

PREFACE

This thesis is submitted in partial fulfillment of the requirements for a Degree of Doctor of Philosophy in Mathematics of University of North Bengal. This thesis serves as documentation of my research work, which has been made between 2011-2016. It was a great learning experience and I had fun digging into many journals and books.

Now-a-days the study of gravitational lensing has attracted a lot of people from physics community, as it has been a very useful tool to study the signatures of peculiar astrophysical objects including black hole and wormhole. Motivated by the importance of gravitational lensing, my entire work is based on the study of gravitational lensing using different analytical methods.

I hope this thesis work may be useful for readers and for future research on similar topics or any other related field.

Amarjit Tamang
Department of Mathematics
University of North Bengal
February, 2016