



École Polytechnique Fédérale de Lausanne

Novel distance correlation-based periodograms to explore Cepheids
variables periodicities

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Master Thesis

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Life is not light but the refracted colours.
— Faust

Dedicated to my pet bunny.

The dedication is usually a short inspirational quote.

Define your dedication in `\dedication{...}` and show them with `\makededication`.

Acknowledgments

This is where you thank those who supported you on this journey. Good examples are your significant other, family, advisers, and other parties that inspired you during this project. Generally this section is about 1/2 page to a page.

Consider acknowledging the use and location of this thesis package.

Define your acknowledgments in `\acknowledgments{...}` and show them with `\makeacks`.

Lausanne, December 1, 2023

Kent Barbey

Abstract

The FooSystem tool enables lateral decomposition of a multi-dimensional flux compensator along the timing and space axes.

The abstract serves as an executive summary of your project. Your abstract should cover at least the following topics, 1-2 sentences for each: what area you are in, the problem you focus on, why existing work is insufficient, what the high-level intuition of your work is, maybe a neat design or implementation decision, and key results of your evaluation.

Résumé

For a doctoral thesis, you have to provide a French translation of the English abstract. For other projects this is optional.

Contents

Acknowledgments	1
Abstract (English/Français)	2
1 Introduction	5
2 Background	6
3 Design	7
4 Implementation	8
5 Evaluation	9
6 Related Work	10
7 Conclusion	11
Bibliography	12

Chapter 1

Introduction

The introduction is a longer writeup that gently eases the reader into your thesis [1]. Use the first paragraph to discuss the setting. In the second paragraph you can introduce the main challenge that you see. The third paragraph lists why related work is insufficient. The fourth and fifth paragraphs discuss your approach and why it is needed. The sixth paragraph will introduce your thesis statement. Think how you can distill the essence of your thesis into a single sentence. The seventh paragraph will highlight some of your results. The eighth paragraph discusses your core contribution.

This section is usually 3-5 pages.

Chapter 2

Background

The background section introduces the necessary background to understand your work. This is not necessarily related work but technologies and dependencies that must be resolved to understand your design and implementation.

This section is usually 3-5 pages.

Chapter 3

Design

Introduce and discuss the design decisions that you made during this project. Highlight why individual decisions are important and/or necessary. Discuss how the design fits together.

This section is usually 5-10 pages.

Chapter 4

Implementation

The implementation covers some of the implementation details of your project. This is not intended to be a low level description of every line of code that you wrote but covers the implementation aspects of the projects.

This section is usually 3-5 pages.

Chapter 5

Evaluation

In the evaluation you convince the reader that your design works as intended. Describe the evaluation setup, the designed experiments, and how the experiments showcase the individual points you want to prove.

This section is usually 5-10 pages.

Chapter 6

Related Work

The related work section covers closely related work. Here you can highlight the related work, how it solved the problem, and why it solved a different problem. Do not play down the importance of related work, all of these systems have been published and evaluated! Say what is different and how you overcome some of the weaknesses of related work by discussing the trade-offs. Stay positive!

This section is usually 3-5 pages.

Chapter 7

Conclusion

In the conclusion you repeat the main result and finalize the discussion of your project. Mention the core results and why as well as how your system advances the status quo.

Bibliography

- [1] Sushant Dinesh, Nathan Burow, Dongyan Xu, and Mathias Payer. “RetroWrite: Statically Instrumenting COTS Binaries for Fuzzing and Sanitization”. In: *IEEE International Symposium on Security and Privacy*. 2020.