

## Acknowledgements

It is a great pleasure to express my warmest thanks to some people whose support and help have been fundamental for the realization of this thesis.

First of all I sincerely thank my supervisor, Prof. Giorgio Metafuno, who followed my work with interest and patience, teaching me a method of research and infecting me with his great enthusiasm for mathematics.

I am grateful to Diego Pallara, who often helped and encouraged me during these years and to Vincenzo Vespri, for useful conversations.

I owe my gratitude to my colleagues and friends Marcello Bertoldi, Giovanni Cupini, Vincenzo Manco, Enrico Priola who have accompanied the progress of my research very patiently, sharing their time and their ideas with me.

I wish to dedicate this work to my grandfather, who has taught me a great love for life and whose memory will remain always alive in my heart.

