ACKNOWLEDGEMENTS

I am greatly indebted to Dr. T.T. Raghunathan, Department of Mathematics, University of Pune, Pune who was instrumental in inspiring me to do my Ph.D. work and who provided both advice and encouragement along the way. It was a profound and enlightening experience to have worked under Dr. Raghunathan. He called my attention to the Matroid Theory and opened new horizon of the knowledge before me. Words cannot express the deep and sincere gratitude that I feel whenever I think of him.

My thanks are due to Professor N.K. Thakare, Head, Department of Mathematics, University of Pune, Pune for giving me constant inspiration and encouragement.

I received much help, many useful remarks, and suggestions from Dr. N.S. Bhave, Dr. B.N. Waphare, and Dr. P.M. Avhad, which I gratefully acknowledge.

I would like to record the support and the help provided by all my colleagues and friends of the Department of Mathematics, University of Pune, Pune, and I thank them for it.

I am grateful to the unknown referee who suggested the matrix approach to our splitting operation which was defined by us in terms of circuits of the matroids.
Last but by no means least, I have to thank my mother, my wife and other family members for their support, love and patience through these long years. I am touched that my little daughters Mita and Prajakta bore my absence at home from morning to late evening including holidays also.

Finally, I express my gratitude to Mr. S.E. Surve for the help in the form of accurate and efficient typing.

M. M. Shikare