DISSERTATION TOPIC SUBMITTED TO IITD

Thesis submitted by

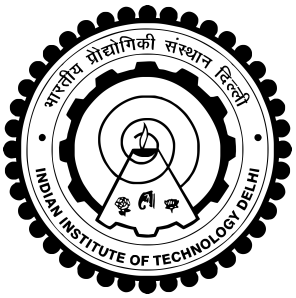
Name
Entry Number

under the guidance of

Prof. Advisor

in partial fulfilment of the requirements
for the award of the degree of

My Fancy Degree



Department Of Computer Science and Engineering
INDIAN INSTITUTE OF TECHNOLOGY DELHI

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THESIS CERTIFICATE

This is to certify that the thesis titled **LaTeX CLASS FOR DISSERTATIONS SUBMITTED TO IIT-D**, submitted by **Author**, to the Indian Institute of Technology, Delhi, for the award of the degree of **Master of Technology**, is a bona fide record of the research work done by him under our supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

Prof. 1
Professor
Dept. of Physics
IIT-Delhi, 600 036

Place: New Delhi

Date: 8th June 2016

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Thanks to all those who made TEX and LATEX what it is today.

ABSTRACT

KEYWORDS: LaTeX; Thesis; Style files; Format.

A LaTeX class along with a simple template thesis are provided here. These can be used to easily write a thesis suitable for submission at IIT-Delhi. The class provides options to format PhD, MS, M.Tech. and B.Tech. thesis. It also allows one to write a synopsis using the same class file. Also provided is a BIBTeX style file that formats all bibliography entries as per the IITD format.

The formatting is as (as far as the author is aware) per the current institute guidelines.

Contents

List of Tables

List of Figures

ABBREVIATIONS

IITD	Indian Institute of Technology, Delhi
RTFM	Read the Fine Manual

NOTATION

r	Radius, m
α	Angle of thesis in degrees
β	Flight path in degrees

Chapter 1

INTRODUCTION

This document provides a simple template of how the provided `iitddiss.cls` LaTeX class is to be used. Also provided are several useful tips to do various things that might be of use when you write your thesis.

To compile your sources run the following from the command line:

```
% pdflatex thesis.tex
% bibtex thesis
% pdflatex thesis.tex
% pdflatex thesis.tex
```

Modify this suitably for your sources.

To generate PDF's with the links from the `hyperref` package use the following command:

```
% dvipdfm -o thesis.pdf thesis.dvi
```

1.1 Package Options

Use this thesis as a basic template to format your thesis. The `iitddiss` class can be used by simply using something like this:

```
\documentclass[PhD]{iitddiss}
```

To change the title page for different degrees just change the option from `PhD` to one of `MS`, `MTech` or `BTech`. The dual degree

pages are not supported yet but should be quite easy to add. The title page formatting really depends on how large or small your thesis title is. Consequently it might require some hand tuning. Edit your version of `iitddiss.cls` suitably to do this. I recommend that this be done once your title is final.

To write a synopsis simply use the `synopsis.tex` file as a simple template. The synopsis option turns this on and can be used as shown below.

```
\documentclass[PhD,synopsis]{iitddiss}
```

Once again the title page may require some small amount of fine tuning. This is again easily done by editing the class file.

This sample file uses the `hyperref` package that makes all labels and references clickable in both the generated DVI and PDF files. These are very useful when reading the document online and do not affect the output when the files are printed.

1.2 Example Figures and tables

Fig. 1.1 shows a simple figure for illustration along with a long caption. The formatting of the caption text is automatically single spaced and indented. Table 1.1 shows a sample table with the caption placed correctly. The caption for this should always be placed before the table as shown in the example.

1.3 Bibliography with BIBTEX

I strongly recommend that you use BIBTEX to automatically generate your bibliography. It makes managing your references much easier. It is an excellent way to organize your references and reuse them. You can use one set of entries for your references and cite

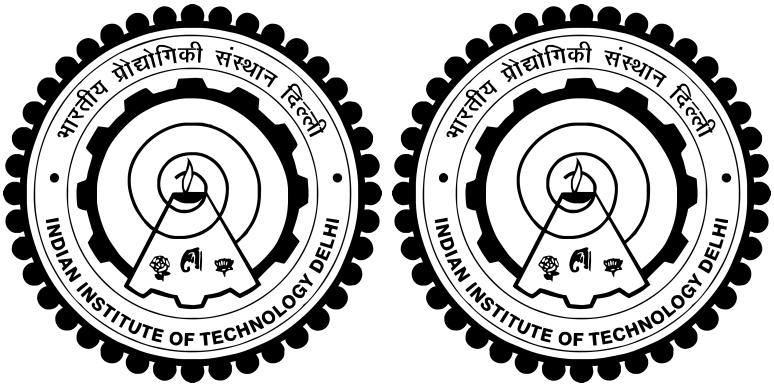

Figure 1.1: Two IITD logos in a row. This is also an illustration of a very long figure caption that wraps around two two lines. Notice that the caption is single-spaced.

Table 1.1: A sample table with a table caption placed appropriately. This caption is also very long and is single-spaced. Also notice how the text is aligned.

x	x^2
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64

them in your thesis, papers and reports. If you haven't used it anytime before please invest some time learning how to use it.

I've included a simple example BIBTEX file along in this directory called `refs.bib`. The `iitddiss.cls` class package which is used in this thesis and for the synopsis uses the `natbib` package to format the references along with a customized bibliography style provided as the `iitd.bst` file in the directory containing `thesis.tex`. Documentation for the `natbib` package should be available in your distribution of LaTeX. Basically, to cite the author along with the author name and year use `\cite{key}` where `key` is the citation key for your bibliography entry. You can also use `\citet{key}` to get the same effect. To make the citation without the author name in the main text but inside the parenthesis use `\citep{key}`. The following paragraph shows how citations can be used in text effectively.

More information on BIBTEX is available in the book by Lamport (1986). There are many references (Lamport, 1986; K, 2016) that explain how to use BIBTEX. Read the `natbib` package documentation for more details on how to cite things differently.

Here are other references for example. Ramachandran (2001) presents a Python based visualization system called MayaVi in a conference paper. Ramachandran *et al.* (2003) illustrates a journal article with multiple authors. Python (van Rossum *et al.*, 1991–) is a programming language and is cited here to show how to cite something that is best identified with a URL.

1.4 Other useful LaTeX packages

The following packages might be useful when writing your thesis.

- It is very useful to include line numbers in your document. That way, it is very easy for people to suggest corrections to your text. I recommend the use of the `lineno` package for this purpose. This is not a standard package but can be obtained on the internet. The directory containing this file

should contain a lineno directory that includes the package along with documentation for it.

- The `listings` package should be available with your distribution of LaTeX. This package is very useful when one needs to list source code or pseudo-code.
- For special figure captions the `ccaption` package may be useful. This is specially useful if one has a figure that spans more than two pages and you need to use the same figure number.
- The notation page can be entered manually or automatically generated using the `nomencl` package.

More details on how to use these specific packages are available along with the documentation of the respective packages.

Appendix A

A SAMPLE APPENDIX

Just put in text as you would into any chapter with sections and whatnot. Thats the end of it.

Bibliography

1. **K, S. P. R.** (2016). *LaTeX class for dissertations submitted to IIT-D*. Ph.D. thesis, Department of Computer Science and Engineering, IIT-Delhi, New Delhi – 110016.

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4. **Ramachandran, P.**, **S. C. Rajan**, and **M. Ramakrishna** (2003). A fast, two-dimensional panel method. *SIAM Journal on Scientific Computing*, **24**(6), 1864–1878.

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LIST OF PAPERS BASED ON THESIS

1. Authors.... Title... *Journal*, Volume, Page, (year).