

IMIA Operator Algebra Seminar
University of Wollongong

Title : Dixmier-Douady for Fell algebras

Speaker: Aidan Sims (UOW)

Abstract: A continuous-trace C^* -algebra is a C^* -algebra with locally compact Hausdorff spectrum which looks locally like a trivial bundle over its spectrum with constant fibre the compact operators. The famous Dixmier-Douady theorem, which was the first great triumph of noncommutative topology, says that the Morita-equivalence classes of continuous-trace C^* -algebras with spectrum T are indexed by a Čech-cohomology group associated to T .

Fell algebras are locally like continuous-trace C^* -algebras, but their spectra needn't be Hausdorff. In this series of two talks, I will discuss how to generalize the Dixmier-Douady theorem to Fell algebras using Kumjian's theory of C^* -diagonals, and present examples indicating why the same techniques cannot be pushed further to handle bounded-trace C^* -algebras. The first lecture will introduce C^* -diagonals and the associated groupoids. The second lecture will show how these can be used to define a Dixmier-Douady invariant and indicate some future directions.

This is joint work with Astrid an Huef and Alex Kumjian.

Time and Date: 3:30pm, Tuesday March 1 and Tuesday March 8, 2011

Location: Room 19.1093 (March 1) and 22.G23 (March 8)