Numerical analysis: a second course

Ortega, James M., 1932- , author

Abstrak

"This is a concise account of certain topics in numerical analysis which a student is expected to know when he reaches an advanced course yet may not have been introduced to in his first course on the subject...This book is organized around the notion of error. After the concepts of stability and ill-conditioning (important in gauging the effects of all kinds of error) are elucidated in a first part of the book, discretization error, convergence error, and rounding error are each studied separately in a few important situations in the last three parts of the book. A review chapter on the Jordan canonical form and on norms for vectors and matrices precedes all." -- Mathematics of Computation, July 1973, page 669.
"An excellent textbook at the advanced undergraduate or beginning graduate level dealing mainly with questions of stability and growth of error. . . . . There are a number of books available whose content intersects significantly with Ortega's material. . . . . However, Ortega's approach is somewhat different, utilizing the concepts of stability and error growth as they arise in various computational areas to unify the treatment, rather than separately dealing with the solution of linear systems, the eigenproblem, or differential equations." -- Choice, January 1973, page 331.
"The selection of the material, its presentation with many examples, and, in particular, counterexamples, make this book extremely valuable--not only for students." -- G. Mayer, Zentrablatt fur Mathematik, 1990.