

1025-37-104

Gregory T Buzzard* (buzzard@math.purdue.edu), Department of Mathematics, Purdue University, 150 N. University St., West Lafayette, IN 47907. *Structural stability for Hénon maps.*

One challenge in dynamics is to identify behavior that persists under perturbations of the dynamical system. In the study of real dynamics, this was resolved at the global level by the structural stability theorem (Robinson in one direction and Mañé in the other), which gives necessary and sufficient conditions for a map to be globally conjugate to nearby maps. In complex dynamics in 1-variable, holomorphic motions played an important role in establishing the global structural stability of most hyperbolic rational maps. I will describe results on structural stability for hyperbolic Hénon maps and the role of holomorphic motions in 2 variables. (Received January 17, 2007)