1160-20-222 **Robert Boltje**, **Cisil Karaguzel** and **Deniz Yilmaz*** (deyilmaz@ucsc.edu). *Fusion systems of blocks of finite groups over arbitrary fields.*

Let k be a field of characteristic $p > 0$ and let G be a finite group. To any block idempotent b of the group algebra kG, Puig associated a fusion system: a category that underpins the local side of the local-global considerations in modular representation theory. Puig also showed that the fusion system is saturated if the k-algebra $kC_G(P)e$ is split, where (P, e) is a maximal b-Brauer pair. In this talk, we investigate the block fusion system in the non-split case by describing it in an explicit way as being generated by the fusion system of a related block idempotent over a larger field together with a single automorphism of the defect group. (Received August 10, 2020)