

## Dave Morris (University of Lethbridge)

**MONDAY—April 2, 2012**

**Room: E575**

**Time: 12:00 to 12:50 p.m.**

Title: Strictly complex norms on amenable groups

Abstract:

It is obvious that the usual Euclidean norm is strictly convex, by which we mean that, for all  $x$  and all nonzero  $y$ , either  $|x + y| > |x|$ , or  $|x - y| > |x|$ . We will discuss the existence of such a norm on an abstract (countable) group  $G$ . A sufficient condition is the existence of a faithful action of  $G$  by orientation-preserving homeomorphisms of the real line. No examples are known to show that this is not a necessary condition, and we will combine some elementary measure theory and dynamics with the theory of orderable groups to show that the condition is indeed necessary if  $G$  is amenable. This is joint work with Peter Linnell of Virginia Tech.

EVERYONE IS WELCOME!

Visit the seminar page at <http://www.cs.uleth.ca/~nathanng/ntcoseminar.html>

