Algebra Seminar

Genus one curves in Severi-Brauer Varieties.

David Saltman
IDA

Abstract: Let $A/F$ be a division algebra of degree 3, and $X$ its Severi-Brauer variety which is a form of the projective plane. The linear system of cubic curves is defined on $X$, and so we can let $C \subset X$ be one such. If $C$ is a nonsingular such curve, then $C$ is a genus one curve with Jacobian $E$, an elliptic curve. The question we address is the one asked by Asher Auel, namely, which $E$ arise. We give an answer that depends on the structure of $A$.

Tuesday, March 15, 2016, 5:00 pm
Mathematics and Science Center: W304

Mathematics and Computer Science
Emory University