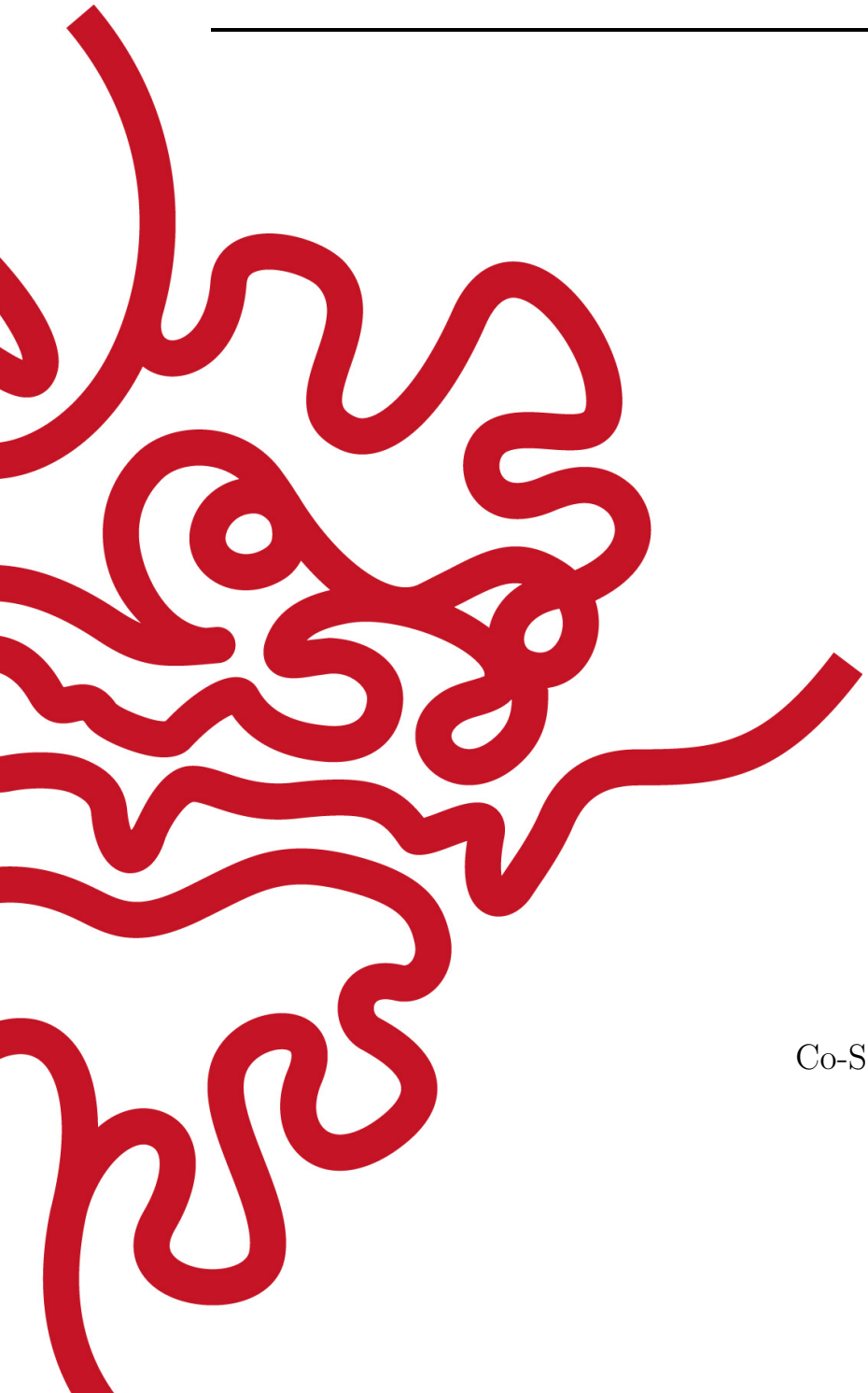
Okinawa Institute of Science and Technology
Graduate University

Thesis submitted for the degree

Doctor of Philosophy

LaTeX thesis (proposal) template



by

Your name

Supervisor: **S. Upervisor**
Co-Supervisor: **C. O'Supervisor**

August 2025

Declaration of Original and Sole Authorship

I, Your name, declare that this thesis entitled *LaTeX thesis (proposal) template* and the data presented in it are original and my own work.

I confirm that:

- No part of this work has previously been submitted for a degree at this or any other university.
- References to the work of others have been clearly acknowledged. Quotations from the work of others have been clearly indicated, and attributed to them.
- In cases where others have contributed to part of this work, such contribution has been clearly acknowledged and distinguished from my own work.
- None of this work has been previously published elsewhere, with the exception of the following: (provide list of publications or presentations, or delete this part). (If the work of any co-authors appears in this thesis, authorization such as a release or signed waiver from all affected co-authors must be obtained prior to publishing the thesis. If so, attach copies of this authorization to your initial and final submitted versions, as a separate document for retention by the Graduate School, and indicate on this page that such authorization has been obtained).

Date: August 2025

Signature:

Replace the file Images/signature.png with a picture of your signature for it to render here

Abstract

The abstract must fit in one page.

Acknowledgment

Please refer to https://www.oist.jp/education/policies-regulations/gs-policies for more information.

Co-authorship

Co-authorship is not allowed in an OIST PhD thesis. All research and analysis is to be the student's own work. Where co-authors have contributed to papers arising from the research, this data should not be included unless essential to the scientific narrative. When included, full disclosure of the contribution is required. Any and all work conducted by others, either internal or external to OIST, must be acknowledged

Please refer to `https://www.oist.jp/education/policies-regulations/gs-policies` for more information.

Abbreviations

Please refer to `https://www.oist.jp/education/policies-regulations/gs-policies` for more information.

Here is an example.

PPT	positive partial transpose
SRPT	Schrödinger-Robertson partial transpose

Glossary

Please refer to `https://www.oist.jp/education/policies-regulations/gs-policies` for more information.

Here is an example:

Dipole Blockade	Phenomenon in which the simultaneous excitation of two atoms is inhibited by their dipolar interaction.
Cavity Induced Transparency	Phenomenon in which a cavity containing two atoms excited with light at a frequency halfway between the atomic frequencies contains the number of photons an empty cavity would contain.

Nomenclature

Please refer to `https://www.oist.jp/education/policies-regulations/gs-policies` for more information.

Here is an example:

c	Speed of light ($2.997\ 924\ 58 \times 10^{8}$ ms^{-1})
$\hbar$	Planck constant ($1.054\ 572\ 66 \times 10^{-34}$ Js)
k_B	Boltzmann constant ($1.380\ 658 \times 10^{-23}$ JK^{-1})
Z_0	Impedance of free space (376.730 313 461 Ω)
μ_0	Permeability of free-space ($4\pi \times 10^{-7}$ Hm^{-1})

If desired, an optional and short dedication may be included here.

Table of Contents

List of Figures

List of Tables

Introduction

This is the introduction. You might want to leave it unnumbered, as it is now. If you want to number it, treat it like any other chapter.

Chapter 1

Guidelines on Format and Content

You will find the most recent version of the guidelines for the thesis in Section 6 of the Graduate School Policies: `https://www.oist.jp/education/policies-regulations/gs-policies`.

In case these requirements change, the exact version of the formatting requirements to which this template adheres can be found here: `https://web.archive.org/web/20250826015151/https://www.oist.jp/education/policies-regulations/gs-policies`.

All requirements for page size, margins, fonts, and line spacing are built-in in this template. Unless you are familiar with LaTeX, it is not recommended to mess around with the settings that aren't clearly marked as something you can change or toggle.

For the bibliography, we recommend using BibTeX or BibLaTeX and through the file `Preamble/Thesis_bibliography.bib` and referencing citations like this [1–3].

Chapter 2

How to Use the Template

This is a practical guide into how to use this template, by explaining the role of the different folders and files. The basic structure of this folder should look like:

```
|-- Thesis.tex
|-- Images/
|-- MainText/
  |-- introduction.tex
  |-- chapter1.tex
  |-- chapter2.tex
  |-- chapter3.tex
  |-- conclusion.tex
|-- Preamble/
  |-- abbreviations.tex
  |-- abstract.tex
  |-- acknowledgments.tex
  |-- coauthorship.tex
  |-- declaration.tex
  |-- dedication.tex
  |-- glossary.tex
  |-- mydefinitions.tex
  |-- nomenclature.tex
  |-- physics_bibstyle.bst
  |-- Thesis_bibliography.bib
```

2.1 The Preamble Folder

You should edit the basic information about the thesis which can be found in the file `Preamble/mydefinitions.tex`. This includes your name, the name of supervisor (and co-supervisor, if applicable) your title, and the date.

There are several toggle options available in this file, allowing you to switch between thesis and thesis proposal formatting, as well as between 1.5 spacing (for thesis proposal and drafts of the thesis) and single spacing (for the final thesis).

This file also contains the bibliography settings, custom packages, and any custom commands that you many want to use. The default bibliography style is defined in `Preamble/physics_bibstyle.bst`, which was created by Jeremie Gillet in 2011 for his thesis. Feel free to swap this file out with a style more suited to your field, and be sure to change the file name in `Preamble/mydefinitions.tex` (line 19). By default, the bibliography file containing your references is `Preamble/Thesis_bibliography.bib`, so you should replace this file with your own version. If you'd like to store your bibliography information somewhere else (for example, if you have one master file for all of your LaTeX projects) you can edit the appropriate section in `Thesis.tex` (should be around line 140).

You should write your abstract in the file `Preamble/abstract.tex`. This should not be longer than a single page.

You will also need to edit `Preamble/declaration.tex` if you have published work that overlaps with the thesis. Similarly, if there are others who have worked on any part of the work presented here, you need to mention this in `Preamble/coauthorship.tex`.

If desired, you can use `Preamble/abbreviations.tex`, `Preamble/glossary.tex`, and `Preamble/nomenclature.tex` to define abbreviations and terms that might be useful to the reader.

2.2 The MainText Folder

For the thesis, the main text can be split across however many chapters are necessary, though there should be an introduction and conclusion. Each of these chapters should be written in a standalone file located in the `MainText` folder, for example:

```
|-- MainText/
  |-- introduction.tex
  |-- chapter1.tex
  |-- chapter2.tex
  |-- chapter3.tex
```

```
|-- conclusion.tex
```

If you'd like to rename or add new files, make sure to change where they are referenced in `Thesis.tex` around line 260. If you want to add an appendix, you can create a new file in `MainText/`, though add them to `Thesis.tex` around line 280 instead. Your thesis may have several other chapters here, for example, Conclusions.

2.3 The Images Folder

All the images that you will use in your thesis should be placed in the `Images` folder. This can contain subfolders, for example one for each chapter. To include an image from the main text, use something like `\includegraphics{subfolder/image.jpg}`; no need to worry about the path to the `Images` folder.

There are two images in the root folder here that are particularly important: `Images/symbol.jpg` and `Images/signature.png`. Don't modify or remove the former, as it is needed to show the logo on the title page. You should replace the latter with a picture of your signature, which will be placed at the bottom of `Preamble/declaration.tex`. For best results, try to get a picture where the background is uniform white.

2.4 The Thesis.tex File

This is the main TeX file that takes input from all of the previously discussed files in the `Preamble` and `MainText` folders. To generate your document, this is the file you should compile. Compile once with LaTeX, once with BibTeX and finally twice more with LaTeX to get all the references right.

There is one document option at the top of this file that you should make sure is correct, which controls whether to format the document for printing or as a digital version. The printed version needs to have a "two-sided" style where the margins alternate on even and odd pages, whereas a digital version should have a "one-sided" style with consistent formatting on every page. Except for the final printed version, the formatting requirements require that you use the "one-sided" version (which is the default option).

As mentioned in the section about the `MainText` folder, you may also need to edit this file to add extra sections or appendices.

You probably won't need to edit this file very much otherwise, but in case you are looking for a specific setting or something, the following settings are defined in this file:

- Basic packages

- Loading of in custom values from `Preamble/mydefinitions.tex`
- Title page
- Headers and footers
- Table of Contents
- Thesis main text import
- Bibliography file (not style)
- Appendices

2.5 Other Points

- This guide uses the `\texttt` environment to denote file names and paths. You should not use this in your actual thesis (proposal) as it will violate the font formatting requirements.

Chapter 3

Figures, tables and images

3.1 Figures

Refer to figure like this: Figure 3.1 or this (Fig. 3.1). The thesis proposal should not include a list of figures (or tables); to enable this for the thesis, for which it is required, you should toggle the setting `\toggletrue{isthesis}` in the file `Preamble/mydefinitions.tex`. In this case, the short version of the caption, as shown in Figure 3.1, will be used in the list.

3.2 Tables

Refer to tables list this: Table 3.1. To make a table that can split across multiple pages, use the `longtable` environment: `https://texdoc.org/serve/longtable.pdf/0`

Tables that span multiple pages should have the heading repeated on each new page.

The font size for all tables has been set to match the formatting requirements (10pt font); this applies to both `longtable` and `table`.

Figure 3.1: Short caption (if wanted). Full caption with all the details here.

This secret image won't be numbered and won't appear in the List of Figures because of the *

Parameter	Value
Δ	0, 150
α	85
ϵ	6
κ	6.8
γ	0.2

Unnumbered table; full caption for regular table here.

Table 3.1: Short caption heading.

Parameter	Centroid model	Centered instance model
Architecture	U-net	U-net
Max Stride	16	16
Filters	16	24
Filters Rate	2.0	1.5
Input Scaling	1.0	1.0
Crop Size	N/A	64
Training Augmentation		
Rotation	[-180, 180]	[-180, 180]
Scale	[0.95, 1.05]	[0.95, 1.05]
Contrast	[0.80, 1.40]	[0.80, 1.40]
Brightness	[0.0, 10.0]	[0.0, 10.0]

Full caption here for longtable if desired.

Conclusion

This is the conclusion. You might want to leave it unnumbered, as it is now. If you want to number it, treat it like any other chapter.

Bibliography

[1] H. Lee and M. Scully, *The Physics of EIT and LWI in V-Type Configurations*, Found. Phys. **28**, 585–600 (1998).

[2] M. Mücke, E. Figueroa, J. Bochmann, C. Hahn, K. Murr, S. Ritter, C. J. Villas-Boas, and G. Rempe, *Electromagnetically induced transparency with single atoms in a cavity*, Nature **465**, 755–758 (2010).

[3] H. Kramers, *Scattering of light by atoms*, Atti Cong. Intern. Fisica Como **2**, 545–557 (1927).

Appendix A

About Appendices

Appendices are optional and should only be used if necessary.