CONTENTS

NOTAI	TIONS	i
СНАРІ	TER 1 : INTRODUCTION	
1.1	Introduction	1
CHAP	TER 2 : BASIC PROPERTIES OF STABLE DISTRIBUTIONS AND THE DISTRIBUTIONS ATTRACTED TO THEM	
2.2	Introduction Stable Distributions Main Definitions And Basic Properties Domains Of Attractions Of The Stable Laws D.F.s In The Domain Of Normal Attraction Of Non-normal Stable Law (Further Properties) Concluding Remarks	12 12 14 18 44
CHAP	TER 3 : RATES OF CONVERGENCE IN LOCAL LIMIT THEOREM : DOMAIN OF NON-NORMAL ATTRA- CTION OF THE STANDARD NORMAL LAW CASE	
3.2	Introduction Notations And Assumptions Preliminary Results Proofs of The Theorems Proof of Theorem 3.1.1 Proof of Theorem 3.1.2 Concluding Remarks	45 48 51 70 70 76 85
СНАР'	TER 4 : RATES OF CONVERGENCE IN LOCAL LIMIT THEOREM : DOMAIN OF NON-NORMAL ATTRA- CTION OF A STABLE LAW CASE WITH INDEX $\alpha \neq 1$, $\alpha \neq 2$	
4.2 4.3	Introduction Notations And Assumptions Preliminary Results Proof Of The Theorem Concluding Remarks	86 87 89 97 102

CHAPTER 5 : RATES OF CONVERGENCE IN LOCAL LIMIT THEOREM FOR INDEPENDENT SUMMANDS-I

5.1	Introduction	103
5.2	Notations And Assumptions	105
5.3	Preliminary Results	107
5.4	Proofs Of The Results	114
	Proof Of Theorem 5.1.1	114
	Proof Of Theorem 5.1.2	116
5.5	General Case	121
	Concluding Remarks	123

CHAPTER 6 : RATES OF CONVERGENCE IN LOCAL LIMIT THEOREM FOR INDEPENDENT SUMMANDS-II

6.1	Introduction	124
6.2	Notations And Assumptions	125
6.3	Preliminary Results	129
6.4	Proofs Of The Results	142
	Proof Of Theorem 6.1.1	142
	Proof Of Theorem 6.1.2	143
	Concluding Remarks	149

CHAPTER 7 : A CLT WHEN SUMMANDS COME RANDOMLY FROM r POPULATIONS

7.1	Introduction And Statement Of The Main Result	150
7.2	Preliminary Results	151
7.3	Proof Of The Theorem	155
7.4	Concluding Remarks	159

CHAPTER 8 : A LOCAL LIMIT THEOREM WHEN SUMMANDS COME RANDOMLY FROM r POPULATIONS

8.1	Introduction	And Statement Of The Main H	Result 161
8.2	Proof Of The	Theorem	163

CHAPTER 9 : SOME OPEN PROBLEMS AND APPLICATIONS

9.1	Applications		164
9.2	Summary And Open Problems	•	165

BIBLIOGRAPHY

167