

IMIA Operator Algebra Seminar
University of Wollongong

Title: The Amalgamated Free Product of Semifinite Hyperfinite von Neumann Algebras over Type I atomic Subalgebras.

Speaker: Daniel Redelmeier (Texas A & M)

Time and Dates: 3:30pm Tuesday, 12 June 2012

Location: Room 15.113 (Access grid room)

Abstract: The amalgamated free product for von Neumann algebras is a construction which has seen considerable use over the years. Here we examine the amalgamated free product of first finite then semifinite hyperfinite von Neumann algebras over type I atomic subalgebras. Generalising the concept of standard embeddings to what we call substandard embeddings we are able to show these are composed of direct sums interpolated free group factors and hyperfinite algebras in the finite case, and those with the addition of $B(H)$ tensored with interpolated free group factors in the semifinite case (as well as allowing semifiniteness in the hyperfinite part). Further we show that these classes are closed under this type of amalgamated free product. We also adapt the concept of free dimension so that these products continue to satisfy the following equality: the free dimension of the amalgamated free product of A and B over D is the sum of the free dimensions of A and B minus the free dimension of D .