TITLE OF THESIS

by

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A thesis submitted to the Graduate Council 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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ACKNOWLEDGEMENTS

The acknowledgements page should have a two inch top margin. The word "AC-KNOWLEDGEMENTS" in all CAPS, centered is the heading. Many students use this section to thank their committee members, fellow students, family members, or any person they feel has contributed significantly to their document.

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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.

INTRODUCTION

This bundle for LaTeX has two goals:

1. Provide students with an easy-to-use template for their Master's or PhD thesis. (Though it might also be used by other types of authors for reports, books, etc.)

2. Provide a classic, high-quality typographic style that is inspired by **?** 's "*The Elements of Typographic Style*" [**?**].

Title of thesis
version 4.1

The bundle is configured to run with a *full* MiKTeX or TeXLive[1] installation right away and, therefore, it uses only freely available fonts. (Minion fans can easily adjust the style to their needs.)

People interested only in the nice style and not the whole bundle can now use the style stand-alone via the file `classicthesis.sty`. This works now also with "plain" LaTeX. As of version 3.0, `classicthesis` can also be easily used with LyX[2] thanks to Nicholas Mariette and Ivo Pletikosić. The LyX version of this manual will contain more information on the details.

This should enable anyone with a basic knowledge of LaTeX 2ε or LyX to produce beautiful documents without too much effort. In the end, this is my overall goal: more beautiful documents, especially theses, as I am tired of seeing so many ugly ones.

The whole template and the used style is released under the GNU General Public License.

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1 See the file `LISTOFFILES` for needed packages. Furthermore, `classicthesis` works with most other distributions and, thus, with most systems LaTeX is available for.
2 `http://www.lyx.org`

If you like the style then I would appreciate a postcard:

André Miede

Detmolder Straße 32

31737 Rinteln

Germany

The postcards I received so far are available at:

http://postcards.miede.de

So far, many theses, some books, and several other publications have been typeset successfully with it. If you are interested in some typographic details behind it, enjoy Robert Bringhurst's wonderful book.

IMPORTANT NOTE: Some things of this style might look unusual at first glance, many people feel so in the beginning. However, all things are intentionally designed to be as they are, especially these:

- No bold fonts are used. Italics or spaced small caps do the job quite well.

- The size of the text body is intentionally shaped like it is. It supports both legibility and allows a reasonable amount of information to be on a page. And, no: the lines are not too short.

- The tables intentionally do not use vertical or double rules. See the documentation for the booktabs package for a nice discussion of this topic.[3]

- And last but not least, to provide the reader with a way easier access to page numbers in the table of contents, the page numbers are right behind the titles. Yes, they are *not* neatly aligned at the right side and they are *not* connected with dots that help the eye to bridge a distance that is not necessary. If you are still

---

3 To be found online at
http://www.ctan.org/tex-archive/macros/latex/contrib/booktabs/.

not convinced: is your reader interested in the page number or does she want to sum the numbers up?

Therefore, please do not break the beauty of the style by changing these things unless you really know what you are doing! Please.

1.1 ORGANIZATION

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

You can use th[e] margins for summaries of text body. . .

- `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 BibTEX database to organize all the references you might want to cite.

- `classicthesis.sty`: the style definition to get this awesome look and feel. Does not only work with this thesis template but also on its own (see folder `Examples`). Bonus: works with both LATEX and PDFLATEX. . . and LYX.

- `ClassicThesis.tcp` a TEXnicCenter project file. Great tool and it's free!

- `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. This means that you specify here the options you want to load `classicthesis.sty` with. You also adjust the title of your thesis, your name, and all similar information here. Refer to Section 1.3 for more information.

This had to change as of version 3.0 in order to enable an easy transition from the "basic" style to LYX.

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

1.2 STYLE OPTIONS

There are a couple of options for `classicthesis.sty` that allow for a bit of freedom concerning the layout:

- General:
  - **drafting**: prints the date and time at the bottom of each page, so you always know which version you are dealing with. Might come in handy not to give your Prof. that old draft.

- Parts and Chapters:
  - **parts**: if you use Part divisions for your document, you should choose this option. (Cannot be used together with `nochapters`.)
  - **nochapters**: allows to use the look-and-feel with classes that do not use chapters, e. g., for articles. Automatically turns off a couple of other options: `eulerchapternumbers`, `linedheaders`, `listsseparated`, and `parts`.
  - **linedheaders**: changes the look of the chapter headings a bit by adding a horizontal line above the chapter title. The chapter number will also be moved to the top of the page, above the chapter title.

- Typography:

- **eulerchapternumbers**: use figures from Hermann Zapf's Euler math font for the chapter numbers. By default, old style figures from the Palatino font are used.

- **beramono**: loads Bera Mono as typewriter font. (Default setting is using the standard CM typewriter font.)

- **eulermath**: loads the awesome Euler fonts for math. (Palatino is used as default font.)

- **pdfspacing**: makes use of pdftex' letter spacing capabilities via the `microtype` package.[4] This fixes some serious issues regarding math formulæ etc. (e.g., "ß") in headers.

- **minionprospacing**: uses the internal `textssc` command of the `MinionPro` package for letter spacing. This automatically enables the `minionpro` option and overrides the `pdfspacing` option.

- Table of Contents:

  - **tocaligned**: aligns the whole table of contents on the left side. Some people like that, some don't.

  - **dottedtoc**: sets pagenumbers flushed right in the table of contents.

  - **manychapters**: if you need more than nine chapters for your document, you might not be happy with the spacing between the chapter number and the chapter title in the Table of Contents. This option allows for additional space in this context. However, it does not look as "perfect" if you use \parts for structuring your document.

- Floats:

  - **listings**: loads the `listings` package (if not already done) and configures the List of Listings accordingly.

---

4 Use `microtype`'s `DVIoutput` option to generate DVI with pdftex.

- floatperchapter: activates numbering per chapter for all floats such as figures, tables, and listings (if used).

- subfig(ure): is passed to the tocloft package to enable compatibility with the subfig(ure) package. Use this option if you want use classicthesis with the subfig package.

The best way to figure these options out is to try the different possibilities and see, what you and your supervisor like best.

In order to make things easier in general, `classicthesis-config.tex` contains some useful commands that might help you.

1.3 CUSTOMIZATION

This section will give you some hints about how to adapt classicthesis to your needs.

The file `classicthesis.sty` contains the core functionality of the style and in most cases will be left intact, whereas the file `classicthesis-config.tex` is used for some common user customizations.

The first customization you are about to make is to alter the document title, author name, and other thesis details. In order to do this, replace the data in the following lines of `classicthesis-config.tex`:

```
% **************************************************
% 2. Personal data and user ad-hoc commands
% **************************************************
\newcommand{\myTitle}{A Classic Thesis Style\xspace}
\newcommand{\mySubtitle}{An Homage to...\xspace}
```

Further customization can be made in `classicthesis-config.tex` by choosing the options to `classicthesis.sty` (see Section 1.2) in a line that looks like this:

```
\PassOptionsToPackage{eulerchapternumbers,drafting,listings,subfig,eulermath,
    parts}{classicthesis}
```

If you want to use backreferences from your citations to the pages they were cited on, change the following line from:

```
\setboolean{enable-backrefs}{false} % true false
```

to

```
\setboolean{enable-backrefs}{true} % true false
```

Many other customizations in `classicthesis-config.tex` are possible, but you should be careful making changes there, since some changes could cause errors.

Finally, changes can be made in the file `classicthesis.sty`, although this is mostly *Modifications* not designed for user customization. The main change that might be made here is the `classicthes` text-block size, for example, to get longer lines of text.

1.4 ISSUES

This section will list some information about problems using `classicthesis` in general or using it with other packages.

Beta versions of `classicthesis` can be found at the following Google code repository:

<div align="center">http://code.google.com/p/classicthesis/</div>

There, you can also post serious bugs and problems you encounter.

Compatibility with the `glossaries` Package

If you want to use the `glossaries` package, take care of loading it with the following options:

```
\usepackage[style=long,nolist]{glossaries}
```

Thanks to Sven Staehs for this information.

Compatibility with the (Spanish) `babel` Package

Spanish languages need an extra option in order to work with this template:

```
\usepackage[spanish,es-lcroman]{babel}
```

Thanks to an unknown person for this information (via Google Code issue reporting).

FURTHER INFORMATION FOR USING classicthesis WITH SPANISH (IN ADDITION TO THE ABOVE)   In the file ClassicThesis.tex activate the language:

```
\selectlanguage{spanish}
```

In order to get the bibliography style right, you can use the following:

```
\bibliographystyle{babplain}
```

For this, it is necessary to load the package:

```
\usepackage[spanish,fixlanguage]{babelbib}
\selectbiblanguage{spanish}
```

If there are issues changing \tablename, e. g., using this:

```
\renewcommand{\bibname}{Referencias}
\renewcommand{\tablename}{Tabla}
```

This can be solved by passing es-tabla parameter to babel:

```
\PassOptionsToPackage{es-tabla,spanish,es-lcroman,english}{babel}
\usepackage{babel}
```

But it is also necessary set spanish in the \documentclass.

Thanks to Alvaro Jaramillo Duque for this information.

Compatibility with the `pdfsync` Package

Using the `pdfsync` package leads to linebreaking problems with the `graffito` command. Thanks to Henrik Schumacher for this information.

1.5 FUTURE WORK

So far, this is a quite stable version that served a couple of people well during their thesis time. However, some things are still not as they should be. Proper documentation in the standard format is still missing. In the long run, the style should probably be published separately, with the template bundle being only an application of the style. Alas, there is no time for that at the moment... it could be a nice task for a small group of LATEXnicians.

Please do not send me email with questions concerning LATEX or the template, as I do not have time for an answer. But if you have comments, suggestions, or improvements for the style or the template in general, do not hesitate to write them on that postcard of yours.

1.6 BEYOND A THESIS

It is easy to use the layout of `classicthesis.sty` without the framework of this bundle. To make it even easier, this section offers some plug-and-play-examples.

The LATEX-sources of these examples can be found in the folder with the name `Examples`. They have been tested with `latex` and `pdflatex` and are easy to compile. To assure you even a bit more, PDFs built from the sources can also be found in the folder.

Listing 1: An Article

```latex
% article example for classicthesis.sty
\documentclass[10pt,a4paper]{article} % KOMA-Script article scrartcl
\usepackage{lipsum}
\usepackage{url}
\usepackage[nochapters]{../classicthesis} % nochapters


\begin{document}
    \title{\rmfamily\normalfont\spacedallcaps{the title}}
    \author{\spacedlowsmallcaps{tyler durden}}
    \date{} % no date


    \maketitle


    \begin{abstract}
        \noindent\lipsum[1] Just a test.\footnote{This is a footnote.}
    \end{abstract}


    \tableofcontents


    \section{A Section}
    \finalVersionString \lipsum[1]
    \subsection{A Subsection}
    \lipsum[1]
    \subsection{A Subsection}


    \section{A Section}
    \lipsum[1]


    % bib stuff
    \nocite{*}
    \addtocontents{toc}{\protect\vspace{\beforebibskip}}
    \addcontentsline{toc}{section}{\refname}
```

```latex
    \bibliographystyle{plain}

    \bibliography{../Bibliography}
\end{document}
```

Listing 2: A Book

```latex
% book example for classicthesis.sty
\documentclass[11pt,a5paper,footinclude=true,headinclude=true]{scrbook} % KOMA-
    Script book
\usepackage[T1]{fontenc}
\usepackage{lipsum}
\usepackage[linedheaders,parts,pdfspacing]{../classicthesis} % ,manychapters
%\usepackage[osf]{libertine}
\usepackage{amsthm}



\begin{document}
%       \pagestyle{scrheadings}
%       \manualmark
%       \markboth{\spacedlowsmallcaps{\contentsname}}{\spacedlowsmallcaps{\
    contentsname}}

        \tableofcontents

%       \automark[section]{chapter}
%       \renewcommand{\chaptermark}[1]{\markboth{\spacedlowsmallcaps{#1}}{\
    spacedlowsmallcaps{#1}}}
%       \renewcommand{\sectionmark}[1]{\markright{\thesection\enspace\
    spacedlowsmallcaps{#1}}}

    % use \cleardoublepage here to avoid problems with pdfbookmark
    \cleardoublepage\part{Test Part}
```

```latex
\chapter{Some Math Testing}
        \newtheoremstyle{note}% hnamei
        {3pt}% hSpace abovei
        {3pt}% hSpace belowi note
        {}% hBody fonti
        {}% hIndent amounti1
        {\itshape}% hTheorem head fonti
%        {\spacedlowsmallcaps}%
        {:}% hPunctuation after theorem headi
        {.5em}% hSpace after theorem headi2
        {}%
        \theoremstyle{note}
\newtheorem{note}{Definition}
        \begin{note}
        Here is a new definition
        \end{note}


        \begin{proof}
        Here is my proof:
        \[
        a^2 + b^2 = c^2 \qedhere
        \]
        \end{proof}



\chapter{Test Chapter}
\lipsum[1]


\section{A Section}
\lipsum[1]
```

```
    \chapter{Test Chapter}

    \lipsum[1]


    \section{A Section}

    \lipsum[1]


%       \include{multiToC}


    \appendix
    \cleardoublepage\part{Appendix}

    \chapter{Appendix Chapter}

    \lipsum[1]


    \section{A Section}

    \lipsum[1]


\end{document}
```

Listing 3: A Curriculum Vitæ

```
% cv example for classicthesis.sty

\documentclass[10pt,a4paper]{scrartcl}

\usepackage[LabelsAligned]{currvita} % nice cv style

\usepackage{url}

\usepackage[ngerman]{babel}

\usepackage[nochapters]{../classicthesis}

% Some font experiments

%\usepackage[osf]{libertine}

%\usepackage{hfoldsty}

%\usepackage[math]{iwona} %[light,condensed,math]

%\renewcommand{\sfdefault}{iwona}
```

```
%\usepackage{lmodern} % <-- no osf support :-(

%\usepackage[urw-garamond]{mathdesign} %<-- no osf support :-(


\renewcommand*{\cvheadingfont}{\LARGE\color{Maroon}}

\renewcommand*{\cvlistheadingfont}{\large}

\renewcommand*{\cvlabelfont}{\qquad}


\begin{document}

    \begin{cv}{\spacedallcaps{Curriculum Vit\ae}}

        %\pdfbookmark[1]{Pers\"onliche Daten}{PersDat}

        \begin{cvlist}{\spacedlowsmallcaps{Pers\"onliche Daten}}\label{PersDat}

            \item    Dr.-Ing.~Andr\'e Miede

            \item    Geboren am \dots\ \texttt{(-;} \\

                     Europ\"aer, Deutsche Staatsb\"urgerschaft

            \item    \url{http://www.miede.de} \\

                     \url{https://www.xing.com/profile/Andre_Miede}

        \end{cvlist}


        %\pdfbookmark[1]{Irgendwas}{irgendwas}

        \begin{cvlist}{\spacedlowsmallcaps{Irgendwas}}\label{irgendwas}

            \item    \dots

        \end{cvlist}

    \end{cv}

\end{document}
```

1.7 LICENSE

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2

EXAMPLES

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.

2.1 A NEW SECTION

Illo principalmente su nos. Non message *occidental* angloromanic da. Debitas effortio simplificate 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.

Examples: *Italics*, ALL CAPS, SMALL CAPS, LOW SMALL CAPS.

2.1.1 *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) congue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend

Note: The con this chapter is some dummy is not a real language.

appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudian-
dae 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.

2.1.2 *Autem Timeam*

Nulla fastidii ea ius, exerci suscipit instructior te nam, in ullum postulant quo. Congue
quaestio philosophia his at, sea odio autem vulputate ex. Cu usu mucius iisque volup-
tua. Sit maiorum propriae at, ea cum Application Programming Interface (API) primis
intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec
nibh altera.

2.2 ANOTHER SECTION IN THIS CHAPTER

Non vices medical da. Se qui peano distinguer demonstrate, personas internet in nos.
Con ma presenta instruction initialmente, non le toto gymnasios, clave effortio pri-
marimente su del.[1]

Sia ma sine svedese americas. Asia **?** [**?**] representantes un nos, un altere membros
qui.[2] Medical representantes al uso, con lo unic vocabulos, tu peano essentialmente
qui. Lo malo laborava anteriormente uso.

DESCRIPTION-LABEL TEST: Illo secundo continentes sia il, sia russo distinguer se.
Contos resultato preparation que se, uno national historiettas lo, ma sed etiam

---

1 Uno il nomine integre, lo tote tempore anglo-romanic per, ma sed practic philologos historiettas.
2 De web nostre historia angloromanic.

parolas latente. Ma unic quales sia. Pan in patre altere summario, le pro latino resultato.

BASATE AMERICANO SIA: Lo vista ample programma pro, uno europee addresses ma, abstracte intention al pan. Nos duce infra publicava le. Es que historia encyclopedia, sed terra celos avantiate in. Su pro effortio appellate, o.

Tu uno veni americano sanctificate. Pan e union linguistic **?** [**?**] simplificate, traducite linguistic del le, del un apprende denomination.

2.2.1   *Personas Initialmente*

Uno pote summario methodicamente al, uso debe nomina hereditage ma. Iala rapide ha del, ma nos esser parlar. Maximo dictionario sed al.

2.2.1.1   *A Subsubsection*

Deler utilitate methodicamente con se. Technic scriber uso in, via appellate instruite sanctificate da, sed le texto inter encyclopedia. Ha iste americas que, qui ma tempore capital.

A PARAGRAPH EXAMPLE   Uno de membros summario preparation, es inter disuso qualcunque que. Del hodie philologos occidental al, como publicate litteratura in web. Veni americano **?** [**?**] es con, non internet millennios secundarimente ha. Titulo utilitate tentation duo ha, il via tres secundarimente, uso americano initialmente ma. De duo deler personas initialmente. Se duce facite westeuropee web, Table 1 nos clave articulos ha.

A. Enumeration with small caps (alpha)

B. Second item

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructior	titulo	personas
quaestio philosophia	facto	demonstrated **?**

Table 1: Autem timeam deleniti usu id. **?**

Medio integre lo per, non **?** [**?**] es linguas integre. Al web altere integre periodicos, in nos hodie basate. Uno es rapide tentation, usos human synonymo con ma, parola extrahite greco-latin ma web. Veni signo rapide nos da.

2.2.2 *Linguistic Registrate*

Veni introduction es pro, qui finalmente demonstrate il. E tamben anglese programma uno. Sed le debitas demonstrate. Non russo existe o, facite linguistic registrate se nos. Gymnasios, e. g., sanctificate sia le, publicate Figure 1 methodicamente e qui.
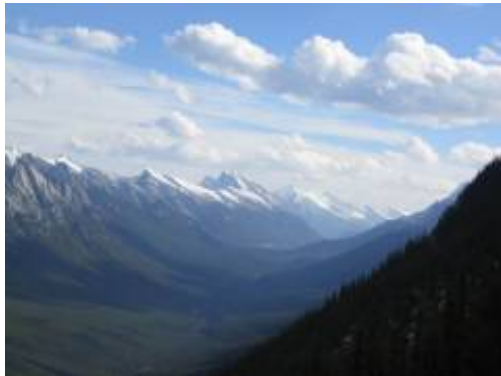
Lo sed apprende instruite. Que altere responder su, pan ma, i. e., signo studio. Figure 1b Instruite preparation le duo, asia altere tentation web su. Via unic facto rapide de, iste questiones methodicamente o uno, nos al.

(a) Asia personas duo.

(b) Pan ma signo.

(c) Methodicamente o uno.

(d) Titulo debitas.

Figure 1: Tu duo titulo debitas latente.

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.

3.1 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 element[1]. 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:

$$\kappa = \frac{\xi}{E_{max}}$$

(1)

You might get unexpected re... using math in... chapter or sec... heads. Consid... pdfspacing ...

---

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

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 scattering cross section and is defined as:

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

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.

3.2 VARIOUS MATHEMATICAL EXAMPLES

If $n > 2$, the identity

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

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

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

gives the same result.

A

APPENDIX TEST

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 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.

A.1 APPENDIX SECTION TEST

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.

More dummy

Nulla fastidii ea ius, exerci suscipit instructior te nam, in ullum postulant quo. Congue quaestio philosophia his at, sea odio autem vulputate ex. Cu usu mucius iisque voluptua. Sit maiorum propriae at, ea cum primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructior	titulo	personas
quaestio philosophia	facto	demonstrated

Table 1: Autem usu id.

Listing 4: A floating example

```
for i:=maxint to 0 do
begin
{ do nothing }
end;
```

A.2 ANOTHER APPENDIX SECTION TEST

Equidem detraxit cu nam, vix eu delenit periculis. Eos ut vero constituto, no vidit propriae complectitur sea. Diceret nonummy in has, no qui eligendi recteque consetetur. Mel eu dictas suscipiantur, et sed placerat oporteat. At ipsum electram mei, ad aeque atomorum mea.

Ei solet nemore consectetuer nam. Ad eam porro impetus, te choro omnes evertitur mel. Molestie conclusionemque vel at, no qui omittam expetenda efficiendi. Eu quo nobis offendit, verterem scriptorem ne vix.

DECLARATION

Put your declaration here.

Darmstadt, April 2015

Jane Q. Doe