Period incrementing and Milnor attractors for non autonomous families of at top tent maps

Luís Silva

Abstract

Period adding and period incrementing structures in the bifurcation scenarios of autonomous piecewise-smooth dynamical systems have been described in several works in the last few years, see [2] and references there in. It was observed in [1], that the introduction of a constant plateau in the map leads naturally to the appearance of Milnor attractors, This happens for parameters that may be described as accumulation points of parameters related with period incrementing sequences. In this work we consider families of nonautonomous dynamical systems generated by the sequential iteration de?ned by a binary sequence s, of two at top tent maps. We describe period incrementing structures in the bifurcation scenarios and show how Milnor attractors emerge as accumulations of period incrementing. We study the dependence of these phenomena on the iteration pattern s

References

[1] V. Avrutin, B. Futter, L. Gardini and M. Schanz, Unstable orbits and Milnor attractors in the discontinuous at top tent map, ESAIM: PROCEEDINGS, 36 (2012), 126–158.

[2] A. Granados, L. Alsedà and M. Krupa, The Period Adding and Incrementing Bifurcations: From Rotation Theory to Applications, SIAM Review 59(2) (2017), 225–292.