ACKNOWLEDGEMENTS

This acknowledgement is dedicated to those people, whose beautiful, creative and unpretentious mind has made my journey worthwhile calling an experience.

Foremost, I would like to express my sincere gratitude to my advisor Dr. Biswa Binayak Mangaraj for the continuous support of my Ph. D study and research, for his patience, motivation, enthusiasm, and immense knowledge. His guidance helped me in every aspect of my research and writing of the dissertation. I could not have imagined having a better advisor and mentor for my Ph. D study without the auspices of my advisor. I would also like to thank the rest of my thesis committee: Prof. B. B. Pati, Prof. U. R. Jena, and Dr. D. Mishra, for their encouragement, insightful comments, and thoughtful questions. I am obliged to the support, advice and suggestions from Prof. S. K. Swain (PGS & R) and Dr. S. Agrawal.

I am grateful to my fellow lab-mates at VSSUT and SOA University: Mr. G. P. Mishra, Mr. A. B. Sahoo, Mr. R. Kumar, and Mr. N. Khaya for the stimulating discussions, the sleepless nights we worked together, and exciting fun we had in these years.

I am extremely indebted to the entire family of S‘O’A University. I express my heartfelt appreciations to the faculty of Electronics and Communication Engineering department, especially, HOD of ECE department for allowing me to carry out my research work along with the academic job. In particular, I am grateful to Prof. Manoj Ranjan Nayak and Prof. B. K. Sarap for enlightening me the first glance of research.

Finally, I must express my very profound gratitude to my parents Mr. Rabindra Kumar Mohanty and Mrs. Chapala Mohanty, parents-in-law Mr. Ajay Kumar Pattanaik and Mrs. Puspamitra Pattanaik, wife Dr. Tejasmita Pattanaik, brother Mr. Jitendra Kumar Mohanty, sister-in-law Dr. Sagyan Sagarika Mohanty, and my lovely kids Priyansu, Anush, Sounak, and Sanvy for providing me with unfailing support and continuous encouragement throughout the years of study and through the process of researching and writing the dissertation. This accomplishment would not have been possible without them. Thank to them who have extended the whole hearted support during days of my research work.

Saumendra Kumar Mohanty