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Elizabeth Drellich*, edrelli1@swarthmore.edu. *On the structure of regular nilpotent Hessenberg varieties.*

Hessenberg varieties are a large family of subvarieties of the flag variety defined by two parameters, a linear operator and a particular type of Lie algebra subspace called a Hessenberg space. If the linear operator is a regular nilpotent element of the Lie algebra, then every Hessenberg space defines a distinct Hessenberg variety, which is not true for a general linear operator. This talk will discuss the structure of regular nilpotent Hessenberg varieties and how they differ from other Hessenberg varieties. (Received July 17, 2017)