

IMIA Operator Algebra and Noncommutative Geometry Seminar
University of Wollongong

Title: A fractal approach to spectral triples on aperiodic tilings

Speaker: Michael Mampusti (University of Wollongong)

Time and Date: 4:30pm Thursday, 4 December 2014

Location: Room 39C.meeting room

Abstract: I will report on progress towards defining an odd spectral triple on a C^* -algebra associated to an aperiodic tiling. A fractal tree can be inscribed in an aperiodic substitution tiling T satisfying mild conditions, which is invariant under the substitution. The fractal tree gives us a notion of geodesic distance between two tilings in the translational equivalence class of T . Using this data we define an odd spectral triple on a C^* -algebra which is strongly Morita equivalent to the tiling C^* -algebra defined by Kellendonk. This work is part of my honours thesis supervised by Michael Whittaker.