EIGENVALUES OF MATRICES

$$\begin{pmatrix} \alpha_0 & \beta_1 & 0 & 0 & \cdots & 0 \\ \beta_1 & \alpha_1 & \beta_2 & 0 & \cdots & 0 \\ 0 & \beta_2 & \alpha_2 & \beta_3 & \cdots & 0 \\ \vdots & & & \ddots & & \vdots \\ \vdots & & & & \ddots & \beta_n \\ 0 & \cdots & & 0 & \beta_n & \alpha_n \end{pmatrix}$$

Françoise Chatelin

WILEY
Publishers Since 1807

Contents

Eigenvalues of Matrices

Françoise Chatelin,
Laboratoire Central de Recherches, Thomson-CSF, Orsay, France

With exercises by Françoise Chatelin and
Mario Ahués, Université de Saint-Etienne, France

Translated with additional material by
Walter Ledermann, University of Sussex

The calculation of eigenvalues of matrices is a problem of great practical and theoretical importance with many different types of application. This book provides a modern and complete guide to this subject, at an elementary level, by presenting in matrix notation the fundamental aspects of the theory of linear operators in finite dimensions.

This volume is a combination of two books; translations of Professor Chatelin's original and the corresponding book of exercises by Professor Ahués. The exercises are an indispensable complement to the main text. Solutions are furnished for some of the exercises.

The book will be of particular value to undergraduate students following courses on numerical analysis and for researchers and practitioners with an interest in this area.

ISBN 0-471-93538-7

9 780471 935384

JOHN WILEY & SONS

CHICHESTER·NEW YORK·BRISBANE·TORONTO·SINGAPORE

WILEY

Publishers Since 1807