ACKNOWLEDGEMENT

“Praise to ALLAH, Creator of the Universe, the Most Gracious, Most Merciful, Who Bestowed Upon Me the Courage to Accomplish This Work”

Seek knowledge from cradle to the grave.

(Prophet Mohammad (PBUH))

Whoever seek knowledge and find it, will get two rewards; one of them the reward for desiring it, and the other for attaining it; therefore even if he do not attain it, for him is one reward.

(Prophet Mohammad (PBUH))

One learned man is harder on the devil than a thousand ignorant worshipers.

(Prophet Mohammad (PBUH))

This thesis tried to combine and unify different types of fuzzy entropy measures in the field of information theory and statistics. I am deeply indebted to the altruistic influence created by Head Department of Statistics, my supervisor Dr. Mirza Abdul Khalique Baig, a selfless guidance, stimulating suggestions, and encouragement and of course for his tolerance and continuous interest in the field of information theory in the context of fuzzy set measures and its applications. His genuine concern and affectionate attitude always kept me lively to accomplish this work.

I am very grateful to Prof. Aquil Ahmed, former Head Department of Statistics, who supported me in every respect during various stages of accomplishment of this thesis.

I am also very thankful to other faculty members of the Department of Statistics Dr. Tariq Rashid Jan and Dr. Parveiz Ahmed. Sincere thanks to Dr. Mohammad Abdullah Mir, Associate Prof. Department of Mathematics, University of Kashmir and Dr. Mukhtar Ahmad Khandy, Associate Prof. Department of Mathematics, University of Kashmir.

The thesis would not have been possible without the confidence, endurance and support of my family especially my beloved parents Haji Abdul Gani and Mehra Habib, my affectionate brother Mr. Altaf Ahmad, my sympathetic sisters Nayeema and Rubia, my sister-in-law Arifa, my brother–in–law’s Mr. Bashir Ahmad and Mr. Nazir Ahmad, my nieces Anjum
Bashir, Uneeza Bashir, Arfeen Bashir, Nuha Jaan, Rabia Altaf and my nephew Numaan Nazir.

I owe lot to my friends and colleagues who helped, inspired and encouraged me especially Mr. Mohammad Akbar (Ph.D scholar Pharmaceutical Science), Miss Nusrat Mushtaq (Ph.D scholar Statistics), Miss Humaira Sultan (Ph.D scholar Statistics), Mr. Kaiser Ahmad (Ph.D scholar Statistics) and my cousin Mr. Waheed – ul – Rasheed.

At last I extend my sincere thanks to all my friends and colleagues with whose prayers have driven me out of depression which I have often faced in the struggle for this academic program.

Mohammad Javid Dar