GROUND SHATTERING WORK TITLE

YOUR NAME

DEPARTMENT OF XXXXXXX

INDIAN INSTITUTE OF TECHNOLOGY DELHI

MONTH 20XX

GROUND SHATTERING WORK TITLE

by

YOUR NAME

Department of XXXXXXXXX

Submitted

in partial fulfillment of the requirements of the degree of Doctor of Philosophy

to the

INDIAN INSTITUTE OF TECHNOLOGY DELHI

MONTH 20XX

Dedicated to ...

Certificate

This is to certify that the thesis entitled **"XXXXXXXXXXXXXXXX"**, submitted by **XXXXXXXXXXXXXXXXXXX** to the Indian Institute of Technology Delhi, for the award of the degree of **Doctor of Philosophy** in XXXXXXXXXX, is a record of the original, bona fide research work carried out by him under our supervision and guidance. The thesis has reached the standards fulfilling the requirements of the regulations related to the award of the degree.

The results contained in this thesis have not been submitted in part or in full to any other University or Institute for the award of any degree or diploma to the best of our knowledge.

Prof. XXXXXXX XXXXXXX
Department of XXXXXXXXX,
Indian Institute of Technology Delhi.

Prof. XXXXXXXXXXX XXXXXXXX
Department of XXXXXXXX,
Indian Institute of Technology Delhi.

Acknowledgements

Thank you everyone

Abstract

This thesis primarily focuses.....

Contents

List of Figures

List of Tables

Abbreviations

FD	**F**inite **D**ifference
BPM	**B**eam **P**ropogation **M**ethod
FDBPM	**F**inite **D**ifference **B**eam **P**ropogation **M**ethod
FDTD	**F**inite **D**ifference **T**ime **D**omain
LP	**L**inearly **P**olarised
OAM	**O**rbital **A**ngular **M**omentum
PML	**P**erfectly **M**atched **L**ayers
WDM	**W**avelength **D**ivision **M**ultiplexing
SDM	**S**pace **D**ivision **M**ultiplexing
SDM	**M**ode **D**ivision **M**ultiplexing
ABC	**A**bsorbing **B**oundary **C**ondition
STA	**S**horcuts **T**o **A**diabaticity
SMF	**S**ingle **M**ode **F**iber
FMF	**F**ew **M**ode **F**iber
MMF	**M**ulti **M**ode **F**iber
RCWA	**R**igorous **C**oupled **W**ave **A**nalysis
FEM	**F**inite **E**lement **M**ethod
FBG	**F**iber **B**ragg **G**rating

Symbols

c	speed of light in vacuum
ϵ	dielectric constant/permittivity
k_0	wavevector in free space
n_{eff}	effective index
ω	angular frequency
λ	wavelength
n_r	refrence refractive index
$\hbar$	reduced Planck‘s constant
l	orbital angular momentum in units of $2\pi\hbar$

Chapter 1

Introduction

1.1 Section 1

Content

1.2 Section 2

1.2.1 section 2.1

An illustrative figure which shows the propagation of a guided optical field is shown in fig.1.1.

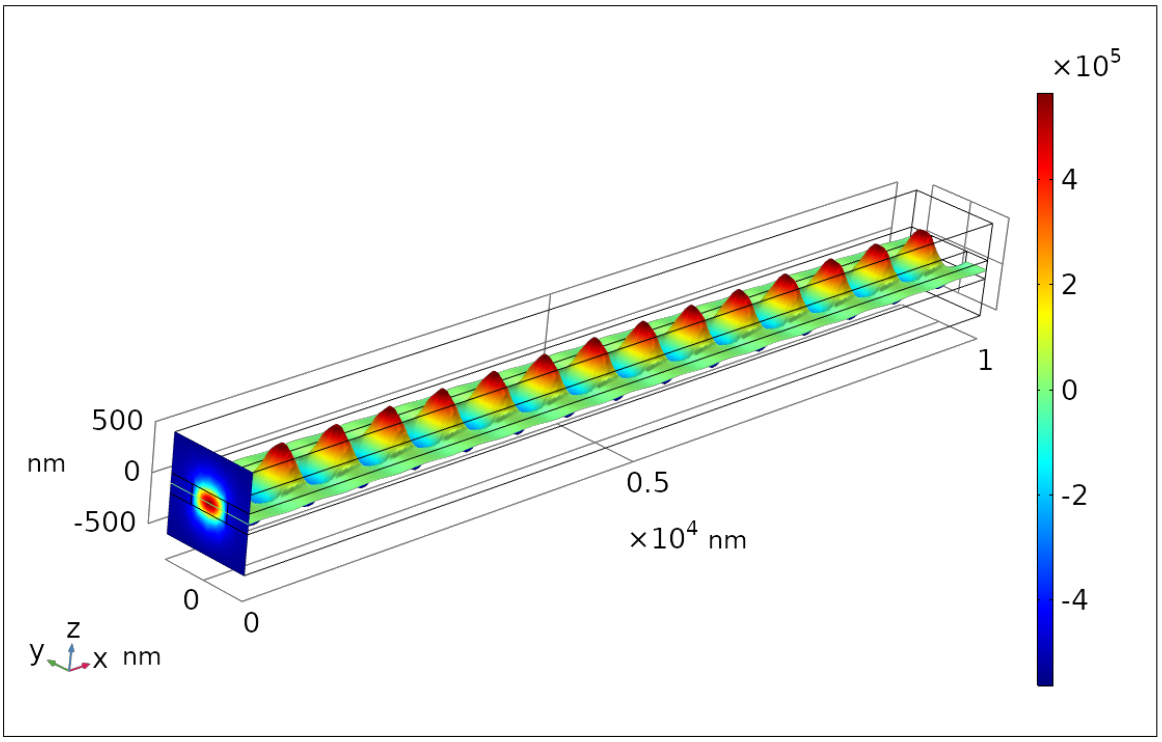

FIGURE 1.1: An illustration of a typical waveguide

1.2.2 section 2.2

1.3 Section 3

1.4 Thesis Organisation

In the first half of the thesis

Chapter 2

CHAPTER II

2.1 Section 1

2.1.1 subsection 1

2.1.2 subsection 2

2.2 Section 2

2.2.1 subsection 1

2.2.2 subsection 2

2.3 Section 3

2.3.1 subsection 1

2.3.2 subsection 2

Chapter 3

CHAPTER III

3.1 Section 1

3.1.1 subsection 1

3.1.2 subsection 2

3.2 Section 2

3.2.1 subsection 1

3.2.2 subsection 2

3.3 Section 3

3.3.1 subsection 1

3.3.2 subsection 2

Chapter 4

CHAPTER IV

4.1 Section 1

4.1.1 subsection 1

4.1.2 subsection 2

4.2 Section 2

4.2.1 subsection 1

4.2.2 subsection 2

4.3 Section 3

4.3.1 subsection 1

4.3.2 subsection 2

Chapter 5

CHAPTER V

5.1 Section 1

5.1.1 subsection 1

5.1.2 subsection 2

5.2 Section 2

5.2.1 subsection 1

5.2.2 subsection 2

5.3 Section 3

5.3.1 subsection 1

5.3.2 subsection 2

Chapter 6

CHAPTER VI

6.1 Section 1

6.1.1 subsection 1

6.1.2 subsection 2

6.2 Section 2

6.2.1 subsection 1

6.2.2 subsection 2

6.3 Section 3

6.3.1 subsection 1

6.3.2 subsection 2

Scope for Future Work

In this thesis, we have worked on...

It is hoped this work will provide the required impetus to a lot of future study.

Appendix A

APPENDIX CHAPTER TITLE

Appendix B

APPENDIX CHAPTER TITLE

Appendix C

APPENDIX CHAPTER TITLE

References

[1] Erik Torrontegui, Sara Ibánez, Sofia Martínez-Garaot, Michele Modugno, Adolfo del Campo, David Guéry-Odelin, Andreas Ruschhaupt, Xi Chen, and Juan Gonzalo Muga. Shortcuts to adiabaticity. In *Advances in atomic, molecular, and optical physics*, volume 62, pages 117–169. Elsevier, 2013. doi: 10.1016/b978-0-12-408090-4.00002-5.

[2] MS Stern. Semivectorial polarised h field solutions for dielectric waveguides with arbitrary index profiles. *IEE Proceedings J (Optoelectronics)*, 135(5):333–338, 1988. doi: 10.1049/ip-j.1988.0062.

[3] MD Feit and JA Fleck. Light propagation in graded-index optical fibers. *Applied optics*, 17(24):3990–3998, 1978. doi: 10.1364/ao.17.003990.

[4] P-L Liu and B-J Li. Study of form birefringence in waveguide devices using the semivectorial beam propagation method. *IEEE photonics technology letters*, 3 (10):913–915, 1991. doi: 10.1109/68.93260.

List of Publications

Journals

1. Publication 1
2. Publication 2
3. Publication 3
4. Publication 4
5. Publication 5

Presentations and proceedings in International/National Conferences

1. Conference 1
2. Conference 2
3. Conference 3
4. Conference 4
5. Conference 5
6. Conference 6

7. Conference 7
8. Conference 8
9. Conference 9
10. Conference 10
11. Conference 11
12. Conference 12