

IMIA Operator Algebra Seminar
University of Wollongong

Title: An introduction to Chen's conjecture and submanifolds of finite type

Speaker: Glen Wheeler (University of Wollongong)

Time and Dates: 3:30pm Thursday, 13 June 2013

Location: Room 39C.tearoom

Abstract: Chen's conjecture is a curiosity which arose in the course of his grand scheme to classify all submanifolds of Euclidean space. While this lofty program is nowhere near completion, work on the conjecture in its original form is almost at an end. In this talk I will take Chen's original path to his conjecture, which begins with jealousy of the Order from Algebraic Geometry, goes through an unusual application of spectral resolution of the Laplacian from Functional Analysis, to end up with a beautiful nonlinear system of partial differential equations. After arriving at the conjecture, I will quickly overview progress on it in its original form, including recent solutions (joint work with V.-M. Wheeler and Y. Bernard). My talk is designed to be accessible and elementary, and will not require anything difficult, scary or intimidating to understand.