



PURDUE UNIVERSITY

Department of Mathematics Colloquium

Speaker: Professor Andrew Toms, York University

Title: "Dimension(s) for C^* -algebras"

Date: Tuesday, September 9, 2008

Time: 4:30 P.M.

Place: MATH 175

Abstract

The study of C^* -algebras may be regarded as noncommutative topology. As such, is it natural to ask for C^* -algebra generalisations of notions from the study of locally compact Hausdorff spaces. One such notion is the covering dimension of the space. In this talk I will survey various methods of generalising this concept to C^* -algebras, and also variants on these methods which account more effectively for the "matricial" structure of C^* -algebras. We will define dimensions for C^* -algebras by topological, operator algebraic, and homological means, and see how they are sensitive to differences between steadily more exotic C^* -algebras. Finally, we will discuss the relationships between these dimension theories, and their bearing on K -theoretic rigidity phenomena.

Refreshments will be served in the Math Library Lounge, 4:00 P.M.