

# CONTENTS

## 0. Foreword

### FIRST PART: OPERATOR THEOREMS

#### I. Operators in Euclidean Spaces: Eight Selected Problems

I.1.- Introduction	p. 5
I.2.- Eight Selected Problems	p. 7
I.3.- Relationships between the Solvability of the Eight Selected Problems	p. 11
I.4.- Further References to the Literature	p. 28
I.5.- Final Remarks	p. 32

#### II. The Main Formal Results: Some Theorems

##### on Operators in Euclidean Spaces

II.1.- Introduction	p. 35
II.2.- $Z^k$ -Functions and $k$ -fold Complementarity Problems	p. 36
II.3.- Two Theorems on Variational Inequalities for Set-Valued Mappings	p. 46
II.4.- Extensions and Interconnections	p. 54

SECOND PART: APPLICATIONS TO DISTRIBUTIVE PROBLEMS  
AND EQUILIBRIUM MODELS

**III. Efficient Allocations with Consumption Externalities**

III.1.- Introduction p. 65

III.2.- The Basic Model: Distributing a Bundle of  
"Goods" p. 70

III.3.- Egalitarian Allocations and Informational  
Frameworks p. 75

III.4.- Final Remarks p. 84

**IV. Market Equilibrium with Nonconvex Technologies**

VI.1.- Introduction p. 91

VI.2.- The Model p. 98

VI.3.- Pricing Rules p. 107

VI.4.- The Existence of Market Equilibrium p. 114

**V. Further Applications**

V.1.- Introduction p. 123

V.2.- Egalitarian Allocations: The General Case p. 124

V.3.- The Existence of Lindahl Equilibria in a Model with  
Several Public Goods and Price Externalities p. 130

V.4.- Nonlinear Input-Output Models p. 135

**References** p. 141