



Department of Mathematics and Statistics

Colloquium

Tuesday September 11

AMB 164 4:00 pm

***p*-ary local Frobenius rings,
their homogeneous weights
and a class of Griesmer-optimal codes**

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Abstract

We start with a characterization of different properties of p -ary local Frobenius rings and their generating characters. Using the generating character, we describe a general form for the homogeneous weights of such rings. In particular we show that the homogeneous weights of all such rings have two non-zero values. Moreover, we find distance-preserving, linear Gray maps for the homogeneous weights of some classes of p -ary local Frobenius rings, and using the Gray image, we construct many Griesmer-optimal linear p -ary codes.

Refreshments at 3:45