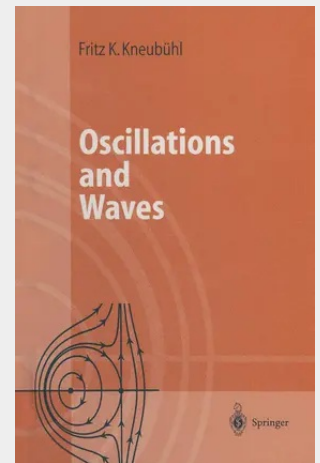


Oscillations and Waves

In the course of over thirty years of research in various fields of physics and teaching experimental physics to undergraduate and graduate students of physics, mathematics, electrical engineering, chemistry and natural sciences I missed an introductory comprehensive book on the mathematics of linear and nonlinear oscillations and waves from the point of view of physicists and engineers. Oscillations and waves are the playground for all kinds of scientists in spite of the fact that they represent essentially mathematical concepts. In this field, however, the interests of experimentalists and engineers, on one side, and mathematicians, on the other side, usually differ. The latter are most interested and engaged in proofs of general fundamental laws on the existence and behavior of the solutions of basic differential equations and on the convergence of their approximations, whereas the former need explicit analytical and numerical solutions or approximations, computer programs and graphic displays. In the past decades a gap opened between these two groups with the result that they have difficulties in communicating with each other. This comprehensive book represents a novel attempt to bridge this gap. This book is based on my lecture notes and its predecessor "Lineare und nichtlineare Schwingungen und Wellen" published by B. G. Teubner, Stuttgart, FRG, in 1995. The contents of the previous book have been considerably extended, revised and improved thanks to advice from colleagues and co-workers. Additions to be mentioned are the first classification of two-dimensional autonomous, i. e.

In the course of over thirty years of research in various fields of physics and teaching experimental physics to undergraduate and graduate students of physics, mathematics, electrical engineering, chemistry and natural sciences I missed an introductory comprehensive book on the mathematics of linear and nonlinear oscillations and waves from the point of view of physicists and engineers. Oscillations and waves are the playground for all kinds of scientists in spite of the fact that they represent essentially mathematical concepts. In this field, however, the interests of experimentalists and engineers, on one side, and mathematicians, on the other side, usually differ. The latter are most interested and engaged in proofs of general fundamental laws on the existence and behavior of the solutions of basic differential equations and on the convergence of their approximations, whereas the former need explicit analytical and numerical solutions or approximations, computer programs and graphic displays. In the past decades a gap opened between these two groups with the result that they have difficulties in communicating with each other. This comprehensive book represents a novel attempt to bridge this gap. This book is based on my lecture notes and its predecessor "Lineare und nichtlineare Schwingungen und Wellen" published by B. G. Teubner, Stuttgart, FRG, in 1995. The contents of the previous book have been considerably extended, revised and improved thanks to advice from colleagues and co-workers. Additions to be mentioned are the first classification of two-dimensional autonomous, i. e.



117,69 €

109,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783540620013

Medium: Buch

ISBN: 978-3-540-62001-3

Verlag: Springer

Erscheinungstermin: 06.10.1997

Sprache(n): Englisch

Auflage: 1997

Produktform: Gebunden

Gewicht: 2070 g

Seiten: 523

Format (B x H): 155 x 235 mm

