

IMIA Operator Algebra Seminar
University of Wollongong

Title: K-theoretic duality for Smale spaces

Speaker: Michael Whittaker (University of Wollongong)

Time and Dates: 3:30pm, Thursday June 30 and July 7, 2011

Location: Room 19.1098

Abstract: K-theoretic duality for a pair of C^* -algebras was formulated by Kasparov to generalize the notion of Poincaré duality for topological spaces. When C^* -algebras A and B are dual there are canonical isomorphisms between the K-theory of A and the K-homology of B and between the K-theory of B and the K-homology of A .

Smale spaces will be introduced along with their associated C^* -algebras. In particular, we will discuss the stable and unstable Ruelle algebras and show that they are dual by explicitly constructing the duality classes. We will focus heavily on two examples of Smale spaces; subshifts of finite type and hyperbolic toral automorphisms.

This is joint work with Jerry Kaminker and Ian Putnam.