

**PLURIPOTENCY AND STATISTICAL BEHAVIOR IN  
NONHYPERBOLIC DYNAMICAL SYSTEMS**

**Speaker: Xiaolong Li 李晓龙**  
**Huazhong University of Science and Technology**  
**华中科技大学**

**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.