

# SCMS Seminar



## ***DIMENSION, COMPARISON, AND ALMOST FINITENESS***

**Speaker: Prof. David Kerr**  
**Texas A&M University**

**Time:** 3:00 - 4:00 pm, Wednesday, June 14, 2017

**Venue:** Room 2201, East Guanghua Tower (Main), Fudan University

**Abstract:** I will explain how one can develop a dynamical version of some of the theory surrounding the Toms-Winter conjecture for simple separable nuclear  $C^*$ -algebras. In particular, I will introduce a notion of almost finiteness for group actions on compact spaces as an analogue of both hyperfiniteness in the measure-preserving setting and of  $\mathcal{Z}$ -stability in the  $C^*$ -algebra setting. This generalizes Matui's concept of the same name from the zero-dimensional context and is related to dynamical comparison in the same way that  $\mathcal{Z}$ -stability is related to strict comparison in the Toms-Winter context. For free minimal actions of countably infinite groups on compact metrizable spaces the property of almost finiteness implies that the crossed product is  $\mathcal{Z}$ -stable, which leads to new examples of classifiable crossed products.