

Title: On the observability of periodic orbits for diffeomorphisms

Shuhei Hayashi (University of Tokyo)

Abstract: From a numerical viewpoint, mathematical concepts of observability to finite sets in compact metric spaces and its probabilistic version are introduced. Through these concepts, the C^1 -creation of good periodic orbits is considered. More precisely, if a non-atomic ergodic measure of a diffeomorphism f on a compact manifold admits no positive Lyapunov exponents, then f can be C^1 approximated by some g having a periodic orbit such that its observability is implied by its probabilistic observability.