Date: October 23, 2007

Speaker: Dr. Ken Gray, The University of Queensland, Australia

Title: Unexpectedly new results on two well-known designs.

Abstract: This talk is in two parts. Each part should appeal particularly to those who appreciate symmetry in mathematics. Firstly, simple 3-dimensional models are used to give a highly symmetric allocation of triples to the 20 faces of an icosahedron that makes it possible, and easy, to read off the ten blocks of each of all 12 possible (6,3,2) designs. This talk does not assume any prior knowledge of block designs.Secondly, it is shown how all of the 480 possible triples on 16 elements not contained in the 20 blocks of a (16,4,1) design can be partitioned into 48 isomorphic 10-block sets, each of which induces a Petersen graph.