

THE UMALAYATHESIS L<sup>A</sup>T<sub>E</sub>X DOCUMENT CLASS

LIM LIAN TZE

INSTITUTE OF POSTGRADUATE STUDIES  
UNIVERSITY OF MALAYA  
KUALA LUMPUR

2015

THE UMALAYATHESIS L<sup>A</sup>T<sub>E</sub>X DOCUMENT CLASS

LIM LIAN TZE

THESIS SUBMITTED IN FULFILMENT  
OF THE REQUIREMENTS  
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

INSTITUTE OF POSTGRADUATE STUDIES  
UNIVERSITY OF MALAYA  
KUALA LUMPUR

2015

**UNIVERSITI MALAYA**  
**ORIGINAL LITERARY WORK DECLARATION**

Name of Candidate: \_\_\_\_\_ (I.C./Passport No.: \_\_\_\_\_ )

Registration/Matrix No.:

Name of Degree:

Title of Project Paper/Research Report/Dissertation/Thesis (“this Work”):

Field of Study:

I do solemnly and sincerely declare that:

- (1) I am the sole author/writer of this Work;
- (2) This work is original;
- (3) Any use of any work in which copyright exists was done by way of fair dealing and for permitted purposes and any excerpt or extract from, or reference to or reproduction of any copyright work has been disclosed expressly and sufficiently and the title of the Work and its authorship have been acknowledged in this Work;
- (4) I do not have any actual knowledge nor do I ought reasonably to know that the making of this work constitutes an infringement of any copyright work;
- (5) I hereby assign all and every rights in the copyright to this Work to the University of Malaya (“UM”), who henceforth shall be owner of the copyright in this Work and that any reproduction or use in any form or by any means whatsoever is prohibited without the written consent of UM having been first had and obtained;
- (6) I am fully aware that if in the course of making this Work I have infringed any copyright whether intentionally or otherwise, I may be subject to legal action or any other action as may be determined by UM.

Candidate’s Signature

Date

Subscribed and solemnly declared before,

Witness’s Signature

Date

Name:

Designation:

## ABSTRACT

This is about my wonderful research.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## ABSTRAK

Ini merupakan abstrak dalam Bahasa Melayu.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## ACKNOWLEDGEMENTS

Thanks guys. I owe you many.

## TABLE OF CONTENTS

<b>ORIGINAL LITERARY WORK DECLARATION</b>	<b>ii</b>
<b>ABSTRACT</b>	<b>iii</b>
<b>ABSTRAK</b>	<b>iv</b>
<b>ACKNOWLEDGEMENTS</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF FIGURES</b>	<b>viii</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF SYMBOLS AND ACRONYMS</b>	<b>x</b>
<b>LIST OF APPENDICES</b>	<b>xi</b>
<b>CHAPTER 1: HOW TO USE UMALAYATHESIS TO WRITE YOUR THESIS</b>	<b>1</b>
1.1 Files	1
1.2 Printing from Acrobat Reader	2
1.3 Using the umalayathesis Class	2
1.3.1 Activation	2
1.3.2 Author Information	2
1.3.3 Preliminary Pages	2
1.3.4 Acknowledgements	3
1.3.5 Abstract	3
1.3.6 Table of contents, List of figures and tables	3
1.3.7 Main Chapters	3
1.3.8 Appendices	4
1.3.9 Citations and Bibliography	4
1.3.10 Glossary	5
1.3.11 Glossary	5
<b>CHAPTER 2: INTRODUCTION, BACKGROUND STORY, MOTIVATIONS</b>	<b>7</b>
2.1 First Test and I need a really long title, please do oblige me won't you? Just a few more words and yes we're there	7
2.1.1 Second Test	8
2.2 Yeah	9
<b>CHAPTER 3: DUMMY CHAPTER</b>	<b>12</b>
<b>APPENDICES</b>	<b>13</b>
<b>REFERENCES</b>	<b>16</b>





## LIST OF FIGURES

Figure 2.1	First figure. OK?	8
Figure 2.2	Second figure. Now I need a long caption to test out how things look in the List of Figures. Is this long enough yet? Is it? Is it?	8
Figure 3.1	Let's see. What have we got here?	12

## LIST OF TABLES

Table 2.1 This is a table

9

## LIST OF SYMBOLS AND ACRONYMS

$\theta$	temperature degree.
LI	lexical item.
NLP	Natural Language Processing.
POS	part of speech.

## LIST OF APPENDICES

Appendix A	Manuals, Technical Specifications, Documentations, Example Scenarios	14
Appendix B	Try	15

## CHAPTER 1

### HOW TO USE UMALAYATHESIS TO WRITE YOUR THESIS

umalayathesis is a  $\LaTeX$  class for authoring theses that fulfil formatting specifications required by Universiti Malaya (UM), Malaysia. The thesis preparation guide can be accessed at <http://goo.gl/28VWj>.

#### 1.1 Files

Here's a quick list of the files required when writing your thesis with the umalayathesis class. Easiest way to go about things is to put all the files in the same directory. (See Chapter 1.3 for more details.)

- `umalayathesis.cls`, the  $\LaTeX$  class file implementing the UM thesis formatting requirements.
- A “main driver” `.tex` file of your thesis, analogous to `int main()` or `public static void main(String[])`. You can name this file anything you like; it is known as `thesis.tex` in this guide. (See 1.3.)
- A `.tex` file containing your thesis abstract. (See 1.3.5.)
- `.tex` files containing your thesis chapters and appendices, one chapter per file. (See 1.3.7 and 1.3.8.)
- A `.bib` file containing your references and publications. (See 1.3.9.)
- A `.tex` file containing your glossary. (See 1.3.11.)

## 1.2 Printing from Acrobat Reader

Remember to set the **paper size** to **A4** and **page scaling** to **None** in the Print dialog, otherwise the margins would be incorrect.

## 1.3 Using the umalayathesis Class

### 1.3.1 Activation

To ‘activate’ the class, make sure your main document file (e.g. thesis.tex) starts off with

`\documentclass{umalayathesis}`:

```
\documentclass{umalayathesis}
\usepackage{graphicx}
\usepackage{... other packages you need}
```

This will set up the page margins, paragraph spacing, indents, page numbers, font face and size, citation and bibliography format, amongst other things.

### 1.3.2 Author Information

You need to provide some author information in the preamble. Example lines from thesis.tex:

```
\author{Lim Lian Tze}
\title{My Ground-breaking Research}
\submissionyear{2012}
\degree{Doctor of Philosophy}
```

These information are needed to generate the preliminary pages.

### 1.3.3 Preliminary Pages

Once in the main document body, `\frontmatter` sets up the, well, front matter. This include setting the page numbers to lower-case Roman numerals.

umalayathesis can generate the cover page, title page and original literary work declaration page with the following lines (included in thesis.tex):

```
\makecoverandtitlepage  
\declarationpage
```

### 1.3.4 Acknowledgements

This is provided using `\acknowledgements`:

```
\acknowledgements{I would like to thank my parents, my family, my  
supervisor...}
```

### 1.3.5 Abstract

Write your abstracts in separate files (`sample-abstract.tex` for the English abstract and `sample-msabstract.tex` for the Malay abstract in this example), and include them in `thesis.tex` like this:

```
\abstractfromfile{sample-abstract}  
\msabstractfromfile{sample-msabstract}
```

### 1.3.6 Table of contents, List of figures and tables

These are auto-generated by the following lines (included in `thesis.tex`):

```
{\clearpage\SingleSpacing  
\tableofcontents\clearpage  
\listoffigures\clearpage  
\listoftables\clearpage}
```

### 1.3.7 Main Chapters

I highly recommend that each chapter be written in a separate file. For example, `chap-intro.tex` has the contents

```
\chapter{Introduction}  
This is the introduction chapter.  
  
\section{Problem Background}  
We study the...
```

And chap-litreview.tex:

```
\chapter{Literature Review}
We review the state of the art in...

\section{Early Approach}
Researchers first attempted to...
```

In thesis.tex, these chapter files are included with the following lines:

```
\mainmatter           % signal start of main chapters
\include{chap-intro}  % no .tex extension!
\include{chap-litreview}
\include{...}
```

### 1.3.8 Appendices

Again, I recommend keeping each appendix chapter in its own file e.g. app-umldiagram.tex:

```
\chapter{UML Diagrams}
...
```

And in thesis.tex:

```
\appendix % signal start of appendices
\include{app-umldiagram}
\include{...}
```

### 1.3.9 Citations and Bibliography

umalayathesis uses the apacite package to format citations and bibliography in the APA style.

Here are some useful variants of the \cite command; see the apacite manual for full list.



- `\cite{Lim:2009}` → (Lim, 2009)
- `\citeNP{Lim:2009}` → Lim, 2009 (no parenthesis)
- `\cite<see>[p.~7]{Lim:2009}` → (see Lim, 2009, p. 7)
- `\citeauthor{Lim:2009}` → Lim
- `\citeyear{Lim:2009}` → (2009)

In `thesis.tex`, these lines will print the bibliography list:

```
\backmatter           % signal start of back matter
\bibliography{bibfile} % bibliography file name without .bib extension
```

### 1.3.10 Glossary

### 1.3.11 Glossary

You can maintain a consistent glossary and acronym list using the `glossaries` package. It also supports acronym expansion on first mention!

First, define your acronyms and terms in a separate file e.g. `myacronyms.tex`:

```
% \newglossaryentry{label}{name={term},description={explanation}}
\newglossaryentry{lexicon}{
name={lexicon},
description={The vocabulary of a language, including its words and
expressions. More formally, it is a language's inventory of lexemes}
}

% \newacronym[description={explanation}]{label}{abbrv}{full form}
\newacronym
[description={single word or words that are grouped in a language's lexicon
}]
{LI}{LI}{lexical item}

\newacronym[description={The application of computational linguistics
principles to problems}]
{NLP}{NLP}{Natural Language Processing}

% when the plural form is irregular, specify firstplural and plural
\newacronym
[firstplural={parts of speech}, plural={POS},
description={linguistic category of lexical items}]
{POS}{POS}{part of speech}
```

Loading the glossary and acronym list, and later printing the list of acronyms and glossary in thesis.tex:

```
% Must be loaded BEFORE \begin{document}!
\loadglsentries{myacronyms}
\begin{document}
...
% List of acronyms is between list of tables and list of appendices
\listofacronyms\clearpage
...
\bibliography{bibfile}
% Glossaries is placed AFTER the bibliography
% (only entries that are actually used in the text will be listed)
\printglossary
...
```

To mention them in the text (i.e. chap-xxx.tex etc):

```
Let's talk about \acp{LI} and \acp{POS} in \ac{NLP}. I mention again \acp{LI}. We will also talk about \glsplural{lexicon}.
```

Notice how the acronyms are expanded on first use, as well as the use of `\glsplural` and `\acp` for plurals:

```
Let's talk about lexical items (LIs) and parts of speech (POS) in Natural Language Processing (NLP). I mention again LIs. We will also talk about lexicons.
```

You will need to run `pdflatex`, the `MakeGlossaries` and `MakeAcronyms` tool that you configured earlier, then 2 more runs of `pdflatex` for the glossaries to appear properly.

Use `\Gls`, `\Glsplural`, `\Ac`, `\Acp` etc. if you need to capitalise the first letter of your terms at the beginning of sentences.

## CHAPTER 2

### INTRODUCTION, BACKGROUND STORY, MOTIVATIONS

#### 2.1 First Test and I need a really long title, please do oblige me won't you? Just a few more words and yes we're there

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.



Figure 2.1: First figure. OK?

### 2.1.1 Second Test

Their (Audibert, 2004) requirements<sup>1</sup> are really amazing<sup>2</sup> (Budanitsky & Hirst, 2006).



Figure 2.2: Second figure. Now I need a long caption to test out how things look in the List of Figures. Is this long enough yet? Is it? Is it?

How how?

2.1.1 (a) *This works?*

Does it? Great. Let's talk about lexical items (LIs) and parts of speech (POS) in Natural Language Processing (NLP). I mention again LIs. Oh I have a symbol too, it's temperature degree ( $\theta$ ). And I talk a lot about lexicons.

---

<sup>1</sup>See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line.

<sup>2</sup>don't you agree?

## 2.2 Yeah

Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetur.

Table 2.1: This is a table

Hey	How's it	Going?
Fine!	Just great.	See ya!
Fine!	Just great.	See ya!

Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Donec odio elit, dictum in, hendrerit sit amet, egestas sed, leo. Praesent feugiat sapien aliquet odio. Integer vitae justo. Aliquam vestibulum fringilla lorem. Sed neque lectus, consectetur at, consectetur sed, eleifend ac, lectus. Nulla facilisi. Pellentesque eget lectus. Proin eu metus. Sed porttitor. In hac habitasse platea dictumst. Suspendisse eu lectus. Ut mi mi, lacinia sit amet, placerat et, mollis vitae, dui. Sed ante tellus, tristique

ut, iaculis eu, malesuada ac, dui. Mauris nibh leo, facilisis non, adipiscing quis, ultrices a, dui.

Morbi luctus, wisi viverra faucibus pretium, nibh est placerat odio, nec commodo wisi enim eget quam. Quisque libero justo, consectetur a, feugiat vitae, porttitor eu, libero. Suspendisse sed mauris vitae elit sollicitudin malesuada. Maecenas ultricies eros sit amet ante. Ut venenatis velit. Maecenas sed mi eget dui varius euismod. Phasellus aliquet volutpat odio. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Pellentesque sit amet pede ac sem eleifend consectetur. Nullam elementum, urna vel imperdiet sodales, elit ipsum pharetra ligula, ac pretium ante justo a nulla. Curabitur tristique arcu eu metus. Vestibulum lectus. Proin mauris. Proin eu nunc eu urna hendrerit faucibus. Aliquam auctor, pede consequat laoreet varius, eros tellus scelerisque quam, pellentesque hendrerit ipsum dolor sed augue. Nulla nec lacus.

Suspendisse vitae elit. Aliquam arcu neque, ornare in, ullamcorper quis, commodo eu, libero. Fusce sagittis erat at erat tristique mollis. Maecenas sapien libero, molestie et, lobortis in, sodales eget, dui. Morbi ultrices rutrum lorem. Nam elementum ullamcorper leo. Morbi dui. Aliquam sagittis. Nunc placerat. Pellentesque tristique sodales est. Maecenas imperdiet lacinia velit. Cras non urna. Morbi eros pede, suscipit ac, varius vel, egestas non, eros. Praesent malesuada, diam id pretium elementum, eros sem dictum tortor, vel consectetur odio sem sed wisi.

Sed feugiat. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Ut pellentesque augue sed urna. Vestibulum diam eros, fringilla et, consectetur eu, nonummy id, sapien. Nullam at lectus. In sagittis ultrices mauris. Curabitur malesuada erat sit amet massa. Fusce blandit. Aliquam erat volutpat. Aliquam euismod. Aenean vel lectus. Nunc imperdiet justo nec dolor.

Etiam euismod. Fusce facilisis lacinia dui. Suspendisse potenti. In mi erat, cursus id, nonummy sed, ullamcorper eget, sapien. Praesent pretium, magna in eleifend egestas,

pede pede pretium lorem, quis consetetur tortor sapien facilisis magna. Mauris quis magna varius nulla scelerisque imperdiet. Aliquam non quam. Aliquam porttitor quam a lacus. Praesent vel arcu ut tortor cursus volutpat. In vitae pede quis diam bibendum placerat. Fusce elementum convallis neque. Sed dolor orci, scelerisque ac, dapibus nec, ultricies ut, mi. Duis nec dui quis leo sagittis commodo.

## CHAPTER 3

### DUMMY CHAPTER

Hello!!

Test 3

Figure 3.1: Let's see. What have we got here?



# Appendices

## **APPENDIX A**

### **MANUALS, TECHNICAL SPECIFICATIONS, DOCUMENTATIONS, EXAMPLE SCENARIOS**

## APPENDIX B

### TRY

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

## REFERENCES

- Audibert, L. (2004). Word sense disambiguation criteria: a systematic study. In *20th International Conference on Computational Linguistics (COLING 2004)* (pp. 910–916). Geneva, Switzerland: COLING.
- Budanitsky, A., & Hirst, G. (2006). Evaluating WordNet-based measures of lexical semantic relatedness. *Computational Linguistics*, 32(1), 13–47.

## GLOSSARY

lexicon The vocabulary of a language, including its words and expressions. More formally, it is a language's inventory of lexemes.