

IMIA Operator Algebra Seminar
University of Wollongong

Title: Fredholm modules for shifts of finite type

Speaker: Mike Whittaker (University of Wollongong)

Time and Dates: 3:30pm Thursday, 4 April 2013

Location: Room 39C.tearoom

Abstract: Shifts of finite type are a specific type of Smale space. One can associate several C^* -algebras to a Smale space and these C^* -algebras encode dynamical information in a noncommutative framework. In this talk we will construct Fredholm modules on the stable and unstable algebras and extend them to the Ruelle algebras of a shift of finite type. To show these are homologically nontrivial we use the Pimsner-Voiculescu sequence to produce K -theory classes in the Ruelle algebras and use the index pairing formula to see that the index is nonzero. All this is work in progress and I welcome feedback and new directions.