

CONTENTS

CHAPTER I: INTRODUCTION	3
CHAPTER II: PRELIMINARIES	
1. <i>Covering number of compact metric spaces</i>	16
2. <i>A Jensen type inequality for the non-decreasing rearrangement of non-negative stochastic processes</i>	19
3. <i>Continuity of Gaussian and sub-Gaussian processes</i>	24
4. <i>Sums of Banach space valued random variables</i>	40
CHAPTER III: RANDOM FOURIER SERIES ON LOCALLY COMPACT ABELIAN GROUPS	
1. <i>Continuity of random Fourier series</i>	51
2. <i>Random Fourier series on the real line</i>	60
3. <i>Random Fourier series on compact Abelian groups</i>	63
CHAPTER IV: THE CENTRAL LIMIT THEOREM AND RELATED QUESTIONS	65
CHAPTER V: RANDOM FOURIER SERIES ON COMPACT NON-ABELIAN GROUPS	
1. <i>Introduction</i>	74
2. <i>Random series with coefficients in a Banach space</i>	81
3. <i>Continuity of random Fourier series</i>	93
CHAPTER VI: APPLICATIONS TO HARMONIC ANALYSIS	
1. <i>The Duality Theorem</i>	105
2. <i>Applications to Sidon sets</i>	118
CHAPTER VII: ADDITIONAL RESULTS AND COMMENTS	
1. <i>Derivation of classical results</i>	122
2. <i>Almost sure almost periodicity</i>	134
3. <i>On left and right almost sure continuity</i>	138
4. <i>Generalizations</i>	140
REFERENCES	144
INDEX OF TERMINOLOGY	148
INDEX OF NOTATIONS	149