The FUB-CS Dissertation Style

John B. Goode

The FUB-CS Dissertation Style

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The FUB-CS Dissertation Style

TESI PER IL DOTTORATO DI RICERCA IN INFORMATICA

DOKTORARBEIT IN INFORMATIK

PHD THESIS IN COMPUTER SCIENCE

DS-200x-NN

John Benedikt Goode

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to me

who did all the work on this [1]

[1]The dedication is optional

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Abstract

By preference, your dissertation should contain an abstract of your dissertation in English. This chapter may be specified by:

```
\abstract
  <your Abstract>
```

Chapter 1

Getting started

This file describes the FUB-CS Dissertation Style package for typesetting dissertations in LaTeX according to FUB-CS standards. It describes which files are needed, and how they should be adopted for your dissertation. It also serves as an example of using these files, and as a template for your own dissertation.

The FUB-CS Dissertation Style file will change the layout of your dissertation to the required FUB-CS Dissertation Style. It defines a standard layout for the cover and spine of your dissertation, and includes a list of previous publications in the FUB-CS Dissertation series. Furthermore, it redefines the layout of `\chapter`, page heads, and theorem-like environments, and provides predefined theorem-like environments and commands for special sections such as `\acknowledgements`.

If you are already familiar with the standard `book.cls` provided with LaTeX2ϵ, then the FUB-CS Dissertation Style file should not give you any difficulties: you may use all `book` style commands to prepare your dissertation. For a description of the commands available in the LaTeX2ϵ `book` style we refer you to the *LaTeX User's Guide & Reference Manual* by Leslie Lamport (1986, 1994), Addison-Wesley Publishing Company, Reading, Mass.

For the sake of compatibility, this package contains an old version of the FUB-CS Dissertation Style, for use with LaTeX2.09. However, this version is no longer supported, and we kindly request you to use the LaTeX2ϵ version if at all possible.

1.1 How to proceed

The complete FUB-CS Dissertation Style package contains the following files:

`fubcsdiss.cls`: the FUB-CS Dissertation Style for use with LaTeX2ϵ

`fubcs_diss.sty`: the FUB-CS Dissertation Style for use with LaTeX2.09

`id10.sty`, `id11.sty`, `id12.sty`, `epsf.sty`: auxiliary files for the FUB-CS Dissertation Style style, for use with LaTeX2.09

`fubcsdissertations.tex`: file containing data on previous FUB-CS Dissertations

`fubcslogo.eps`: this is the FUB-CS logo; input by `guide_front.tex`

`fubcs_no_text_logo.eps`: the FUB-CS logo without text; input by `guide_spine.tex`

`guide.tex`: the main latex file for this document

`guide_front.tex`: file describing the official FUB-CS-Dissertation front matter

`guide_XXX.tex`: file containing the text of section XXX of this document

`guide_spine.tex`: file for preparing the text for the spine of your dissertation

You should make sure that LaTeX is able to find the files `fubcsdissertations.tex`, `fubcsdiss.cls`, `fubcslogo.eps` and `fubcs_no_text_logo.eps` when you typeset your document with the FUB-CS Dissertation Style; one way to achieve this is to put all files in the FUB-CS Dissertation Style package in the directory (or folder) where your dissertation files reside.

Note that the `fubcsdissertations.tex` file in the archive is automatically updated for any new dissertations: please download the most recent version before sending your dissertation to the printers.

1.2 Invoking the FUB-CS Dissertation Style

The FUB-CS Dissertation Style is invoked by replacing "book" by "fubcsdiss" in the first line of your document. You should also `\include` a *personalized* version of the file `guide_front.tex` after the `\begin{document}` declaration. You also need to `\include` the file `fubcsdissertations.tex` after the last page of your dissertation:

```
\documentclass{fubcsdiss}

\begin{document}
\pagestyle{plain}
\pagenumbering{roman}

%%  \include the 'front matter'

\include{guide_front}
\include{guide_dedication}
\tableofcontents
\include{guide_acknowledgements}
\include{guide_abstract}

%%  now we can start with the real thing

\cleardoublepage
\pagestyle{headings}
\pagenumbering{arabic}

    <your dissertation>

%%  \include the 'end matter'

\include{guide_bib}
\include{guide_index}
\include{guide_symbols}
\include{guide_riassunto}
\include{guide_zusammenfassung}
\include{guide_curriculum}
```

```
%%  finally, \include the list of previous FUB-CS dissertations

\include{fubcsdissertations}

\end{document}
```

If your file is already coded with LaTeX you can easily adapt it a posteriori to the FUB-CS Dissertation Style.

If your document is coded with the FUB-CS Dissertation Style, you may not be able to typeset it using the standard LaTeX book style without doing some minor recoding, as the FUB-CS Dissertation Style file defines some comands that are not provided by the standard LaTeX book style.

Please refrain from using any LaTeX or TeX commands that affect the layout or formatting of your document (i.e. commands like `\textheight`, `\hoffset` etc.). The FUB-CS Dissertation Style has been carefully designed to produce the rightlayout from your LaTeX input. There may nevertheless be exceptional occasions on which to use some of them. If there is anything specific you would like to do and for which neither LaTeX nor the FUB-CS Dissertation Style file provides a command, *please contact us* (email: cs-secretariat@unibz.it).

1.3 Personalizing `guide_front.tex`

The file `guide_front.tex` contains all information needed to produce the front matter of your dissertation according to FUB-CS standards. You need to personalize `guide_front.tex` by inserting your data at appropriate spots. Additionally, those that print on single-sided printers will want to eliminate the empty page printed after the cover page. All items that need to be personalized in `guide_front.tex` can be found by searching for the string "%PERSONALIZE". Note that items such as the name of the Rector Magnificus *may* be up-to-date, but it is prudent to assume not and research the name of the current Rector Magnificus. All such items are also marked with the string "%PERSONALIZE". The files `guide_dedication` and `guide_acknowledgements` contain the optional dedication and acknowledgements, and are `\included` from the main file. You can personalize the text in these files, or simply change the name of the `\included` files in the main file.

1.4 Personalizing `guide_spine.tex`

The file `guide_spine.tex` contains all information needed to produce the spine of your dissertation according to FUB-CS standards. You need to personalize the file `guide_spine.tex` by inserting your data at appropriate spots. All items that need to be personalized in `guide_spine.tex` can be found by searching for the string "%PERSONALIZE".

Chapter 2

The order of things

According to FUB-CS standards your dissertation should meet a limited number of requirements concerning its organization and layout. You need hardly worry about details concerning the layout as these are handled by the FUB-CS Dissertation Style file. The following describes how your dissertation should be organized.

2.1 The cover

The FUB-CS Dissertation Style only prescribes the size and location of the title and author on the cover page. Besides this you are free to design your own cover.

Dissertations formatted according to FUB-CS standards have a spine displaying the authors name, the title of the dissertation, and the FUB-CS logo. There is a file called `guide_spine.tex` to help you format your spine text.

2.2 The front matter

The front matter has Roman page numbers (this is achieved by specifying the command `\pagenumbering{roman}` after the `\begin{document}` declaration). The front matter should contain the following material in the following order:

i "french page" containing nothing but the title of your dissertation

ii the "FUB-CS page" containing the logo and address of FUB-CS

iii the title page containing the text prescribed by the university

iv this page contains the following information in the following order:

- name and address of your promotor (es)
- when appropriate, an acknowledgment to the funding agency
- Cataloguing data for the National Library (optional)
- a copyright notice
- information concerning the production of your dissertation
- the ISBN code

v (optional) dedication

v (or vii) table of contents

vii (or ix) Acknowledgments, specified by `\acknowledgments`.

ix (or xi) Abstract in English, specified by `\abstract`.

The file called `guide_front.tex` helps you format the front matter of your dissertation.

2.3 The body of your text

This section contains some information about organizing the main text of your dissertation.

Headings. Headings will be automatically generated by the following codes

```
\chapter
\section
\subsection
\subsubsection
\paragraph
```

The headings produced by `\paragraph` and `\subparagraph` need to be punctuated at the end, as they are followed by the body of the (sub-)paragraph.

Appearance of the headings can be changed, for instance, with the "fancy chapter" package `fncychap`. If you decide to do so, then change—uncomment and type any one of the optional parameters—in the main file, `guide.tex`, the following line:

```
\usepackage[Lenny]{fncychap}
```

This guide uses Lenny.

Theorem-like environments. In addition to the above headings your text may be structured by theorem-like environments, like lemmas, propositions, conjectures, ... The following theorem-like environments are predefined by the FUB-CS Dissertation Style file: `theorem`, `lemma`, `corollary`, `conjecture`, `proposition`, `definition`, `remark`, `example`, `convention`, `fact` and `question`. They are defined to be numbered consecutively, i.e. typing

```
\begin{lem}
This is a lemma
\end{lem}
\begin{prop}
Is this a question? No, a proposition!
\end{prop}
```

produces

LEMMA 2.1. *This is a lemma*

PROPOSITION 2.1. *Is this a question? No, a proposition!*

There are two flavours defined. One nice one, as above, and a default, that uses

```
\begin{lemma}
This is a lemma
\end{lemma}
\begin{question}
Is this a question?
\end{question}
```

which basically will bury these things in the text.

A number of theorem-like environments have italicized text: `theorem`, `lemma`, `corollary`, `conjecture` and `proposition`. All other pre-defined environments have roman text. Inside theorem-like environments text may be emphasized by using `\em`. (In environments with italicized text such as lemma and theorems this will produce text in roman type style; in environments with roman text this produces italicized text.) As a rule of thumb you should always emphasize the terms being defined in a definition.

You can modify the theorem-like environments in the file `fubcsdiss.cls`.

Special signs and characters. You may need to use special signs. The available ones are listed in the LaTeX *User's Guide & Reference Manual*, pp. 44 ff. If you need other symbols than those, you could use the symbols of the $\mathcal{AMS}$-TeX fonts. The $\mathcal{AMS}$-TeX fonts also contain gothic letters and 'blackboard bold' characters such as IN. Consult your local TeX wizzard for instructions on using the $\mathcal{AMS}$-TeX fonts.

Splitting your input Rather than putting the whole input of a document in a single file, you may wish to split it into several smaller ones. There will always be one file that is the *root* file; it is the one whose name you type when you run LaTeX. The root file of the document you are reading is called `guide.tex`. Other files may be 'included' by the commands `\input` and `\include`. The command `\input{filename}` causes LaTeX to insert the contents of the file `filename.tex` right at the current spot in your manuscript. The command `\include{filename}` does the same, except that the included text will begin and end on its own page (i.e. an automatic `\clearpage` command is issued at the beginning and end of the included file). Additionally, this allows the use of the `\includeonly` command (see the paragraph on saving paper). The `\include` command is the preferred way to include a file containing, for instance, the text of a single chapter.

2.4 The end matter

The end matter should at least contain a Bibliography, a Samenvatting, and a list of previous publications in the FUB-CS Dissertation Series. Note that a dutch summary is obligatory in english dissertations, according to UvA promotion regulations. Preferably your dissertation also contains an Abstract and an Index. In addition it may contain Appendices, a List of Symbols and your Curriculum Vitae. According to FUB-CS standards the material should be included in the following order:

- Appendices (optional), see pp. 23, 158 of the LaTeX *User's Guide & Reference Manual* on how to create appendices
- Bibliography (obligatory), specified by

```
\begin{thebibliography}{XX}
  <your list of \bibitems>
\end{thebibliography}
```

- Index, specified by

```
\begin{theindex}
  <your list of entries>
\end{theindex}
```

- List of Symbols (optional), specified by

```
\begin{thesymbols}
  <your list of symbols>
\end{thesymbols}
```

- Riassunto, specified by

```
\riassunto
  <your Riassunto>
```

- Zusammenfassung, specified by

```
\zusammenfassung
  <your Zusammenfassung>
```

- Curriculum Vitae and Publications, specified by

```
\curriculum
  <your CV and Publications>
```

- List of previous publications in the FUB-CS Dissertation Series (obligatory), specified by

```
\include{fubcsdissertations}
```

The end matter of this document has been split into separate files, `included` in the main file. In this document, each file except for `fubcsdissertations.tex` contains a copy of the corresponding entry from the overview above.

2.5 The spine

You can use the file `guide_spine.tex` to typeset the text on the spine of your dissertation. This text should consist of your name, the title of your dissertation, and the FUB-CS logo.

The file `guide_spine.tex` produces the text for the spine of your dissertation in a number of sizes. Let your competent printer choose the most appropriate size.

Chapter 3

Producing the final version

This chapter contains some suggestions that you may find useful when producing the final version of your dissertation.

Page dimensions and font size. The FUB-CS Standard for printed dissertations is a 10 point font and a 240 mm x 170 mm size page (reduced B5 format). The default for the FUB-CS Dissertation Style is a 12 point font and A4 paper. This is so that you can enhance the appearance of your dissertation by scaling down your camera-ready copy to 81% of its original size. If you have a high resolution printer, you may want to use a font size of 10 or 11 points; the FUB-CS Dissertation Style determines the page dimensions of your dissertation depending on the the font size you choose, in such a way that the amount of text on a page is the same.

Posizioni - *Stellungen*. Although you are not required to include a leaflet containing Posizioni - *Stellungen* with your dissertation, you may want to do that anyhow. The following code is a way a producing such a leaflet.

```
\documentstyle[12pt]{guide_diss}
\begin{document}
\begin{center}
{\Huge Posizioni - \emph{Stellungen}}\\[4ex]
dalla Tesi - \textit{zu den Doktorarbeit}\\[4ex]
{\Large\em The FUB-CS Dissertation Style}\\[2ex]
van\\[2ex]
{\large John B. Goode}
\end{center}
\par\vspace {2.5\baselineskip}
\begin{enumerate}
\item This Stelling will get my name on national TV.
\item And so will this one.
\end{enumerate}
```

Saving paper. If anything, producing a dissertation costs a lot of paper. When working on workstations you can save paper by previewing rather than making printouts. At most sites you can also save paper by using the command `mpage -2 mydissertation.ps` to print 2 pages of your dissertation on a single sheet of paper. The LaTeX command `\includeonly{file1,file2,.`

also allows you to save paper, by allowing you to only print the parts of your document that have changed. The file specified by an `\include` command will only be processed if it appears in the argument of the `\includeonly` command. If it doesn't appear, then it is omitted, but all succeeding text will be processed as if the file had been inserted, numbering pages, sections, equations etc. as if the omitted file's text had been inserted. See also pp. 75-77 of the LaTeX *User's Guide & Reference Manual*.

Font problems. A Latex installation usually includes a program called `dvips` or `dvi2ps` which converts DVI-files generated by Latex to Postscript. However, with the standard settings, the fonts contained in the postscript file will be so-called 'Type 3' (bitmapped) fonts, which are resolution-dependent. This may cause problems when you want to convert your document to PDF format or print it on printers with very high resolutions (such as the printers at a professional printing shop). If you use the `-Ppdf` flag, as in

```
dvips -Ppdf myfile.dvi
```

then the dvips program generates postscript files using 'Type 1' (scalable) fonts (provided these fonts are installed), which should eliminate font problems.

If you want to create a PDF file from a Latex document, the easiest way is to use the dvips program to create a postscript file, and then convert it into a PDF file using the `ps2pdf` script (if installed). However, please note that the `ps2pdf` script uses the GhostScript program, and that versions before Ghostscript 6.0 are *not* capable of handling Type 1 LaTeX fonts. Instead, the fonts are converted them into Type 3 fonts, which (as stated above) can cause problems on printers with very high resolutions. If your Ghostscript version is lower than 6.0 (you can check this by typing `gs --version`), and you cannot convince your System Administrator to update the program, Adobe has an Online Conversion Service which offers free trials. For more information on font problems, see the FUB-CS Support page on creating postscript files.

Appendix A

Technical Specifications

This chapter contains the exact specifications of the FUB-CS Dissertation Style.

Page dimensions By default, the FUB-CS Dissertation Style uses the options `twoside`, `a4paper` and `12pt`. The left and right margins are equal, as are the top and bottom margins.

Font Size	Text Width	Text Height	Height incl. Head/Foot	Left/Right Margin	Top/Bottom Margin
10 pt	121 mm	182 mm	201 mm	44.5 mm	57.3 mm
11 pt	133 mm	200 mm	222 mm	38.4 mm	45.2 mm
12 pt	145 mm	218 mm	242 mm	32.4 mm	33.1 mm
12 pt (81%)	118 mm	177 mm	196 mm	25.7 mm	26.8 mm

The page head and foot Left-hand pages have the page-number in the upper left corner, and the italized non-uppercase current chapter title in the upper right corner. Right-hand pages have the page-number in the upper right corner, and the italized non-uppercase current section title in the upper left corner. If the `\cleardoublepage` command causes a left-hand page to be empty, that page will have neither page number nor page head.

The chapter head By default, the FUB-CS Dissertation Style uses the option `openright`. With this option, chapters always start on a right-hand page (using the `\cleardoublepage` command). The first page of a chapter has the pagenumber in the page foot, and an empty page head. Each chapter starts with a blank space (18 pt high at a 12 pt fontsize), the left-aligned boldfaced `Large`-sized chapternumber, a horizontal line, the right-aligned boldfaced `LARGE`-sized chaptertitle, and another blank space (120 pt high at a 12 pt fontsize).

As mentioned in Chapter 2, you can change this with the fancy chapter option.

Sectioning commands The commands `\thebibliography` and `\theindex` now produce an entry in the table of contents. The new sectioning commands `\thesymbols`, `\acknowledgements`, `\riassunto`, `\zusammenfassung`, `\abstract` and `\curriculum` are defined. All sectioning commands now produce non-uppercased page heads.

Theorem-like environments All theorem-like environments begin with the number in boldfaced type, 'theorem' (or similar) in small caps, and the optional argument (if any) in a normal fonttype. The theorem-like environments `\theorem`, `\conjecture`, `\lemma` `\proposition`

and `\corollary` are predefined and have italicized text. The theorem-like environments `\definition`, `\remark`, `\example`, `\convention`, `\fact` and `\question` are predefined and have non-italicized text. All predefined theorem-like environments are numbered consecutively, within each section.

Miscellaneous The `fubcsdiss` class loads the `graphicx` package, and defines the commands `\fubcslogo` and `\fubcsnotextlogo`. On systems where the `graphicx` package is not available, you can use the `fubcsdiss-epsfig` class, which loads the `epsfig` package instead. This package is not suitable for use in conjunction with `pdflatex` however.

Bibliography

[1] According to FUB-CS standards a chapter containing bibliographic references should always be included in your dissertation. It is specified by:

```
\begin{thebibliography}{XX}
  <your list of \bibitems>
\end{thebibliography}
```

[2] If you do not want numbers, then you can you can use, for instance, the very nice and powerful `natbib` package and have the references listed like the four below (and many options to vary citation in the text), or manually specify something like

```
\bibitem[L94]{Lamport}
```

in your bibliography list to get `[L94]` both in the text and between the square brackets in the bibliography.

[L94] Lamport, L. *LaTeX User's Guide & Reference Manual*, Addison-Wesley Publishing Company, Reading, Mass. 1986, 1994.

[PR04] Poggi, A., Ruzzi, M. Filling the gap between data federation and data integration. In: di Pula, S.M. (ed.): *Proceedings of the 12th Italian Symposium on Advanced Database Systems*, Cagliari, Italy. 2004. pp270-281.

[PS06] Pontow, C., Schubert, R. A mathematical analysis of theories of parthood. *Data & Knowledge Engineering*, 2006, 59:107-138.

[Popper1996] Popper, K.R. *The myth of the framework – in defence of science and rationality*. London: Routledge. 1996. 229p.

Index

By preference, your dissertation should contain an index. Instructions on how to produce an index can be found on pages 77–79 of the LaTeX manual. You may specify an index as follows:

```
\begin{theindex}
  <your list of entries>
\end{theindex}
```

List of symbols

This is an optional chapter containing a list of symbols that you use. It is specified by:

```
\begin{thesymbols}
  <your list of symbols>
\end{thesymbols}
```

Curriculum Vitae and Publications

This is an optional chapter containing your Curriculum Vitae as brief (± half a page) text, and add your publications in reverse chronological order spanning the years of doing your PhD. It is specified as follows:

```
\curriculum
  <your CV>
```

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FUB CS Diss Style

any subtitle goes here

your summary of about 1 column goes your summary of about 1 column goes here and balance it out a bit so that the logo is somewhere in the middle. alternatively, there is a

```
\begin{backsummary}
your summary goes here.
see also fubdiss2.cls
\end{backsummary}
```


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