

Contents

<i>Contributors</i>	<i>vii</i>
<i>Preface</i>	<i>ix</i>
Positive Functions and Some Applications to Stability Questions for Numerical Methods <i>Germund Dahlquist</i>	1
Constructive Polynomial Approximation in Sobolev Spaces <i>Todd Dupont and Ridgway Scott</i>	31
Questions of Numerical Condition Related to Polynomials <i>Walter Gautschi</i>	45
Global Homotopies and Newton Methods <i>Herbert B. Keller</i>	73
Problems with Different Time Scales <i>Heinz-Otto Kreiss</i>	95
Accuracy and Resolution in the Computation of Solutions of Linear and Nonlinear Equations <i>Peter D. Lax</i>	107
Finite Element Approximations to the One-Dimensional Stefan Problem <i>J. A. Nitsche</i>	119
The Hodie Method and Its Performance for Solving Elliptic Partial Differential Equations <i>Robert E. Lynch and John R. Rice</i>	143

Solving ODE's with Discrete Data in SPEAKEASY <i>L. F. Shampine</i>	177
Perturbation Theory for the Generalized Eigenvalue Problem <i>G. W. Stewart</i>	193
Some Remarks on Good, Simple, and Optimal Quadrature Formulas <i>H. F. Weinberger</i>	207
Linear Differential Equations and Kronecker's Canonical Form <i>J. H. Wilkinson</i>	231
<i>Index</i>	267

