Kristin Courtney WWU Münster

Title: Amalgamated Products of Strongly RFD C*-algebras arising from locally compact groups

Abstract: Residual finite dimensionality is the C*-algebraic analogue for maximal almost periodicity and residual finiteness for groups. Just as with the analogous group-theoretic properties, there is significant interest in when residual finite dimensionality is preserved under standard constructions, in particular amalgamated free products. In general, this question is quite difficult; however the answer is known when the amalgam is finite dimensional or when the two C*-algebras are commutative. In moving beyond these cases, group theoretic restrictions suggest that we consider central amalgams. We generalize the commutative case to pairs of so-called "strongly residually finite dimensional" C*-algebras amalgamated over a central subalgebra. Examples of strongly residually finite dimensional C*-algebras include group C*-algebras associated to virtually abelian groups, certain just-infinite groups, and Lie groups with only finite dimensional irreducible unitary representations. This is joint work with Tatiana Shulman.