

Speaker: Andrew Toms

Title: Functorial classification of C^* -algebras: Elliott's program **Abstract:**

We introduce the notion of classification by functors, which has a long history in the world of C^* -algebras. The origins and ideas behind Elliott's classification program for separable amenable C^* -algebras will be discussed, and its history traced. I'll finish by describing the current state of the program and some possible points of contact between it and the notion of classifiability espoused by descriptive set theory. By the unitary group we mean the Polish group of unitary operators on a separable complex Hilbert space. We consider the class of all orbit equivalence relations induced by Borel actions of the unitary group. The main focus is the Borel reducibility hierarchy for this class of equivalence relations. I'll talk about results as well as open problems.