

# Thesis Title

by **Author Name**

Thesis submitted in fulfilment of the requirements for the degree of  
*Doctor of Philosophy*  
under the supervision of SUPERVISOR NAME

School of Electrical and Data Engineering  
Faculty of Engineering and IT  
University of Technology Sydney  
October 4, 2023

# Certificate of Authorship / Originality

I, Author Name, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Electrical and Data Engineering at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

Signature:

A handwritten signature in black ink, written in a cursive style, that reads "Signature".

Date:

October 4, 2023

# Abstract

This is the text of the abstract, providing a brief summary of the context, research problem, main contributions and conclusions of this work.

# Dedication

For (name of person - this is optional!)

# Acknowledgements

I would like to thank (supervisor, family, research collaborators, anyone else who significantly helped you with this work).

Author Name  
October 4, 2023  
Sydney, Australia

# Contents

<b>1</b>	<b>Introduction</b>	<b>2</b>
1.1	Research Objectives and Overview . . . . .	2
1.1.1	Additional Research Contributions . . . . .	3
<b>2</b>	<b>Literature Review</b>	<b>4</b>
2.1	Introduction . . . . .	4
2.2	Theme 1 . . . . .	4
2.2.1	Subtopic A . . . . .	4
2.2.2	Subtopic B . . . . .	4
2.2.3	Subtopic C . . . . .	4
2.3	Theme 2 . . . . .	4
2.4	Conclusion . . . . .	4
<b>3</b>	<b>Contribution 1</b>	<b>5</b>
3.1	Introduction . . . . .	5
3.2	Theme 1 . . . . .	5
3.2.1	Subtopic A . . . . .	5
3.2.2	Subtopic B . . . . .	7
3.2.3	Subtopic C . . . . .	7
3.3	Theme 2 . . . . .	7
3.4	Conclusion . . . . .	7
<b>4</b>	<b>Contribution 2</b>	<b>8</b>
4.1	Introduction . . . . .	8
4.2	Theme 1 . . . . .	8
4.2.1	Subtopic A . . . . .	8
4.2.2	Subtopic B . . . . .	8
4.2.3	Subtopic C . . . . .	8
4.3	Theme 2 . . . . .	8
4.4	Conclusion . . . . .	8
<b>5</b>	<b>Contribution 3</b>	<b>9</b>
5.1	Introduction . . . . .	9
5.2	Theme 1 . . . . .	9
5.2.1	Subtopic A . . . . .	9
5.2.2	Subtopic B . . . . .	9
5.2.3	Subtopic C . . . . .	9
5.3	Theme 2 . . . . .	9

5.4	Conclusion . . . . .	9
<b>6</b>	<b>Conclusions and Future Work</b>	<b>10</b>
6.1	Summary of Outcomes . . . . .	10
6.2	Recommendations & Future Work . . . . .	10
6.3	Concluding Remarks . . . . .	10
<b>A</b>	<b>Example Appendix</b>	<b>12</b>
<b>B</b>	<b>Software Documentation</b>	<b>13</b>
B.1	Code Availability . . . . .	13
B.2	Software Requirements . . . . .	13
B.3	Simulation Code - How to Run . . . . .	13

# List of Figures

- 3.1 This the approximate process for producing a Thesis. It typically takes 3-4 years. 6
- 3.2 The stages of the creative process. . . . . 6



# List of Tables

3.1 Table captions normally go at the top. . . . . 6

# Chapter 1

## Introduction

The start of the introduction provides some context and brief background.

### 1.1 Research Objectives and Overview

The research question which this Thesis aims to answer is...

The specific research objectives of this Thesis are:

1. Objective 1
2. Objective 2

Chapter 2 provides a comprehensive review of literature which is relevant to the overall aim. This includes ...

Chapter 3 aims to ...

This chapter resulted in the following publications:

- D. R. Franklin and K. J. Wilson, “A LaTeX Thesis Template for the School of Electrical and Data Engineering,” *IEEE Transactions on LaTeX Thesis Templates*, vol. 1, no. 1, Oct. 2021
- D. R. Franklin and K. J. Wilson, “A LaTeX Thesis Template for the School of Electrical and Data Engineering,” *IEEE Transactions on LaTeX Thesis Templates*, vol. 1, no. 1, Oct. 2021

Chapter 4 aims to ...

This chapter resulted in the following publications:

- D. R. Franklin and K. J. Wilson, “A LaTeX Thesis Template for the School of Electrical and Data Engineering,” *IEEE Transactions on LaTeX Thesis Templates*, vol. 1, no. 1, Oct. 2021

Chapter 5 aims to ...

This chapter resulted in the following publications:

- D. R. Franklin and K. J. Wilson, “A LaTeX Thesis Template for the School of Electrical and Data Engineering,” *IEEE Transactions on LaTeX Thesis Templates*, vol. 1, no. 1, Oct. 2021

Finally, Chapter 6 summarises the results and implications of this work, and provides recommended directions for continuation of this work in the future.

### **1.1.1 Additional Research Contributions**

A number of additional research publications and presentations are listed below:

- xxx

# Chapter 2

## Literature Review

### 2.1 Introduction

Some contextual overview of what we are going to discuss.

Section 2.2 discusses Theme 1. Section 2.3 discusses Theme 2....

### 2.2 Theme 1

#### 2.2.1 Subtopic A

#### 2.2.2 Subtopic B

#### 2.2.3 Subtopic C

### 2.3 Theme 2

Etc. etc.

### 2.4 Conclusion

# Chapter 3

## Contribution 1

### 3.1 Introduction

In this Chapter, XXX is presented. Note: to cross-reference to other parts of the document you do so like this - see Section 4.2.2.

Section 3.2 discusses Theme 1. Section 3.3 discusses Theme 2....

### 3.2 Theme 1

Figure 3.1 illustrates the key elements of Thesis synthesis. L<sup>A</sup>T<sub>E</sub>X will tend to place figures where it wants (they ‘float’ - generally they should be at the top or bottom of a page); you can override the default behaviour if you want, but you probably don’t want to bother doing that until after your content is pretty much done. Instead, keep the figures as close as possible to the text; you can tweak this afterwards if you want by adding an option:

```
\begin{figure}[htb]
```

This says put it here, if you can, otherwise at the top, or otherwise at the bottom. BUT I strongly suggest not using **h** as it looks terrible.

Maybe you need an inline URL at this point: Here’s one! <https://en.wikibooks.org/wiki/LaTeX>.

Mathematics can be inline, for example  $x = \int_0^\infty y^2 dy$ , or can be in display mode, as shown in (3.1):

$$F(x, y, z) = \sqrt{x^{y^z}} \tag{3.1}$$

You probably want to show some of your results in a table, such as Table 3.1.

The basic creative process is shown in Figure 3.2. Specifically, Figure 3.2a shows the first step, while Figure 3.2b and 3.2c show the remaining key steps of the procedure.

#### 3.2.1 Subtopic A

Algorithm 1 shows a classical algorithm typeset in L<sup>A</sup>T<sub>E</sub>X. This is also a float.

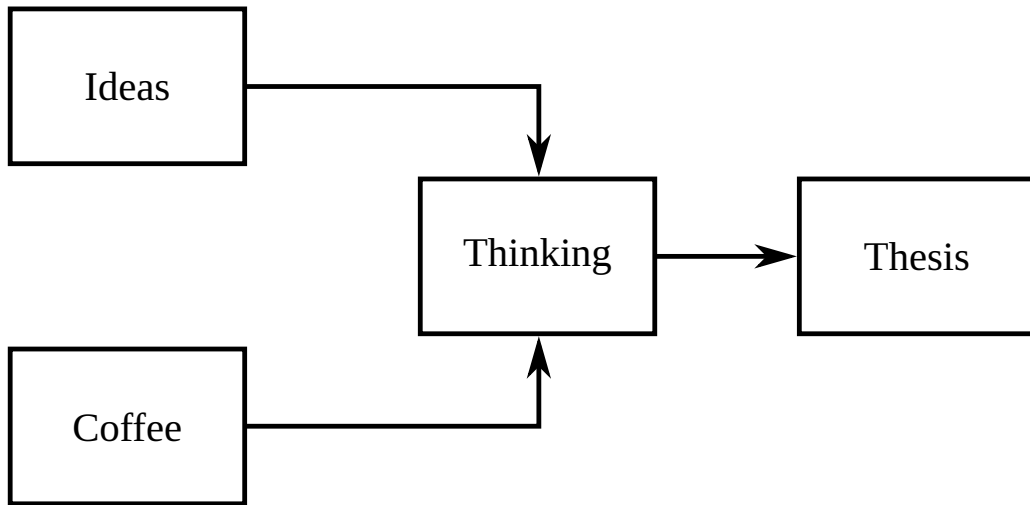


Figure 3.1: This the approximate process for producing a Thesis. It typically takes 3-4 years.

Table 3.1: Table captions normally go at the top.

Left column	$\mu$	$\sigma$
Item 1	0.3	0.5
Item 2	0.9	0.4

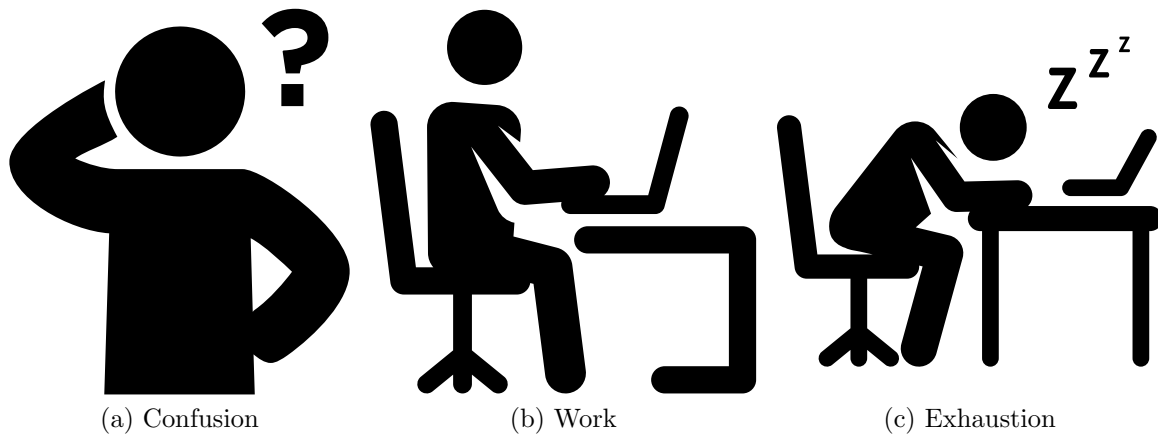


Figure 3.2: The stages of the creative process.

---

**Algorithm 1** An algorithm with caption

---

**Require:**  $n \geq 0$

**Ensure:**  $y = x^n$

$y \leftarrow 1$

$X \leftarrow x$

$N \leftarrow n$

**while**  $N \neq 0$  **do**

**if**  $N$  is even **then**

$X \leftarrow X \times X$

$N \leftarrow \frac{N}{2}$

▷ This is a comment

**else if**  $N$  is odd **then**

$y \leftarrow y \times X$

$N \leftarrow N - 1$

**end if**

**end while**

---

**3.2.2** Subtopic B

**3.2.3** Subtopic C

**3.3** Theme 2

Etc. etc.

**3.4** Conclusion

# Chapter 4

## Contribution 2

### 4.1 Introduction

In this Chapter, XXX is presented.

Section 4.2 discusses Theme 1. Section 4.3 discusses Theme 2....

### 4.2 Theme 1

#### 4.2.1 Subtopic A

#### 4.2.2 Subtopic B

#### 4.2.3 Subtopic C

### 4.3 Theme 2

Etc. etc.

### 4.4 Conclusion



# Chapter 5

## Contribution 3

### 5.1 Introduction

In this Chapter, XXX is presented.

Section 5.2 discusses Theme 1. Section 5.3 discusses Theme 2...

### 5.2 Theme 1

#### 5.2.1 Subtopic A

#### 5.2.2 Subtopic B

#### 5.2.3 Subtopic C

### 5.3 Theme 2

Etc. etc.

### 5.4 Conclusion

# Chapter 6

## Conclusions and Future Work

### 6.1 Summary of Outcomes

### 6.2 Recommendations & Future Work

### 6.3 Concluding Remarks

In summary, ...

# Bibliography

- [1] D. R. Franklin and K. J. Wilson, “A LaTeX Thesis Template for the School of Electrical and Data Engineering,” *IEEE Transactions on LaTeX Thesis Templates*, vol. 1, no. 1, Oct. 2021.

# Appendix A

## Example Appendix

Here you might present some additional results, derivations, proofs etc. that were not included in the main text.

# Appendix B

## Software Documentation

Here's an example source code listing, where the code is read in from an external file:

```
1 % Function to create a nice rotating animated GIF of 3D volumetric data V
2
3 function animation (V)
4
5 h = volshow (V, 'BackgroundColor', [0 0 0], 'Renderer', 'MaximumIntensityProjection', 'CameraPosition', [2 2↵
6         0], 'CameraUpVector', [1 0 0], 'ColorMap', jet);
7
8 camproj ('perspective');
9
10 N = 500;
11
12 filename = 'animation.gif';
13 vec = linspace(0, 4 * pi(), N)';
14 myPosition = 2 * [zeros(size(vec)) cos(vec) sin(vec)];
15
16 for idx = 1:N
17     % Update current view.
18     h.CameraPosition = myPosition(idx, :);
19     % Use getframe to capture image.
20     I = getframe(gcf);
21
22     [indI, cm] = rgb2ind (I.cdata,256);
23     % Write frame to the GIF File.
24     if idx == 1
25         imwrite(indI, cm, filename, 'gif', 'Loopcount', inf, 'DelayTime', 0.05);
26     else
27         imwrite(indI, cm, filename, 'gif', 'WriteMode', 'append', 'DelayTime', 0.05);
28     end
29 end
```

### B.1 Code Availability

All scripts and source code used for simulation and analysis of the ... are available here:

<https://bitbucket.org/username/gitrepo.git>

### B.2 Software Requirements

- MATLAB code is confirmed working with version XXXX;
- Simulations require the use of gcc version XXX or llvm/clang version YYYY

### B.3 Simulation Code - How to Run