

Disintegration of Measures and Fine Ergodic Property of Smooth Dynamics (3 Lectures)

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Topics of the course:

1. Preliminaries on measurable partitions, conditional expectation, disintegration of measures along leaves of a foliation
2. Absolute continuity, atomic dichotomy in disintegration of partially hyperbolic dynamics
3. Hierarchy in ergodic properties: Katok's example on non equivalence of Kolmogorov and Bernoulli systems and new results on equivalence of Kolmogorov and Bernoulli in one dimensional central case in partially hyperbolic systems.

References:

1. Diagonal actions on locally homogenous space, M. Einsiedler, E. Lindenstrauss, Clay Mathematics Proceeding, vol 8, 2008
2. Minimal yet measurable foliations, G. Ponce, A. Tahzibi, J.R. Varão, Journal of Modern Dynamics, 2014, Vol. 8 Issue 1, p93