

Introduction to the LaTeX template for BSc/MSc theses and F-Project reports

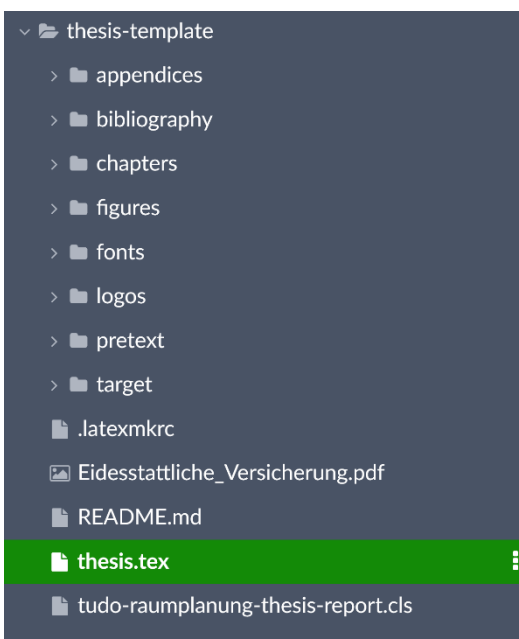
The LaTeX template offered by our department is an adapted version of the template offered by the Software Engineering Group at the Computer Science department of TU Dortmund University. The template is flexible and thus ready for use in different contexts: for BSc and MSc theses, as well as for F-Project proposals, interim reports, and final project reports. The following paragraphs provide a brief introduction to the structure of the template in order to explain how to use it and where to find relevant parameters for customisation.

Setting up your project

The template is offered in two ways. You can download the template as a ZIP file from the department's homepage and then use it with your own local installation of LaTeX (e.g., MikTeX in conjunction with TeXnicCenter or TeXworks), which is an option for those who are reasonably seasoned in working with LaTeX. Alternatively, you can use Overleaf, an online LaTeX editor that is free to use (at least with basic functionality, which should be good enough for most dissertation projects but may not work so well with a large number of collaborators on F-Projects, for which the pro-version would be recommended). To do so, just create an Overleaf account, click 'New Project', and then choose the option 'Upload Project'. Just choose the ZIP file when asked to provide a file on the following upload prompt. After this step, you should be ready to TeX. An even easier way to set up the template on Overleaf is to select it from their gallery, through which we provide the template, too. The link to the gallery entry for our template is provided on the department's homepage alongside the ZIP package.

Navigating the template

Once set up, the template offers an easy-to-follow structure helping you to organise your manuscript.



The main file controlling the manuscript is `thesis.tex`, the internal structure of which will be introduced below, in the following section of this manual. In addition, you will find a couple of folders the names of which should be straightforward. A very relevant folder is 'chapters', which is where you will place individual tex-files for each chapter, which is a way to keep the project tidy. You will find two sample chapters in that folder once you have set up the project, which contain some introductory information on LaTeX in general. Another important folder is 'bibliography', where you find the BibTeX file holding your bibliography in BibTeX format. All other folder names should be self-explanatory. Some files, such as `tudo-raumplanung-thesis-report.cls`, are important source files controlling this template and its layout. It is advised not to touch these files unless you really know what you are doing.

The main file ‘thesis.tex’

The main file where you provide general metadata and bind all contents together is ‘thesis.tex’. The following introduction follows the structure of the file from top to bottom and introduces only those parts that require customisation.

```
\documentclass[german,report]{tudo-raumplanung-thesis-report}
```

This command can be used with different parameter combinations, which go into the square brackets: `german` or `english`, as both languages are supported, and one of the following parameters for the type of manuscript that you are typesetting: `ba` (Bachelor’s thesis), `ma` (Master’s thesis), `expose` (proposals), `interim` (interim project reports), `report` (final project reports).

```
\title{F01: Dies ist ein beispielhafter Titel -- hier für ein F-Projekt}
```

```
\storeauthors\authors{
  {Nachname, Vorname}
}
```

```
\storereviewers\reviewers{
  {Jun.-Prof.\ Dr.\ rer.\ nat.\ Great Examiner}
  {Prof.\ Dr.-Ing.\ Fantastic Examiner}
}
```

The `title` command is where you provide the full title of your work. This is the text that will be printed on the cover page of your manuscript. The `storeauthors\authors` command allows providing author information in tuples consisting of lastname and firstname. You can add any number of authors (e.g., for an F-Project) by adding further such tuples in curly brackets. The authors list will be formatted in two columns when you provide more than ten authors. The `storereviewers\reviewers` list works analogously.

```
\begin{abstract}
This is an Abstract. \blindtext
\end{abstract}
```

```
\begin{abstract-ger}
Dies ist eine Zusammenfassung. \glqq Deutsche Anführungs- und Abführungszeichen werden so
gesetzt\grqq{}. ßäöü \blindtext
\end{abstract-ger}
```

The `abstract` and `abstract-ger` environments are where you write the English and German language abstracts for your work. These will be printed on two separate pages in the preamble of your manuscript. Both, an English and a German abstract is required as both are typically contained in dissertations, irrespective of your preferred language for the main text.

```
\begin{abbreviations}
\acro{ANT}{Actor network theory}
\acro{SLR}{Systematic literature review}
\end{abbreviations}
```

This is where you can place abbreviations. Each of the `acro` commands is provided with a pair of curly brackets the first of which holds the abbreviation followed by a second one spelling that abbreviation out in full. The resulting list of abbreviations is printed as part of the preamble of your text.

```
\input{chapters/introduction.tex}
\input{chapters/sample-chapter.tex}
```

The input commands will substitute the respective chapters into the main file at compilation time, whereby the order is as provided. You can see that the path points to the chapters folder, where you have to create a separate tex-file for each of your chapters. It is advisable to give those files reasonable file names making it easier for you to make sense of the overall structure in the end as your project grows bigger.

```
\bibliography{bibliography/references.bib}
```

All references go to the references.bib file. We shall have a look at one entry for demonstration purposes:

```
@article{westerholt2023simulation,
  title={A simulation study to explore inference about global Moran's  $I$  with random spatial indexes},
  author={Westerholt, René},
  journal={Geographical Analysis},
  volume={55},
  number={4},
  pages={621--650},
  year={2023}
}
```

The BibTeX format is a standardised format for providing bibliographic information and the template makes use of the different attributes provided when plotting the bibliography. The example above shows how to include a journal article. The individual attributes are self-explanatory and westerholt2023simulation at the very beginning is a unique identifier that you will use in your text to refer to this item. The latter is possible via `\citep{westerholt2023simulation}` (which produces '(Westerholt, 2023)') or `\citet{westerholt2023simulation}` (producing 'Westerholt (2023)'). Further information on how to work with citations (e.g., how to include page numbers) is found in the sample chapter of the template. Most reference managers allow exporting BibTeX files, which may be an option for you should you work with Citavi, Mendeley, or any other such tool. Another easy way to retrieve BibTeX entries is via Google Scholar: just click on 'Cite' and then you will find 'BibTeX' at the bottom, allowing you to copy-paste the respective text. However, you should always double-check the BibTeX code manually as Google (and probably also your reference managers) sometimes introduces errors such as non-capitalised journal names. The website <https://www.bibtex.com/e/entry-types/> will be helpful as it introduces all possible types of BibTeX entries including relevant attributes.

Support

Feel free to contact Jun.-Prof. Dr. René Westerholt should you have any questions about this template and how to use it. Please do also report any errors that you can trace back to the template implementation. We are sorry that we cannot provide general help with LaTeX and/or Overleaf. However, both tools are very established and you will find plenty of information and support online. Happy TeXing!