Karlsruhe Institute of Technology

Intelligent Process Automation and Robotics Lab

My Title is Long

Master Thesis

of

My Name

At the Department of Computer Science
Institute for Anthropomatics and Robotics (IAR) -
Intelligent Process Automation and Robotics Lab (IPR)

First reviewer:	Prof. Dr.-Ing. Torsten Kröger
Second reviewer:	Prof. Dr.-Ing. habil. Björn Hein
First advisor:	M.Sc. C
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xx. Month 20XX – xx. Month 20XX

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Todo list

I declare that I have developed and written the enclosed thesis completely by myself, and have not used sources or means without declaration in the text.

Karlsruhe, January 15, 2019

. . . . . .

(**My Name**)

Add Acknowledgments if you like!

Abstract

My Title is Long

English abstract.

Keywords: *Keywords, of, my, Thesis*

Zusammenfassung

Mein Titel ist lang

Deutsche Zusammenfassung

Stickwörter: *Die, Stichwörter, für, meine, Arbeit*

Contents

1. Introduction

See the section 9.

... 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.

This is the second paragraph. 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.

And after the second paragraph follows the third paragraph. 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.

After this fourth paragraph, we start a new paragraph sequence. 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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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.

2. State of the art

...

3. Methods

…

4. Concept

...

5. Implementation

...

Please add some figures

6. Results

...

7. Discussion

…

8. Conclusion

…

Bibliography

[1] M. Deininger. *Studien-Arbeiten: ein Leitfaden zur Vorbereitung, Durchführung und Betreuung von Studien-, Diplom- und Doktorarbeiten am Beispiel Informatik*. vdf, 2005. ISBN 9783728130129. URL https://books.google.de/books?id=9vmtUu-812kC.

[2] Torsten Kroger and Friedrich M. Wahl. Multi-sensor integration and sensor fusion in industrial manipulation: Hybrid switched control, trajectory generation, and software development. In *2008 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems*, pages 411–418, Aug 2008. doi: 10.1109/MFI.2008.4648030.

[3] Tad McGeer. Passive Dynamic Walking. *The International Journal of Robotics Research*, 9(2):62–82, 1990. doi: 10.1177/027836499000900206. URL http://ijr.sagepub.com/content/9/2/62.abstract.

Appendix

A. First Appendix Section

Figure A.1.: A figure

...

Glossary

robot The robot developed in this work.. 20

Acronyms

IAR-IPR Institute for Anthropomatics and Robotics - Intelligent Process Control and Robotics. 20, 34

List of Figures

List of Tables

Listings

List of Algorithms

```
@mastersthesis{My Name_xx. Month 20XX,
	author = {My Name},
	editor = {M.Sc. C, M.Sc. D},
	ipr-thesis = Master Thesis,
	keywords = {Keywords, of, my, Thesis},
	location = {Karlsruhe, Germany},
	month = ,
	pages = ,
	school = {Karlsruhe Institute of Technology},
	title = {My Title
is Long},
	year = {xx. Month 20XX}
}
```

9. How to use this Template

IMPORTANT: This chapter will disappear when you add final parameter on the document. See section 9.14.

9.1. Getting Started

Initially you **should only edit** the `My_document_info.tex` with important data regarding your work.

Add **content** in files in `Content` folder.

Add **bibliography** in the file `Bibliography/my_thesis_bibliography.bib` or just add a file from your supervisior in the `Bibliography` folder and reference it in the `\mybibliographyfiles` command in the `My_document_info.tex` file.

As an useful aid in all scientific work following book is recommended: [1].

9.2. Inline lists

My robot can: (i) forward and backward movements, (ii) sidewards movements, (iii) rotation along any curve in space, (iv) place of artificial forces along paths.

(1) the independently controllable wheels; (2) the rechargeable battery pack; (3) the Sick LMS100 laser range scanner; (4) the force-torque sensor; (5) the handlebar for controlling the robotic device

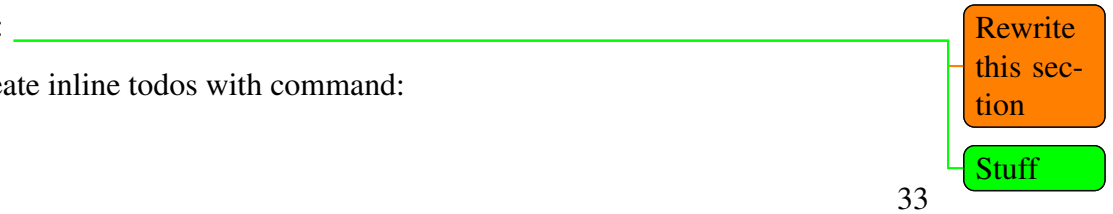
`https://ctan.math.illinois.edu/macros/latex/contrib/enumitem/enumitem.pdf`

9.3. Todos

Todo dommand can be used in multiple form and paramters set. You can set todos on the right side with commands:

```
\todo{Rewrite this section}
\todo[color=green]{Stuff}
```

which render as:



You can also create inline todos with command:

```
\todo[inline]{Rewrite this section}
\todo[inline,color=green]{Rewrite this section}
\todoin{Stuff}
```

which rendrs as:

Rewrite this section

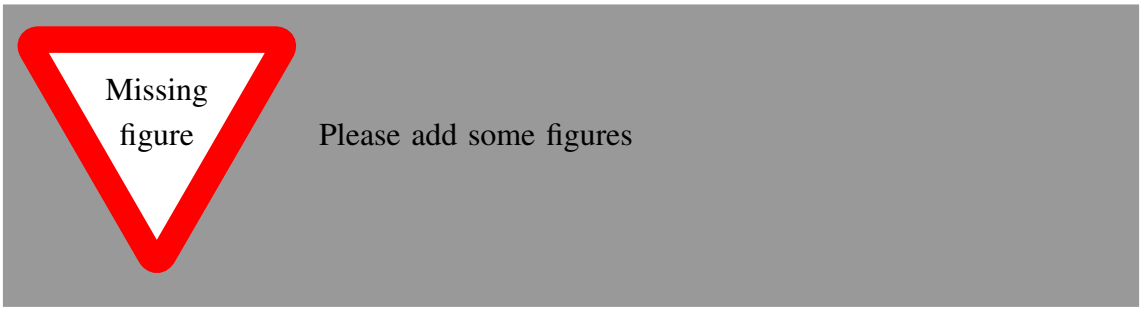
Rewrite this section

Stuff

One can also use command for figure placeholder with command:

```
\missingfigure{Please add some figures}
```

which renders as:



9.4. Glossaries and Acronyms

Please use `glossaries` package for this. See *documentation*.

Example (Acronym):

```
\newacronym{ipr}{IAR-IPR}{Institute for Anthropomatics and Robotics - Intellig
```

is used by

```
\gls{ipr}
```

rendering as “Institute for Anthropomatics and Robotics - Intelligent Process Control and Robotics (IAR-IPR)”, on the first use and as “IAR-IPR” on every following use. For further feature see *documentation*.

Please keep in mind that one has to call *external commands* for glossaries to work.

9.5. Nomenclature

For more details see *example*.

Use following command: \nomenclature{IAR-IPR}{Institute for Anthropomatics and Robotics (IAR) - Intelligent Process Control and Robotics (IPR)}

9.6. SI Units

Please use `siunitx` package for this. See: `https://ctan.org/pkg/siunitx`

9.7. Tables

Table .1.: Tables have caption on top.

Object	Speed $[cm/s]$	Inner LR $[cm]$	Inner UR $[cm]$
Pitcher	real	n/a	5.65
	4.60	3.71 ± 0.67	5.09 ± 2.23
	10.64	3.55 ± 0.57	6.14 ± 0.69
Cookie O	real	7.55	7.55
	4.60	6.98 ± 0.27	6.98 ± 0.27
	10.64	6.77 ± 0.26	6.77 ± 0.26

Use `\longtable` for tables over multiple pages. See documentation.

9.8. Figures

Figure .1.: Figures have caption under. If you use figures from other work, do not forget to reference them [1].

9.9. Citation

9.9.1. Multiple citations

Use multiple citation like this:

```
\cite{deininger2005studien, deininger2005studien}
```

rendered as "[1, 1]".

9.9.2. More powerfull cite commands: `\citet` and `\citep`

For comprehensive description please check *the natbib documentation*.

Rather than using the awkward construction[1]

```
\cite{deininger2005studien} describes...
```

rendered as "[1] demonstrated...," or the inconvenient

```
Deininger \cite{deininger2005studien} describes...
```

rendered as "Deininger [1] demonstrated...", one can write

```
\citet{deininger2005studien} describes...
```

which renders as "Deininger [1] demonstrated..." and is both easy to write and much easier to read.

Citing specific chapter:

Kroger and Wahl [2, sec. III]

[2, sec. III]

For more examples check *the natbib documentation*.

9.10. Using Hyperlinks

Please use the ability of PDF viewers to interpret hyperlinks[2], specifically to allow each reference in the bibliography to be a link to an online version of the reference. As an example, if you were to cite "Passive Dynamic Walking" [3], the entry in the bibtex would read:

```
@article{McGeer01041990,
  author = {McGeer, Tad},
  title = {\href{http://ijr.sagepub.com/content/9/2/62.abstract}{Passive Dynamic Walking}},
  volume = {9},
  number = {2},
  pages = {62-82},
  year = {1990},
  doi = {10.1177/027836499000900206},
  URL = {http://ijr.sagepub.com/content/9/2/62.abstract},
  eprint = {http://ijr.sagepub.com/content/9/2/62.full.pdf+html},
  journal = {The International Journal of Robotics Research}
}
```

and the entry in the compiled PDF would look like:

[1] Tad McGeer. Passive Dynamic Walking. *The International Journal of Robotics Research*, 9(2):62–82, 1990.

where the title of the article is a link that takes you to the article on IJRR's website.

Also use this for adding links into text as done in the [2]. For more information see documentation on wikibooks. The `hyperref` package is already configured for this document in `KIT_document_setup.tex` file.

[1] The example is from the template for the conference *Robotic Science and Systems*.

[2] The example is from the template for the conference *Robotic Science and Systems*.

9.11. Equations

Use numbered equations:

$$m \cdot \ddot{x}(t) + d \cdot \dot{x}(t) = F(t) \tag{9.1}$$

9.12. Inline comments

Use command `\comment{}` for inline comments.

9.13. After Review marking

Use command `\afterReview{}` for marking text parts as changed.

9.14. Finalizing the Document

Please check here: `https://github.com/KITrobotics/Latex_Template/blob/master/README.md#finalizing-document`