

PLURIPOTENCY AND STATISTICAL BEHAVIOR IN NONHYPERBOLIC DYNAMICAL SYSTEMS

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Time: Wed, April 1st, 14:30-15:30

Venue: Room 106, SCMS

Abstract:

Roughly speaking, pluripotency refers to the possibility of realizing prescribed statistical behaviors on sets of positive measure under arbitrarily small perturbations. In this talk, I will discuss a result on two-dimensional diffeomorphisms showing that, in the presence of a wild Smale horseshoe, strong pluripotency holds robustly for the entire horseshoe. As applications, one obtains the dense occurrence of dynamics with a nontrivial physical measure and of historic behavior on wandering domains. I will also explain the connection with Takens' last problem and discuss some of the main geometric ideas behind the construction. This is a joint work with S. Kiriki, Y. Nakano, T. Soma and E. Vargas.