1145-11-2288 Jennifer Berg* (jb93@rice.edu) and Anthony Várilly-Alvarado. Odd order obstructions to rational points on general K3 surfaces.

K3 surfaces are 2-dimensional analogues of elliptic curves, but lack a group structure. They need not have rational points. However, in 2009 Skorobogatov conjectured that the Brauer group should account for all failures of the local-to-global principle for rational points on K3 surfaces. In this talk I will briefly describe the geometric origin of certain 3-torsion classes in the Brauer group of a K3 surface. We utilize this geometric description to show that these classes can in fact obstruct the existence of rational points. This is joint work with Anthony Várilly-Alvarado. (Received September 25, 2018)