

**Meeting:** 1007, Santa Barbara, California, SS 13A, Special Session on Arithmetic Geometry

1007-11-98      **Luis Finotti\*** ([finotti@math.ohio-state.edu](mailto:finotti@math.ohio-state.edu)), Department of Mathematics, Ohio State University, 231 West 18th Avenue, Columbus, OH 43210. *Minimal Degree Liftings of Hyperelliptic Curves in Characteristic 2.*

Liftings of hyperelliptic curves in characteristic 2 to hyperelliptic curves over rings of Witt vectors, and their associated lifts of points, can be used in the construction of error-correcting codes. The parameters of these codes depend on the degrees of the coordinate functions of the lift of points. We will give upper and lower bounds for those degrees and show explicit examples of codes that are obtained using such lifts.

We shall also discuss whether or not there are lifts of the Frobenius in particular open subsets of hyperelliptic curves and relate the elliptic case with the canonical lifting. (Received February 08, 2005)