
Preface to the Third Edition

It has been thirteen years since the appearance of the first edition of this book, and nine years after the second. Meanwhile, chaotic (or nonlinear) dynamics is established as an essential part of courses in physics and it still fascinates students, scientists and even nonacademic people, in particular because of the beauty of computer generated images appearing frequently in this field.

Quite generally, computers are an ideal tool for exploring and demonstrating the intricate features of chaotic dynamics. The programs in the previous editions of this book have been designed to support such studies even for the non-experienced users of personal computers. However, caused by the rapid development of the computational world, these programs written in Turbo Pascal appeared in an old-fashioned design compared to the up-to-date standard. Even more important, those programs would not properly operate under recent versions of the Windows operating system. In addition, there is an increasing use of Linux operating systems. Therefore, for the present edition, all the programs have been entirely rewritten in C++ and, of course, revised and polished. Two version of the program codes are supplied working under Windows or Linux operating systems.

We have again corrected a few passage in the text of the book and added some more recent developments in the field of chaotic dynamics. Finally a new program treating the important class of two-dimensional discrete ('kicked') systems has been added and described in Chap. 13.

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Chaos

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