

IMIA Operator Algebra Seminar
University of Wollongong

Title: Subfactors as quantum symmetries

Speaker: Scott Morrison (Australian National University)

Time and Dates: 3:30pm Thursday, 25 October 2012

Location: Room 15.113 (Access grid room)

Abstract: I'll explain how every finite group G can be realized (essentially uniquely) as outer automorphisms of the hyperfinite II_1 factor R . Taking the fixed points we obtain a subfactor $R^G \subset R$. From the representation theory of $R^G \subset R$ we can recover the group G . A useful perspective on subfactors is to think of any subfactor $A \subset B$ as arising in this way from a 'quantum symmetry group'. We're still exploring this new world: constructing new examples, understanding just how 'exotic' these are, and proving classification results in some regimes. I'll tell you what we've seen so far.