

# 概率论系列报告

报告题目 (Title): **Study of KdV equation from a point of view of ergode theory**

报告人 (Speaker): Shinichi Kotani (南京大学, Osaka University)

时间 (Time): 11月4日(周一)下午 2:00-3:00

地点 (Venue): 北京大学理科一号楼 1513

摘要 (Abstract): The KdV equation is known to be an infinitely dimensional completely integrable system. In finite dimension, if a system is completely integrable and is confined in a bounded domain, then it is known that the motion is quasi-periodic, and as a consequence the motion is recurrent. If the space dimension is infinite, this statement is not trivial. However, people believe that it would be true, namely solutions to the KdV equation starting from a certain class of ergodic processes have a property of recurrence. This conjecture has not been solved yet, but it seems to contain a new aspect of the KdV equation as well as of ergode theory. I will explain several problems behind.

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