

SMAS Operator Algebra and Noncommutative Geometry Seminar
University of Wollongong

Title: Aperiodic substitution tilings with fractals

Speaker: Samuel Webster (University of Wollongong)

Time and Date: 3:30pm Thursday, 13 March 2014

Location: Room 39C.meeting room

Abstract: We show how to construct infinitely many new tilings from known substitution systems. Our new tilings are built from planar graphs which are dual to the tiling. For our new tilings to be substitution systems we invoke the power of infinity, which force our new tilings to have fractal boundary. Our construction preserves properties of the original tiling such as aperiodicity, primitivity and finite local complexity. Our new fractal tilings are mutually locally derivable with the substitution system we start with, and always force the border. This is joint work with Natalie Priebe Frank and Michael Whittaker.