

ON ASYMPTOTICAL TRACIAL APPROXIMATION OF SIMPLE C^* -ALGEBRAS

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Time: Mon, Jan. 11th, 10:00-10:30

Venue: Room 111, SCMS

Abstract:

Tracial approximation plays an important role in the theory of classification of C^* -algebras. All classifiable simple nuclear C^* -algebras can be tracially approximated by C^* -algebras with nice property.

In this talk I will introduce a concept called asymptotical tracial approximation. Accordingly we will have tracial nuclear dimension, which is a generalization of tracial rank and nuclear dimension. Also, we will have asymptotically tracially Jiang-Su stability. We show that for a simple separable unital C^* -algebra, having finite tracial nuclear dimension is equivalent to being asymptotically tracially nuclear and asymptotically tracially Jiang-Su stable. This is a generalization of the Toms-Winter conjecture to non-nuclear C^* -algebras. We also show that for tracially finite nuclear dimension C^* -algebras, strict comparison for positives is hold. I will also talk about some interesting examples about the tracial approximation.

This is a joint work with Professor Huaxin Lin.