SBU Department of Mathematics &
Institute for Mathematical Sciences

Dynamical Systems Seminar

Liviana Palmisano

Uppsala University

Newhouse Laminations

We prove that the Newhouse phenomenon has a codimension 2 nature. Namely, there exist codimension 2 laminations of maps with infinitely many sinks. The leaves of the laminations are smooth and the sinks move simultaneously along the leaves. These Newhouse laminations occur in unfoldings of rank-one homoclinic tangencies. As consequence, in the space of polynomial maps, there are examples of: -two dimensional Hnon maps with finitely many sinks and one strange attractor, -Hnon maps, in any dimension, with infinitely many sinks, -quadratic Hnon-like maps with infinitely many sinks and one period doubling attractor, -quadratic Hnon-like maps with infinitely many sinks and one strange attractor, -two dimensional Hnon maps with finitely many sinks and two period doubling attractors, -quadratic Hnon-like maps with finitely many sinks, two period doubling attractors and one strange attractor.

Friday - February 08, 2019
Room Math Tower P-131 2:30 pm