Department of Applied and Computational Mathematics and Statistics Colloquium

Joachim Rosenthal

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will give a lecture entitled:

Linear Random Network Codes, A Grassmannian Approach

Abstract

A novel framework for random network coding has been introduced by Koetter and Kschischang. In this framework, information is encoded in subspaces of a given ambient space over a finite field. A natural metric is introduced where two subspaces are "close to each other" as soon as their dimension of intersection is large. This framework poses the challenge to come up with new codes with optimal or near optimal distance and to develop efficient decoding algorithms.

In the first part of the talk, we will provide a survey. In the second part of the talk, we will report on progress constructing spread codes and orbit codes.

Tuesday, April 26th, 2011
4:00 p.m. to 5:00 p.m.
129 Hayes-Healy Center