

Speaker: Pradeep Kiran, Dept. of Computer Science, TAMU

Title: Quantum Reed-Muller Codes

Abstract:

We construct nonbinary quantum codes from classical generalized Reed-Muller codes and derive the conditions under which these quantum codes can be punctured. We provide a partial answer to a question raised by Grassl, Beth and Roetteler on the existence of optimal q -ary quantum codes of length n with $q \leq n \leq q^2 - 1$.

This is joint work with Andreas Klappenecker. The results have been published in Proceedings of ISIT 2005.