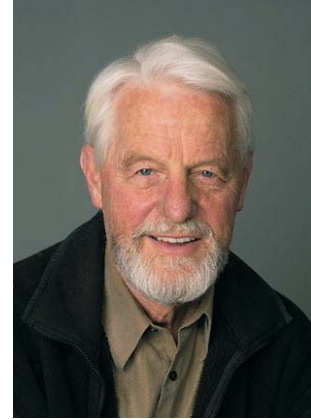# Peter Lancaster
University of Calgary

May 5, 2011
3:00 p.m.
Classroom Building 312 (CL312)

Canonical Structures for Matrix Functions

Many problems of mechanics, sound propagation, mathematical biology, etc., can be effectively modelled with matrix eigenvalue problems in which the eigenvalue parameter appears in a nonlinear fashion. Over the last fifty years or so, this has given rise to a comprehensive theory. In particular, canonical structures play an important role, and can be arrived at by either algebraic or analytical methods. We will give a survey of results of this kind in which either Hermitian or unitary symmetry plays an important role. (This talk can be understood with little more than ideas from undergraduate algebra and analysis.)

UNIVERSITY OF REGINA

Mathematics and Statistics

Pacific Institute FOR THE MATHEMATICAL SCIENCES