Combinatorics Seminar

Speaker:

David Pike
Memorial University

Wednesday, April 2

2:00 p.m., HH-3017

Colouring Block Designs

Abstract:

A block design with point set V and block set ß is said to be c-colourable if the points of V can be partitioned into c sets called colour classes such that no block of ß has all of its points in a single colour class. A design is said to be c-chromatic if it is c-colourable but not $(c - 1)$-colourable. For all integers $c \geq 2$, $k \geq 3$ and $\lambda \geq 1$ (except for $(c,k) = (2,3)$), we show that for sufficiently large v the obvious necessary conditions for the existence of a BIBD(v, k, λ) are sufficient for the existence of a c-chromatic BIBD(v, k, λ). This is joint work with Daniel Horsley.