Contents

Pre	face	iii
Contributors		ix
1.	DIFFUSION FIELDS, QUANTUM FIELDS, AND FIELDS WITH VALUES IN LIE GROUPS Sergio Albeverio and Raphael Høegh-Krohn	1
2.	OPTIMAL STOCHASTIC CONTROL OF DIFFUSION PROCESSES WITH JUMPS STOPPED AT THE EXIT OF A DOMAIN Alain Bensoussan and José Luis Menaldi	99
3.	NECESSARY CONDITIONS ON OPTIMAL MARKOV CONTROLS FOR STOCHASTIC PROCESSES Jurgen Franke	123
4.	ON WAVEFRONT PROPAGATION IN PERIODIC MEDIA Mark I. Freidlin	147
5.	WIENER-LIKE INTEGRALS FOR GAUSSIAN PROCESSES AND THE LINEAR ESTIMATION PROBLEM Masuyuki Hitsuda	167
6.	STOCHASTIC FLOWS OF DIFFEOMORPHISMS Nobuyuki Ikeda and Shinzo Watanabe	179
7.	DIFFERENTIABILITY IN MEASURE FOR STOCHASTIC DIFFERENTIAL EQUATIONS Jean Jacod	199
8.	GENERALIZED FEYNMAN INTEGRALS USING ANALYTIC CONTINUATION IN SEVERAL COMPLEX VARIABLES Gopinath Kallianpur and C. Bromley	217
9.	STOCHASTIC DIFFERENTIAL EQUATIONS AND STOCHASTIC FLOWS OF HOMEOMORPHISMS Hiroshi Kunita	269

viii Contents

10.	APPROXIMATION OF PROCESSES AND APPLICATIONS TO CONTROL AND COMMUNICATION THEORY Harold J. Kushner	293
11.	AN ANALOG TO THE STOCHASTIC INTEGRAL FOR $\frac{3}{6}$	
	Minoru Motoo	323
12.	A COMPLEX MEASURE RELATED TO THE SCHRÖDINGER EQUATION Kunio Nishioka	339
13.	ON THE NEARNESS OF TWO SOLUTIONS IN COMPARISON THEOREMS FOR ONE-DIMENSIONAL STOCHASTIC DIFFERENTIAL EQUATIONS Yukio Ogura	353
14.	ESTIMATION THEORY IN HILBERT SPACES AND ITS APPLICATIONS Shigeru Omatu	367
15.	HOMOGENIZATION OF DIFFUSION PROCESSES WITH BOUNDARY CONDITIONS Hiroshi Tanaka	411
16.	DIFFUSION APPROXIMATION OF SOME STOCHASTIC DIFFERENCE EQUATIONS	
	Hisao Watanabe	439
Index		457