Rees, Mary

Ergodic rational maps with dense critical point forward orbit. (English) Zbl 0553.58008

Ergodic Theory Dyn. Syst. 4, 311-322 (1984).

A proof is given of the fact that a rational map with all critical points eventually mapping to expanding periodic orbits is ergodic with respect to Lebesgue measure. It is shown that in many smooth families of rational maps, if A is the set of functions with all critical points eventually periodic, then $\bar{A}$ is uncountable, and contains functions which are ergodic with respect to Lebesgue measure and have dense critical point forward orbit.

MSC:

58E05 Abstract critical point theory (Morse theory, Lyusternik-Shnirel'man theory, etc.) in infinite-dimensional spaces
37A99 Ergodic theory
37G99 Local and nonlocal bifurcation theory for dynamical systems

Keywords:

rational map; Julia set; ergodic; critical point

Full Text: DOI

References:

[1] DOI: 10.1007/BF02591353 · Zbl 0127.03401 · doi:10.1007/BF02591353