

# **Triggering the Forth Impact**

by

Cruel Angel

A Thesis Submitted to  
The Hong Kong University of Science and Technology  
in Partial Fulfilment of the Requirements for  
the Degree of Doctor of Philosophy  
in Human Instrumentality

August 2021, Geo Front



## **Authorization**

I hereby declare that I am the sole author of the thesis.

I authorize the Hong Kong University of Science and Technology to lend this thesis to other institutions or individuals for the purpose of scholarly research.

I further authorize the Hong Kong University of Science and Technology to reproduce the thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

---

Cruel Angel

13 August 2021



# Triggering the Forth Impact

by

Cruel Angel

This is to certify that I have examined the above PhD thesis  
and have found that it is complete and satisfactory in all respects,  
and that any and all revisions required by  
the thesis examination committee have been made.

---

Prof. Adams, Thesis Supervisor

---

Prof. Lilith, Thesis Co-supervisor

---

Prof. Ikari Yui, Head of Department

Department of NERV

13 August 2021



## **ACKNOWLEDGEMENTS**

Thank you, all the Evangelion.





# TABLE OF CONTENTS

Title Page		i
Authorization		iii
Signature Page		v
Acknowledgements		vii
Table of Contents		ix
List of Figures		xi
List of Tables		xiii
List of Algorithms		xv
Abstract		xvii
Chapter 1	Introduction	1
Chapter 2	Example chapter	3
	2.1 Background	3
	2.1.1 Enumitem	3
	2.2 Math	4
	2.2.1 Symbols	4
	2.2.2 Equations	5
	2.2.3 Theorem	5
	2.3 Figure	5
	2.4 Table	6
	2.5 Code	6
	2.5.1 Inline code	6
	2.5.2 Code environment	7
	2.6 Manage citations	7

	2.6.1	Add and manage	7
	2.6.2	Citation style	7
Chapter 3		Conclusions	9
References			11
Appendix A		List of Publications	13
Appendix B		FYTGS Requirements	15
	B.1	Components	15
	B.1.1	Order	15
	B.1.2	Authorization page	15
	B.1.3	Signature page	16
	B.1.4	Acknowledgments	16
	B.1.5	Abstract	16
	B.1.6	Bibliography	16
	B.2	Language, Style and Format	16
	B.2.1	Language	16
	B.2.2	Pagination	17
	B.2.3	Format	17
	B.2.4	Footnotes	17
	B.2.5	Appendices	18
	B.2.6	Figures, Tables and Illustrations	18
	B.2.7	Photographs/Images	18
	B.2.8	Additional Materials	18

## LIST OF FIGURES

- Figure 2.1 An example tikz picture with a short caption. 5
- Figure 2.2 An example tikz picture with long caption and breakline Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. 5



## LIST OF TABLES

Table 2.1	A table with a short caption.	6
Table 2.2	Test result on different platforms with long caption and breakline Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.	6



# LIST OF ALGORITHMS

Algorithm 1 Temp

5





# **Triggering the Forth Impact**

by Cruel Angel

Department of NERV

The Hong Kong University of Science and Technology

Abstract

Some text.



# CHAPTER 1

## INTRODUCTION

Some introduction text.

**Please read the PDF documentation here:** <https://github.com/HKFoggyU/hkust-thesis/releases>.



# CHAPTER 2

## EXAMPLE CHAPTER

Please read the PDF documentation here: <https://github.com/HKFoggyU/hkust-thesis/releases>.

### 2.1 Background

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Cite a paper [1]. Chapter 2 will give more examples. Cite another paper: [2].

#### 2.1.1 Enumitem

Itemize.

- Test test.
- Test test.
  - test test
  - test test<sup>1</sup>

---

<sup>1</sup>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

- test test
- Test test.

Enumerate.

1. Test test.
2. Test test.
  - a. test test
  - b. test test<sup>2</sup>
  - c. test test
3. Test test.

## 2.2 Math

### 2.2.1 Symbols

- Calligraphic letters:  $\mathcal{A}$
- Mathbb letters:  $\mathbb{A}$
- Mathfrak letters:  $\mathfrak{A}$
- Math Sans serif letters:  $\mathbf{A}$
- Math bold letters: **A**
- Math bold upright Greek letters: (Not displaying! Use the following one.)
- Math bold upright Greek letters:  $\alpha$
- Math bold italic Greek letters:  $\alpha$
- Math bold italic Greek letters:  $\mathbf{\alpha}$

Avoid using `bm` package as it conflicts with `unicode-math` and it is outdated for  $\text{\LaTeX}$ .

You can alias some math commands by `\newcommand` or `\renewcommand` anyway.

---

<sup>2</sup> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

## 2.2.2 Equations

$$E^2 = m^2 + p^2 \tag{2.1}$$

You can use `\cref{}` to automatically setup the cross reference name; instead, you can always use `\ref{}` to customize the appearance of the cross reference.

Equation (2.1) or Equation (2.1) gives the mass-energy relationship.

## 2.2.3 Theorem

**Definition 1** LCL is orange juice.

*Proof.* They are both orange. □

---

### Algorithm 1 Temp

---

1: Temp

---

Available theorem environments are listed below:

algorithm, assumption, axiom, conclusion, condition, corollary, definition, example, lemma, proof, property, proposition, remark, theorem.

## 2.3 Figure

An example image is shown in Figure (2.2) or Figure (2.2).



Figure 2.1: An example tikz picture with a short caption.



Figure 2.2: An example tikz picture with long caption and breakline

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

## 2.4 Table

An example table is shown in Table (2.2) or Table (2.2).

Table 2.1: A table with a short caption.

OS	TeX	Test
Overleaf	TeX Live 2021/2/3	Pass
Windows 10	TeX Live 2020	<code>ltxhook</code> problem
Ubuntu 20.04	TeX Live 2021	Pass

Table 2.2: Test result on different platforms with long caption and breakline

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

OS	TeX	Test
Overleaf	TeX Live 2021/2/3	Pass
Arch Linux (2023.11)	TeX Live	Pass
Windows 10/11	TeX Live 2021	Pass
macOS 10.15	TeX Live 2021	Pass
Windows 10	TeX Live 2020	<code>ltxhook</code> problem
Ubuntu 20.04	TeX Live 2021	Pass
Termux	TeX Live 2021	Pass
Windows 11	MiKTeX 4.9	Pass
Windows 10	MiKTeX 4.4	Pass

## 2.5 Code

### 2.5.1 Inline code

Use `\lstinline|<code>|` to print code snippets. The `||` marks delimit the code and can be replaced by any character not in the code; *e.g.* `\lstinline$<code>$` gives the same result.



## 2.5.2 Code environment

The code to draw the Figure (2.2) is listed below:

Listing 2.1: L<sup>A</sup>T<sub>E</sub>X code for inserting a figure

---

```
1 \begin{figure}[htb]
2   \begin{tikzpicture}
3     \draw (0,0) -- (1, 0) -- (1, 1) -- cycle;
4   \end{tikzpicture}
5   \caption{An example picture with long caption: \blindtext
6     \\\blindtext}
7   \label{fig:tikz example} % this is a comment
8 \end{figure}
```

---

## 2.6 Manage citations

Use `biber` as B<sup>B</sup>T<sub>E</sub>X backend.

### 2.6.1 Add and manage

Entries are stored in `mythesis.bib`. For other sources, modify following commands in `mythesis.tex`:

---

```
1 \addbibresource{mythesis.bib}
```

---

### 2.6.2 Citation style

As described in the sample page from ECE department, the style is set to `iee`. You can modify the style in the `hkustthesis.cls` file as you wish.



# CHAPTER 3

## CONCLUSIONS

Some conclusion text.

**Please read the PDF documentation here:** <https://github.com/HKFoggyU/hkust-thesis/releases>.



## REFERENCES

- [1] A. Author, “A paper title,” *Nature*, vol. 7, pp. 123–128, 2021 (cit. on p. 3).
- [2] F. Mittelbach, M. Goossens, J. Braams, D. Carlisle, and C. Rowley, *The LaTeX Companion*. Reading, Massachusetts: Addison-Wesley, 1993 (cit. on p. 3).



# APPENDIX A

## LIST OF PUBLICATIONS

### Journal Publications

- [1] F. Mittelbach, M. Goossens, J. Braams, D. Carlisle, and C. Rowley, *The LaTeX Companion*. Reading, Massachusetts: Addison-Wesley, 1993.
- [2] A. Author, “A paper title,” *Nature*, vol. 7, pp. 123–128, 2021.

### Conference Publications

- [1] F. Mittelbach, M. Goossens, J. Braams, D. Carlisle, and C. Rowley, *The LaTeX Companion*. Reading, Massachusetts: Addison-Wesley, 1993.
- [2] A. Author, “A paper title,” *Nature*, vol. 7, pp. 123–128, 2021.





# APPENDIX B

## FYTGS REQUIREMENTS

The requirements are from the [RPG Handbook](#).

### B.1 Components

#### B.1.1 Order

A thesis should contain the following parts in the order shown:

1. Title page, containing in this order:
  - a. Thesis title
  - b. Full name of the candidate
  - c. Degree for which the thesis is submitted
  - d. Name of the University, *i.e.* The Hong Kong University of Science and Technology
  - e. Month and year of submission
2. Authorization page
3. Signature page
4. Acknowledgments
5. Table of contents
6. Lists of figures and tables
7. Abstract ( $\leq 300$  words.)
8. Thesis body
9. Bibliography
10. Appendices and other addenda, if any.

#### B.1.2 Authorization page

On this page, students authorize the University to lend or reproduce the thesis.

1. The copyright of the thesis as a literary work vests in its author (the student).

2. The authorization gives HKUST Library a non-exclusive right to make it available for scholarly research.

### **B.1.3 Signature page**

This page provides signatures of the thesis supervisor(s) and Department Head confirming that the thesis is satisfactory.

### **B.1.4 Acknowledgments**

The student is required to declare, in this section, the extent to which assistance has been given by his/her faculty and staff, fellow students, external bodies or others in the collection of materials and data, the design and construction of apparatus, the performance of experiments, the analysis of data, and the preparation of the thesis (including editorial help). In addition, it is appropriate to recognize the supervision and advice given by the thesis supervisor(s) and members of TSC.

### **B.1.5 Abstract**

Every copy of the thesis must have an English abstract, being a concise summary of the thesis, in 300 words or less.

### **B.1.6 Bibliography**

The list of sources and references used should be presented in a standard format appropriate to the discipline; formatting should be consistent throughout.

**Sample pages** of both MPhil and PhD theses are provided here (MPhil / PhD), with specific instructions for formatting page content (centering, spacing, etc.).

## **B.2 Language, Style and Format**

### **B.2.1 Language**

Theses should be written in English.

Students in the School of Humanities and Social Science who are pursuing research work in the areas of Chinese Studies, and who can demonstrate a need to use Chinese to write their theses should seek prior approval from the School via their thesis supervisor and the divisional head.

If approval is granted, students are also required to produce a translation of the title page, authorization page, signature page, table of contents and the abstract in English.

## **B.2.2 Pagination**

1. All pages, starting with the Title page should be numbered.
2. All page numbers should be centered, at the bottom of each page.
3. Page numbers of materials preceding the body of the text should be in small Roman numerals.
4. Page numbers of the text, beginning with the first page of the first chapter and continuing through the bibliography, including any pages with tables, maps, figures, photographs, etc., and any subsequent appendices, should be in Arabic numerals.
5. Start a new page after each chapter or section but not after a sub-section.

*Note: That means the Title page will be page i; the first page of the first chapter will be page 1.*

## **B.2.3 Format**

1. A conventional font, size 12-point, 10 to 12 characters per inch must be used.
2. One-and-a-half line spacing should be used throughout the thesis, except for abstracts, indented quotations or footnotes where single line spacing may be used.
3. All margins—top, bottom, sides—should be consistently 25mm (or no more than 30mm) in width. The same margin should be used throughout a thesis. Exceptionally, margins of a different size may be used when the nature of the thesis requires it.

## **B.2.4 Footnotes**

1. Footnotes may be placed at the bottom of the page, at the end of each chapter or after the end of the thesis body.
2. Like references, footnotes should be presented in a standard format appropriate to the discipline.
3. Both the position and format of footnotes should be consistent throughout the thesis.

## **B.2.5 Appendices**

The format of each appended item should be consistent with the nature of that item, whether text, diagram, figure, etc., and should follow the guidelines for that item as listed here.

## **B.2.6 Figures, Tables and Illustrations**

Figures, tables, graphs, etc., should be positioned according to the scientific publication conventions of the discipline, e.g., interspersed in text or collected at the end of chapters. Charts, graphs, maps, and tables that are larger than a standard page should be provided as appendices.

## **B.2.7 Photographs/Images**

1. High contrast photos should be used because they reproduce well. Photographs with a glossy finish and those with dark backgrounds should be avoided.
2. Images should be dense enough to provide 300 ppi for printing and 72 dpi for viewing.

## **B.2.8 Additional Materials**

Raw files, datasets, media files, and high resolution photographs/images of any format can be included.

*Note: Students should get approval from their department head before deviating from any of the above requirements concerning paper size, font, margins, etc.*