



Department of Mathematics and Statistics

Colloquium

Tuesday February 27

AMB 164 4:00 - 5:00 pm

**A new approach to codes: centralizer, twisted
centralizer and general linear transformation codes**

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Abstract

Abstract: We recently defined two new classes of codes that bring a new approach to viewing codes. We will discuss these codes, which we have called centralizer and twisted centralizer codes, together with their encoding and syndrome computation and parameters. Inspired by these two examples, we will discuss a new direction of research in which we view codes as kernels of linear transformations between suitable vector spaces, thus introducing the notion of linear transformation codes. We will finish by giving some potential applications of these codes in designing new cryptosystems.

Refreshments at 3:45