

# **The Title of My Thesis**

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

**Master of Engineering (Electrical)**

from

**University of Wollongong**

by

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

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# 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, Utkarsh Sethi, 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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# 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 nonsense.	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.	4

# Chapter 1

## The First Chapter

This is a newer and tastier version of the ECTE45x thesis style. It is more compact with less space between title and text, equations and text, and the reference list is smaller and more compact.

The first chapter is obviously Chapter number 1. I am now citing V. B. Honsinger [1], Jovanovic et al. [2] and EPRI [3]. BibTeX will take care of the entries for me. Blah blah ... In this case, the bibliography file is expected to be called ‘thesis.bib’.

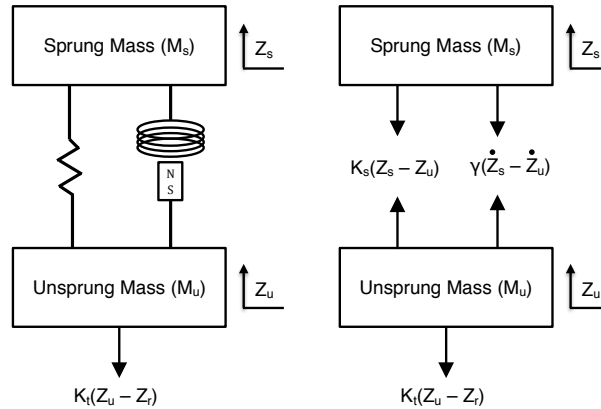
Go on and describe contents of chapter, blah blah blah ...

### 1.1 First Section in Chapter

This is section 1.1.

### 1.2 Another Section in Chapter

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



**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.

#### 1.2.1 First Subsection

This is the first subsection in this report. Notice how the title has been formatted as one would expect. Try doing that with other, inferior products.

**First Subsubsection**

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

**1.3 Summary**

Blah blah ...

And now for some handy math hints via equation examples:

$$A = \frac{1}{\sum_{k=1}} \tag{1.1}$$

$$A = n^{\frac{1}{3}} \tag{1.2}$$

$$A = n^{\frac{1}{3}} \max_{k=1} \tag{1.3}$$

# Chapter 2

## Another Chapter

This is Chapter number 2. This is where things start to get very dull.

Go on and describe contents of chapter, blah blah blah ...

### 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  $\text{\LaTeX}$  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 Summary

Blah blah ...

# References

- [1] V. B. Honsinger, “The inductances  $L_d$  and  $L_q$  of reluctance machines,” *IEEE Transactions on Power Applications and Systems*, vol. PAS-90, no. 1, pp. 298–304, January/February 1971.
- [2] M. Jovanovic, R. E. Betz, and D. Platt, “Position and speed estimation of sensorless synchronous reluctance motor,” in *Proceedings of the IEEE International Conference on Power Electronics and Drive Systems*, 1995, pp. 844–849.
- [3] Energy and Environmental Economics Inc, and EPRI Solutions Inc, “Value of distribution automation applications,” Apr. 2007, last viewed 6th September, 2008. [Online]. Available: <http://www.energy.ca.gov/2007publications/CEC-500-2007-028/FCEC-500-2007-028.PDF>

# Appendix A

## An Appendix

This is an Appendix. In particular, it is Appendix A. In particular it should be your Project Plan and Specification. Notice that the numbering of appendices is based A, B, C ... etc.

# Appendix B

## Another Appendix

This is another Appendix, namely Appendix B. This appendix should be your Logbook Summary Signature Sheet.