

☀ **ALGEBRA SEMINAR TALK** ☀

FRIDAY, DECEMBER 12, 2008

MARTIN PINSONNAULT
(The University of Western Ontario)

2:30 P.M. – Middlesex College Room 107

“Homotopy Type of Some Symplectomorphism Groups”

ABSTRACT:

In this talk, I will explain how we can compute the rational homotopy type of symplectomorphism groups of some four-manifolds. After explaining the general framework, I will focus on some rational symplectic four-manifolds for which the analysis can be carried through effectively using pseudo-holomorphic curves techniques and the theory of deformations of complex structures. For those manifolds, we will see that Symp is equivalent to an iterated homotopy pushout of maximal compact subgroups.

S. K. Donaldson



M. Gromov



M. Freedman



Some of the amazing contributors to our current knowledge of 4-manifolds.

There is something very special about four-dimensional manifolds and about our next Algebra Seminar speaker, Martin Pinsonnault. Four-dimensional manifolds are so natural, yet so mysterious. They are intimately connected with physics and differential geometry. They are mischievous strangers among other dimensional manifolds with their own special tricks. Yet Martin Pinsonnault will show us how to demystify symplectomorphism groups of some of these manifolds and even how to compute their rational homotopy type. This is really a nice way to conclude our Algebra Seminar for this semester and for the year 2008!

☺ ALL ARE WELCOME!