The Department of Mathematics

2019–20–B term

Course Name Cantor minimal systems and Orbit Equivalence

Course Number 201.2.5451

Course web page
    https://sites.google.com/site/tommeyerovitch/home/cantor-minimal-systems-and-orb

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Office Hours https://www.math.bgu.ac.il/en/teaching/hours

Abstract

Requirements and grading[1]

Course topics

In this course we will discuss Cantor minimal systems. These are dynamical systems that admit a precise "digital representation" in the sense that the state space can be viewed as an infinite sequence of digits.There has been considerable recent interest in such systems. In this course we will consider formal versions of the question "when are two systems actually the same" . We will introduce and study the notions of isomorphism and orbit equivalence for dynamical systems. The objective of this course is to introduce students to basic notions in dynamical systems through contemporary results. Introduction: Dynamical systems in topological dynamics and ergodic theory, ergodicity and minimality, isomorphism of dynamical systems, the Cantor set, toplogical equivalence relations, orbit equivalence. Invariant measures. Cantor mimimal systems, Bratteli diagrams and the Bratteli-Vershik Model, topological equivalence relations, Orbit cocyles, strong orbit equivalence, invariants for orbit equivalence and topological orbit equivalence.

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[1]Information may change during the first two weeks of the term. Please consult the webpage for updates