

## CONTENTS

### PART V: Differential Equations of Mathematical Physics

1. PARTIAL DIFFERENTIAL EQUATIONS AND  
RELATIVISTIC QUANTUM FIELD THEORY ..... 1

*A. S. Wightman*

2. DIFFERENTIAL EQUATION PROBLEMS OF  
CLASSICAL MATHEMATICAL PHYSICS..... 53

*K. O. Friedrichs*

### PART VI: Differential Equations in a Banach Space

1. ON DISSIPATIVE OPERATORS ..... 65

*R. S. Phillips*

2. APPROXIMATION THEOREMS FOR EVOLUTION  
EQUATIONS ..... 115

*Tosio Kato*

3. UNIQUENESS RESULTS FOR SOLUTIONS OF  
DIFFERENTIAL EQUATIONS IN HILBERT SPACE  
WITH APPLICATIONS TO PROBLEMS IN PARTIAL  
DIFFERENTIAL EQUATIONS ..... 125

*Shmuel Agmon*

## PART VII: Stochastic Differential Equations

1. THE PHYSICAL BACKGROUND OF LANGEVIN'S  
EQUATION ..... 147  
*M. Kac*
2. MARKOV PROCESSES AND POTENTIAL THEORY ..... 167  
*R. K. Getoor*
3. PROPAGATION OF CHAOS FOR A CLASS OF NON-  
LINEAR PARABOLIC EQUATIONS ..... 177  
*H. P. McKean, Jr.*

## PART VIII: Numerical Solutions

1. NUMERICAL SOLUTION OF ELLIPTIC EQUATIONS 197  
*Garrett Birkhoff*
2. APPROXIMATE INTEGRATION RULES WITH NON-  
NEGATIVE WEIGHTS ..... 233  
*Philip J. Davis*
3. TOEPLITZ OPERATORS ..... 257  
*Peter D. Lax*