

CONTENTS

Contributors	vii
Preface	ix
Elastostatic and Elastodynamic Stress Singularities <i>J. D. Achenbach</i>	1
Fundamental Mathematical Problems in the Theory of Nonlinear Elasticity <i>Stuart S. Antman</i>	35
Numerical Solution of Linear Partial Differential Equations of Elliptic-Hyperbolic Type <i>A. K. Aziz and S. H. Leventhal</i>	55
Homogenization and Its Application. Mathematical and Computational Problems <i>Ivo Babuška</i>	89
An Assessment of Current Finite Element Analysis of Nonlinear Problems in Solid Mechanics <i>Klaus-Jürgen Bathe</i>	117
Crude Numerical Approximation of Turbulent Flow <i>Alexandre Joel Chorin</i>	165
Heterogeneity Effects in Neutron Transport Computations <i>Ely M. Gelbard</i>	177
Behavior of the Solutions of an Elliptic Boundary Value Problem in a Polygonal or Polyhedral Domain <i>Pierre Grisvard</i>	207
Numerical Solution of Nonlinear Partial Differential Equations of Mixed Type <i>Antony Jameson</i>	275
Numerical Analysis of the Neutron Transport Equation <i>R. B. Kellogg</i>	321

CONTENTS

Instability Phenomena in Fluid Mechanics <i>Klaus Kirchgässner</i>	349
Introduction to Some Aspects of Free Surface Problems <i>J. L. Lions</i>	373
Regularity of Solutions of the Stokes Problem in a Polygonal Domain <i>John E. Osborn</i>	393
Hyperbolic Equations in Regions with Characteristic Boundaries or with Corners <i>Stanley Osher</i>	413
Numerical Bifurcation and Secondary Bifurcation: A Case History <i>Louis Bauer and Edward L. Reiss</i>	443
Convergence in Energy for Elliptic Operators <i>Sergio Spagnolo</i>	469
Short Communications	499

