

WIND-TUNNEL TESTS OF A DUCTED PROPELLOR
By Student Student

Individual Third Year Project Report April 2023
Supervisor: Dr. Angadh Nanjangud

SCHOOL OF ENGINEERING AND MATERIALS SCIENCE
ENGINEERING/MATERIALS
THIRD YEAR PROJECT
EMS600U/EMS690U

APRIL 2020

DECLARATION

This report entitled

Replace this text with the Project/Report Title

Was composed by me and is based on my own work. Where the work of the others has been used, it is fully acknowledged in the text and in captions to table illustrations. This report has not been submitted for any other qualification.

Name: *Enter your name here*

Signed:

Date:

Student Student
Date:
Aerospace Engineering

Abstract

This is a one or two paragraph summary of the report. It should comprise a brief and factual account of the contents including a statement of major conclusions reached. It should not be more than 200 words long.

This is probably the most important part of the report– it will certainly be the part that is read by more people than any other sections. It should state compactly the purpose of the project, the methods or procedures followed, the principal findings, and the conclusions, and it should be self-standing. Generally a reader should get enough information from the abstract to decide whether to read the whole report.

Contents

| | |
|-----------------------------|---|
| Chapter 1. Rationale | 1 |
| 1.1 Rationale | 1 |
| 1.2 Brief tutorial | 1 |
| Chapter 2. Objectives | 4 |
| 2.1 Purpose | 4 |
| Chapter 3. Conclusion | 5 |
| 3.1 Summary and Conclusions | 5 |
| 3.2 Future work | 5 |
| Chapter 4. Test Chapter | 6 |
| 4.1 Test section | 6 |
| 4.2 Another test section | 6 |
| Appendix. Bibliography | 7 |

Chapter 1

Rationale

1.1 Rationale

Rationale means the background and motivation to your project. You should include references in this section, but this is not the comprehensive literature review that you will do in the final report.

1.2 Brief tutorial

In writing your reports, I highly recommend you use \LaTeX for many reasons but I will highlight the best/most important ones here:

- (1) high typographical quality of the documents. Your document will not look as good on MS Word.
- (2) You can write your content in a modular fashion that enables separating your thinking from your worrying about the layout.
- (3) Much easier to write math quickly as you can reuse what you write much more easily.

The main benefit for you is that I am already providing you a standardized template that works for your Sem A and Sem B reports. Also, you don't have to worry about checking to

see if your references are in the IEEE format as this document will put all your references in that manner automatically.

1.2.1 How to use referencing in L^AT_EX?

As you know, you will have to begin by reading other people's work so that you can provide the appropriate credit. This is standard academic practice and also protects you from plagiarism. The way to give credit is to "cite" someone's work. Here is how I like do so.

My typical and recommended workflow is to find papers on Google Scholar. If I like what I read or think it might be useful, I collect its "BibTeX". I know this sounds like a lot of jargon so just watch this short 3-minute video that explains what I mean.

BibTeX is reference management software for formatting lists of references.

As always, take a look at the appropriate file My preferred approach is to populate the Bibliography.bst file with data on papers that is easily available via Google Scholar. We will go over this in our meeting. Questions are always welcome.

Once I have the appropriate papers listed in my Bibliography.bst file, I just have to use the command `\cite` to generate References. For example: Moore wrote one of the first papers studying the math of rockets.¹ Konstantin, Tsiolkovsky, the father of the rocket equation, went deeper into using rockets for space exploration.²

This is a test citation.³

1.2.2 How to include a figure

Refer to the file with the title "Rationale.tex" to see how the below figure was added to this document.

1.2.3 How to write cool math in L^AT_EX

This is how you put in a Figure 1.1.



FIGURE 1.1. Insert caption here.

Now, there are many reasons that I like to use \LaTeX . The most important one is that you can write math equations rapidly and it looks beautiful! To learn how to do so, I direct you to a Math tutorial on Overleaf.

1.2.4 More \LaTeX tutorial

Again, Overleaf has a nice tutorial that you can use to become more familiar with \LaTeX :
[Learn LaTeX in 30 minutes](#)

Chapter 2

Objectives

2.1 Purpose

Please state the overarching goal and list three objectives for your research project.

Chapter 3

Conclusion

3.1 Summary and Conclusions

Here, you summarize what you found/learned from your investigations and what the implications of your work are.

3.2 Future work

What would you recommend be done in the future to build upon this work?

Chapter 4

Test Chapter

4.1 Test section

lorem ipsum.

4.1.1 Subsection A

4.1.2 Subsection B

4.2 Another test section

lorem ipsum.

4.2.1 Subsection C

Bibliography

- [1] W. Moore, "A treatise on the motion of rockets," *London: G. and S. Robinson*, p. 13, 1813.
- [2] K. Tsiolkovsky, "Research of space by jet engines (kaluga)(1967 research of space by jet engines) (moscow)," *Mashinostroenie*, vol. 375, 1914.
- [3] C. M. Pieters and S. Tompkins, "Tsiolkovsky crater: A window into crustal processes on the lunar farside," *Journal of Geophysical Research: Planets*, vol. 104, no. E9, pp. 21 935–21 949, 1999.