

Dedication

To

The soul of father ,

mother ,

family

and husband

Acknowledgements

I would like to express my deep thanks to my supervisor Dr. Shawgy Hussien Abd Alla for his full assistance and help . Especial thanks and due to my husband Hajo Bashir for his help and care .

Also my thanks to my friends and to Maha Abbo for her excellent typing .

Abstract

We show a general approach to infinite dimensional non-Gaussian Analysis which generalizes the work to measures which possess more singular logarithmic derivatives . This frame work also includes the possibility to handle measures of Poisson type .

الخلاصة

لقد أوضحنا تقارب عام للتحليل اللاجاوسيان ذو البعد اللانهائي والذي يمدد العمل للقياسات التي تملك مشتقات لوغريتمية وحيدة ، هذا الإطار ايضاً يحتوى امكان فتح قياسات من نوع بويسن .

Contents

Subject	page
Dedication	(i)
Acknowledgement	(ii)
Abstract	(iii)
الخلاصة	
(iv)	
Content	(v)
Chapter 1 : Background facts	1
Chapter 2 : Introduction on Generalized functions	12
Section (2.1) : Time-invariant systems , generalized function and Laplace transform	12
Section (2.2) : Other types of Generalized function	24
Chapter 3 : Linear Topological spaces , Infinite Dimensional Analysis and test functions with measure	28
Section (3.1) : Measures on linear Topological spaces	28
Section (3.2) : Concept of distributions and test function on linear space with measure	42
Chapter 4 : Characterization of integral transformation and change of Measure	55
Section (4.1) : Distribution Integral transformations and characterization Theorems	55
Section (4.2) : The Wick product , positive distributions and Change of measure	68
Symbols	75
References	76