

# Part I

## Basic Notions

This part is of an introductory nature and serves as a reference for the remaining chapters. We recall in a pragmatic manner all the necessary notions and results from hyperbolic dynamics, the thermodynamic formalism and dimension theory that are needed in the book. In Chap. 2 we consider suspension flows, the notion of cohomology and the Bowen–Walters distance. Suspension flows serve as models for hyperbolic flows which are introduced in Chap. 3. Here we also recall the notion of a Markov system and we describe how it can be used to associate a symbolic dynamics to any locally maximal hyperbolic set. In Chap. 4 we recall all the necessary notions and results from the thermodynamic formalism and dimension theory. This includes the notions of topological pressure, BS-dimension, lower and upper box dimensions and pointwise dimension.