TABLE OF CONTENTS

PROFILE	vii
PREFACE	ix
INTRODUCTION	1
PART I	
QUANTIZATION OF VELOCITY FIELD (THE CANONICAL OPERATOR)	
 The method of Stationary phase. The Legendre Transformation Pseudodifferential Operators The Hamilton-Jacobi Equation. The Hamilton System The Lagrangian Manifolds and Canonical Transformations Fourier Transformation of a λ-Pseudo-differential Operator (the Transition to p-Representation) The Precanonical Operator (Quantization of the Velocity Field in the Small) The Index of a Curve on a Lagrangian Manifold The Canonical Operator (Global Quantization of the Velocity Field) Global Quantization of the Velocity Field. Higher Approximations 	29 50 70 100 117 124 140 154
PART II	
SEMI-CLASSICAL APPROXIMATION FOR NON-RELATIVISTIC AND RELATIVISTIC QUANTUM MECHANICAL EQUATIONS	
10. The Cauchy Problem with Rapidly Oscillating Initial Data for Scalar Hamiltonians	177

TABLE OF CONTENTS

11.	Matrix Hamiltonians	199
12.	The Semi-Classical Asymptotics of the Cauchy Problem for the	
	Schrödinger Equation	228
13.	The Asymptotic Series for the Eigenvalues (Bohr's Quantiza-	
	tion Rule)	257
14.	Semi-Classical Approximations for the Relativistic Dirac	
	Equation	279
RE	FERENCES	290
SU	BJECT INDEX	295
INI	DEX OF ASSUMPTIONS, THEOREMS, ETC.	300