

# BILLIARDS IN DYNAMICAL SYSTEMS

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In the first part of the lecture, I am going to introduce some background of dynamical systems including: ergodicity, ergodic theorem and unique ergodicity. The introduction will be illustrated by a series of basic examples. The second part of the lecture is devoted to billiards as an object of research on dynamical systems, with an emphasis on billiards on rational polygons. I am not going to focus on specific theorems, but I would like to provide an overview of problems and methods. Student should go through the entire course of mathematical analysis and have some basic probability theory.