## Contents

Chapter I
Asymptotic boundary conditions and expansion theorems
FOR BOUNDARY EIGENVALUE PROBLEMS
$N(y) = \lambda  P(y)$ with $\lambda$ -nonlinear boundary conditions
1.1. General assumptions and foundations
1.2. Asymptotic expansion of the characteristic determinant
1.3. Regularity
1.4. Asymptotic boundary conditions24
1.5. Expansion theorems
1.6. Proof of the expansion theorems
1.6.1. Estimate of the main terms
1.6.2. Estimate of the boundary terms,
Derivation of the asymptotic boundary conditions
1.6.3. Proof of Theorems 4a and 4b85
Chapter II
APPLICATIONS
2.1. A counter-example
2.2. The clamped–free elastic bar
2.3. More examples from technical mechanics
Figures
Index of symbols
References