1086-00-26   **Raman Parimala***, Emory University, Atlanta, GA. *A Hasse principle for quadratic forms over function fields.*

The term 'Hasse principle' stands for the idea of finding integersolutions to equations by piecing together solutions modulo different prime powers. Solutions modulo prime powers lead to solutions in the completions of the field of rational numbers at p-adic valuations. A classical theorem of Hasse-Minkowski states that a quadratic form over rational numbers admits a nontrivial solution if it does over all p-adic completions and is indefinite over real numbers. There are more general theorems on the obstructions to the Hasse principle for the existence of rational points on homogeneous spaces under linear algebraic groups defined over number fields. We shall discuss formulations of the Hasse principle over function fields and some consequences for quadratic forms. (Received May 21, 2012)