Acknowledgements

I place on record my profound sense of gratitude to my supervisors Prof. T. Thrivikraman and Dr. R.S Chakravarti, Department of Mathematics, Cochin University of Science and Technology, for their continuous inspiration, sincere guidance and invaluable suggestions during the entire period of my work. Prof. Thrivikraman has introduced me to the wonderful world of Fuzzy Mathematics and without his guidance and motivation this Ph.D could not have been accomplished. He was kind enough to entertain me even at his residence for discussion. I express my heartfelt thanks and gratitude to him and to the members of his family. I am very much indebted to Dr. Chakravarti, who has instilled in me the interest for Algebra, for giving me an opportunity to do research under his supervision and for the help and support given to me during the entire period of research.

The realization of this doctoral thesis was possible due to the excellent facilities available at the Department of Mathematics, Cochin University of Science and Technology. I thank Prof. M. Jathavedan the Head of the Department, other faculty members and administrative staff for providing me such congenial and supportive atmosphere to my work.

In the process of my research and in writing the thesis, many people, directly and indirectly have helped me. I would like to express my gratitude to them. Though I am not mentioning any name, I use this opportunity to express my sincere thanks to all my fellow researchers from whom I have benefited immeasurably.
I would like to thank the Management, Principal and Staff of Bharata Mata College, Thrikkakara, for their wholehearted support to my work. I also thank my colleagues in the Department of Mathematics of Bharata Mata College, especially Dr. K.V. Thomas for their timely help in my research work.

I acknowledge with great gratitude the financial support from University Grants Commission of India under the Faculty Development Programme.

I owe very much to my family members especially to my wife and daughter for the moral support they extended throughout the course of this work.

Above all I praise and thank God Almighty for His blessings throughout the period of my study.

Paul Isaac