Analysis Seminar

Title: Semigroup actions on operator algebras

Speaker: E. Kakariadis (Newcastle)

Date: Tue 2nd December 2014 at 3:00PM

Location:

Abstract: The study of operator algebras arising from dynamical systems is almost as old as the study of operator algebras themselves. Recently the research has turned the focus to actions of semigroups on an arbitrary operator algebra by endomorphisms and their dilation to group actions. In this talk we will present recent findings for the semigroup $mathbbZ_+^n$. These include the Cuntz-Nica-Pimsner algebra that generalises the Cuntz-Pimsner algebra of the one variable case and the usual C*-crossed product for group actions. In particular we will give a dilation technique from n commuting endomorphisms to n commuting automophisms on a larger C*-algebra such that the corresponding (minimal) Cuntz-Nica-Pimsner algebras are strong Morita equivalent. Hence we can reduce problems on semigroup actions to problems on group actions. Further consequences of our analysis include the association of the ideal structure/nuclearity/exactness of the Nica-Pimsner algebras with minimality-freeness/nuclearity/exactness of the C*-dynamics. The talk is based on a joint work with Ken Davidson and Adam Fuller.