



微分方程与计算物理研究室

2024 年度系列报告(4)

报告题目: Crossing blocks, topological horseshoe and computer studies on complex systems

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时间: 2024 年 10 月 31 日 (周四) 16:00-17:00

地点: 数学院南楼 202

摘要: Chaos is ubiquitous in complex systems. In this talk, we present a theory of crossing blocks and topological horseshoe. As applications of this theory, we demonstrate how to prove chaos in several applied nonlinear systems by computer computations, based on the crossing blocks and topological horseshoes. In particular, we show new remarkable dynamics in some polynomial ODE system. In addition, we also show the efficiency of deep learning in investigations of chaos in complex systems.