

Documentation for *chaacthesis* class

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1 Introduction

This class provides the layout for any kind of thesis written at the Chair of Applied Cryptography, Friedrich-Alexander-Universität Erlangen-Nürnberg. Theoretically more or less everything can be overwritten but it is not recommended.

The class file has either to be added to the \LaTeX source folder or to be in the same folder as your main file.

2 Included Packages

The package already includes the following other packages:

- *amsmath*, *amsfonts*, *amssymb*, *amsthm*
- *bibgerm*
- *cleveref*
- *[lambda]*, *operators*, *advantage*, *sets*, *adversary*, *landau*, *probability*, *notions*, *logic*, *ff*, *mm*, *primitives*, *events*, *complexity*, *asymptotics*, *keys**cryptocode*
- *expl3*
- *[T1]fontenc*
- *graphicx*
- *[hidelinkes=true,backref=true,pdfauthor,pdftitle,breaklinks=true]hyperref*

- *[utf8]inputenc*
- *lmodern*
- *microtype*
- *[numbers]natbib*
- *pgf*
- *tikz*
- *url*
- *xcolor*

For *hyperref* the command `\hypersetup{}` can be used after the command `\setDetails` (see ??). Every other package can has to be loaded prior to that command. *pdfauthor* and *pdftitle* are set also by `\setDetails`.

3 Generate titlepage and (re)layout header and table of contents

To generate the title page and the style there are two commands to use. The first is `\setDetails{}` to give the needed parameters to the class. It has to be used before `\begin{document}` and should be used very late as it loads the packages *hyperref* and *cleveref* which could cause clashed otherwise.

3.1 Defining titlepage and styles

To generate the title page there exist only command where all the details can be set which is called `\setDetails{}`. In this commands the following keys exists (which can be used in arbitrary order):

- logoChair** This expects a relative path to the logo of the chair. If no or wrong path is given nothing happens.
- logoUni** This expects a relative path to the seal or logo of the university. If no or wrong path is given nothing happens.
- title** Title of the thesis. This will be also used as the intern pdf title if nothing else is specified.
- author** Author of the thesis. This will be also used as the intern pdf author if nothing else is specified.
- date** Here the date has to be given as a string. Also for example `\today` is possible.
- place** Here the place which is shown next to the date has to be given as a string.
- language** This key determines the language used throughout the thesis. Right now it can get the values `ngerman` and `english` while `english` is used if no value is given.
- kind** There are four existing keys which determine a format for the line which gives the kind of the thesis, namely `bachelor`, `master`, `seminar` and `diss`. This line is also

dependent on the language. If none of this key values is used the input for this key is output directly.

`advisor`

This can be used for a single advisor or a set separated by commas. If the language is `ngerman` there exist different forms for male and female advisors where the female form is the norm. If you want the male form you need to append a `m`, i.e. `{A name, another name, m}`.

If this key is used the keys `firstAdvisor` to `fourthAdvisor` (see below) are ignored.

`firstAdvisor`
`secondAdvisor`
`thirdAdvisor`
`fourthAdvisor`

These keys also exist in male and female form for `ngerman` with female as norm. Furthermore if you want the male form you need to append `m` as well. In contrast to `advisor` these keys can not be used for multiple advisors; if you try it anyway only the first one for each key will be used.

`header`

This key is a boolean and allows you to turn the header off if you really want to do that.

`level`

This key allows you to define `section` as highest level. This results in sections in the table of contents not being number `x.x` but `x` and also in the header the chapters aren't shown anymore.

Strings can be given as normal with Unicode characters. If a string contains spaces it has to be surrounded by curly braces `{String and String}`.

3.2 Shipping out title page, abstract and table of contents

The shipout of the title page happens with the command `frontpart`. This command has to be used after `\begin{document}` as it also calls `\tableofcontents`. As an optional argument the relative path for the file containing your abstract can be given as `\frontpart[abstract]`. It will not work if you write `*.tex`!

4 Examples

Here are two examples how the title page could look like.

```
\setDetails{
title={Geldspeicherverwaltung mithilfe der Blockchain},
author={Dagobert Duck},
place={Entenhausen},
date={\today},
language=ngerman,
kind={master},
firstAdvisor={Gundel Gauckely},
secondAdvisor={Die Panzerknacker,m},
}
```

FRIEDRICH-ALEXANDER-UNIVERSITÄT
ERLANGEN-NÜRNBERG

Masterarbeit in Informatik

Geldspeicherverwaltung mithilfe der Blockchain

Dagobert Duck

Erste Betreuerin: Gundel Gauckely
Zweiter Betreuer: Die Panzerknacker

Entenhausen, 17. Januar 2018

```
\setDetails{
logoChair={logoTextRight.pdf},
title={Short negotiations with smart contracts},
author={Qui-Gon Jinn and Obi-Wan Kenobi},
advisor={Chancellor Valorum, Kahless, T'Kuvma},
place={Naboo},
date={32 BBY},
kind={diss},
logoUni={fau-siegel.pdf},
firstAdvisor={Will not appear},
}
```

FRIEDRICH-ALEXANDER-UNIVERSITÄT
ERLANGEN-NÜRNBERG



Chair of
Applied Cryptography

Dissertation in Computer Science

Short negotiations with smart contracts

Qui-Gon Jinn and Obi-Wan Kenobi



Advisors: Darth Sidious, Nute Gunray, T'Kuvma

Naboo, 32 BBY