1046-11-645 **P. Charters\*** (`pcharter@math.utexas.edu`), Department of Mathematics, 1 University Station, C1200, Austin, TX 78751. *Generalizing Binary Quadratic Residue Codes.*

The quadratic residue codes are a family of codes that have historically been of interest due to their strong properties - they have transmission rate close to $\frac{1}{2}$, and a square root lower bound on their minimal distance. In this talk we will define a new family of codes, which we will call $q$-residue codes, that will generalize the quadratic residue codes using higher powered prime residues over fields of the corresponding order. Some of the important properties of these new codes will also be discussed. (Received September 09, 2008)