

New Trends in Onedimensional Dynamics Celebrating the 70th anniversary of Welington de Melo

Rio de Janeiro, November 14 - 18, 2016

Title: Measurable dynamics of a generalized Arnol'd family

Author: Arlane Vieira

Abstract: We investigate the measurable dynamics of the generalized Arnol'd family (in one parameter) in the punctured plane. This family restricts to a family of critical circle maps with only one critical point in \mathbb{S}^1 of degree $2d + 1$. We prove the complement of its escaping set has positive Lebesgue measure and, almost every orbit is asymptotic to the post-singular set. As a consequence, we find that the whole Fatou set has finite area. We also show that each map of this family is non recurrent and non ergodic with respect to the Lebesgue measure.