

chapter is devoted. Many asymptotic results due to Borg are discussed in detail.

Magnus has made extensive studies of the discriminant, and in particular its dependence on the Fourier coefficients of the periodic coefficient in Hill's equation. These are summarized and discussed fully. Another chapter is devoted to the general coexistence problem. This concerns itself with the questions of when can a Hill's equation have two linearly independent periodic solutions. For the Mathieu equation for example it is known that coexistence cannot arise, unless the equation degenerates to a harmonic equation. A number of classes of Hill equations are discussed, where either partial or complete answers can be provided. A final chapter is devoted to a number of special Hill equations for which detailed information is available.

This book provides a wealth of information regarding Hill's equation, most of which was up to now only available in the periodical literature. The authors promise another volume that will be devoted to the many interesting applications of Hill's equation in the physical sciences. It is to be hoped that we will not be kept waiting long for this companion volume.

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Handbook of Laplace transformation, by Floyd E. Nixon. Prentice-Hall, Applied Mathematics series. Englewood Cliffs, N. J., 1965. xii + 260 pages, second edition.

According to the preface 'this book is intended as a practical guide or reference for those already familiar with the Laplace transform and a self-study book for those who want to learn the Laplace transformation.'

The book consists of 8 chapters.

Chapter 1 deals with determinants and determinant manipulation techniques. Chapters 2, 3 and 4 give root finding methods and frequently used identities including the derivation of many important Laplace transform theorems. Chapter 5 contains a newly added extensive discussion on recurring wave forms which evolves the theory required for understanding practical design problems and mechanical vibrations due to inputs and electronic filtering wave forms. In chapter 6 selected Laplace transforms examples are given. Finally in chapters 7 and 8, tables are given for Laplace transform operations and Laplace transform pairs.

The book should be very useful for Engineers and Physicists.

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