

## Acknowledgements

I would like to thank my supervisor Prof. Richard L. Grimsdale for his guidance, advice, patience, support and enthusiasm throughout this thesis. I thank to Dr. Adrian L. Thomas, Prof. Paul F. Lister, and Dr. Lionel G. Ripley for their advice and support. I also thank to Dr. Mike McNeill and Shaun McCann for their support and company. Obviously all the members of the VLSI and Computer Graphics Group have been a great company as well, namely, MD. Waller, GJ. Dunnett, MC. Basset, A. Makris, A. Plataniotis, S. Samothrakis, D. Latmer, and M. White.

I would like to acknowledge the financial support from the CAPES/Brazilian Government which made this work possible. A special thanks to Dr. Nelson de Jesus Marden, Dr. Gilberto Camara Neto, and Dr. Luiz A. Vieira Dias at INPE whose support were fundamental to proceed my studies here.

Finally, I would like to thank my wife, Rose, who gave me her loving support, patience, and understanding throughout this work.