

SCHOOL ON HYPERBOLIC DYNAMICS, 12–16 JUNE 2017 (CRM, PISA)

**MINICOURSE TITLE: “A GEOMETRIC APPROACH FOR
CONSTRUCTING SRB AND EQUILIBRIUM MEASURES IN
HYPERBOLIC DYNAMICS”
LECTURER: YAKOV PESIN**

ABSTRACT. I will describe a unified approach for constructing SRB measures in dynamics. This approach is pure geometrical and does not use any symbolic model of the system. In dissipative dynamics SRB measures are natural and physically meaningful measures supported on attractors and they have a rich collection of ergodic properties. I will outline a construction of SRB measures in the case of uniformly hyperbolic attractors and then consider the most general case of non-uniformly hyperbolic chaotic attractors. I will then show how to modify the construction to obtain equilibrium measures. This involves some interesting ideas and results from the geometric measure theory. The lectures require some basic knowledge from the theory of dynamical systems and ergodic theory but all necessary notions will be introduced and most of relevant results will be stated.