1163-14-1038   **Rajesh S. Kulkarni** and **Charlotte Ure*** (`cu9da@virginia.edu`). *A Parametrization of Brauer Classes on Elliptic Curves by Binary Cubic Forms.*

The classical notion of Clifford algebras associated to quadratic forms naturally generalizes to forms of higher degree. In this talk, I will focus on the Clifford algebra associated to a binary cubic form, which defines a Brauer class on an elliptic curve. I will discuss how this connection gives rise to a bijection between the set of orbits of binary cubic forms with respect to a GL_2-action and isomorphism classes of pairs (E, α), where E is an elliptic curve of j-invariant 0 equipped with an automorphism θ of order 3, and α is a θ-invariant 3-torsion Brauer class on E. (Received September 15, 2020)