Chapter 0

PRELIMINARIES

All spaces considered here are assumed to be metric (if otherwise is not explicitly said) and all mappings are assumed to be continuous. Concepts and notions undefined in the text are used according to their meaning known from the literature. To aviod any doubt or misunderstanding, the reader can find the needed definition or explanation in Appendix A, where the items are alphabetically ordered.

The following notation will be used. The symbol $\mathbb{R}$ stands for the space of real numbers, equipped with the natural topology. Thus $\mathbb{R}^2$ denotes the plane (usually supplied with a Cartesian coordinate system); equivalently, the plane can be denoted by $\mathbb{C}$ when considered as the set of all complex numbers. The closed unit interval $[0, 1]$ of reals is denoted by $\mathbb{I}$, and $\mathbb{N}$ means the set of all positive integers.