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TITLES THAT REQUIRE MORE THAN ONE LINE SHOULD APPEAR IN
AN INVERTED PYRAMID FORM

by

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A thesis submitted to the Graduate College of
Texas State University in partial fulfillment
of the requirements for the degree of
Master of Science
with a Major in Computer Science
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LIST OF ABBREVIATIONS (optional)

API Application Programming Interface

UML Unified Modeling Language

ABSTRACT

Indent and begin typing the abstract. The abstract is a continuous summary, not disconnected note or an outline, and is brief and to the point. The text of the abstract is double-spaced or one and one-half spaced. The abstract may continue on to additional pages.

I. INTRODUCTION

This template for L^AT_EX is designed to make formatting your thesis as painless as possible.

Organization

A very important factor for successful thesis writing is the organization of the material. This template suggests a structure as the following:

- `Chapters/` is where all the “real” content goes in separate files such as `Chapter01.tex` etc.
- `FrontBackMatter/` is where all the stuff goes that surrounds the “real” content, such as the acknowledgments, dedication, etc.
- `gfx/` is where you put all the graphics you use in the thesis. Maybe they should be organized into subfolders depending on the chapter they are used in, if you have a lot of graphics.
- `Bibliography.bib`: the BibT_EX database to organize all the references you might want to cite.
- `ClassicThesis.tex`: the main file of your thesis where all gets bundled together.
- `classicthesis-config.tex`: a central place to load all nifty packages that are used. In there, you can also activate backrefs in order to have information in the bibliography about where a source was cited in the text (i. e., the page number). *Make your changes and adjustments here.* You also adjust the title of your thesis, your name, and all similar information here.

In total, this should get you started in no time.

Citations

In-text citations are fairly straightforward:

1. Standard citation. (Bringhurst, 2008, p. 123)
2. According to Donald Knuth (1976), the "C language rocks". (p. 12)

test subsection

some extra text here

II. EXAMPLES

Ei choro aeterno antiopam mea, labitur bonorum pri no nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

A New Section

Illo principalmente su nos. Non message *occidental* angloromanic da. Debitas effortio simplicate sia se, auxiliar summarios da que, se avantiate publicationes via. Pan in terra summarios, capital interlingua se que. Al via multo esser specimen, campo responder que da. Le usate medical addresses pro, europa origine sanctificate nos se.

Test for a Subsection

Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilisis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro Unified Modeling Language (UML) congrue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdiet nec, sea odio dui vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu.

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. ea cum Application

Table II.1: Runtimes

Schedule	10001x128	10001x256	20001x128	20001x256
Block	2.5334	10.0105	4.1639	16.4307
Static	2.4800	9.9037	4.0644	16.2538
Default	2.9132	11.6461	5.4368	21.7393
Dynamic	2.4965	9.8905	4.0690	16.2200
Guided	2.4880	9.8922	4.0565	16.2162

Programming Interface (API) primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

Sia ma sine svedese americas. Asia Bentley (Bentley, 1999) representantes un nos, un altere membros qui.¹ Medical representantes al uso, con lo unic vocabulos, tu peano essentialmente qui. Lo malo laborava anteriormente uso. Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilisis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro UML congue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdiet nec, sea odio duis vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu. Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. ea cum API primis intellegat.

¹De web nostre historia angloromantic.

Table II.2: This is the second table

Schedule	10001x128	10001x256	20001x128	20001x256
Block	2.5334	10.0105	4.1639	16.4307
Static	2.4800	9.9037	4.0644	16.2538
Default	2.9132	11.6461	5.4368	21.7393
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Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilisis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

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²De web nostre historia angloromanic.



(a) Asia personas duo.



(b) Pan ma signo.



(c) Methodicamente o uno.



(d) Titulo debitas.

Figure II.1: Tu duo titulo debitas latente.

graecis. In eos meis nominavi, liber soluta vim cu. ea cum API primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

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Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilisis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro UML congue populo ornatus cu, ex qui dicant nemore

³De web nostre historia angloromanic.

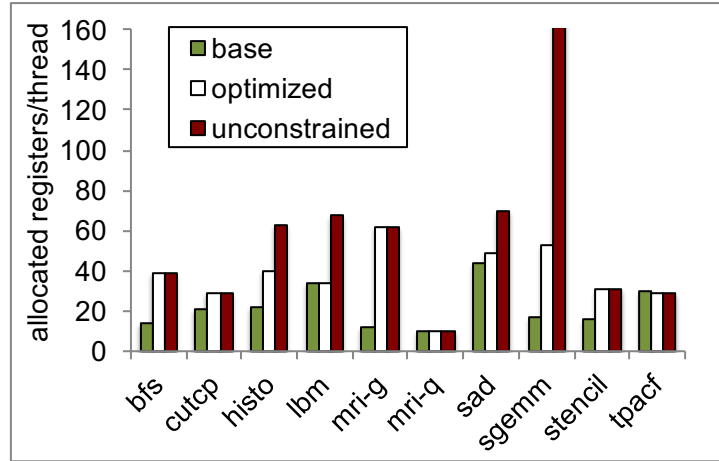


Figure II.2: Another Figure

melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdiet nec, sea odio duis vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu. Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. ea cum API primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

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⁴De web nostre historia angloromanic.

III. MATH TEST CHAPTER

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore
graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate
interpretaris eu, vix eu libris efficiantur.

Some Formulas

Due to the statistical nature of ionisation energy loss, large fluctuations can occur in the amount of energy deposited by a particle traversing an absorber element¹. Continuous processes such as multiple scattering and energy loss play a relevant role in the longitudinal and lateral development of electromagnetic and hadronic showers, and in the case of sampling calorimeters the measured resolution can be significantly affected by such fluctuations in their active layers. The description of ionisation fluctuations is characterised by the significance parameter κ , which is proportional to the ratio of mean energy loss to the maximum allowed energy transfer in a single collision with an atomic electron:

$$\kappa = \frac{\xi}{E_{\max}} \quad (\text{III.1})$$

E_{\max} is the maximum transferable energy in a single collision with an atomic electron.

$$E_{\max} = \frac{2m_e\beta^2\gamma^2}{1 + 2\gamma m_e/m_x + (m_e/m_x)^2} ,$$

where $\gamma = E/m_x$, E is energy and m_x the mass of the incident particle, $\beta^2 = 1 - 1/\gamma^2$ and m_e is the electron mass. ξ comes from the Rutherford

¹Examples taken from Walter Schmidt's great gallery:
<http://home.vrweb.de/~was/mathfonts.html>

scattering cross section and is defined as:

$$\xi = \frac{2\pi z^2 e^4 N_{\text{Av}} Z \rho \delta x}{m_e \beta^2 c^2 A} = 153.4 \frac{z^2}{\beta^2} \frac{Z}{A} \rho \delta x \quad \text{keV},$$

where

z charge of the incident particle

N_{Av} Avogadro's number

Z atomic number of the material

A atomic weight of the material

ρ density

δx thickness of the material

κ measures the contribution of the collisions with energy transfer close to E_{max} .

For a given absorber, κ tends towards large values if δx is large and/or if β is small. Likewise, κ tends towards zero if δx is small and/or if β approaches 1.

The value of κ distinguishes two regimes which occur in the description of ionisation fluctuations:

1. A large number of collisions involving the loss of all or most of the incident particle energy during the traversal of an absorber.

As the total energy transfer is composed of a multitude of small energy losses, we can apply the central limit theorem and describe the fluctuations by a Gaussian distribution. This case is applicable to non-relativistic particles and is described by the inequality $\kappa > 10$ (i. e., when the mean energy loss in the absorber is greater than the maximum energy transfer in a single collision).

2. Particles traversing thin counters and incident electrons under any conditions.

The relevant inequalities and distributions are $0.01 < \kappa < 10$, Vavilov distribution, and $\kappa < 0.01$, Landau distribution.

Various Mathematical Examples

If $n > 2$, the identity

$$t[u_1, \dots, u_n] = t[t[u_1, \dots, u_{n_1}], t[u_2, \dots, u_n]]$$

defines $t[u_1, \dots, u_n]$ recursively, and it can be shown that the alternative definition

$$t[u_1, \dots, u_n] = t[t[u_1, u_2], \dots, t[u_{n-1}, u_n]]$$

gives the same result.

APPENDIX SECTION

APPENDIX A

Insert supplementary material here.

REFERENCES

- Bentley, J. (1999). *Programming Pearls*. Addison–Wesley, Boston, MA, USA, 2nd edition.
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