

IMIA Operator Algebra Seminar
University of Wollongong

Title: Noncommutative solenoids

Speaker: Judy Packer (University of Colorado)

Time and Dates: 3:30pm Thursday, 2 August 2012

Location: Room 15.113

Abstract: A noncommutative solenoid is a twisted group C^* -algebra for $\mathbf{Q}_N \times \mathbf{Q}_N$, where \mathbf{Q}_N denotes the additive subgroup of the rational numbers whose denominators consist of N to integer powers, for $N > 1$ a fixed integer. We discuss techniques for determining when such C^* -algebras are simple by studying the related multipliers of $\mathbf{Q}_N \times \mathbf{Q}_N$, and classify a family of these C^* -algebras up to $*$ -isomorphism. Our results rely in part on computing the K_0 -groups of the C^* -algebras in question. We do so by writing these C^* -algebras as direct limits of rotation algebras, and prove that their K_0 -groups are extensions of \mathbf{Q}_N by \mathbb{Z} .

The work discussed here is joint with Frédéric Latrémolière of the University of Denver.