

Einladung zum Vortrag

von Prof. Dr. Sergiy Kolyada

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zum Thema

Dynamical Compactness and Dynamical Topology

am Mittwoch, 30.11.2016, um 13:00 Uhr (IM SR 040)

Abstract:

The area of dynamical systems where one investigates dynamical properties that can be described in topological terms is called Topological Dynamics. Investigating the topological properties of spaces and maps that can be described in dynamical terms is in a sense the opposite idea. This area is called Dynamical Topology. Some results of this talk can be considered as a contribution to Dynamical Topology. To link the Auslander point dynamics property with topological transitivity, we introduced the notion of Dynamical Compactness with respect to a family as a new concept of chaoticity of a dynamical system (X, T) given by a compact metric space X and a continuous surjective self-map $T: X \rightarrow X$. In particular, we will show that all dynamical systems are dynamically compact with respect to a Furstenberg family if and only if this family has the finite intersection property. Observe that each topologically weak mixing system is dynamically (transitive) compact. We will discuss the relationships among it and other several stronger forms of sensitivity.

Based on joint works with Wen Huang, Danylo Khilko, Alfred Peris and Guo Hua Zhang.