

# RAllatex

## Documentation

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Build-Date: June 29, 2022

Git-Hash: 1bd04fb (*1bd04fb49afbe5227d36a223b30be25ed5f3448a*)

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# Chapter 1

## Introduction

### 1.1 The TUMlatex Project

The TUMlatex project represents a cooperation of several chairs of the Technical University of Munich to provide a compact and easy-to-use LaTeX package for both, employees and students. The whole project is hosted on the GitLab server of the LRZ and can be accessed via <https://gitlab.lrz.de/AM/TUMlatex>.

If you are an advanced LaTeX user and want to contribute to this project, please read the contribution guide available on the GitLab project page. If you are responsible for the LaTeX templates of your chair and you are interested in joining this collaboration, please contact the current maintainer Michael Kreutz ([m.kreutz@tum.de](mailto:m.kreutz@tum.de)).

This documentation is intended to assist users during the creation of documents. It does **not** contain information on how to set up your LaTeX environment. For detailed instructions on how to prepare your environment for usage with this class, be referred to the GitLab project page.

### 1.2 Modules, Styles and Templates

In order to maintain a clear and modular structure, the concept of modules, styles and templates has been chosen. While modules and styles are fused into one single class or package file (`.cls` or `.sty`), templates do not interfere with each other.

#### 1.2.1 Modules

Each module bundles several LaTeX packages, definitions and commands which can be used if the corresponding module has been activated. Modules implement the core functionality of this project. Modules can be activated by passing the option `RAI<module name>` to the main class, e. g. by writing `\documentclass[RAIcore,RAIlang]{RAIlatex}`. If you pass no options related to modules, e. g. by writing `\documentclass{RAIlatex}`, the class will automatically load all modules. This should be the usual case. However you are free to deactivate modules, for example because the journal you want to publish your paper in does not allow certain packages to be loaded.

Also there are specific dependencies between modules, see chapter 2 for individual details. Note that if you select a specific module, its dependencies will be activated automatically. Selecting the module `RAIfont` will thus also activate the module `RAIcore`. Use `\RAIdebug` to print a list of all enabled modules.

#### 1.2.2 Styles

Styles extend the core functionality of modules by defining styling options for different document types. For example there is a different style for a student thesis than for a lecture script. In contrast both will use the same modules. Styles can be selected in the same way as modules, i. e. by passing the option `RAI<style name>` to the main class, e. g. by writing `\documentclass[RAIempty]{RAIlatex}`. It is important to note that

- exactly one style per document has to be selected,

- the style **RAIempty** is automatically selected, if the user passes no options related to styles, e. g. by writing `\documentclass{RAIlatex}` and
- if a style is explicitly selected, all modules will be loaded automatically (independent of your module choice).

As a consequence you must not specify any style in order to be able to select modules.

### 1.2.3 Templates

In order to simplify the usage of the class, a variety of templates is given. Those can be copied (complete folder) to create a new document without any knowledge how to use the main class. Thus a template demonstrates the main functionality which is usually needed for this type of document. You just have to edit the template and insert your content.

## 1.3 Folder Structure

The (compiled) package folder is structured as follows:

- *RAIDocumentation* (source and compiled files of **this** document)
- *RAITemplates* (source and precompiled template files)
- *RAITools* (useful scripts and tools)
- *RAIlatex.cls* (main class file)
- *RAIlatex.cwl* (syntax file used for auto-completion in TeXstudio)
- *RAIlatex.sty* (main package file)
- *RAIlatex\_LICENSE.txt* (license information of the package)

In order to create a new document just copy the appropriate template (complete folder) from *RAITemplates* to anywhere you want. Then edit the file *main.tex*.

## 1.4 The RAIlatex Project

The RAIlatex project is a subproject related to the Chair of Robotics, Artificial Intelligence and Real-time Systems. It includes the complete functionality of the TUMlatex base package as well as additional chair-specific modules, styles and templates.

## Chapter 2

### Modules

#### 2.1 RAcore

<b>Dependencies</b>	none
<b>Options</b>	none
<b>Loaded Packages</b>	inputenc etoolbox xparse silence
<b>Sourcefile</b>	source/IN/RAI/Modules/RAIcore.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMcore.sty
<b>Commands</b>	<a href="#">\RAIcoreLogInfo</a> <a href="#">\RAIcoreLogWarning</a> <a href="#">\RAIcoreLogError</a> <a href="#">\RAIcoreRepetition</a> <a href="#">\RAIcoreProjectWebsite</a>

##### Description

The [RAIcore](#)-module is the most important module since it plays a major role in the building process of the class. It helps filtering warnings and debugging the whole document. For more information related to the commands of this module look up chapter 5. The results of the debugging process are written to the log file (*main.log*).

There are also basic control structures implemented. You can use the command [\RAIcoreRepetition](#) as simple implementation of a for-loop.

#### 2.2 RAfont

<b>Dependencies</b>	<a href="#">RAIcore</a>
<b>Options</b>	optHelvetica optArial optCharter optComputerModern optCharterMath optComputerModernMath
<b>Loaded Packages</b>	fix-cm fontenc helvet uarial charter mathdesign anyfontsize
<b>Sourcefile</b>	source/IN/RAI/Modules/RAIfont.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMfont.sty
<b>Commands</b>	<a href="#">\RAIfontSetDocumentFontSizeVI</a> <a href="#">\RAIfontSetDocumentFontSizeVII</a> <a href="#">\RAIfontSetDocumentFontSizeVIII</a> <a href="#">\RAIfontSetDocumentFontSizeIX</a> <a href="#">\RAIfontSetDocumentFontSizeX</a> <a href="#">\RAIfontSetDocumentFontSizeXI</a> <a href="#">\RAIfontSetDocumentFontSizeXII</a> <a href="#">\RAIfontSetDocumentFontSizeXIII</a> <a href="#">\RAIfontSetDocumentFontSizeXIV</a> <a href="#">\RAIfontSetDocumentFontSizeXV</a> <a href="#">\RAIfontSetDocumentFontSizeXVI</a> <a href="#">\RAIfontSetDocumentFontSizeXVIII</a> <a href="#">\RAIfontSetDocumentFontSizeXX</a> <a href="#">\RAIfontSetDocumentFontSizeXXII</a> <a href="#">\RAIfontSetDocumentFontSizeXXIV</a> <a href="#">\RAIfontSetDocumentFontSizeXXVIII</a> <a href="#">\RAIfontSetDocumentFontSizeXXLII</a> <a href="#">\RAIfontSetDocumentFontSizeXXLVI</a> <a href="#">\RAIfontSetDocumentFontSizeXL</a> <a href="#">\RAIfontSetDocumentFontSizeXLIV</a>

##### Description

The module [RAIfont](#) loads all requested fonts and symbols. There are four different “text” fonts available. If you do not select one of them [optHelvetica](#), or a font specified by the chosen style, will be used as default. The same applies to the two math options, which define the “mathematical” font. The default “mathematical” font is [optCharterMath](#).

Option	Sans Serif	Roman	Typewriter
<a href="#">optHelvetica</a>	<b>Helvetica</b> (phv)	Charter (bch)	Com. Mod. (cmmt)
<a href="#">optArial</a>	<b>URW Arial</b> (ua1)	Charter (bch)	Com. Mod. (cmmt)
<a href="#">optCharter</a>	Helvetica (phv)	<b>Charter</b> (bch)	Com. Mod. (cmmt)
<a href="#">optComputerModern</a>	Com. Mod. (cmss)	<b>Com. Mod.</b> (cmr)	Com. Mod. (cmmt)

Note that URW Arial is **not** included in standard  $\TeX$  distribution like TeXLive, thus it will only be loaded if the option `optArial` is given explicitly. You probably have to install this font manually for your system.

**Hint:** You can switch between sans serif, roman and typewriter font easily with the standard LaTeX commands `\sffamily`, `\rmfamily` and `\ttfamily` respectively.

## Font Families

The following table shows examples for the different font options.

Helvetica (sans serif only)	Example Text 1 2 3 A B C a b c
Charter (roman only)	Example Text 1 2 3 A B C a b c
Computer Modern (sans serif)	Example Text 1 2 3 A B C a b c
Computer Modern (roman)	Example Text 1 2 3 A B C a b c
Computer Modern (typewriter)	Example Text 1 2 3 A B C a b c

## Fontsizes

By using the commands of this module (starting with `\RAIfontSetDocumentFontSize`) you can change the default font size of the whole document. Note that it is also possible to use these commands to switch font sizes within a document.

The package provides following fontsizes

Command	Font Size	Comment
<code>\RAIfontSetDocumentFontSizeVI</code>	6pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeVII</code>	7pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeVIII</code>	8pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeIX</code>	9pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeX</code>	10pt	from standard article-class ( <b>original</b> )
<code>\RAIfontSetDocumentFontSizeXI</code>	11pt	from standard article-class ( <b>original</b> )
<code>\RAIfontSetDocumentFontSizeXII</code>	12pt	from standard article-class ( <b>original</b> )
<code>\RAIfontSetDocumentFontSizeXIII</code>	13pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXIV</code>	14pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXV</code>	15pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXVI</code>	16pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXVIII</code>	18pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXX</code>	20pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXXII</code>	22pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXXIV</code>	24pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXXVIII</code>	28pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXXLII</code>	32pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXXLVI</code>	36pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXL</code>	40pt	<b>scaled</b> from standard article-class
<code>\RAIfontSetDocumentFontSizeXLIV</code>	44pt	<b>scaled</b> from standard article-class

The commands in the following table will be affected by the font size and accordingly adjusted. In this case the commands for the font size 11pt are shown.

A	A	A	A	A
<code>\tiny</code>	<code>\scriptsize</code>	<code>\footnotesize</code>	<code>\small</code>	<code>\normalsize</code>
A	A	A	A	A
<code>\large</code>	<code>\Large</code>	<code>\LARGE</code>	<code>\huge</code>	<code>\HUGE</code>

## 2.3 RAllang

<b>Dependencies</b>	<code>\RAIcore</code>
<b>Options</b>	<code>optGerman optEnglish</code>
<b>Loaded Packages</b>	<code>babel csquotes</code>
<b>Sourcefile</b>	<code>source/IN/RAI/Modules/RAllang.sty</code>
<b>Sourcefile (parent)</b>	<code>source/TUM/Modules/TUmlang.sty</code>
<b>Commands</b>	<code>\RAIlangSwitchToGerman</code> <code>\RAIlangSwitchToEnglish</code> <code>\RAIlangGerEng</code> <code>\RAIlangForceGerman</code> <code>\RAIlangForceEnglish</code> <code>\RAIlangTUM</code> <code>\RAIlangDepartmentMW</code> <code>\RAIlangDepartmentIN</code> <code>\RAIlangDe-</code> <code>partment</code> <code>\RAIlangChairMWAER</code> <code>\RAIlangChairMWVIB</code> <code>\RAIlangChairMWAM</code> <code>\RAIlangChairMWAPT</code> <code>\RAIlangChairMWAIS</code> <code>\RAIlangChairMWIWB</code> <code>\RAIlangChairMWIWBWLF</code> <code>\RAIlangChairMWIW-</code> <code>BLBM</code> <code>\RAIlangChairMWVBV</code> <code>\RAIlangChairMWLCC</code> <code>\RAIlangChairMWLES</code> <code>\RAIlangChairMWLFE</code> <code>\RAIlangChairMWFTM</code> <code>\RAIlangChairMWFSF</code> <code>\RAIlangChairMWFML</code> <code>\RAIlangChairMWLHT</code> <code>\RAIlangChairMWPKM</code> <code>\RAIlangChairMWLLB</code> <code>\RAIlangChairMWLLS</code> <code>\RAIlangChairMWZG</code> <code>\RAIlangChairMWMHPC</code> <code>\RAIlangChairMWLMT</code> <code>\RAIlangChairMWLMM</code> <code>\RAIlangChairMWLNT</code> <code>\RAIlangChairMWLNM</code> <code>\RAIlangChairMWPMW</code> <code>\RAIlangChairMWPE</code> <code>\RAIlangChairMWPTM</code> <code>\RAIlangChairMWLFA</code> <code>\RAIlangChairMWLRT</code> <code>\RAIlangChairMWRT</code> <code>\RAIlangChairMWSES</code> <code>\RAIlangChairMWSPGM</code> <code>\RAIlangChairMWTD</code> <code>\RAIlangChairMWTFD</code> <code>\RAIlangChairMWUTG</code> <code>\RAIlangChairMWLVK</code> <code>\RAIlangChairMWWKM</code> <code>\RAIlangChairMWLWE</code> <code>\RAIlangChairMWZFP</code> <code>\RAIlangChairMWZL</code> <code>\RAIlangChairINRAI</code> <code>\RAIlangChairINSSE</code> <code>\RAIlangChair</code> <code>\RAIlangre-</code> <code>searchassistantMale</code> <code>\RAIlangResearchassistantMale</code> <code>\RAIlangResearchAssistantMale</code> <code>\RAIlang-</code> <code>researchassistantFemale</code> <code>\RAIlangResearchassistantFemale</code> <code>\RAIlangResearchAssistantFemale</code> <code>\RAIlangtenuredprofessorMale</code> <code>\RAIlangTenuredprofessorMale</code> <code>\RAIlangTenuredProfessorMale</code> <code>\RAIlangtenuredprofessorFemale</code> <code>\RAIlangTenuredprofessorFemale</code> <code>\RAIlangTenuredProfessorFe-</code> <code>male</code> <code>\RAIlangsupervisor</code> <code>\RAIlangSupervisor</code> <code>\RAIlangsupervision</code> <code>\RAIlangSupervision</code> <code>\RAIlangex-</code> <code>aminer</code> <code>\RAIlangExaminer</code> <code>\RAIlangbachelorsthesis</code> <code>\RAIlangBachelorsthesis</code> <code>\RAIlangBachelorsThes-</code> <code>is</code> <code>\RAIlangdiplomathesis</code> <code>\RAIlangDiplomathesis</code> <code>\RAIlangDiplomaThesis</code> <code>\RAIlangsemesterthesis</code> <code>\RAIlangSemesterthesis</code> <code>\RAIlangSemesterThesis</code> <code>\RAIlangmastersthesis</code> <code>\RAIlangMasters-</code> <code>thesis</code> <code>\RAIlangMastersThesis</code> <code>\RAIlanginterdisciplinaryproject</code> <code>\RAIlangInterdisciplinaryproject</code> <code>\RAIlangInterdisciplinaryProject</code> <code>\RAIlangScientificWorkForObtainingAcademicDegree</code> <code>\RAIlang-</code> <code>FieldOfStudyinformatics</code> <code>\RAIlangFieldOfStudyInformatics</code> <code>\RAIlangFieldOfStudygamesengineering</code> <code>\RAIlangFieldOfStudyGamesengineering</code> <code>\RAIlangFieldOfStudyGamesEngineering</code> <code>\RAIlangFieldOf-</code> <code>Studyinformationsystems</code> <code>\RAIlangFieldOfStudyInformationsystems</code> <code>\RAIlangFieldOfStudyInforma-</code> <code>tionSystems</code> <code>\RAIlangFieldOfStudybiomedicalcomputing</code> <code>\RAIlangFieldOfStudyBiomedicalcomputing</code> <code>\RAIlangFieldOfStudyBiomedicalComputing</code> <code>\RAIlangFieldOfStudyautomotivesoftwareengineering</code> <code>\RAIlangFieldOfStudyAutomotivesoftwareengineering</code> <code>\RAIlangFieldOfStudyAutomotiveSoftwa-</code> <code>reEngineering</code> <code>\RAIlangFieldOfstudyroboticscognitionintelligence</code> <code>\RAIlangFieldOfStudyRobotics-</code> <code>cognitionintelligence</code> <code>\RAIlangFieldOfStudyRoboticsCognitionIntelligence</code> <code>\RAIlangPhdDegreeDrIng</code> <code>\RAIlangPhdDegreeDrIngOld</code> <code>\RAIlangPhdDegreeDrRerNat</code> <code>\RAIlangDate</code> <code>\RAIlangMonth</code> <code>\RAIlang-</code> <code>MonthShort</code> <code>\RAIlangmonth</code> <code>\RAIlangmonthShort</code>

### Description

The module `\RAIlang` gives you the ability to change the language of the document. Thereby, you have the choice between German (`optGerman`) and English (`optEnglish`). This especially effects predefined headers and titlepages. If no option has been passed, the default language will be German (`optGerman`). You can also switch the language of the document dynamically (i. e. within the text) with the commands `\RAIlangSwitchToGerman` and `\RAIlangSwitchToEnglish`.

Besides it also includes an accumulation of commands, which displays different words or phrases in English or German. These are all listed in chapter 5. Furthermore you can easily create placeholders with the command `\RAIlangGerEng` where you can specify german and english translations. Depending on the document language the german or english text will be displayed automatically.

### Dates

The module also specifies helper commands to typeset dates in the global document language. You can use the commands `\RAIlangMonth`, `\RAIlangMonthShort` and `\RAIlang-month` to output month names.

## 2.4 RAaddress

<b>Dependencies</b>	none
<b>Options</b>	none
<b>Loaded Packages</b>	none
<b>Sourcefile</b>	source/IN/RAI/Modules/RAaddress.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMaddress.sty
<b>Commands</b>	\RAaddressCityMunich \RAaddressCityGarching \RAaddressCityMW \RAaddressCityIN \RAaddressCityDepartment \RAaddressCityChair \RAaddressPostalCodeGarching \RAad- dressPostalCodeMW \RAaddressPostalCodeIN \RAaddressPostalCodeDepartment \RAad- dressPostalCodeChair \RAaddressStreetMW \RAaddressStreetIN \RAaddressStreetDepartment \RAaddressStreetChair \RAaddressIBANTUM \RAaddressIBANMW \RAaddressIBANIN \RAad- dressIBANDepartment \RAaddressIBANChair \RAaddressBICTUM \RAaddressBICMW \RAad- dressBICIN \RAaddressBICDepartment \RAaddressBICChair \RAaddressCreditInstitutionTUM \RAaddressCreditInstitutionMW \RAaddressCreditInstitutionIN \RAaddressCreditInstitutionDepart- ment \RAaddressCreditInstitutionChair \RAaddressWebsiteTUM \RAaddressWebsiteMW \RAad- dressWebsiteIN \RAaddressWebsiteDepartment \RAaddressWebsiteChair \RAaddressTaxNum- berTUM \RAaddressTaxNumberMW \RAaddressTaxNumberIN \RAaddressTaxNumberDepartment \RAaddressTaxNumberChair \RAaddressSalesTaxIDTUM \RAaddressSalesTaxIDMW \RAad- dressSalesTaxIDIN \RAaddressSalesTaxIDDepartment \RAaddressSalesTaxIDChair

### Description

The **RAaddress**-module defines common strings used in contact information like streets, cities, postal codes, IBANs and BICs. Selected commands:

Command	Output
\RAaddressCityMunich	Munich
\RAaddressCityGarching	Garching
\RAaddressCityChair	Garching
\RAaddressPostalCodeChair	85748
\RAaddressStreetChair	Boltzmannstraße 3
\RAaddressIBANChair	DE10700500000000024866
\RAaddressBICChair	BYLADEMM
\RAaddressCreditInstitutionChair	Bayerische Landesbank
\RAaddressWebsiteTUM	www.tum.de
\RAaddressWebsiteDepartment	www.in.tum.de
\RAaddressWebsiteChair	www.in.tum.de/rai
\RAaddressTaxNumberChair	143/241/80037
\RAaddressSalesTaxIDChair	DE811193231

## 2.5 RAcolor

<b>Dependencies</b>	RAIcore
<b>Options</b>	optRGB optCMYK optGray optMonochrome
<b>Loaded Packages</b>	xcolor
<b>Sourcefile</b>	source/IN/RAI/Modules/RAcolor.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMcolor.sty
<b>Commands</b>	none


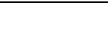











### Description

The module **RAIcolor** defines the official colors of the TUM according to the corporate design. The main options of this module are **optRGB**, **optCMYK**, **optGray** and **optMonochrome**, which are different color models. Though CMYK is preferable used for print media and RGB for digital documents. Gray and Monochrome are just different variations of black and white. If no option has been passed, the default option **optRGB** will be used.













The following tables give an overview over the color definitions.

#### Default Colors:

Color	R	G	B	C	M	Y	K	Hex	Preview
TUMBlue	0	101	189	100	43	0	0	0x0065BD	
TUMWhite	255	255	255	0	0	0	0	0xFFFFFFFF	
TUMBlack	0	0	0	0	0	0	100	0x000000	
TUMBlue1	0	51	89	100	57	12	70	0x003359	
TUMBlue2	0	82	147	100	54	4	19	0x005293	
TUMGray1	51	51	51	0	0	0	80	0x333333	
TUMGray2	127	127	127	0	0	0	50	0x7F7F7F	
TUMGray3	204	204	204	0	0	0	20	0xCCCCCC	
TUMBlue3	100	160	200	65	19	1	4	0x64A0C8	
TUMBlue4	152	198	234	42	9	0	0	0x98C6EA	
TUMIvory	218	215	203	3	4	14	8	0xDAD7CB	
TUMOrange	227	114	34	0	65	95	0	0xE37222	
TUMGreen	162	173	0	35	0	100	20	0xA2AD00	

#### Anniversary Colors: (150 Jahre culture of excellence)

(Note: These colors may only be used in the anniversary year 2018.)

Color	R	G	B	C	M	Y	K	Hex	Preview
TUMAnniMustard	232	200	55	12	18	85	0	0xE8C837	
TUMAnniMustard2	202	171	41	18	25	90	10	0xCAAB29	
TUMAnniOrange	247	166	0	0	40	100	0	0xF7A600	
TUMAnniOrange2	243	145	0	0	50	100	0	0xF39100	
TUMAnniGreen	188	207	30	35	0	95	0	0xBCCF1E	
TUMAnniGreen2	162	191	22	45	5	100	0	0xA2BF16	
TUMAnniBlue	146	212	241	45	0	3	0	0x92D4F1	
TUMAnniBlue2	91	197	242	60	0	0	0	0x5BC5F2	
TUMAnniPink	242	144	149	0	55	30	0	0xF29095	
TUMAnniPink2	227	130	143	8	60	30	0	0xE3828F	

## 2.6 RAltikz

<b>Dependencies</b>	<a href="#">RAIcore</a>
<b>Options</b>	<code>optTikzExternalize</code>
<b>Loaded Packages</b>	<code>pdfpages tikz mdframed pgfplots grffile pgfgantt</code>
<b>Sourcefile</b>	<code>source/IN/RAI/Modules/RAltikz.sty</code>
<b>Sourcefile (parent)</b>	<code>source/TUM/Modules/TUMtikz.sty</code>
<b>Commands</b>	<code>\RAItikzExternalizeSkipNext \RAItikzGrid \RAItikzCircled</code>

### Description

The **RAItikz** module implements basic TikZ, pgfplots and pgfgantt functionality. The option `optTikzExternalize` quickens the building process by storing TikZ-graphics in a separate folder (`figures/tikzoutput`). When rebuilding the document the compiler will take unchanged graphics directly from the external dataset instead of building the graphic again. However, in some cases positioning problems may occur. In this case the module provides a solution

by forcing TikZ to skip the externalization of the next graphic by the command `\RAItikzExternalizeSkipNext`.

Furthermore the module defines the command `\RAItikzGrid` with which a grid can be drawn:



Additionally macros for framing content are defined:

Command	Example(s)
<code>\RAItikzCircled</code>	$\textcircled{A}$ , $\textcircled{x}$ , $\textcircled{1}$

## 2.7 RAllogo

<b>Dependencies</b>	<code>RAIcore</code> <code>RAIfont</code> <code>RAIcolor</code> <code>RAIlang</code> <code>RAItikz</code>
<b>Options</b>	none
<b>Loaded Packages</b>	none
<b>Sourcefile</b>	source/IN/RAI/Modules/RAIlogo.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMlogo.sty
<b>Commands</b>	<code>\RAIlogoChair</code> <code>\RAIlogoTercetTUM</code> <code>\RAIlogoTercetDepartment</code> <code>\RAIlogoTercetChair</code> <code>\RAIlogoTUM</code> <code>\RAIlogoDepartmentMW</code> <code>\RAIlogoDepartmentIN</code> <code>\RAIlogoDepartment</code> <code>\RAIlogoAnniversary</code>

### Description

The `RAIlogo` module creates the logos of the university and the department as TikZ pictures. By passing parameters to the commands, the size and the color of the logos is specified.



`\RAIlogoTUM`



`\RAIlogoTUM`



`\RAIlogoDepartment`

Similar to the logos, also the TUM tercets can be printed in a convenient way:

Technical University of Munich

Department of Informatics  
Technical University of Munich

Chair of Robotics, Artificial Intelligence and Real-time Systems  
Department of Informatics  
Technical University of Munich

`\RAIlogoTercetTUM`

`\RAIlogoTercetDepartment`

`\RAIlogoTercetChair`

In the anniversary year 2018 one may also use the anniversary badge (`\RAIlogoAnniversary`):



## 2.8 RAImath

<b>Dependencies</b>	RAIcore
<b>Options</b>	optLeftEquations optCenterEquations
<b>Loaded Packages</b>	amsmath mathtools siunitx amssymb amsfonts bm
<b>Sourcefile</b>	source/IN/RAI/Modules/RAImath.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMmath.sty
<b>Commands</b>	<code>\real \imag \asin \acos \atan \co \atanII \AtanII \sinabr \cosabr \sign \sgn \argmin \argmax \div \grad \curl \rot \dif \Dif \order \Abs \abs \Norm \norm \e \const \konst \laplacian \vdiv \vgrad \vcurl \vrot \hex \bin \dec \bnot \MR \MN \MZ \MC \MQ \Mone \eqhat \eqexcl \eqdef \defined \rdefined \vec \vnull \vzero \vone \vnabla \mat \pmat \bmat \Bmat \vmat \Vmat \dd \vdot \vdotted \diff \tdiff \pdiff \tpdiff \Ddiff \tDdiff \rs</code>

### Description

The **RAImath** module defines various math operators, sets of numbers, numeral systems, relations as well as vector and matrix notations. The options `optLeftEquations` (default) and `optCenterEquations` allows the user to specify the alignment of equations.

### Operators

Command	Output	Command	Output	Command	Output	Command	Output
<code>\real</code>	Re	<code>\sign</code>	sign	<code>\curl</code>	curl	<code>\dif</code>	d
<code>\imag</code>	Im	<code>\sgn</code>	sgn	<code>\rot</code>	rot	<code>\Dif</code>	D
<code>\asin</code>	asin	<code>\argmin</code>	arg min	<code>\atanII</code>	atan2	<code>\order</code>	O
<code>\acos</code>	acos	<code>\argmax</code>	arg max	<code>\AtanII</code>	Atan2		
<code>\atan</code>	atan	<code>\div</code>	div	<code>\sinabr</code>	s		
<code>\co</code>	co	<code>\grad</code>	grad	<code>\cosabr</code>	c		

### Miscellaneous

Command	Output	Command	Output	Command	Output	Command	Output
<code>\Abs{x}</code>	$ x $	<code>\Norm{x}</code>	$\ x\ $	<code>\konst</code>	konst	<code>\vgrad</code>	$\nabla$
<code>\abs{x}</code>	$ x $	<code>\norm{x}</code>	$\ x\ $	<code>\laplacian</code>	$\Delta$	<code>\vcurl</code>	$\nabla \times$
<code>\e</code>	e	<code>\const</code>	const	<code>\vdiv</code>	$\nabla \cdot$	<code>\vrot</code>	$\nabla \times$

### Numeral Systems and Sets of Numbers

Command	Output	Command	Output	Command	Output	Command	Output
<code>\hex{123}</code>	123 <sub>H</sub>	<code>\bin{101}</code>	101 <sub>B</sub>	<code>\dec{123}</code>	123 <sub>D</sub>	<code>\bnot{101}</code>	$\overline{101}$
<code>\MR</code>	$\mathbb{R}$	<code>\MN</code>	$\mathbb{N}$	<code>\MZ</code>	$\mathbb{Z}$	<code>\MC</code>	$\mathbb{C}$
<code>\MQ</code>	$\mathbb{Q}$	<code>\Mone</code>	1				

### Relations

Command	Output	Command	Output	Command	Output	Command	Output
<code>\eqhat</code>	$\hat{=}$	<code>\eqexcl</code>	$\stackrel{!}{=}$	<code>\eqdef</code>	$\stackrel{\text{def.}}{=}$	<code>\defined</code>	$\coloneqq$
<code>\rdefined</code>	$\equiv$						

### Derivatives

Command	Output	Command	Output	Command	Output
<code>\dd{x}</code>	$dx$	<code>\vdot{x}</code>	$\dot{x}$	<code>\vddot{x}</code>	$\ddot{x}$
<code>\diff[2]{f}{x}</code>	$\frac{d^2f}{dx^2}$	<code>\tdiff[2]{f}{x}</code>	$\frac{d^2f}{dx^2}$	<code>\pdiff[2]{f}{x}</code>	$\frac{\partial^2f}{\partial x^2}$
<code>\tpdiff[2]{f}{x}</code>	$\frac{\partial^2f}{\partial x^2}$	<code>\Ddiff[2]{f}{x}</code>	$\frac{D^2f}{Dx^2}$	<code>\tDdiff[2]{f}{x}</code>	$\frac{D^2f}{Dx^2}$

### Vectors and Matrices

Vectors and matrices are usually written as **bold** symbols. You can either use the explicit command `\vec` or the short and handy form `\v+<letter>` to typeset vectors. The placeholder `<letter>` can be replaced by any lower or upper case latin or greek letter. Example:

Command	Output	Command	Output
<code>\vec{a}</code>	$\boldsymbol{a}$	<code>\va</code>	$\boldsymbol{a}$
<code>\vec{A}</code>	$\boldsymbol{A}$	<code>\vA</code>	$\boldsymbol{A}$
<code>\vec{\gamma}</code>	$\boldsymbol{\gamma}$	<code>\vgamma</code>	$\boldsymbol{\gamma}$
<code>\vec{\Gamma}</code>	$\boldsymbol{\Gamma}$	<code>\vGamma</code>	$\boldsymbol{\Gamma}$

Moreover there exist abbreviations for the most common matrix notations:

Command	Output	Command	Output	Command	Output
<code>\mat{1&amp;2\\3&amp;4}</code>	$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$	<code>\pmat{1&amp;2\\3&amp;4}</code>	$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$	<code>\bmat{1&amp;2\\3&amp;4}</code>	$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$
<code>\Bmat{1&amp;2\\3&amp;4}</code>	$\begin{Bmatrix} 1 & 2 \\ 3 & 4 \end{Bmatrix}$	<code>\vmat{1&amp;2\\3&amp;4}</code>	$\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix}$	<code>\Vmat{1&amp;2\\3&amp;4}</code>	$\begin{Vmatrix} 1 & 2 \\ 3 & 4 \end{Vmatrix}$

### Indices

There exists the auxillary command `\rs` to typeset leftsided indices in equations. Example: type `\rs{a^b}{\vC}_c^d` to obtain  ${}_a^bX_c^d$ .

## 2.9 RAlayout

<b>Dependencies</b>	RAlcore RAlcolor RAltikz RAllogo
<b>Options</b>	optAfive optAfour optAthree optAtwo optAone optAzero optBeamerClassicFormat optBeamerWideFormat optExzellenz
<b>Loaded Packages</b>	geometry
<b>Sourcefile</b>	source/IN/RAI/Modules/RAlayout.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMlayout.sty
<b>Commands</b>	\RAlayoutHeaderCustomChair \RAlayoutTitlePageDefault \RAlayoutSetIndent \RAlayoutNoIndent \RAlayoutSetAfive \RAlayoutSetAfour \RAlayoutSetAthree \RAlayoutSetAtwo \RAlayoutSetAone \RAlayoutSetAzero \RAlayoutSetBeamerClassicFormat \RAlayoutSetBeamerWideFormat \RAlayoutPutAtCenter \RAlayoutPutAtNorthWest \RAlayoutPutAtNorthWestCentered \RAlayoutPutAtNorthEast \RAlayoutPutAtNorthEastCentered \RAlayoutPutAtSouthWest \RAlayoutPutAtSouthWestCentered \RAlayoutPutAtSouthEast \RAlayoutPutAtSouthEastCentered \RAlayoutHeaderCD-TUMLogoOnly \RAlayoutHeaderCDTUM \RAlayoutHeaderCDDepartment \RAlayoutHeaderCD-Chair \RAlayoutCDBorder

### Description

The `RAlayout` module defines page size and margins, commands for absolute positioning of content on the page and header definitions. The four options of this module specify the document page format. If no size option is specified the default option `optAfour` is used.

The following table gives an overview of the page formats.

Option	Size	Margins
<code>optAfive</code>	DIN A5 (148mm × 210mm)	1.41cm
<code>optAfour</code>	DIN A4 (210mm × 297mm)	2cm
<code>optAthree</code>	DIN A3 (297mm × 420mm)	2.82cm
<code>optAtwo</code>	DIN A2 (420mm × 594mm)	4cm
<code>optAone</code>	DIN A1 (594mm × 841mm)	5.66cm
<code>optAzero</code>	DIN A0 (841mm × 1189mm)	8cm
<code>optBeamerClassicFormat</code>	4:3 (254mm × 190.5mm)	1cm (left and right)
<code>optBeamerWideFormat</code>	16:9 (254mm × 142.9mm)	1cm (left and right)

### Absolute Positioning

For absolute positioning on the page several convenience commands exist. They all start with `\RAlayoutPutAt` and allow positioning relative to global page markers, i. e. the corners or the page center. The content is integrated into a TikZ-picture whose anchor is in the same corner as the specified page corner. Moreover the content may be rotated by any angle of rotation.

**Important:** Note that due to positioning issues TikZ-pictures cannot be externalized in combination with this commands.

### Headers

The module defines several headers which differ in the amount of information displayed. Headers including the letters “CD” correspond to the corporate design of the TUM. By passing the option `optExzellenz` you can enable the display of the anniversary badge (use this only in the anniversary year 2018).

## 2.10 RA**I**biblio

<b>Dependencies</b>	RA <b>I</b> core RA <b>I</b> lang
<b>Options</b>	optBiber optBibtex optBibstyleNumeric optBibstyleAlphabetic optBibstyleAuthorYear
<b>Loaded Packages</b>	biblatex
<b>Sourcefile</b>	source/IN/RAI/Modules/RAIbiblio.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMBiblio.sty
<b>Commands</b>	none

### Description

The RA**I**biblio module generates the layout of the citations and bibliography. You can choose between the two backends *biber* (optBiber, modern, recommended) and *bibtex* (optBibtex, outdated, not recommended). Note, that the module is only loaded, if a backend has been specified.

Moreover the style of bibliography entries can be specified. An example for the references

- Albert Einstein, “Zur Elektrodynamik bewegter Körper”, 1905
- Michel Goossens, Frank Mittelbach, and Alexander Samarin “The LaTeX Companion”, 1993

is given for every option:

- optBibstyleAuthorYear: Einstein 1916 – Goossens, Mittelbach and Samarin 1993
- optBibstyleAlphabetic: [Ein16] – [GMS93]
- optBibstyleNumeric: [1] – [2]

## 2.11 RA**I**names

<b>Dependencies</b>	RA <b>I</b> core
<b>Options</b>	none
<b>Loaded Packages</b>	none
<b>Sourcefile</b>	source/IN/RAI/Modules/RAInames.sty
<b>Sourcefile (parent)</b>	source/TUM/Modules/TUMnames.sty
<b>Commands</b>	\RAInamesProfHerrmann \RAInamesProfHofmann \RAInamesPresident \RAInamesProfAdams \RAInamesProfBengler \RAInamesProfBerensmeier \RAInamesProfBottasso \RAInamesProfCac- camo \RAInamesProfDrechsler \RAInamesProfFottner \RAInamesProfGee \RAInamesProfGrosse \RAInamesProfGuemmer \RAInamesProfGuenther \RAInamesProfHaidn \RAInamesProfHajek \RAInamesProfHolzapfel \RAInamesProfHornung \RAInamesProfKaltenbach \RAInamesProfK- lein \RAInamesProfKoutsourelakis \RAInamesProfKremling \RAInamesProfLieg \RAIname- sProfLienkamp \RAInamesProfLindemann \RAInamesProfLohmann \RAInamesProfLueth \RAInamesProfMacianJuan \RAInamesProfMarburg \RAInamesProfNeu \RAInamesProfPolifke \RAInamesProfProvost \RAInamesProfReinhart \RAInamesProfRixen \RAInamesProfSattelmayer \RAInamesProfSenner \RAInamesProfSpannerUlmer \RAInamesProfSpliethoff \RAInamesProfStahl \RAInamesProfVogelHeuser \RAInamesProfVolk \RAInamesProfWachtmeister \RAInamesProfWall \RAInamesProfWalter \RAInamesProfWerner \RAInamesProfWeusterBotz \RAInamesProfZaeh \RAInamesProfZimmermann \RAInamesProfAlthoff \RAInamesProfBurschka \RAInamesProfKnoll \RAInamesProfPretschner

### Description

The RA**I**names module implements the names of various active professors (see chapter 5).

## 2.12 RAlutils

<b>Dependencies</b>	<a href="#">RALcore</a> <a href="#">RALlang</a> <a href="#">RALcolor</a>
<b>Options</b>	<code>optHideTodos</code> <code>optHideAnnotations</code>
<b>Loaded Packages</b>	<code>excludeonly</code> <code>epstopdf</code> <code>xspace</code> <code>cancel</code> <code>datetime</code> <code>eurosym</code> <code>blindtext</code> <code>titlesec</code> <code>titletoc</code> <code>pdfcomment</code>
<b>Sourcefile</b>	<code>source/IN/RAl/Modules/RAlutils.sty</code>
<b>Sourcefile (parent)</b>	<code>source/TUM/Modules/TUMutils.sty</code>
<b>Commands</b>	<code>\RALutilsTodo</code> <code>\RALutilsTodoW</code> <code>\RALutilsTodoSpacer</code> <code>\RALutilsPDFanno</code> <code>\RALutilsPDFannoColor</code> <code>\RALutilsPDFhigh</code> <code>\RALutilsDate</code> <code>\RALutilsToday</code>

### Description

The [RALutils](#) module provides several utility functions, which make it easier to integrate comments, annotations and other notes into the final PDF.

### Todos

There are several ways to typeset todos:

Command	Output	Comment
<code>\RALutilsTodo</code>	<b>ToDo:</b> default, <b>ToDo:</b> custom	simple todo note (color customizable)
<code>\RALutilsTodoW</code>	<b>ToDo:</b> default, <b>ToDo:</b> custom	todo note with LaTeX warning

There is also the possibility to insert a placeholder by `\RALutilsTodoSpacer`:



`ToDo: custom spacer header`



**Note:** Todos can be hidden globally by passing the option `optHideTodos`.

### Comments and annotations

If the document length should not be influenced by a comment, one may use the following commands:

Command	Output	Comment
<code>\RALutilsPDFanno</code>	annotated text 	simple pdf popup annotation
<code>\RALutilsPDFannoColor</code>	annotated text 	pdf popup annotation (custom color)
<code>\RALutilsPDFhigh</code>	highlighted text passage	pdf highlighted text (customizable color)

**Note:** Comments and annotations can be hidden globally by passing the option `optHideAnnotations`.

### Dates

In order to typeset dates, the two commands `\RALutilsDate` and `\RALutilsToday` exist.

Command	Output	Comment
<code>\RALutilsDate</code>	January 1, 1970	displays a custom date
<code>\RALutilsToday</code>	June 29, 2022	displays the current date (compile time)

## 2.13 RAref

<b>Dependencies</b>	<a href="#">RAIcore</a> <a href="#">RAIlang</a> <a href="#">RAIcolor</a>
<b>Options</b>	<code>optBlackRefs</code>
<b>Loaded Packages</b>	<code>hyperref</code> <code>cleveref</code>
<b>Sourcefile</b>	<code>source/IN/RAI/Modules/RAIref.sty</code>
<b>Sourcefile (parent)</b>	<code>source/TUM/Modules/TUMref.sty</code>
<b>Commands</b>	<a href="#">\RAIrefSetPDFMetadata</a>

### Description

The [RAIref](#) module takes care of in-document referencing. Basically it loads and initializes the `hyperref` and `cleveref` packages. Furthermore the module provides a command to set the PDF meta-data (properties of the pdf document).

You can use the `optBlackRefs` to disable colored references. **Hint:** This module loads the `hyperref` packages which often has to be loaded **after** loading certain other packages. In order to load packages **before** `hyperref` and **without** modifying the `TUMlatex` class/package you can add a file `pre_hyperref_packages.tex` right beside your `main.tex` file. The `TUMlatex` package will automatically execute the content of this file (i.e. your additional package loading macros) directly before loading the `hyperref` package.



## Chapter 3

### Styles

#### 3.1 RAIpbdprepublication

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	caption fancyhdr
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIpbdprepublication.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMpbdprepublication.sty
<b>Commands</b>	\RAIpbdprepublicationTitlePage

##### Description

The style **RAIpbdprepublication** helps PhD students to set up their pre-publication list for the TUM Graduate School (at the end of the doctoral project). The corresponding template **RAIpbdprepublication** is approved by the Graduate School.

#### 3.2 RAleempty

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	none
<b>Sourcefile</b>	source/IN/RAI/Styles/RAleempty.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMempty.sty
<b>Commands</b>	none

##### Description

The **RAleempty** style is probably the most difficult one to use, since it is a completely empty style. That means the complete formatting process is up to the user. An unexperienced user may therefore choose another style to start with.

#### 3.3 RAIpbdexpose

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	caption fancyhdr
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIpbdexpose.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMpbdexpose.sty
<b>Commands</b>	\RAIpbdexposeTitlePage

##### Description

The style **RAIpbdexpose** helps PhD students to set up their expose for the TUM Graduate School. The corresponding template **RAIpbdexpose** is approved by the Graduate School.

### 3.4 RAIphdthesis

<b>Baseclass</b>	[11pt,a4paper,twoside]book
<b>Options</b>	none
<b>Loaded Packages</b>	caption fancyhdr
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIphdthesis.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMphdthesis.sty
<b>Commands</b>	\RAIphdthesisPrintTableOfContents \RAIphdthesisTitlePage

#### Description

The **RAIphdthesis** style helps research assistants to write their PhD thesis document.

### 3.5 RAIdocumentation

<b>Baseclass</b>	[11pt,a4paper,oneside,fleqn]book
<b>Options</b>	none
<b>Loaded Packages</b>	caption longtable fancyhdr
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIdocumentation.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMddocumentation.sty
<b>Commands</b>	\RAIdocumentationModule \RAIdocumentationStyle \RAIdocumentationTemplate \RAIdocumentationOption \RAIdocumentationCode

#### Description

The **RAIdocumentation** style is used to specify the layout of **this** document. There are several commands to typeset special names:

Command	Output	Description
\RAIdocumentationModule	module	typesets module names
\RAIdocumentationStyle	style	typesets style names
\RAIdocumentationTemplate	template	typesets template names
\RAIdocumentationOption	option	typesets options
\RAIdocumentationCode	code	typesets LaTeX code

### 3.6 RAIbeamer

<b>Baseclass</b>	[noamssymb,t,11pt]beamer
<b>Options</b>	none
<b>Loaded Packages</b>	caption transparent
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIbeamer.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMbeamer.sty
<b>Commands</b>	\RAIbeamerTitlePageStudentThesis \RAIbeamerSetupHeader \RAIbeamerSetFooterText \RAIbeamerSetupFooterCD \RAIbeamerSetupFooterSlideNumberOnly \RAIbeamerTitlePageDefault

#### Description

The **RAIbeamer** style creates a default style for presentations. It can be used for lectures, conference presentations or student thesis presentations. The style complies in general with the TUM corporate design, such that it can also be used for external presentations (e. g. conferences).

To customize the colors, fonts, font sizes or even complete templates one can use the standard beamer macros

- \setbeamercolor{template name}{<key=value> list},

- `\setbeamerfont{template name}{<key=value> list},`
- `\setbeamersize{size name=<dim>},`
- `\setbeamertemplate{template name}{your definition}.`

There is a useful cheat-sheet on how to modify the style of your beamer presentation available online:

<http://www.cpt.univ-mrs.fr/~masson/latex/Beamer-appearance-cheat-sheet.pdf>

### 3.7 *RAIstudentexpose*

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	caption fancyhdr
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIstudentexpose.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMstudentexpose.sty
<b>Commands</b>	<code>\RAIstudentexposeTitlePage</code> <code>\RAIstudentexposeHeader</code> <code>\RAIstudentexposeTitlePageBachelorsThesis</code> <code>\RAIstudentexposeTitlePageSemesterThesis</code> <code>\RAIstudentexposeTitlePageMastersThesis</code> <code>\RAIstudentexposeTitlePageIDP</code> <code>\RAIstudentexposeReview</code>

#### Description

The style *RAIstudentexpose* helps students to set up their expose for their student thesis. The style is approved by the Center of Key Competencies of the TUM Department of Mechanical Engineering.

### 3.8 *RAIletter*

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	lastpage
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIletter.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMletter.sty
<b>Commands</b>	<code>\RAIletterSetReceiver</code> <code>\RAIletterSetPlace</code> <code>\RAIletterSetDate</code> <code>\RAIletterSetSubject</code> <code>\RAIletterSetTitle</code> <code>\RAIletterSetName</code> <code>\RAIletterSetPhone</code> <code>\RAIletterSetFax</code> <code>\RAIletterSetEmail</code> <code>\RAIletterSetHomepage</code> <code>\RAIletterHeader</code>

#### Description

The *RAIletter* style typesets a default letter according to the TUM Corporate Design.

### 3.9 *RAIposter*

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	none
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIposter.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMposter.sty
<b>Commands</b>	<code>\RAIposterDrawGrid</code>

#### Description

The *RAIposter* style is used to create individual posters of size DIN A0. In order to comply with the poster size, the font size, logos etc. are scaled.

### 3.10 RAstudentthesis

<b>Baseclass</b>	[11pt,a4paper,twoside,fleqn]book
<b>Options</b>	optBlackHeadings
<b>Loaded Packages</b>	caption fancyhdr ifthen
<b>Sourcefile</b>	source/IN/RAI/Styles/RAstudentthesis.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMstudentthesis.sty
<b>Commands</b>	\RAITitlePageStudentThesisCustomDiplomarbeit \RAIstudentthesisTitlePageCustomBachelorsThesis \RAIstudentthesisTitlePageCustomSemesterThesis \RAIstudentthesisTitlePageCustomMastersThesis \RAIstudentthesisTitlePageCustomIDP \RAIstudentthesisAbstract \RAIstudentthesisPrintTableOfContents \RAIstudentthesisTitlePageCD \RAIstudentthesisTitlePageFrontPage \RAIstudentthesisTitlePageFrontPageInfoTable \RAIstudentthesisDeclaration \RAIstudentthesisTitlePageCDDiplomarbeit \RAIstudentthesisTitlePageCDBachelorsThesis \RAIstudentthesisTitlePageCDSemesterThesis \RAIstudentthesisTitlePageCDMasterThesis \RAIstudentthesisTitlePageCDIDP

#### Description

The `RAIstudentthesis` style was created to support students by providing unified thesis templates.

The `optBlackHeadings` option disables colored section styles to reduce the number of colored pages.

### 3.11 RAstudentthesiscover

<b>Baseclass</b>	[11pt,a4paper]article
<b>Options</b>	optCoverWithMarks optCoverWithBorders
<b>Loaded Packages</b>	calc
<b>Sourcefile</b>	source/IN/RAI/Styles/RAstudentthesiscover.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMstudentthesiscover.sty
<b>Commands</b>	\RAIstudentthesisCover

#### Description

The `RAIstudentthesiscover` style defines a layout for covers of student theses (for printing). The count of PDF pages in the thesis is automatically determined to define the height of the spine.

### 3.12 RAIdocument

<b>Baseclass</b>	[11pt,a4paper,fleqn]article
<b>Options</b>	none
<b>Loaded Packages</b>	caption
<b>Sourcefile</b>	source/IN/RAI/Styles/RAIdocument.sty
<b>Sourcefile (parent)</b>	source/TUM/Styles/TUMdocument.sty
<b>Commands</b>	none

#### Description

The `RAIdocument` style defines a very basic layout. It can be used for most documents which do not fit other styles.

# Chapter 4

## Tipps and Tricks

### 4.1 Using the Auto-Completion Feature of TeXstudio

If you are using TeXstudio<sup>1</sup> for editing LaTeX documents you may use the auto-completion feature together with this package. For details on how to set up this feature be referred to the GitLab project page<sup>2</sup>.

### 4.2 LaTeX Coding Style

Although everybody has a different style of coding, one should consider following style suggestions in order to keep the code clear and readable.

- Add a % (percent sign) at the end of each line. This tells the compiler, that the line ends here and can save compilation time. Also place a percent sign in empty lines to avoid irregular spacing in the compiled document.
- Do not name sub-folders “aux”, since Windows seems to have a problem with that name (especially if you share your document via git).
- Use comments to structure your code.
- Replace tabs by whitespaces in order to guarantee a uniform display on every system.

**Important:** Note that some “bad” code fragments (like empty lines) not only influence the readability of the code but also may change the output and can lead to irregular spacing.

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<sup>1</sup><https://www.texstudio.org/>

<sup>2</sup><https://gitlab.lrz.de/AM/TUMlatex>

# Chapter 5

## Command Reference

### **\RAIcoreLogInfo{InfoMessage}**

Description: Writes an information into the log-file.

Module: RAIcore - File: source/TUM/Modules/TUMcore.sty (Line: 25)

### **\RAIcoreLogWarning{WarningMessage}**

Description: Writes a warning into the log-file.

Module: RAIcore - File: source/TUM/Modules/TUMcore.sty (Line: 29)

### **\RAIcoreLogError{ErrorMessage}**

Description: Writes an error into the log-file.

Module: RAIcore - File: source/TUM/Modules/TUMcore.sty (Line: 33)

### **\RAIcoreRepetition{Count}{CodeToRepeat}**

Description: Executes the given code several times.

Module: RAIcore - File: source/TUM/Modules/TUMcore.sty (Line: 40)

### **\RAIcoreProjectWebsite**

Description: Prints the project-website of TUMlatex.

Module: RAIcore - File: source/TUM/Modules/TUMcore.sty (Line: 53)

### **\RAIfontSetDocumentFontSizeVI**

Description: Sets the default font size of the document to 6.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 87)

### **\RAIfontSetDocumentFontSizeVII**

Description: Sets the default font size of the document to 7.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 216)

### **\RAIfontSetDocumentFontSizeVIII**

Description: Sets the default font size of the document to 8.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 345)

### **\RAIfontSetDocumentFontSizeIX**

Description: Sets the default font size of the document to 9.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 474)

### **\RAIfontSetDocumentFontSizeX**

Description: Sets the default font size of the document to 10.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 603)

### **\RAIfontSetDocumentFontSizeXI**

Description: Sets the default font size of the document to 11.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 732)

### **\RAIfontSetDocumentFontSizeXII**

Description: Sets the default font size of the document to 12.

Module: RAIfont - File: source/TUM/Modules/TUMfont.sty (Line: 859)

**\RAfontSetDocumentFontSizeXIII**

Description: Sets the default font size of the document to 13.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 987)

**\RAfontSetDocumentFontSizeXIV**

Description: Sets the default font size of the document to 14.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1116)

**\RAfontSetDocumentFontSizeXV**

Description: Sets the default font size of the document to 15.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1245)

**\RAfontSetDocumentFontSizeXVI**

Description: Sets the default font size of the document to 16.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1374)

**\RAfontSetDocumentFontSizeXVIII**

Description: Sets the default font size of the document to 18.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1503)

**\RAfontSetDocumentFontSizeXX**

Description: Sets the default font size of the document to 20.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1632)

**\RAfontSetDocumentFontSizeXXII**

Description: Sets the default font size of the document to 22.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1761)

**\RAfontSetDocumentFontSizeXXIV**

Description: Sets the default font size of the document to 24.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 1890)

**\RAfontSetDocumentFontSizeXXVIII**

Description: Sets the default font size of the document to 28.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 2019)

**\RAfontSetDocumentFontSizeXXLII**

Description: Sets the default font size of the document to 32.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 2148)

**\RAfontSetDocumentFontSizeXXLVI**

Description: Sets the default font size of the document to 36.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 2277)

**\RAfontSetDocumentFontSizeXL**

Description: Sets the default font size of the document to 40.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 2406)

**\RAfontSetDocumentFontSizeXLIV**

Description: Sets the default font size of the document to 44.

Module: RAfont - File: source/TUM/Modules/TUMfont.sty (Line: 2535)

**\RAlangSwitchToGerman**

Description: Changes the current language to German.

Module: RAlang - File: source/TUM/Modules/TUMlang.sty (Line: 33)

**\RAlangSwitchToEnglish**

Description: Changes the current language to English.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 39)*

### **\RAllangGerEng{GermanCode}{EnglishCode}**

Description: Depending on the chosen document language, the given german or english related code will be executed.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 48)*

### **\RAllangForceGerman{Text}**

Description: Forces german version of specified code.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 50)*

### **\RAllangForceEnglish{Text}**

Description: Forces english version of specified code.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 61)*

### **\RAllangTUM**

Description: Prints the official (german or english) long-name of the TUM.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 79)*

### **\RAllangDepartmentMW**

Description: Prints the official (german or english) name of the TUM School of Engineering and Design. As of 10/2021, the Department of Mechanical Engineering is part of the TUM School of Engineering and Design. Instead of the name of the faculty, the name of the School should be used.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 84)*

### **\RAllangDepartmentIN**

Description: Prints the official (german or english) name of the Department of Informatics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 86)*

### **\RAllangDepartment**

Description: Prints the official (german or english) name of the department.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 91)*

### **\RAllangChairMWAER**

Description: Prints the official (german or english) name of the Chair of Aerodynamics and Fluid Mechanics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 97)*

### **\RAllangChairMWVIB**

Description: Prints the official (german or english) name of the Chair of Vibroacoustics of Vehicles and Machines.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 99)*

### **\RAllangChairMWAM**

Description: Prints the official (german or english) name of the Chair of Applied Mechanics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 101)*

### **\RAllangChairMWAPT**

Description: Prints the official (german or english) name of the Chair of Plant and Process Technology.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 103)*

### **\RAllangChairMWAIS**

Description: Prints the official (german or english) name of the Chair of Automation and Information Systems.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 105)*

### **\RAllangChairMWIWB**

Description: Prints the official (german or english) name of the Institute for Machine Tools and Industrial Management (iwb).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 107)*

### **\RAllangChairMWIWBWLF**



Description: Prints the official (german or english) name of the Chair of Machine Tools and Manufacturing Technology.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 109)*

#### **\RAllangChairMWIWB LBM**

Description: Prints the official (german or english) name of the Chair of Industrial Management and Assembly Technologies.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 111)*

#### **\RAllangChairMWBVT**

Description: Prints the official (german or english) name of the Chair of Biochemical Engineering.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 113)*

#### **\RAllangChairMWLCC**

Description: Prints the official (german or english) name of the Chair of Carbon Composites.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 115)*

#### **\RAllangChairMWLES**

Description: Prints the official (german or english) name of the Chair of Energy Systems.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 117)*

#### **\RAllangChairMWLFE**

Description: Prints the official (german or english) name of the Chair of Ergonomics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 119)*

#### **\RAllangChairMWFTM**

Description: Prints the official (german or english) name of the Chair of Automotive Technology.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 121)*

#### **\RAllangChairMWFSD**

Description: Prints the official (german or english) name of the Chair of Flight System Dynamics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 123)*

#### **\RAllangChairMWFML**

Description: Prints the official (german or english) name of the Chair of Materials Handling, Material Flow, Logistics / Logistics Engineering.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 125)*

#### **\RAllangChairMWLHT**

Description: Prints the official (german or english) name of the Chair of Helicopter Technology.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 127)*

#### **\RAllangChairMWPKM**

Description: Prints the official (german or english) name of the Associate Professorship of Continuum Mechanics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 129)*

#### **\RAllangChairMWLLB**

Description: Prints the official (german or english) name of the Chair of Lightweight Structures.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 131)*

#### **\RAllangChairMWLLS**

Description: Prints the official (german or english) name of the Chair of Aircraft Design.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 133)*

#### **\RAllangChairMWFZG**

Description: Prints the official (german or english) name of the Chair of Machine Elements.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 135)*

#### **\RAllangChairMWMHPC**

Description: Prints the official (german or english) name of the Associate Professorship of Mechanics and High Performance Computing.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 137)*

#### **\RAllangChairMWLMT**

Description: Prints the official (german or english) name of the Chair of Medical Engineering.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 139)*

#### **\RAllangChairMWLMM**

Description: Prints the official (german or english) name of the Chair of Micro Technology and Medical Device Technology.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 141)*

#### **\RAllangChairMWLNT**

Description: Prints the official (german or english) name of the Chair of Nuclear Technology.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 143)*

#### **\RAllangChairMWLNM**

Description: Prints the official (german or english) name of the Chair of Computational Mechanics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 145)*

#### **\RAllangChairMWPMW**

Description: Prints the official (german or english) name of the Associate Professorship of Plasma Material Interaction.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 147)*

#### **\RAllangChairMWPE**

Description: Prints the official (german or english) name of the Chair of Product Development.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 149)*

#### **\RAllangChairMWPTM**

Description: Prints the official (german or english) name of the Chair of Production and Technology in Media.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 151)*

#### **\RAllangChairMWLFA**

Description: Prints the official (german or english) name of the Chair of Space Propulsion.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 153)*

#### **\RAllangChairMWLRT**

Description: Prints the official (german or english) name of the Chair of Astronautics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 155)*

#### **\RAllangChairMWRT**

Description: Prints the official (german or english) name of the Chair of Automatic Control.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 157)*

#### **\RAllangChairMWSES**

Description: Prints the official (german or english) name of the Assistant Professorship of Safe Embedded Systems.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 159)*

#### **\RAllangChairMWSPGM**

Description: Prints the official (german or english) name of the Associate Professorship of Sport Equipment and Materials.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 161)*

#### **\RAllangChairMWTD**

Description: Prints the official (german or english) name of the Chair of Thermodynamics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 163)*

### **\RAllangChairMWTFD**

Description: Prints the official (german or english) name of the Associate Professorship of Thermo-Fluid Dynamics.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 165)*

### **\RAllangChairMWUTG**

Description: Prints the official (german or english) name of the Chair of Metal Forming and Casting.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 167)*

### **\RAllangChairMWLVK**

Description: Prints the official (german or english) name of the Chair of Internal Combustion Engines.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 169)*

### **\RAllangChairMWWKM**

Description: Prints the official (german or english) name of the Chair of Materials Science and Mechanics of Materials.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 171)*

### **\RAllangChairMWLWE**

Description: Prints the official (german or english) name of the Chair of Wind Energy.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 173)*

### **\RAllangChairMWZFP**

Description: Prints the official (german or english) name of the Chair of Non-Destructive Testing.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 175)*

### **\RAllangChairMWZL**

Description: Prints the official (german or english) name of the Central Teaching Unit.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 177)*

### **\RAllangChairINRAI**

Description: Prints the official (german or english) name of the Chair of Robotics, Artificial Intelligence and Real-time Systems.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 181)*

### **\RAllangChairINSSE**

Description: Prints the official (german or english) name of the Chair of Software and Systems Engineering.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 183)*

### **\RAllangChair**

Description: Prints the official (german or english) name of the *own* chair.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 188)*

### **\RAllangresearchassistantMale**

Description: Prints the (german or english) name of a research assistant (male, first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 193)*

### **\RAllangResearchassistantMale**

Description: Prints the (german or english) name of a research assistant (male, first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 195)*

### **\RAllangResearchAssistantMale**

Description: Prints the (german or english) name of a research assistant (male, all first letters in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 197)*

### **\RAllangresearchassistantFemale**

Description: Prints the (german or english) name of a research assistant (female, first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 199)*

### **\RAllangResearchassistantFemale**

Description: Prints the (german or english) name of a research assistant (female, first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 201)*

### **\RAllangResearchAssistantFemale**

Description: Prints the (german or english) name of a research assistant (female, all first letters in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 203)*

### **\RAllangtenuredprofessorMale**

Description: Prints the (german or english) name of a tenured professor (male, first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 205)*

### **\RAllangTenuredprofessorMale**

Description: Prints the (german or english) name of a tenured professor (male, first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 207)*

### **\RAllangTenuredProfessorMale**

Description: Prints the (german or english) name of a tenured professor (male, all first letters in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 209)*

### **\RAllangtenuredprofessorFemale**

Description: Prints the (german or english) name of a tenured professor (female, first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 211)*

### **\RAllangTenuredprofessorFemale**

Description: Prints the (german or english) name of a tenured professor (female, first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 213)*

### **\RAllangTenuredProfessorFemale**

Description: Prints the (german or english) name of a tenured professor (female, all first letters in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 215)*

### **\RAllangsupervisor**

Description: Prints the (german or english) name of a supervisor (first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 217)*

### **\RAllangSupervisor**

Description: Prints the (german or english) name of a supervisor (first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 219)*

### **\RAllangsupervision**

Description: Prints the (german or english) name of a supervision (first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 221)*

### **\RAllangSupervision**

Description: Prints the (german or english) name of a supervision (first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 223)*

### **\RAllangexaminer**

Description: Prints the (german or english) name of an examiner (first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 225)*

### **\RAllangExaminer**

Description: Prints the (german or english) name of an examiner (first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 227)*

### **\RAllangbachelorsthesis**

Description: Prints the (german or english) name of a bachelor's thesis (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 232)

### **\RAllangBachelorsthesis**

Description: Prints the (german or english) name of a bachelor's thesis (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 234)

### **\RAllangBachelorsThesis**

Description: Prints the (german or english) name of a bachelor's thesis (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 236)

### **\RAllangdiplomathesis**

Description: Prints the (german or english) name of a diploma thesis (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 238)

### **\RAllangDiplomathesis**

Description: Prints the (german or english) name of a diploma thesis (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 240)

### **\RAllangDiplomaThesis**

Description: Prints the (german or english) name of a diploma thesis (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 242)

### **\RAllangsemesterthesis**

Description: Prints the (german or english) name of a semester thesis (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 244)

### **\RAllangSemesterthesis**

Description: Prints the (german or english) name of a semester thesis (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 246)

### **\RAllangSemesterThesis**

Description: Prints the (german or english) name of a semester thesis (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 248)

### **\RAllangmastersthesis**

Description: Prints the (german or english) name of a master's thesis (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 250)

### **\RAllangMastersthesis**

Description: Prints the (german or english) name of a master's thesis (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 252)

### **\RAllangMastersThesis**

Description: Prints the (german or english) name of a master's thesis (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 254)

### **\RAllanginterdisciplinaryproject**

Description: Prints the (german or english) name of an IDP (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 256)

### **\RAllangInterdisciplinaryproject**

Description: Prints the (german or english) name of an IDP (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 258)

### **\RAllangInterdisciplinaryProject**

Description: Prints the (german or english) name of an IDP (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 260)

**\RAllangScientificWorkForObtainingAcademicDegree**

Description: Prints the (german or english) sentence for obtaining the degree.

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 262)

**\RAllangFieldOfStudyinformatics**

Description: Prints the (german or english) name of a field of study (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 267)

**\RAllangFieldOfStudyInformatics**

Description: Prints the (german or english) name of a field of study (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 269)

**\RAllangFieldOfStudygamesengineering**

Description: Prints the (german or english) name of a field of study (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 271)

**\RAllangFieldOfStudyGamesengineering**

Description: Prints the (german or english) name of a field of study (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 273)

**\RAllangFieldOfStudyGamesEngineering**

Description: Prints the (german or english) name of a field of study (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 275)

**\RAllangFieldOfStudyinformationsystems**

Description: Prints the (german or english) name of a field of study (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 277)

**\RAllangFieldOfStudyInformationsystems**

Description: Prints the (german or english) name of a field of study (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 279)

**\RAllangFieldOfStudyInformationSystems**

Description: Prints the (german or english) name of a field of study (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 281)

**\RAllangFieldOfStudybiomedicalcomputing**

Description: Prints the (german or english) name of a field of study (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 283)

**\RAllangFieldOfStudyBiomedicalcomputing**

Description: Prints the (german or english) name of a field of study (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 285)

**\RAllangFieldOfStudyBiomedicalComputing**

Description: Prints the (german or english) name of a field of study (all first letters in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 287)

**\RAllangFieldOfStudyautomotivesoftwareengineering**

Description: Prints the (german or english) name of a field of study (first letter in lower case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 289)

**\RAllangFieldOfStudyAutomotivesoftwareengineering**

Description: Prints the (german or english) name of a field of study (first letter in upper case).

Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 291)

**\RAllangFieldOfStudyAutomotiveSoftwareEngineering**

Description: Prints the (german or english) name of a field of study (all first letters in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 293)*

### **\RAllangFieldOfstudyroboticscognitionintelligence**

Description: Prints the (german or english) name of a field of study (first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 295)*

### **\RAllangFieldOfStudyRoboticscognitionintelligence**

Description: Prints the (german or english) name of a field of study (first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 297)*

### **\RAllangFieldOfStudyRoboticsCognitionIntelligence**

Description: Prints the (german or english) name of a field of study (all first letters in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 299)*

### **\RAllangPhdDegreeDrIng**

Description: Prints the german name of a doctoral degree.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 304)*

### **\RAllangPhdDegreeDrIngOld**

Description: Prints the german name of a doctoral degree Dr.-Ing. from the Promotionsordnung of 2012.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 306)*

### **\RAllangPhdDegreeDrRerNat**

Description: Prints the german name of a doctoral degree.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 308)*

### **\RAllangDate**

Description: Prints the german or english version of the word *date*.

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 313)*

### **\RAllangMonth{NumberOfMonth}**

Description: Prints the name of the given month in german or english (first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 316)*

### **\RAllangMonthShort{NumberOfMonth}**

Description: Prints the short-name of the given month in german or english (first letter in upper case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 321)*

### **\RAllangmonth{NumberOfMonth}**

Description: Prints the name of the given month in german or english (first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 326)*

### **\RAllangmonthShort{NumberOfMonth}**

Description: Prints the short-name of the given month in german or english (first letter in lower case).

*Module: RAllang - File: source/TUM/Modules/TUMlang.sty (Line: 331)*

### **\RAIaddressCityMunich**

Description: Prints the name of the city Munich.

*Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 8)*

### **\RAIaddressCityGarching**

Description: Prints the name of the city Garching.

*Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 10)*

### **\RAIaddressCityMW**

Description: Prints the city of the Department of Mechanical Engineering.

*Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 12)*

### **\RAIaddressCityIN**

Description: Prints the city of the Department of Informatics.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 14)

#### **\RAIaddressCityDepartment**

Description: Prints the city of the Department.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 16)

#### **\RAIaddressCityChair**

Description: Prints the city of the chair's address.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 18)

#### **\RAIaddressPostalCodeGarching**

Description: Prints the postal code of the city Garching.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 22)

#### **\RAIaddressPostalCodeMW**

Description: Prints the postal code of the Department of Mechanical Engineering.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 24)

#### **\RAIaddressPostalCodeIN**

Description: Prints the postal code of the Department of Informatics.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 26)

#### **\RAIaddressPostalCodeDepartment**

Description: Prints the postal code of the department.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 28)

#### **\RAIaddressPostalCodeChair**

Description: Prints the postal code of the chair's address.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 30)

#### **\RAIaddressStreetMW**

Description: Prints the street of the Department of Mechanical Engineering.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 34)

#### **\RAIaddressStreetIN**

Description: Prints the street of the Department of Informatics.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 36)

#### **\RAIaddressStreetDepartment**

Description: Prints the street of the department.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 38)

#### **\RAIaddressStreetChair**

Description: Prints the street of the chair's address.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 40)

#### **\RAIaddressIBANTUM**

Description: Prints the IBAN number of the Technical University of Munich's bank connection.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 44)

#### **\RAIaddressIBANMW**

Description: Prints the IBAN number of the Department of Mechanical Engineering's bank connection.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 46)

#### **\RAIaddressIBANIN**

Description: Prints the IBAN number of the Department of Informatics's bank connection.

Module: *RAIaddress* - File: *source/TUM/Modules/TUMaddress.sty* (Line: 48)



**\RAIaddressIBANDepartment**

Description: Prints the IBAN number of the department's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 50)

**\RAIaddressIBANChair**

Description: Prints the IBAN number of the chair's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 52)

**\RAIaddressBICTUM**

Description: Prints the BIC number of the Technical University of Munich's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 56)

**\RAIaddressBICMW**

Description: Prints the BIC number of the Department of Mechanical Engineering's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 58)

**\RAIaddressBICIN**

Description: Prints the BIC number of the Department of Informatics's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 60)

**\RAIaddressBICDepartment**

Description: Prints the BIC number of the department's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 62)

**\RAIaddressBICChair**

Description: Prints the BIC number of the chair's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 64)

**\RAIaddressCreditInstitutionTUM**

Description: Prints the name of the credit institution of the Technical University of Munich's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 68)

**\RAIaddressCreditInstitutionMW**

Description: Prints the name of the credit institution of the Department of Mechanical Engineering's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 70)

**\RAIaddressCreditInstitutionIN**

Description: Prints the name of the credit institution of the Department of Informatics's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 72)

**\RAIaddressCreditInstitutionDepartment**

Description: Prints the name of the credit institution of the departments's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 74)

**\RAIaddressCreditInstitutionChair**

Description: Prints the name of the credit institution of the chair's bank connection.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 76)

**\RAIaddressWebsiteTUM**

Description: Prints the website-URL of the Technical University of Munich.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 80)

**\RAIaddressWebsiteMW**

Description: Prints the website-URL of the Department of Mechanical Engineering.

Module: RAIaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 82)

**\RAIaddressWebsiteIN**

Description: Prints the website-URL of the Department of Informatics.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 84)*

### **\RAaddressWebsiteDepartment**

Description: Prints the website-URL of the department.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 86)*

### **\RAaddressWebsiteChair**

Description: Prints the website-URL of the chair.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 88)*

### **\RAaddressTaxNumberTUM**

Description: Prints the tax number of the Technical University of Munich.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 92)*

### **\RAaddressTaxNumberMW**

Description: Prints the tax number of the Department of Mechanical Engineering.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 94)*

### **\RAaddressTaxNumberIN**

Description: Prints the tax number of the Department of Informatics.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 96)*

### **\RAaddressTaxNumberDepartment**

Description: Prints the tax number of the department.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 98)*

### **\RAaddressTaxNumberChair**

Description: Prints the tax number of the chair.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 100)*

### **\RAaddressSalesTaxIDTUM**

Description: Prints the sales tax identification number of the Technical University of Munich.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 104)*

### **\RAaddressSalesTaxIDMW**

Description: Prints the sales tax identification number of the Department of Mechanical Engineering.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 106)*

### **\RAaddressSalesTaxIDIN**

Description: Prints the sales tax identification number of the Department of Informatics.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 108)*

### **\RAaddressSalesTaxIDDepartment**

Description: Prints the sales tax identification number of the department.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 110)*

### **\RAaddressSalesTaxIDChair**

Description: Prints the sales tax identification number of the chair.

*Module: RAaddress - File: source/TUM/Modules/TUMaddress.sty (Line: 112)*

### **\RAtikzExternalizeSkipNext**

Description: Skips the next picture (tikzpicture) in the external build.

*Module: RAtikz - File: source/TUM/Modules/TUMtikz.sty (Line: 38)*

### **\RAtikzGrid[LineStyle]{xStep}{yStep}{xCount}{yCount}**

Description: Draws a grid.

*Module: RAtikz - File: source/TUM/Modules/TUMtikz.sty (Line: 43)*

### **\RAtikzCircled{Content}**

Description: Surrounds a specified content with a circle.

Module: *RAItikz* - File: *source/TUM/Modules/TUMtikz.sty* (Line: 58)

**\RAIlogoChair**[*Width*]{*Height*}{*RAILogoBlue1*}{*RAILogoBlue2*}

Description: Prints the logo of the chair.

Module: *RAIlogo* - File: *source/IN/RAI/Modules/RAIlogo.sty* (Line: 9)

**\RAIlogoTercetTUM**[*Color*]{*Height*}

Description: Prints the TUM tercet (TUM only).

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 9)

**\RAIlogoTercetDepartment**[*Color*]{*Height*}

Description: Prints the TUM tercet (TUM and department).

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 21)

**\RAIlogoTercetChair**[*Color*]{*Height*}

Description: Prints the TUM tercet (TUM, department and chair).

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 33)

**\RAIlogoTUM**[*Width*]{*Height*}{*Color*}

Description: Prints the logo of the TUM.

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 48)

**\RAIlogoDepartmentMW**[*Width*]{*Height*}{*Color*}

Description: Prints the logo of the department.

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 64)

**\RAIlogoDepartmentIN**[*Width*]{*Height*}{*Color*}

Description: Prints the logo of the department.

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 109)

**\RAIlogoDepartment**[*Width*]{*Height*}{*Color*}

Description: Prints the logo of the department.

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 134)

**\RAIlogoAnniversary**[*ReferenceHeight*]{*Color*}

Description: Prints the anniversary badge.

Module: *RAIlogo* - File: *source/TUM/Modules/TUMlogo.sty* (Line: 139)

**\real**

Description: real part

Module: *RAImath* - File: *source/TUM/Modules/TUMmath.sty* (Line: 35)

**\imag**

Description: imaginary part

Module: *RAImath* - File: *source/TUM/Modules/TUMmath.sty* (Line: 37)

**\asin**

Description: inverse sine

Module: *RAImath* - File: *source/TUM/Modules/TUMmath.sty* (Line: 39)

**\acos**

Description: inverse cosine

Module: *RAImath* - File: *source/TUM/Modules/TUMmath.sty* (Line: 41)

**\atan**

Description: inverse tangens

Module: *RAImath* - File: *source/TUM/Modules/TUMmath.sty* (Line: 43)

**\co**

Description: co-prefix for cotangens

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 45)

**\atanll**

Description: inverse tangens 2 (lower case)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 47)

**\Atanll**

Description: inverse tangens 2 (upper case)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 49)

**\sinabr**

Description: Abbreviation of sine

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 51)

**\cosabr**

Description: Abbreviation of cosine

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 53)

**\sign**

Description: sign function (long style)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 55)

**\sgn**

Description: sign function (short style)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 57)

**\argmin**

Description: argument of the minimum

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 60)

**\argmax**

Description: argument of the maximum

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 62)

**\div**

Description: divergence

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 64)

**\grad**

Description: gradient

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 67)

**\curl**

Description: curl

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 69)

**\rot**

Description: rotation

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 71)

**\dif**

Description: differentiation (lower case d)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 73)

**\Dif**

Description: differentiation (upper case d)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 75)*

### **\order**

Description: order

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 77)*

### **\Abs{x}**

Description: absolute value (big lines)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 82)*

### **\abs{x}**

Description: absolute value (small lines)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 84)*

### **\Norm{x}**

Description: norm (big lines)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 86)*

### **\norm{x}**

Description: norm (small lines)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 88)*

### **\e**

Description: Euler's number

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 90)*

### **\const**

Description: Constant (English)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 92)*

### **\konst**

Description: Constant (German)

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 94)*

### **\laplacian**

Description: laplacian operator symbol

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 96)*

### **\vdiv**

Description: divergence written with nabla-operator

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 98)*

### **\vgrad**

Description: gradient written with nabla-operator

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 100)*

### **\vcurl**

Description: curl written with nabla-operator

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 102)*

### **\vrot**

Description: rotation written with nabla-operator

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 104)*

### **\hex{x}**

Description: Numeral system: hexadecimal

*Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 109)*

### **\bin{x}**

Description: Numeral system: binary

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 111)

**\dec{x}**

Description: Numeral system: decimal

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 113)

**\bnot{x}**

Description: Binary complement

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 115)

**\MR**

Description: Sets: real numbers

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 120)

**\MN**

Description: Sets: natural numbers

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 122)

**\MZ**

Description: Sets: integer numbers

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 124)

**\MC**

Description: Sets: complex numbers

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 126)

**\MQ**

Description: Sets: rational numbers

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 128)

**\Mone**

Description: 1-set

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 130)

**\eqhat**

Description: Relation: corresponds to

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 135)

**\eqexcl**

Description: Relation: demand

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 137)

**\eqdef**

Description: Relation: definition

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 139)

**\defined**

Description: Relation: definition (left)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 141)

**\rdefined**

Description: Relation: definition (right)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 143)

**\vec{x}**

Description: Notation of vectors

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 149)

**\vnull**

Description: null vector

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 176)

**\vzero**

Description: null vector

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 178)

**\vone**

Description: one-vector

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 180)

**\vnabla**

Description: nabla-vector

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 182)

**\mat{x}**

Description: Matrix (without brackets)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 186)

**\pmat{x}**

Description: Matrix (curved brackets)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 188)

**\bmat{x}**

Description: Matrix (cornered brackets)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 190)

**\Bmat{x}**

Description: Matrix (curled brackets)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 192)

**\vmat{x}**

Description: Matrix (single vertical line)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 194)

**\Vmat{x}**

Description: Matrix (double vertical line)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 196)

**\dd{x}**

Description: differential...

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 201)

**\vdot{x}**

Description: vector-derivative (single)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 203)

**\vddot{x}**

Description: vector-derivative (double)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 205)

**\diff[order]{function}{variable}**

Description: Derivative (lower case d)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 207)

**\tdiff[order]{function}{variable}**

Description: Derivative (lower case d, small style)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 209)

**\pdiff**[*order*]{*function*}{*variable*}

Description: partial derivative

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 211)

**\tpdiff**[*order*]{*function*}{*variable*}

Description: partial derivative (small style)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 213)

**\Ddiff**[*order*]{*function*}{*variable*}

Description: Derivative (upper case D)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 215)

**\tDdiff**[*order*]{*function*}{*variable*}

Description: Derivative (upper case D, small style)

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 217)

**\rs**{*LeftSubscript*}{*MainVariable*}

Description: Auxillary command to typeset leftsided subscripts in math mode.

Module: RAImath - File: source/TUM/Modules/TUMmath.sty (Line: 238)

**\RAIlayoutHeaderCustomChair**[*AnniversaryBadgeColor*]

Description: Prints the custom chair header.

Module: RAlayout - File: source/IN/RAI/Modules/RAlayout.sty (Line: 13)

**\RAIlayoutTitlePageDefault**{*FirstLine*}{*SecondLine*}{*ThirdLine*}

Description: Prints the default titlepage for usual documents.

Module: RAlayout - File: source/IN/RAI/Modules/RAlayout.sty (Line: 30)

**\RAIlayoutSetIndent**

Description: Sets the default indent and paragraph separation depending on the chosen language.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 42)

**\RAIlayoutNoIndent**

Description: Disables indent and paragraph separation.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 55)

**\RAIlayoutSetAfive**

Description: Sets the document format to DIN A5.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 66)

**\RAIlayoutSetAfour**

Description: Sets the document format to DIN A4.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 79)

**\RAIlayoutSetAthree**

Description: Sets the document format to DIN A3.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 92)

**\RAIlayoutSetAtwo**

Description: Sets the document format to DIN A2.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 105)

**\RAIlayoutSetAone**

Description: Sets the document format to DIN A1.

Module: RAlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 118)

**\RAIlayoutSetAzero**



Description: Sets the document format to DIN A0.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 131)

### **\RAllayoutSetBeamerClassicFormat**

Description: Sets the document format to classical 4:3 presentation format.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 144)

### **\RAllayoutSetBeamerWideFormat**

Description: Sets the document format to modern 16:9 presentation format.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 157)

### **\RAllayoutPutAtCenter**[*Rotation*]{*Content*}

Description: Absolute positioning of content in the center of the page.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 183)

### **\RAllayoutPutAtNorthWest**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the upper left corner of the page.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 190)

### **\RAllayoutPutAtNorthWestCentered**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the upper left corner of the page (object center).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 197)

### **\RAllayoutPutAtNorthEast**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the upper right corner of the page.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 204)

### **\RAllayoutPutAtNorthEastCentered**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the upper right corner of the page (object center).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 211)

### **\RAllayoutPutAtSouthWest**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the lower left corner of the page.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 218)

### **\RAllayoutPutAtSouthWestCentered**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the lower left corner of the page (object center).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 225)

### **\RAllayoutPutAtSouthEast**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the lower right corner of the page.

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 232)

### **\RAllayoutPutAtSouthEastCentered**[*Rotation*]{*xShift*}{*yShift*}{*Content*}

Description: Absolute positioning of content relative to the lower right corner of the page (object center).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 239)

### **\RAllayoutHeaderCDTUMLogoOnly**[*AnniversaryBadgeColor*]

Description: Prints the official TUM Corporate Design header (TUM logo only).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 249)

### **\RAllayoutHeaderCDTUM**[*AnniversaryBadgeColor*]

Description: Prints the official TUM Corporate Design header of the TUM (with tercet).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 258)

### **\RAllayoutHeaderCDDepartment**[*AnniversaryBadgeColor*]

Description: Prints the official TUM Corporate Design header of the department (with logo and tercet).

Module: RAllayout - File: source/TUM/Modules/TUMlayout.sty (Line: 269)

**\RAIlayoutHeaderCDChair***[AnniversaryBadgeColor]*

Description: Prints the official TUM Corporate Design header of the chair (with tercet).

Module: RAIlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 282)

**\RAIlayoutCDBorder**

Description: Draws the document border according to the TUM Corporate Design (protected area).

Module: RAIlayout - File: source/TUM/Modules/TUMlayout.sty (Line: 296)

**\RAInamesProfHerrmann**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 9)

**\RAInamesProfHofmann**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 11)

**\RAInamesPresident**

Description: Prints the full name of the current president of the TUM.

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 13)

**\RAInamesProfAdams**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 19)

**\RAInamesProfBengler**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 21)

**\RAInamesProfBerensmeier**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 23)

**\RAInamesProfBottasso**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 25)

**\RAInamesProfCaccamo**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 27)

**\RAInamesProfDrechsler**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 29)

**\RAInamesProfFottner**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 31)

**\RAInamesProfGee**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 33)

**\RAInamesProfGrosse**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 35)

**\RAInamesProfGuemmer**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 37)

**\RAInamesProfGuenthner**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 39)

**\RAInamesProfHaidn**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 41)

**\RAInamesProfHajek**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 43)

**\RAInamesProfHolzapfel**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 45)

**\RAInamesProfHornung**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 47)*

### **\RAInamesProfKaltenbach**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 49)*

### **\RAInamesProfKlein**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 51)*

### **\RAInamesProfKoutsourelakis**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 53)*

### **\RAInamesProfKremling**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 55)*

### **\RAInamesProfLieleg**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 57)*

### **\RAInamesProfLienkamp**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 59)*

### **\RAInamesProfLindemann**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 61)*

### **\RAInamesProfLohmann**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 63)*

### **\RAInamesProfLueth**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 65)*

### **\RAInamesProfMacianJuan**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 67)*

### **\RAInamesProfMarburg**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 69)*

### **\RAInamesProfNeu**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 71)*

### **\RAInamesProfPolifke**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 73)*

### **\RAInamesProfProvost**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 75)*

### **\RAInamesProfReinhart**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 77)*

### **\RAInamesProfRixen**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 79)*

### **\RAInamesProfSattelmayer**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 81)*

### **\RAInamesProfSenner**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 83)*

### **\RAInamesProfSpannerUlmer**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 85)*

### **\RAInamesProfSpliethoff**

*Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 87)*

### **\RAInamesProfStahl**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 89)

### **\RAInamesProfVogelHeuser**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 91)

### **\RAInamesProfVolk**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 93)

### **\RAInamesProfWachtmeister**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 95)

### **\RAInamesProfWall**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 97)

### **\RAInamesProfWalter**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 99)

### **\RAInamesProfWerner**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 101)

### **\RAInamesProfWeusterBotz**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 103)

### **\RAInamesProfZaeh**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 105)

### **\RAInamesProfZimmermann**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 107)

### **\RAInamesProfAlthoff**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 111)

### **\RAInamesProfBurschka**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 113)

### **\RAInamesProfKnoll**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 115)

### **\RAInamesProfPretschner**

Module: RAInames - File: source/TUM/Modules/TUMnames.sty (Line: 117)

### **\RALutilsTodo[Color]{Text}**

Description: Inserts a todo text.

Module: RALutils - File: source/TUM/Modules/TUMutils.sty (Line: 24)

### **\RALutilsTodoW[Color]{Text}**

Description: Inserts a todo text and additionally prints a warning.

Module: RALutils - File: source/TUM/Modules/TUMutils.sty (Line: 30)

### **\RALutilsTodoSpacer[Heading]{HeightInMM}**

Description: Draws a todo box of specified length.

Module: RALutils - File: source/TUM/Modules/TUMutils.sty (Line: 36)

### **\RALutilsPDFanno[Author]{Text}**

Description: Inserts a PDF-comment (default color).

Module: RALutils - File: source/TUM/Modules/TUMutils.sty (Line: 53)

### **\RALutilsPDFannoColor[Author]{Text}{Color}**

Description: Inserts a PDF-comment (custom color).

Module: RALutils - File: source/TUM/Modules/TUMutils.sty (Line: 59)

### **\RALutilsPDFhigh[Color]{Text}**

Description: Highlights a text as a PDF-comment.

Module: *RAIutils* - File: *source/TUM/Modules/TUMutils.sty* (Line: 65)

**\RAIutilsDate{Day}{Month}{Year}**

Description: Prints the specified date in german or english language.

Module: *RAIutils* - File: *source/TUM/Modules/TUMutils.sty* (Line: 74)

**\RAIutilsToday**

Description: Prints the current date in german or english language.

Module: *RAIutils* - File: *source/TUM/Modules/TUMutils.sty* (Line: 77)

**\RAIrefSetPDFMetadata{Title}{Subject}{Author}{Keywords}{PDFCreator}{PDFProducer}**

Description: Sets the PDF metadata of the document.

Module: *RAIref* - File: *source/TUM/Modules/TUMref.sty* (Line: 41)

**\RAIphdprepublicationTitlePage{YourName}{Date}**

Description: Create titlepage for the pre-publication list of the TUM Graduate School.

Style: *RAIphdprepublication* - File: *source/TUM/Styles/TUMphdprepublication.sty* (Line: 63)

**\RAIphdexposeTitlePage{YourName}{YourEmail}{YourPhoneNumber}{ProvisionalTitle}{Supervisor}{Mentor}{Date}**

Description: Create titlepage for the expose of the TUM Graduate School.

Style: *RAIphdexpose* - File: *source/TUM/Styles/TUMphdexpose.sty* (Line: 60)

**\RAIphdthesisPrintTableOfContents**

Description: Prints the table of contents.

Style: *RAIphdthesis* - File: *source/IN/RAI/Styles/RAIphdthesis.sty* (Line: 62)

**\RAIphdthesisTitlePage{Title}{Subtitle}{Author}{DoctoralDegree}{Chairman}{Examiner1}{Examiner2}{DateSubmission}{DateAcceptance}**

Description: Inserts the titlepage of a phd thesis (according to the TUM corporate design).

Style: *RAIphdthesis* - File: *source/TUM/Styles/TUMphdthesis.sty* (Line: 9)

**\RAIdocumentationModule{Name}**

Description: Typesets module names for the documentation.

Style: *RAIdocumentation* - File: *source/TUM/Styles/TUMdocumentation.sty* (Line: 60)

**\RAIdocumentationStyle{Name}**

Description: Typesets style names for the documentation.

Style: *RAIdocumentation* - File: *source/TUM/Styles/TUMdocumentation.sty* (Line: 62)

**\RAIdocumentationTemplate{Name}**

Description: Typesets template names for the documentation.

Style: *RAIdocumentation* - File: *source/TUM/Styles/TUMdocumentation.sty* (Line: 64)

**\RAIdocumentationOption{Option}**

Description: Typesets options for the documentation.

Style: *RAIdocumentation* - File: *source/TUM/Styles/TUMdocumentation.sty* (Line: 66)

**\RAIdocumentationCode{Command}**

Description: Typesets code for the documentation.

Style: *RAIdocumentation* - File: *source/TUM/Styles/TUMdocumentation.sty* (Line: 68)

**\RAIbeamerTitlePageStudentThesis**

Description: Creates a default titlepage (slide) for student theses.

Style: *RAIbeamer* - File: *source/IN/RAI/Styles/RAIbeamer.sty* (Line: 13)

**\RAIbeamerSetupHeader[TopMargin]{Content}**

Description: Sets the default header and defines the top margin.

*Style: RAIbeamer - File: source/TUM/Styles/TUMbeamer.sty (Line: 158)*

### **\RAIbeamerSetFooterText**

Description: Sets the additional text in the footer.

*Style: RAIbeamer - File: source/TUM/Styles/TUMbeamer.sty (Line: 163)*

### **\RAIbeamerSetupFooterCD**

Description: Sets the default footer according to the TUM corporate design.

*Style: RAIbeamer - File: source/TUM/Styles/TUMbeamer.sty (Line: 166)*

### **\RAIbeamerSetupFooterSlideNumberOnly**

Description: Sets the footer only displaying the slide number.

*Style: RAIbeamer - File: source/TUM/Styles/TUMbeamer.sty (Line: 171)*

### **\RAIbeamerTitlePageDefault**

Description: Creates a default titlepage (slide).

*Style: RAIbeamer - File: source/TUM/Styles/TUMbeamer.sty (Line: 261)*

### **\RAIstudentexposeTitlePage{TypeOfThesis}{ProvisionalTitle}{Author}{MatrNr}{EMail}{Supervisor}{Date}**

Description: Inserts the titlepage of the expose of a student thesis.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 60)*

### **\RAIstudentexposeHeader{TypeOfThesis}{ProvisionalTitle}{Author}{MatrNr}{EMail}{Supervisor}{Date}**

Description: Inserts the header of the expose of a student thesis.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 65)*

### **\RAIstudentexposeTitlePageBachelorsThesis{ProvisionalTitle}{Author}{MatrNr}{EMail}{Supervisor}{Date}**

Description: Inserts the titlepage of the expose of an bachelor's thesis.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 93)*

### **\RAIstudentexposeTitlePageSemesterThesis{ProvisionalTitle}{Author}{MatrNr}{EMail}{Supervisor}{Date}**

Description: Inserts the titlepage of the expose of an semester thesis.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 95)*

### **\RAIstudentexposeTitlePageMastersThesis{ProvisionalTitle}{Author}{MatrNr}{EMail}{Supervisor}{Date}**

Description: Inserts the titlepage of the expose of an master's thesis.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 97)*

### **\RAIstudentexposeTitlePageIDP{ProvisionalTitle}{Author}{MatrNr}{EMail}{Supervisor}{Date}**

Description: Inserts the titlepage of the expose of an IDP.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 99)*

### **\RAIstudentexposeReview**

Description: Ends the document with a review section according to the TUM Center of Key Competencies template.

*Style: RAIstudentexpose - File: source/TUM/Styles/TUMstudentexpose.sty (Line: 105)*

### **\RAIletterSetReceiver{Lines}**

Description: Defines the receiver (multiple lines).

*Style: RAIletter - File: source/TUM/Styles/TUMletter.sty (Line: 26)*

### **\RAIletterSetPlace{Location}**

Description: Defines the place (sender).

*Style: RAIletter - File: source/TUM/Styles/TUMletter.sty (Line: 32)*

### **\RAIletterSetDate{Date}**

Description: Defines the date.

*Style: RAIletter - File: source/TUM/Styles/TUMletter.sty (Line: 38)*

**\RAIletterSetSubject{Subject}**

Description: Defines the subject.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 44)

**\RAIletterSetTitle{Subject}**

Description: Defines the title of the sender.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 50)

**\RAIletterSetName{Subject}**

Description: Defines the name of the sender.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 56)

**\RAIletterSetPhone{Subject}**

Description: Defines the phone number of the sender.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 62)

**\RAIletterSetFax{Subject}**

Description: Defines the fax number of the sender.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 68)

**\RAIletterSetEMail{Subject}**

Description: Defines the e-mail address of the sender.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 74)

**\RAIletterSetHomepage{Subject}**

Description: Defines the homepage of the sender chair.

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 80)

**\RAIletterHeader**

Description: Prints the header of the letter (sender, receiver, ...)

Style: RAletter - File: source/TUM/Styles/TUMletter.sty (Line: 86)

**\RAIposterDrawGrid**

Description: Draws a grid in the background in order to ease positioning.

Style: RAposter - File: source/TUM/Styles/TUMposter.sty (Line: 21)

**\RAITitlePageStudentThesisCustomDiplomarbeit{GermanTitle}{EnglishTitle}{FieldOfStudy}{Author}{Examiner}{Supervisor}{Date}**

Description: Inserts the titlepage of a Diplomarbeit (RAI specific design).

Style: RAstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 71)

**\RAIstudentthesisTitlePageCustomBachelorsThesis{GermanTitle}{EnglishTitle}{FieldOfStudy}{Author}{Examiner}{Supervisor}{Date}**

Description: Inserts the titlepage of a bachelor's thesis (RAI specific design).

Style: RAstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 75)

**\RAIstudentthesisTitlePageCustomSemesterThesis{GermanTitle}{EnglishTitle}{FieldOfStudy}{Author}{Examiner}{Supervisor}{Date}**

Description: Inserts the titlepage of a semester thesis (RAI specific design).

Style: RAstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 79)

**\RAIstudentthesisTitlePageCustomMastersThesis{GermanTitle}{EnglishTitle}{FieldOfStudy}{Author}{Examiner}{Supervisor}{Date}**

Description: Inserts the titlepage of a master's thesis (RAI specific design).

Style: RAstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 83)

**\RAIstudentthesisTitlePageCustomIDP{GermanTitle}{EnglishTitle}{FieldOfStudy}{Author}{Examiner}{Supervisor}{Date}**

Description: Inserts the titlepage of an IDP (RAI specific design).

Style: RAIstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 87)

**\RAIstudentthesisAbstract**{EnglishAbstract}{GermanAbstract}

Description: Inserts the abstract (german and english) of a student thesis.

Style: RAIstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 174)

**\RAIstudentthesisPrintTableOfContents**

Description: Inserts the table of contents of a student thesis.

Style: RAIstudentthesis - File: source/IN/RAI/Styles/RAIstudentthesis.sty (Line: 184)

**\RAIstudentthesisTitlePageCD**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}{Grad1}{Grad2}

Description: Inserts the titlepage of a student thesis (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 15)

**\RAIstudentthesisTitlePageFrontPage**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}{Grad1}{Grad2}

Description: Print the actual titlepage contents of a student thesis (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 24)

**\RAIstudentthesisTitlePageFrontPageInfoTable**{Supervisor}{Advisor}{Author}{Date}

Description: Prints info table for the thesis frontpage.

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 49)

**\RAIstudentthesisDeclaration**{Author}{Date}

Description: Prints the declaration about scientific work.

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 60)

**\RAIstudentthesisTitlePageCDDiplomarbeit**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}

Description: Inserts the titlepage of a Diplomarbeit (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 68)

**\RAIstudentthesisTitlePageCDBachelorsThesis**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}

Description: Inserts the titlepage of a bachelor's thesis (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 72)

**\RAIstudentthesisTitlePageCDSemesterThesis**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}

Description: Inserts the titlepage of a semester thesis (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 76)

**\RAIstudentthesisTitlePageCDMasterThesis**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}

Description: Inserts the titlepage of a master's thesis (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 80)

**\RAIstudentthesisTitlePageCDIDP**{GermanTitle}{EnglishTitle}{Author}{Examiner}{Supervisor}{Date}

Description: Inserts the titlepage of an IDP (according to the TUM corporate design).

Style: RAIstudentthesis - File: source/TUM/Styles/TUMstudentthesis.sty (Line: 84)

**\RAIstudentthesisCover**[PageCount]{Author}{Title}{PDFFile}

Description: Creates the cover (incl. spine) for printing a student thesis.

Style: RAIstudentthesiscover - File: source/TUM/Styles/TUMstudentthesiscover.sty (Line: 28)