focus on the ring of Eisenstein integers and discuss a geometric description of its minimal Euclidean function. We then use this description to establish an efficient method to compute the value of the minimal Euclidean function on a given Eisenstein integer. (Received September 05, 2019)