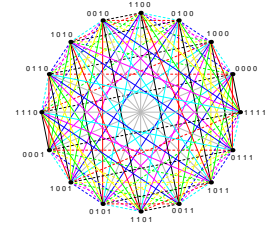


**Jointly Organized by
School of Computer Science and
Department of Mathematics and Statistics**



April 22 (Monday), 16:30 – 17:30, Burnside Hall 1205

Projections on Codes

by

Prof. Keith Mellinger

University of Illinois at Chicago

<http://www.math.uic.edu/~kmelling/>

The construction of good binary (linear) codes from shorter codes has been widely studied by coding theorists. One motivation is to lower the decoding complexity of the original code. We will start with a survey of the theory of error-correcting codes. After taking a look at the main problems, notations, and techniques, we will look at examples of codes and discuss some of the current applications and trends in the research. From there, we will discuss a certain projection technique whereby one can obtain an additive code over $GF(4)$ from a binary linear code of longer length. We generalize the projection, look at several examples, and discuss the associated automorphism groups.

This talk will be accessible to a diverse audience.

(Jointly with Applied Mathematics Seminar, <http://www.math.mcgill.ca/nigam/AMCSEseminar.htm>)

Organizers: D. Avis(CS), D. Bryant(CS/Math), K. Fukuda(CS), B. Reed(CS) and V. Rosta(Math).

Information: <http://www.cs.mcgill.ca/~fukuda/semi/discmath.html>