

# Limit sets of discrete dynamical systems

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## Abstract

To understand the dynamical properties of a discrete dynamical system  $(X, f)$  it is necessary to analyze the behavior of the trajectories of any point  $x$  from  $X$  under the iteration of  $f$ . Limit sets of trajectories are a helpful tool for these purposes since they can be used to understand the long term behavior of a dynamical system. This talk is devoted to establishing different concepts of limit sets of forward and backward trajectories occurring in  $X$ . We will focus on the case when  $X$  is a compact interval and will provide basic facts, recent results and open challenges in this field.