

IMIA Operator Algebra Seminar
University of Wollongong

Title: Groupoid actions on fractafolds

Speaker: Alex Kumjian (University of Nevada)

Time and Dates: 3:30pm Thursday, 9 August 2012

Location: Room 15.113 (Access grid room)

Abstract: Let Y be a complete metric space (with a locally compact topology). An iterated function system (IFS) consists of n strict contractions F_1, \dots, F_n on Y . The fractal associated to the IFS is the unique compact set K which satisfies $K = F_1(K) \cup \dots \cup F_n(K)$. Under mild hypotheses Strichartz constructs a fractal blowup K_x for each $x \in X = \{1, \dots, n\}^\infty$ as the increasing union of the compact sets $F_{x_1}^{-1} \dots F_{x_1}^{-1}$. If x and y are shift tail equivalent then K_x and K_y are homeomorphic. We show that there is a natural groupoid action on the fractafold bundle (i.e. the disjoint union of the K_x endowed with an appropriate topology).

This is an interim report of joint work with Marius Ionescu