

SEMINARIUM UKŁADY DYNAMICZNE

Tytuł: **Non-hyperbolic ergodic measures with positive entropy and full support**
Referent: **Martha Łącka**
Data: **26 I 2018**

Abraham and Smale proved that hyperbolic diffeomorphisms are not dense among all diffeomorphisms of a given manifold. This inspired Pesin to define a weaker notion of hyperbolicity: he proposed a notion of a hyperbolic ergodic measure. Gorodetsky, Ilyashenko, Kleptsyn, and Nalsky constructed an open set of diffeomorphisms of a three dimensional torus such that every diffeomorphism in this set admits a non-hyperbolic ergodic measure. Their method leads, however, to measures with zero entropy. Bonatti, Bochi, and Diaz in the series of two papers proved that for every manifold of dimension at least 3 there exist: an open set of diffeomorphisms admitting a non-hyperbolic ergodic measure with positive entropy and an open set of diffeomorphisms admitting a non-hyperbolic ergodic measure with full support. We will show that one can strengthen their results by constructing diffeomorphisms with a non-hyperbolic ergodic measure with positive entropy and full support. The talk will be based on the joint work with Ch. Bonnati, L. Diaz, and D. Kwietniak.