Abstract

We discuss in this thesis 17 notions of chaos which are commonly used in the mathematical literature and related definitions, namely those being introduced by Devaney, Turbulence, Liapounove, Robinson, Wiggins, Touhey, Experimentalists, Knudsen, P-chaos, Martelli, Block-Coppel, Li-Yorke, Entropy, Auslander, Smital, Kato, and S.Li respectively. We in particular show that for continuous mappings of a compact interval into itself the notions of chaos are equivalent (except the notion in sense of Li and Yorke) while each of these is sufficient but not necessary for chaos in the sense of Li & Yorke. We also give examples indicating that in the general context of continuous mappings between compact metric spaces the relation between these notions of chaos is more involved.