

CONTENTS

Chapter I. Discrete Convergence, Stability and Consistency

Foreword

§1. Discrete convergence	1-7
§2. Metric discrete limit spaces	1-7
§3. Stability, equicontinuity and moduli of continuity	1-7
§4. Discrete convergence of continuous mappings and error estimates	1-9
§5. Continuous discrete convergence	1-6

Chapter II. Approximations of Differential and Integral Equations

Foreword

§6. Difference approximations for initial value problems of ordinary differential equations	1-16
6.1 Definitions	1
6.2 Consistency	7
6.3 Stability	10
6.4 Convergence	13
§7. Difference methods for linear initial value problems	1-13
7.1 Definitions	1
7.2 Solubility and stability	5
7.3 Consistency and convergence	10
§8. Discretely uniform approximation of continuous functions	1-16
8.1 Discretely uniform approximation	1
8.2 Convergence of sets	3
8.3 Discretely uniform limit spaces	6
8.4 Applications	12

§9. Discrete approximations of measures and integrals	1-12
9.1 Measures and integrals	1
9.2 Discrete convergence of sequences of measures	3
9.3 Applications and examples	9
§10. Discrete approximations of nonlinear integral equations	1-17
10.1 Consistency of Fredholm integral operators	1
10.2 The restricted integral operators	7
10.3 Differentiable integral operators	12
References	1-5