

Mathematics & Computer Science
NUMBER THEORY & COMBINATORICS SEMINAR

Dr. Ted Dobson

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DATE: Wednesday, February 29, 2012

TIME: 11:00 to 11:50 p.m.

ROOM: E575

TITLE: Groups that are transitive on all partitions of a finite set

ABSTRACT:

Let ℓ_1, \dots, ℓ_r be positive integers whose sum is n . Let K_1, \dots, K_r be subsets of the n -element set $[n] = \{1, \dots, n\}$ such that these sets form a partition P of $[n]$ and $|K_i| = \ell_i$. We say that $[\ell_1, \dots, \ell_r]$ is the *shape* of P . Let \wp be the set of all partitions of $[n]$ with shape $[\ell_1, \dots, \ell_r]$. We determine all subgroups of S_n that are transitive on \wp for every possible shape $[\ell_1, \dots, \ell_r]$, as well as determine all subgroups of S_n that are transitive on the set of all ordered partitions of every possible shape. As an application, we determine which Johnson graphs are isomorphic to Cayley graphs. This is joint work with Aleksander Malnič.

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

OPEN TO ALL INTERESTED PERSONS



Light refreshments