1046-14-1768 **Nathan Drake*** (ndrake@clemson.edu), Department of Mathematical Sciences, Clemson University, Clemson, SC 29634-0975. *On decoding multipoint algebraic geometry codes.*

Algebraic geometry codes (AG codes) have attracted a great deal of attention since their advent. AG codes are generalizations of the widely implemented Reed-Solomon codes, and the construction of AG codes yields a family of codes with parameters exceeding the Gilbert-Varshamov bound. An AG code is defined using divisors D and G on a curve X over a finite field. Such a code is called an m-point code if there are exactly m points in the support of the divisor G. A multipoint code is an m-point code with $m > 1$. The majority of the work on AG codes has focused on one-point codes, meaning that the divisor G is a multiple of a single rational point. However, at times, allowing G to be more general yields codes with better parameters than their one-point counterparts. Even so, most decoding algorithms are designed for the one-point case. In this talk we present a decoding algorithm for multipoint codes that utilizes list decoding in a supercode. (Received September 16, 2008)