



FMSP Lectures

George Elliott
(Univ. Toronto)

Recent progress in the classification of
amenable C^* -algebras

July 22 (Wednesday) 16:45 ~ 18:15 Room 122

Abstract:

Recently Gong, Lin, and Niu (GLN) classified Jiang-Su stable, simple, unital, separable, amenable (= nuclear), rationally tracially approximately point-line C^* -algebras, and showed that these exhausted the natural invariant for C^* -algebras with all except the last property, but assumed to be finite. (The infinite ones are already classified--- by Kirchberg-Phillips---, assuming the UCT.) Using work of Niu, Santiago, Tikuisis, and me, Gong, Lin, Niu, and I have shown that the class of simple, unital, approximately subhomogeneous (ASH) C^* -algebras is contained in the class classified by GLN---and therefore (since ASH algebras also exhaust the invariant) coincides with it. There remains the question of showing that arbitrary stably finite, simple, unital, separable, amenable C^* -algebras are ASH---interesting as the Jiang-Su stable ones would then be classifiable. (Also, by a result of Dadarlat, it would follow that the UCT holds for any separable amenable C^* -algebra. Of course, it would still be interesting just to assume the UCT.)