W. de Melo

Title:
Chaotic Period Doublins

Abstract:

I will talk about a joint work with V. V. M.S Chandamouli, M. Martens and W. C. P. Tresser on the geometry of maps in the stable manifold of the period doubling renormalization operator actin on the space of C^r maps for r around 2. The main result is that the analytic fixed point is no longer hyperbolic in the space of C^2 maps and that below C^2 even uniqueness is lost: for each n, there exists an invariant compact subset such that the restriction of the operator to this subsect is a homemorphism with topological entropy bigger than n.