Algebra Seminar

Generalized Brauer dimension of semi-global fields

Saurabh Gosavi
Rutgers University

Abstract: Given a finite set of Brauer classes B of a fixed period ℓ, we define $ind(B)$ to be the minimum of degrees of field extensions L/F such that $\alpha \otimes_F L = 0$ for every α in B. When F is a semi-global field (i.e transcendence degree one field over a complete discretely valued field), we will provide an upper-bound for $ind(B)$ which depends on invariants of fields of lower arithmetic complexity. As a simple application of our result, we will obtain an upper-bound for the splitting index of quadratic forms and finiteness of symbol length for function fields of curves over higher-local fields.

Tuesday, November 12, 2019, 4:00 pm
Mathematics and Science Center: MSC W303

Mathematics
Emory University