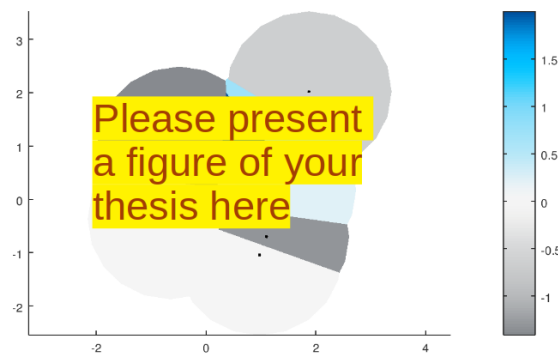


Title of the bachelor or master thesis with a 2nd text line

GivenName M. FamilyName



Bachelor thesis/Master thesis
in the degree program **Geoengine**
at the Institute of Geodesy, University of Stuttgart

Stuttgart, month 20xx

Supervisor: Prof. Dr.-Ing. Nico Sneeuw
Universität Stuttgart

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Technische Universität Unterdorf

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Abstract

In this short text we present the summary of the reserach, also kown as the *abstract*.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Chapter 1

Introduction

1.1 Graphics and References

We start with a first sentence and continue quickly with a figure:



Figure 1.1: Title of the figure.

Figures have always an explaining caption below the graphics and an internal label. The figures are cited in the text via the command `\ref{}` and their content is explained. In Figure 1.1, the reader can find ...

It is also possible, to place several sub-picture in one figure (cf. Figure 1.2) and the single graphics 1.2a and 1.2b still can be quoted. Apart from references on figures (or tables), there are also footnotes¹ in which additional information², e.g. about the name conventions can be given.



(a) Logo left



(b) Logo right & rotated

Figure 1.2: Caption of the figure.

Figures and tables are usually within a float-environment, i.e. \LaTeX optimizes the positions in an internal algorithm. In these examples, we skipped this feature exceptionally. To re-launch this standard behavior, one should remove the option `[H]` in the `figure`-environment.

¹A footnote is at the lower bottom of the text, quasi at its foot.

²Providing literature in footnotes is less common in geodesy.

1.2 Hyphenations

The automatic hyphenation is good, but not perfect. After writing, it is recommended to read the thesis again under this aspect and to support the algorithm – where necessary – via the command `\–` within a word. A good example for an unlucky hyphenation is the word `misun-derstanding` instead of `mis-under-standing`. To avoid the first one, one can write `mis\–understanding` in the document (without the `$`-symbol of the template).

To avoid hyphenations between two lines, e.g. within formulas or certain words, one can use the command `\mbox{ }` around the part. This should be rarely considered, as it influences the automatic hyphenation algorithm.

1.3 And next section

Now we should have reached a new page and can see the header lines, which are hidden in beginning of a chapter ...

1.3.1 Open questions

Now we add small enumeration

1. first issue
2. another issue
 - a) with
 - b) smaller
 - c) sub issues
3. last issue

1.3.1.1 A very small section

Lets write a listing of elements

- first element
- second element
- and one more

Chapter 2

Experiments

2.1 Formula, References and Units

Physical quantities are given by numbers and units. A correct spacing between number and unit is obtained with the command `\unit{}`, e.g. $\Delta r = 123 \text{ m}$ or $\|\mathbf{v}\| = 25.12243 \text{ m/s}$

In linear algebra many calculations are performed via matrices \mathbf{A} and vectors \mathbf{x}, \mathbf{y} . The commands for these objects are defined or modified in the preamble of this document. Analogous definitions can be introduced in the preamble, when your report uses certain mathematical expressions often.

Formulas like the linear equation system (2.1) or the addition theorem (2.2) require usually explanations. Again we introduce here a label and a reference, but this time via `\eqref{}`:

$$\mathbf{y} = \mathbf{A}\mathbf{x}$$

$$\begin{pmatrix} y_1 \\ y_2 \\ y_3 \\ \vdots \\ y_n \end{pmatrix} = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \\ a_{31} & a_{32} \\ \vdots & \vdots \\ a_{n1} & a_{n2} \end{bmatrix} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix} \quad (2.1)$$

$$\mathbf{x} = (\mathbf{A}^\top \mathbf{A})^{-1} (\mathbf{A}^\top \mathbf{y})$$

and

$$\cos(x + y) = \cos x \cos y - \sin x \sin y \quad (2.2)$$

Formulas or ideas are usually (not completely) developed by yourself, but found in literature. Hence, one quotes these publications via `\citep{}` or `\cite{}`. There are different combinations possible:

- one author of a book (?), an article (?) or a lecture manuscript (?)
- two authors of an article (?) or a talk (?)
- more than two authors: (?).
- in case of online publications also the last call of the website should be given in the report (cf. ? and (?) in the literature list).
- Or one can combine different entries in one bracket: In (???), the reader can find ...

The different behaviors for two or more authors is realized automatically. In the data base you can simply add all available information.

The program JABREF is recommended for the literature data base to obtain consistent entries.

2.2 First Results in Tables

Tables are also quoted and explained in the text. It is very common, to set the caption above the tables, which is demonstrated in the examples 2.1 and 2.2:

Table 2.1: Example of a simple table

columnA	columnB	columnC	columnD
entryA1	entryB1	entryC1	entryD1
entryA2	entryB2	entryC2	entryD2
entryA3	entryB3	entryC3	entryD3

Table 2.2: Example of a more complex table

BBB	CCC	DDD	AAA
column & row			AAA
			AAA
1'111	22'222	33'333'333	$\begin{Bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{Bmatrix}$

2.3 And some blind text to fill the pages

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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And we are done with the template ...

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Appendix A

About the Programming

And here some explanation in the appendix...