20201129复旦大学小型动力系统WORKSHOP

时间：**11月29日 9:00-16:30**

腾讯会议：894 642 613

上午 Lecture 1   9:00-9:50   Speaker: Yujun Zhu (朱玉峻)

Title: On preimage entropy and stable entropy

Abstract: For noninvertible dynamical systems, we investigate the theory of entropy via preimage sets. The relations among several types of topological and measure-theoretic entropies via preimage structure are considered. For a partially hyperbolic endomorphism on a closed manifold, we introduce the notions of stable topological and metric entropies, and establish a variational principle relating them.

Lecture 2   9:50-10:40   Speaker: Dou Dou (窦斗)

Title: Entropy dimension for zero entropy systems

Abstract: Entropy dimension is a class of entropy type quantities which measure the intermediate complexity for zero entropy systems. In this talk, I will introduce some related results and progresses on this theme.

Lecture 3   10:40-11:30   Speaker: Xiaomin Zhou (周小敏)

Title: Formulae of conditional entropy and some deformations

Abstract: We investigate conditional entropy with respect to monotonic (invariant, decreasing or increasing) measurable partitions and in particular we obtain Brin-Katok's and Katok's entropy formulae for conditional entropy with respect to invariant, decreasing and a large class of increasing partitions.

下午 Lecture 1   14:00-14:50   Speaker: Yu Huang (黄煜)

Title: 控制系统不变熵简介

Abstract: 不变熵和控制集是控制动力学中两个重要的概念，前者在网络控制系统中具有十分重要的作用，后者是能控性概念的细化。我们将介绍这两方面的进展，包括引入测度版本的不变熵和控制集上的二分定理。

Lecture 2   14:50-15:40   Speaker: Rui Kuang (匡锐)

Title: Some results related to entropy on one dimension dynamics

Abstract: In this talk, we show that any scrambled set of a graph map f with zero topological entropy has zero outer μ-measure, where μ is a finite and f-invariant Borel measure. We also investigate some formulas of topological sequence entropy for a circle map.

Lecture 3   15:40-16:30   Speaker: Tao Yu (于涛)

Title: Measure complexity and dynamical systems

Abstract: In this talk, we discuss dynamical systems which have bounded complexity with respect to various semi-metrics. First we show that a system has discrete spectrum if and only if it has bounded complexity with respect to some semi-metrics for amenable group actions. Second we show that a system is rigid if and only if it has bounded complexity with respect to some other metrics.