

# **The Title of My Thesis**

A thesis submitted in partial fulfilment of the  
requirements for the award of the degree

**Bachelor of Engineering (Electrical), Bachelor of  
Mathematics**

**from**

**University of Wollongong**

**by**

**Joe E. Blogs**

**School of Electrical, Computer and Telecommunications  
Engineering**

**June, 2013**

Supervisor: Dr John Smith

# Abstract

According to some people, the abstract should be approximately 300 words, and no more than 700 words. It should be an ‘Informative Abstract’.

# Acknowledgements

I would like to thank the Flying Spaghetti Monster for his guidance and constant inspiration . . .

# Statement of Originality

I, Joe E. Blogs, declare that this thesis, submitted as part of the requirements for the award of Bachelor of Engineering, in the School of Electrical, Computer and Telecommunications Engineering, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications or assessment at any other academic institution.

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Date: Monday 1<sup>st</sup> July, 2024

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# Abbreviations and Symbols

$g$	Airgap, mm
$g_e$	Equivalent airgap, mm
$J$	Current Density, amps/metre
$L_R$	Rotor stack length, mm
$N_s$	Number of Slots per Pole Pair
$\theta_m$	Mechanical angle, radians
$\theta, \theta_e$	Electrical angle, radians
$\theta_p$	Pole Arc angle, radians
$p$	Pole pairs
$R$	Stator radius, mm
$\mathfrak{R}_l$	Leakage Reluctance, amps/weber/metre
$\mathfrak{R}$	Reluctance amps/weber
$\mu_o$	Permeability constant, $4\pi \times 10^{-7}$ amps/metre



# List of Changes

Section	Statement of Changes	Page Number
Abstract	Complete re-write because the abstract that was produced for Autumn session was complete non-sense.	ii
Glossary	Changed to single spacing instead of double	viii
1	Included a blurb about how this is a new version of the ECTE45x style etc.	1
References	Using a 10pt font and various other space-saving features.	5

# Chapter 1

## The First Chapter

When needing to talk about different sections of your report you can call them using their reference label such as Chapter number 1.

For your many citations of different papers, articles and books. There are two styles, one is shown like ... Honsinger [1], and the other shown like [2].

### 1.1 First Section in Chapter

This is section 1.1, they are the next level down from a Chapter!

### 1.2 Another Section in the Chapter

#### 1.2.1 First Subsection

Sections can decrease in ranking by adding 'sub' in front.

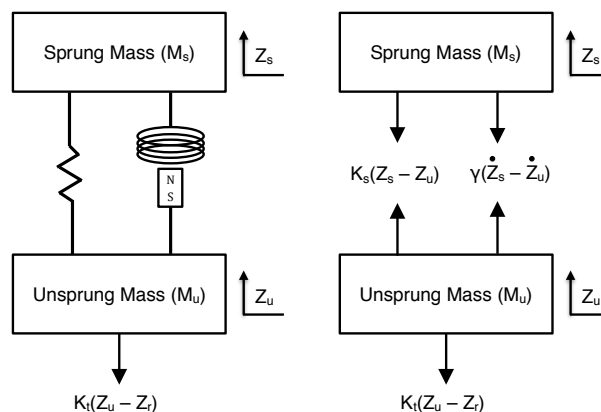
#### First Subsubsection

This is an example of a subsubsection. You wouldn't want to descend much further than this. Subsubsections are not numbered and do not appear in the table of contents.

## Figures

This section will not be included in the Table of Contents as it includes a \* out the front

Figure 1.1 is an example of a figure containing an image.



**Figure 1.1:** Caption for the text body. We can make this one really really long in order to describe everything about the figure for which this caption references, noting that the caption for the index really should be much shorter.

### 1.3 Minor Equations

And now for some handy math hints via equation examples:

$$A = \frac{1}{\sum_{k=1}} \quad (1.1)$$

$$A = n^{\frac{1}{3}} \quad (1.2)$$

$$A = n^{\frac{1}{3}} \max_{k=1} \quad (1.3)$$

### 1.4 Bulk Text

Here is some bulk text to see how stylings change across different pages.

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# Chapter 2

## Another Chapter

This is Chapter number 2.

### 2.1 First Section in Chapter

This is section 2.1.

### 2.2 Another Section in Another Chapter

We're very keen so we are referencing Table 2.1

		TO	
		AC	DC
FROM	AC	Cycloconverter	Rectifier
	DC	Inverter	Chopper

Table 2.1: Classification of Conversion Circuits

### 2.3 Complicated Equations

One thing that L<sup>A</sup>T<sub>E</sub>X is really good at is typesetting mathematics.

$$\frac{d^2\Phi_q(\theta)}{d\theta^2} - \frac{2\mu_o R^2 L_R}{p^2 g_e} \Phi_q(\theta) + \frac{\mu_o R^2 L_R}{p^2 g_e} [J(\theta) - J(\pi - \theta)] = 0 \tag{2.1}$$

Arrays are used for really long equations.

$$2RJ_q = 2A \left[ \frac{\Re_q R}{\gamma} (e^{\gamma \frac{\theta_p}{2}} - e^{-\gamma \frac{\theta_p}{2}}) + p \Re_{side} (e^{\gamma \frac{\theta_p}{2}} + e^{-\gamma \frac{\theta_p}{2}}) \right] + \frac{4cJ_q}{b+1} \left[ \Re_q R \sin \frac{\theta_p}{2} + p \Re_{side} \cos \frac{\theta_p}{2} \right] \tag{2.2}$$

### 2.4 Code Blocks

```
1  #include <iostream>
2
3  int main() { std::cout << "Hello World!";
4  return 0;}
```

# Bibliography

- [1] V. B. Honsinger. The inductances  $L_d$  and  $L_q$  of reluctance machines. IEEE Transactions on Power Applications and Systems, PAS-90(1):298–304, January/February 1971.
- [2] Energy and Environmental Economics Inc, and EPRI Solutions Inc. Value of distribution automation applications, April 2007. URL <http://www.energy.ca.gov/2007publications/CEC-500-2007-028/FCEC-500-2007-028.PDF>. Last viewed 6th September, 2008.

# Appendix A

## Project Proposal

Include the project propsal, without the literature planner.

For PDFs, a good way to include them is to have a figure (not included in toc with \*) of the first page. Then include all the other pages using pdfpages package. Using the figure first allows for the headers to match correctly.

# Appendix B

## Logbook Summary Signature Sheet

This is another Appendix, namely Appendix B. This appendix should be your Logbook Summary Signature Sheet, template can be found in information booklet on moodle.



# Appendix C

## Another Appendix

After the other two, the main idea is to place anything that doesn't fit nicely into the flow of your report. Things like code and schematics.