Delete all **red** text before final submission.

#### Abstract

From Thesis Regulation Guide section 3.1.7: "The abstract must give enough information about the thesis to allow a potential reader to decide whether or not to consult the complete work. The candidate must ensure that the abstract refers to all the elements that would make the thesis worth consulting. The abstract should include important place names and proper nouns because these can be significant key words for electronic retrieval. It should not include graphs, charts, illustrations or tables. The expected content of an abstract varies among disciplines, but all abstracts can be expected to include the following:

- a statement of the research problem or question
- an indication of the research method(s) used or theoretical orientation taken
- findings or major discoveries made
- conclusions and significance.

#### **Keywords**

From Thesis Regulation Guide section 3.1.7: "At the end of the Abstract should appear a list of keywords. Librarians use these keywords when assigning subject headings and index terms as part of the Cataloguing Record. The candidate, as the person most familiar with the research and its significance, selects the terms that help other scholars get access to his/her work. For example, the following keywords could be used for a thesis studying fuzzy relational modeling: fuzzy relational modeling, fuzzy simulation, fuzzy c-Means, Centre of Gravity, Centre of Area, Weighted Average of Cluster Centres, Polyline algorithm.

The following could be used to describe a thesis entitled "The Other of Grammatology:

Lacan, Derrida, Kristeva," which studies the relationship between psychoanalysis, deconstruction, and feminism as they relate to linguistic representations: Psychoanalysis, Deconstruction, Freud, Derrida, Kristeva, Lacan, Feminism, Reference."

### **Summary for Lay Audience**

From Thesis Regulation Guide section 3.1.8: The summary for lay audience is a brief (maximum 350 words) and accessible summary of a research project that is used to explain complex ideas, technical writing and scientific terms to people who do not have prior knowledge of the subject. While your abstract is designed with your subject peers in mind, the Summary for Lay Audience communicates the importance, impact, and content of your thesis to a broader audience.

### **Co-Authorship Statement (Where Applicable)**

From Thesis Regulation Guide section 3.1.8: "In the case where a thesis includes papers co-authored by the candidate and others, the thesis must state explicitly who contributed to such work and the nature and extent of this contribution. The Supervisor(s) must attest to the accuracy of such statements about co-authorship at the Thesis Examination."

# **Epigraph (Optional)**

"My favourite advice to give others is that which I am least capable"

-Niall Bannigan

## **Dedication (Optional)**

I would like to dedicate this work to all of the transistors inside my computer jumping around for me, day and night, so that I don't have to use pen and paper!

## **Acknowledgements (Optional)**

From Thesis Regulation Guide section 3.1.9: "The acknowledgments note help received from the Supervisor(s), staff, co-authors and co-researchers, fellow students, technicians or others in the collection of materials or data, the design and construction of apparatus, the analysis of data, and the writing of the thesis."

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## List of Nomenclature

#### Latin Letters

| С           | Speed of light in a vacuum, m/s              |
|-------------|--|
| g           | Gravitational acceleration, m/s <sup>2</sup> |
| Greek Lette | rs   |
| α           | Nothing at all                               |
| β           | Change in angle, o                           |
| Superscript | S  |
| D           | Data derived from Doppler radar              |
| Subscripts  |  |
| i           | Value in a series                            |
| Abbreviatio | ns   |
| AFM         | Advanced Fluid Mechanics (Research Group)    |

# **Preface (Optional)**

Let me preface by saying...hmm, what was I going to say again?

# 1 Time Series: Long Memory

Here is a picture of a long memory time series.



Figure 1.1: A long memory time series

Here's a table.

| n | α   | nα  | β |
|---|-----|-----|---|
| 1 | 0.2 | 0.2 | 5 |
| 2 | 0.3 | 0.6 | 4 |
| 3 | 0.7 | 2.1 | 3 |

Table 1.1: A random table

$$y = mx + b \tag{1.1}$$

$$= ax + c \tag{1.2}$$

This is an un-numbered equation, along with a numbered one.

$$u = px$$
  
$$p = P(X = x)$$
(1.3)

Look at Table 1.1 and Figure A.1 and equations 1.1, 1.2, and 1.3.

Let's do some matrix algebra now.

$$det \left( \begin{vmatrix} 2 & 3 & 5 \\ 4 & 4 & 6 \\ 9 & 8 & 1 \end{vmatrix} \right) = 42$$
(1.4)

In the equation and equarray environments, you don't need to have the dollar sign to enter math mode.

$$\alpha = \beta_1 \Gamma^{-1} \tag{1.5}$$

This is citing a reference [1]. Note that this is quite straightforward if you have a good system, such as always putting references in a standard file even if you use it for multiple chapters or documents and also being sure to use a labelling scheme that makes sense to you (Niall prefers to use the leading authors last name with the last two digits of the year [2]). Also be careful to not leave a space before the tilde ( $\sim$ ) used in the reference command because otherwise you get a double-space [3].

### References

- [1] F. Alma, S. H. Bene, and T. Elas, "Lorem ipsum," ACME Publishing, vol. 21, pp. 550–556, 2014.
- [2] N. Bannigan and H. Du, "Put anything you want to appear exactly as you type it in CURLY bRaCeS," ACME Publishing, vol. 11, no. 2, pp. 355 – 368, 2023. [Online]. Available: https://journals.ametsoc.org/view/journals/wcas/11/2/ wcas-d-18-0078\_1.xml
- [3] H. Du and N. Bannigan, "Also, be sure that you have a comma after each entry except the final one," *Happy & Healthy*, vol. 18, no. 5, pp. 473–495, 2019.

# Chapter 2

## 2 Theorems

# 2.1 Basic Theorems

**Theorem 2.1.1**  $e^{i\pi} = -1$ 

# Chapter 3

# **3** The Thesis Preparation and Format

Here is a picture of a long memory time series.



Figure 3.1: A long memory time series

Here's a table.

| n | α   | nα  | β |
|---|-----|-----|---|
| 1 | 0.2 | 0.2 | 5 |
| 2 | 0.3 | 0.6 | 4 |
| 3 | 0.7 | 2.1 | 3 |

Table 3.1: A random table

$$y = mx + b \tag{3.1}$$

$$= ax + c \tag{3.2}$$

This is an un-numbered equation, along with a numbered one.

$$u = px$$
  
$$p = P(X = x)$$
(3.3)

Look at Table 3.1 and Figure 3.1 and equations 3.1, 3.2, and 3.3.

Let's do some matrix algebra now.

$$det \left( \begin{vmatrix} 2 & 3 & 5 \\ 4 & 4 & 6 \\ 9 & 8 & 1 \end{vmatrix} \right) = 42 \tag{3.4}$$

In the equation and equarray environments, you don't need to have the dollar sign to enter math mode.

$$\alpha = \beta_1 \Gamma^{-1} \tag{3.5}$$

This is citing a reference [1]. Also be careful to not leave a space before the tilde ( $\sim$ ) used in the reference command because otherwise you get a double-space [2].

#### References

- F. Alma, S. H. Bene, and T. Elas, "Lorem ipsum," ACME Publishing, vol. 21, pp. 550–556, 2014.
- [2] H. Du and N. Bannigan, "Also, be sure that you have a comma after each entry except the final one," *Happy & Healthy*, vol. 18, no. 5, pp. 473–495, 2019.

## 4 Conclusion

This is the end of a very boring paper.

### Appendices

The purpose of an appendix is to include in the thesis supporting material that is not an essential part of the text itself. For example, in a thesis that involves a survey, letters of information to subjects, questionnaires, or other research instruments may appear in an appendix. In a thesis that analyzes a rare or inaccessible text, that text may be included in an appendix. An appendix also may include raw data on which analysis has been performed, either in print or disk format.

### **A Proof of Theorems**

#### A.1 Example Theorem

**Proof of Theorem 2.1.1** 

$$e^{i\pi} = \cos(\pi) + i\sin(\pi) \tag{1}$$

$$= -1$$
 (2)



Figure A.1: A long memory time series

#### **B** Errata

| Test Number | $\alpha^2 \beta$ |
|-------------|------------------|
| 1           | 0.1234π          |
| 2           | $0.1423\pi$      |
| 3           | $0.1342\pi$      |

Table B.1: A sample appendix table

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### **Curriculum Vitae**

| Name:                                       | Haoran Du  |
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| Post-Secondary<br>Education and<br>Degrees: | University of Cincinnati<br>Cincinnati, OH, USA<br>2015 - 2020 B.Sc  |
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| Related Work<br>Experience:                 | Teaching Assistant<br>The University of Western Ontario<br>2021 - 2023   |
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#### **Publications:**

Du, H., Savory, E., & Perret, L. (2022, August 29-31). *Effect of an upstream tall building on a street canyon flow* [Paper presentation]. Physmod 2022 - International Workshop on Physical Modeling of Flow and Dispersion Phenomena, Prague, Czech Republic.

Du, H., Savory, E., & Perret, L. (2023). Effect of morphology and an upstream tall building on the mean turbulence statistics of a street canyon flow. *Building and Environment* [Accepted].

Du, H., Perret, L., & Savory, E. (2023). Effect of urban morphology and an upstream tall building on the scale interaction between the overlying boundary layer and a street canyon. *Boundary-Layer Meteorology* [To be submitted].

Note: This vita is not intended to be a job resumé. Please keep it brief and emphasize related work experience only.