

# Preface

This thesis "On Some Conceptual and Counter-intuitive Issues in Relativity Theory" is a culmination of work and learning on the different aspects of Twin Paradox and its ramifications in the theory of Relativity. Though this century old paradox has been a matter of considerable interest in the world of Physics for more than hundred years, articles on the issue still appear in different journals, yet it continues to illuminate our ideas in Relativity theory. In this thesis an effort has been made to take a step ahead to understand the counter-intuitive issue with more clarity. The work was conducted by me in the Department of Physics under the University of North Bengal. During the entire process of the research work there have been several people who provided me with valuable inputs to my work, guided me through and proved to be a very positive influence towards completion of the work. I sincerely acknowledge their efforts and take this opportunity to express my gratitude to them.

First of all I am grateful to the almighty God for establishing me to complete this thesis.

I am extremely grateful to my supervisor, Prof.(Dr.) S. K. Ghosal, Professor of Physics, Physics Department, North Bengal University, for his guidance, all the useful discussions and brainstorming sessions especially during the difficult conceptual development phase. His deep insights helped me at various stages of my research.

I also remain indebted to him and his entire family for their understanding and support during the entire journey.

I wish to express my sincere thanks to the University of North Bengal for giving me the opportunity to carry out my doctoral research.

I also extend my heartfelt thanks to all the faculty members of the Department of Physics for making all the necessary requirements available to me, their help, encouragement and invaluable guidance. I am sincerely grateful to all the staff members of the department for their support.

My very special thanks goes to my collaborator Mr. Saroj Nepal, Tribhuvan University, Viratnager.

I take this opportunity to thank all my teachers for their tireless efforts on me during the different levels of my academic pursuit.

Words cannot express the gratitude that I have for my parents for their love, support and encouragement throughout my life.

Special thanks are also due to my in-laws for their support.

I owe my gratitude to my sister and my brother-in-law for their encouragement and being there whenever I needed an ear.

A big thank you goes to my husband, who has shown great understanding and patience towards this work as well as every thing else I do and my wonderful baby, who is the meaning of my life.

Finally I wish to express my sincere appreciation to everybody who have contributed to this thesis and supported me in one way or the other during this amazing journey.

Debarchana Das.