# The kautools bundle\*

# Stefan Berthold stefan.berthold@kau.se

#### April 18, 2013

#### Abstract

The  ${\sf kautools}$  bundle provides tools (LMTEX style files) for the  ${\sf kauthesis}$  bundle.

#### Contents

1	$\mathbf{Intr}$	roduction	1
	1.1	The kautitle package	1
	1.2	The kaumeta package	2
	1.3	The kaulist package	2
	1.4	The kauclear package	2
	1.5	The kauenvironments package	2
	1.6		3
	1.7	The kaupaper package	3
	1.8	The kaustudies package	3
	1.9	The pgfcropmarks package	3
2	Imp	plementation	3
	2.1	The kautitle package	3
	2.2		
	4.4	The kaumeta package	5
	2.3	The kaumeta package	5 6
		The kaumeta package	-
	2.3	The kaumeta package	6
	$\frac{2.3}{2.4}$	The kaumeta package	6 7
	2.3 2.4 2.5	The kaumeta package	6 7 7
	2.3 2.4 2.5 2.6	The kaumeta package	6 7 7 8

# 1 Introduction

#### 1.1 The kautitle package

The kautitle package defines an alternative title page using the logo of Karlstad University. Note that this is not an implementation of the Karlstad University

<sup>\*</sup>This document corresponds to kautools v1.8, dated 2013/04/18.

Studies title page, i.e., this alternative title page won't be used for your thesis. The logo is available from

http://www.kau.se/sites/default/files/image/press/kau-logo-tryck.pdf

and must be available in LATEX's search path before using this package.

At the moment, this package uses a manually installed font called aun and it's bold version aub. It might not be available on your system, though, and since the font is licensed, I may not distribute it. If you do not possess the font, you have to switch to another one.

\maketitle \kut@maketitle Load the package without options. The title page can be created using \maketitle. Note that the previous definition of \maketitle is not destroyed, but preserved in the macro \kut@maketitle. You can use it in your document as follows:

\makeatletter \kut@maketitle \makeatother

\setkautitlefont

Two fonts are used on the title page and can be changed using the macro  $\startion{setkautitlefont{\langle font\rangle}}$ . The argument  $\langle font\rangle$  accepts key-value pairs where keys are normalfont and titlefont and values are any sequence of LaTeX's font commands. For switching to your standard sans-serif font, you should add these lines to your preamble:

```
\setkautitle%
{ normalfont=\sffamily\LARGE
, titlefont=\sffamily\bfseries\Huge }
```

#### 1.2 The kaumeta package

The kaumeta package defines three macros, \subject, \institute, and \place, for providing additional meta data about the document and it's author. This meta data can be used, e.g., on the title page of the document.

#### 1.3 The kaulist package

The kaulist package defines pretty printing macros for lists. For instance, a list "1,2,3" is transformed to "1, 2, and 3".

#### 1.4 The kauclear package

This package replaces the macro \cleardoublepage. Empty pages with odd page numbers will not print the page number. Also, the macro \pagestyle is redefined. The new behaviour is to stores the page style for being able to restore it later on.

#### 1.5 The kauenvironments package

This package defines the environments researchquestions and contributions.

#### 1.6 The kauparts package

This packages defines a new \part macro, \kaupart. It is independend of \part, but you should decide yourself for one alternative only. The \kaupart macro adds a cover page for the new part.

Use the package options vshift and vstep to adjust the placement of the thumb indices on the cover pages.

\kaupart

Use  $\kaupart[\langle meta \rangle] \{\langle title \rangle\}$  to create a numbered part with the given  $\langle title \rangle$ . You may use the optional argument  $\langle arg \rangle$  for adding meta data. This includes body for typing additional material on the cover page and label for creating a label such as usually created by \label. In addition, the switch tocentry may be set to false, if the macro should not add an entry to the table of contents.

\kaupart\*

The starred version of \kaupart works exactly like the unstarred version, but creates an unnumbered part.

#### 1.7 The kaupaper package

Yet no description.

#### 1.8 The kaustudies package

This package sets the page dimensions so that your document does not need to be scaled for printing. It also chooses Garamond as the standard font.

You can use the package option tinyfontswitch=false in order to avoid the switch to sans-serif fonts when using \tiny. The switch is recommended by Karlstad University Studies, though, it is rather debatable whether this is necessary when using IATeX and the correct page dimensions.

#### 1.9 The pgfcropmarks package

The package pgfcropmarks draws crop marks on A4 paper. This is supposed to be the last step after creating all tables, indices, and glosseries. When the package is loaded, IATEX will not create or update any auxiliary files.

# 2 Implementation

#### 2.1 The kautitle package

No package options are accepted.

- 1 (\*title)
- 2 \ProcessOptions\relax

Load dependencies.

- 3 \RequirePackage{xkeyval}
- 5 \RequirePackage{hyphenat}
- 6 \RequirePackage{kaumeta}

\setkautitlefont

The macro \setkautitlefont allows to choose another than the default font for the title page. The title page has only two different font settings, titlefont which is used for the title text and normalfont which is used otherwise.

```
7 \define@cmdkeys[kut] {pkg} [kut@] {normalfont, titlefont}
                 8 \setkeys[kut]{pkg}%
                    { normalfont=\fontfamily{aun}\fontsize{18}{21.6}\selectfont\bfseries
                    , titlefont=\fontfamily{aub}\fontsize{28}{33.6}\selectfont }
                11 \newcommand\setkautitlefont[1]{\setkeys[kut]{pkg}{#1}}
\kut@maketitle
               Preserve the previous version of \maketitle.
                12 \let\kut@maketitle\maketitle
                The title page will consist of two background images (the Karlstad University
                logo), title, subject, author, and author's institute. Everything will be shaded
                except the title.
                13 \renewcommand\maketitle{%
                    \thispagestyle{empty}
                     \begin{tikzpicture}[remember picture, overlay]%
                Clipping the title page to the dimensions of the logical page. This is interesting
                when the physical and the logical page do not have the same dimensions.
                16
                       \path (current page.north west) +(-4pt,4pt) node (NW) {};
                17
                       \path (current page.south east) +(4pt,-4pt) node (SE) {};
                18
                       \path (current page.north west) +(-3pt,3pt) node (NWC) {};
                       \path (current page.south east) +(3pt,-3pt) node (SEC) {};
                19
                       \path[clip] (NWC) rectangle (SEC);
                20
                Background images.
                       \path (current page.south west) node[rotate=243.5] {\pgfimage{kau-logo-tryck}};%
                21
                       \path (current page.north east) node[rotate=175] {\pgfimage{kau-logo-tryck}};%
                ^{22}
                Subject in the upper left corner of the page.
                       \path (current page.north west) node
                24
                         [shift={(10pt,-12pt)},anchor=south west,rotate=270
                25
                         ,font=\kut@normalfont\vphantom{Xy}]
                26
                         {\@subject};
                Institute in the lower right corner of the page.
                       \path (current page.south east) node
                         [shift={(-8pt,6pt)},anchor=north east,rotate=270
                28
                29
                         ,rounded corners,fill=black,text=white,inner sep=8pt
                         ,font=\kut@normalfont\vphantom{Xy}]
                30
                         {\@shortinstitute};
                Title bar on vertically centered on the left side of the page.
                32
                33
                         (current page.east) node[shift={(-10,0)}] (A) {}
                34
                         (current page.east) node[shift={(0,-2.5)}] (B) {}
                35
                         [shading=axis,left color=white,right color=black] (A) rectangle (B.south east)
                36
                Author below the title bar.
                37
                       \path (B) node
                38
                         [anchor=north east
                         ,inner sep=8pt
                39
                         ,text=black
                40
                         ,font=\kut@normalfont\vphantom{Xy}
                41
```

,text width=14cm,text ragged left]

{\@author};

42 43

```
Shading over the entire page (slightly bigger than the clipping).
                            \path[fill=white,opacity=0.90,transparency group] (NW) rectangle (SE);
                    Title text on the title bar. No hyphens are allowed in the title text.
                           \path (B) node
                    45
                              [anchor=south east,shift={(-3pt,0)}
                    46
                              ,text=yellow!75!red
                    47
                              ,font=\kut@titlefont\vphantom{Xy}
                    48
                              ,text width=14cm,text ragged left]
                    49
                    50
                              {\nohyphens{\@title}};
                         \end{tikzpicture}%
                    51
                         \clearpage%
                    52
                    53 }
                    54 (/title)
                    2.2
                            The kaumeta package
                    No package options are parsed.
                    55 (*meta)
                    56 \ProcessOptions\relax
                    Dependencies are loaded.
                    57 \usepackage{ifthen}
                    The macro \subject{\langle subject \rangle} can be used to set the subject of the document.
         \subject
                    The last \langle subject \rangle set will be available in the macro \@subject.
        \@subject
                    58 \newcommand*\@subject{}
                    59 \newcommand\subject[1]{\renewcommand*\@subject{#1}}
                    The macro \institute[\langle short \rangle] \{\langle institute \rangle\}\ can be used to set the institute of
       \institute
                    the document's author. It is possible to provide a shorter version of the institue in
                    the optional argument \langle short \rangle. If not explicitly set, the short version is the same as
                    the long version (institute). The values are available in the macros \@institute
     \@institute
\@shortinstitute
                    and \@shortinstitute.
                    60 \newcommand*\@institute{}
                    61 \newcommand*\@shortinstitute{}
                    62 \newcommand\institute[2][]{%
                         \renewcommand*\@institute{#2}%
                    63
                         \ifthenelse{\equal{#1}{}}{%
                    64
                           \renewcommand*\@shortinstitute{#2}%
                    65
                         }{%
                    67
                           \renewcommand*\@shortinstitute{#1}%
                    68
                         }%
                    69 }
                    The macro \place{\langle place \rangle} can be used to set the place of the document's author.
           \place
                    The last \langle place \rangle set will be available in the macro \Oplace.
          \@place
                    70 \newcommand*\@place{}
                    71 \newcommand\place[1] {\renewcommand*\@place{#1}}
                    \{\langle name \rangle\} sets the supervisor's name for the kaumasters class.
      \supervisor
                    72 \newcommand\@supervisor{}
                    73 \newcommand\supervisor[1] {\renewcommand*\@supervisor{#1}}
```

```
\{\langle name \rangle\} sets the examiner's name for the kaumasters class.
 \examiner
             74 \newcommand\@examiner{}
             75 \newcommand\examiner[1] {\renewcommand*\@examiner{#1}}
             76 \langle /meta \rangle
             2.3
                    The kaulist package
             No options are parsed.
             77 (*list)
             78 \ProcessOptions\relax
                 For \prettylist, the packages pgffor, pgfmath, and pgfkeys are required.
             79 \RequirePackage{tikz}
            defines a comma (","), if one is to be used before "and".
\commasign
             80 \AtBeginDocument{%
                  \@ifpackageloaded{babel}
                    82
             83
                    {\newcommand*\commasign{,}}%
             definses the word used as "and".
   \andname
             85 \AtBeginDocument{%
                  \@ifpackageloaded{babel}
             86
                    {\newcommand*\andname{\iflanguage{swedish}{och}{and}}}}%
             87
                    {\newcommand*\andname{and}}%
             88
             89 }
\prettylist \{\langle list \rangle\} transformes a comma separated list into a list in natural language.
             90 \newcommand\prettylist[1]{%
             The number of list elements is stored in \num.
                  \foreach[count=\xi] \x in #1 {}%
                  \left| \right| xi\%
             The first element is just printed without any changes.
                  \foreach[count=\xi] \x in #1 {%
             94
                    \ifnum \xi=1%
             The last element is printed with preceding \commasign, if there are more than
             two elements in the list, and otherwise without.
                    \else%
             96
                      \ifnum \xi=\num%
             97
             98
                        \ifnum \num=2%
                          {} \andname{} \x%
             99
            100
                          \commasign{} \andname{} \x%
            101
            102
                        \fi%
             Elements in between the first and the last one are printed with a preceding hard-
             coded comma sign (not \commasign).
```

103

104

\else%

, \x%

```
\fi%
                       105
                       106
                              \fi%
                       107
                           }%
                       108 }%
                       109 (/list)
                        2.4
                              The kauclear package
                        No options are parsed.
                       110 (*clear)
                       111 \ProcessOptions\relax
\kuc@currentpagestyle The page style is stored in \kuc@currentpagestyle. Default: plain
                       112 \newcommand\kuc@currentpagestyle{plain}
           \pagestyle The macro \pagestyle is redefined to update the page style in \kuc@currentpagestyle.
                       113 \let\pagestyle@orig\pagestyle
                       114 \renewcommand\pagestyle[1]{%
                            \verb|\command| kuc@currentpagestyle{#1}|%
                            \pagestyle@orig{#1}%
                       116
                       117 }
                       The page style can be restored with \kuc@restorepagestyle after (temporarily)
\kuc@restorepagestyle
                       switching to another one using \pagestyle@orig.
                       118 \newcommand\kuc@restorepagestyle{%
                            \pagestyle@orig{\kuc@currentpagestyle}%
                       119
                       120 }
  \cleardoubpage@orig The previous definition of \cleardoublepage is preserved in \cleardoublepage@orig.
                       121 \let\cleardoubpage@orig\cleardoublepage
                      The macro \cleardoublepage is redefined. The new definition switches tem-
     \cleardoublepage
                        porarily to the page style empty.
                       122 \renewcommand\cleardoublepage{%
                           \clearpage%
                       123
                            \pagestyle@orig{empty}%
                            \cleardoubpage@orig%
                           \kuc@restorepagestyle%
                       127 }
                       128 \langle / clear \rangle
                        2.5
                              The kauenvironments package
```

No package options are parsed. 129 (\*environments) 130 \ProcessOptions\relax Load dependencies. 131 \RequirePackage{xspace} 132 \RequirePackage{xcolor}

```
The environment is an enumeration derived from enumerate. The argument of \item[\langle question \rangle] is used to formulate the research question.

133 \newenvironment{researchquestions}%

134 {\begin{enumerate}%
135 \let\kue@item\item%
136 \renewcommand\item[1] [Research question]%
```

{\kue@item\emph{##1}\nopagebreak\par}%

137

contributions

The environment is an enumeration derived from enumerate. The argument of  $\lceil (contrib) \rceil$  is used to formulate the contribution.

```
140 \newenvironment{contributions}%
    {\begin{enumerate}%
       \let\kue@item\item%
142
       \renewcommand\item[1][%
143
         \textcolor{red}{\emph{write your contribution between brackets
144
           as optional argument of \texttt{\string\item}.}}]%
145
         {\kue@item\emph{##1}\xspace}%
146
147
     }%
148
     {\end{enumerate}}%
149 (/environments)
```

#### 2.6 The kauparts package

```
150 (*parts)
151 \RequirePackage{xkeyval}
153 \define@cmdkeys[kup]{pkg}[kup@]{vshift,vstep}
154 \setkeys[kup] {pkg}{vshift=2, vstep=0.8}
156 \ProcessOptionsX[kup] < pkg>
157
158 \RequirePackage{calc}
159 \RequirePackage{ifthen}
160 \RequirePackage{suffix}
161 \RequirePackage{tikz}
162 \usetikzlibrary{positioning}
164 \define@cmdkeys[kup] {part} [kup@] {body,label}
165 \define@boolkeys[kup]{part}[kup@]{tocentry}
166
167 \newcounter{kup@part}
168 \newcounter{kup@vertical}
169 \setcounter{kup@vertical}{0}
170
171 \newcommand\kup@partheadline[2]{%
     \path[node distance=1ex] (current page.north east) +(3pt,\kup@vshift+\kup@vstep*\arabic{kup@
172
       node%
173
174
         [ anchor=north east%
         , minimum width=2cm+3pt\%
175
         %, minimum height=7mm%
176
         %, draw=black%
177
```

```
178
                                               %, fill=black%
                                                , left color=white%
                         179
                                                , right color=black%
                         180
                                                , text=white%
                         181
                                                , font=\LARGE\bfseries%
                         182
                                               ] (bar) {#1}%
                         183
                                          node[base left=of bar,font=\LARGE\bfseries] {#2};%
                         184
                         185 }
  \kaupart
                         186 \newcommand\kaupart[2][]{%
                                     \cleardoublepage%
                         187
                                     \thispagestyle{plain}%
                         188
                                     \stepcounter{kup@part}%
                         189
                                     \setkeys[kup]{part}{body=\relax,label=,tocentry=true,#1}%
                         190
                         191
                                     \ifkup@tocentry%
                         192
                                     \label{lem:line} $$\addcontentsline{toc}{part}_{numberline{\Roman{kup@part}}} $$
                         193
                                     \renewcommand\@currentlabel{\Roman{kup@part}}%
                         194
                                     \label{$\ \equal{\kup@label}{}}{\ \label{\kup@label}}% \label{\kup@label}% \label\kup@label}% \label\kup@label\kup@label\kup@label\kup@label\kup@label}% \label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@label\kup@
                                     \begin{tikzpicture}[remember picture, overlay, yscale=-1]%
                         197
                                          \kup@partheadline{\Roman{kup@part}}{#2}%
                                     \end{tikzpicture}%
                         198
                                      \kup@body
                         199
                                      \stepcounter{kup@vertical}%
                         200
                                      \cleardoublepage%
                         201
                         202 }
\kaupart*
                         203 \WithSuffix\newcommand\kaupart*[2][]{%
                                   \cleardoublepage%
                         204
                                     \thispagestyle{plain}%
                         205
                                     \setkeys[kup]{part}{body=\relax,tocentry=true,#1}%
                         206
                                     \ifkup@tocentry%
                         207
                         208
                                         \addcontentsline{toc}{part}{\textsc{#2}}%
                         209
                         210
                                     \begin{tikzpicture}[remember picture,overlay,yscale=-1]%
                                          \kup@partheadline{\vphantom{X}}{#2}%
                         212
                                     \end{tikzpicture}%
                         213
                                     \kup@body
                                     \stepcounter{kup@vertical}%
                         214
                        215
                                     \cleardoublepage%
                        216 }
                        217 \langle /parts \rangle
                                           The kaupaper package
                         218 \langle *paper \rangle
                        219 \verb|\RequirePackage{xkeyval}|
                        221 \define@cmdkeys[kua]{paper}[kua@]{author,title,subtitle,reference,email,refstr,vanity,subdelin
                         222 \setkeys[kua]{paper}{refstr=\reprintedname}
                         224 \ProcessOptionsX[kua] <paper>
```

```
225
226 \RequirePackage{kauparts}
227 \RequirePackage{ifthen}
228 \RequirePackage{tikz}
230 \RequirePackage{ragged2e}
231 \RequirePackage{hyphenat}
232
233 \AtBeginDocument{%
     \@ifpackageloaded{babel}%
234
       {\newcommand*\reprintedname{%
235
         \iflanguage{swedish}{Ursprungligen publicertad i}{Reprinted from}}%
236
237
        \newcommand*\appendedpapersname{%
         \iflanguage{swedish}{Bifogade publiceringar}{List of Appended Papers}}%
238
239
        \newcommand*\participationname{%
         \iflanguage{swedish}{Kommentarer p\aa{} min medverka}{Comments on my Participation}}%
240
        \newcommand*\papername{%
241
242
          \iflanguage{swedish}{Publicering}{Paper}}%
       }%
243
       {\newcommand*\reprintedname{Reprinted from}%
244
        \newcommand*\appendedpapersname{List of Appended Papers}%
245
        \newcommand*\participationname{Comments on my Participation}%
246
        \newcommand*\papername{Paper}%
247
       }%
248
249 }
250
251 \newcounter{kua@section}
252 \newcounter{kua@equation}
253 \newcounter{kua@figure}
254 \newcounter{kua@table}
255
256 \newcounter{kua@paper}
257
258 \providecommand\thepaper{}
259 \providecommand\thepapertitle{}
261 \newcommand\kua@warning\relax
262 \newcommand\kua@dowarn{\gdef\kua@warning{\@latex@warning@no@line{List data created from the ka
263 \AtEndDocument{\kua@warning}
265 \newcommand\kua@listof[4]{%
266
     \IfFileExists{\jobname.#1}%
267
       {% check whether empty file
         \newread\reader%
268
269
         \openin\reader\jobname.#1%
         \read\reader to \readmacro%
270
271
         \ifeof\reader%
           \textcolor{red}{\ldots{} will be available after the next \LaTeX{} run.}%
272
273
           \@starttoc{#1}%
274
           %\AtEndDocument{\@latex@warning@no@line{Rerun to get the list of #2 right}}%
275
           \kua@dowarn%
276
         \else% file not empty -> create list
           #3\@starttoc{#1}#4%
277
```

\fi%

278

```
}%
              279
                     {% file does not exist
              280
                       \textcolor{red}{\ldots{} will be available after the next \LaTeX{} run.}%
              281
              282
                       \@starttoc{#1}%
                       %\AtEndDocument{\@latex@warning@no@line{Rerun to get the list of #2 right}}%
              283
              284
                       \kua@dowarn%
              285
                     }%
              286 }
\listofpapers
              287 \newcommand\listofpapers{%
                   \section*{\appendedpapersname}%
                   \addcontentsline{toc}{section}{\appendedpapersname}%
              289
                   \kua@listof{pap}{appended papers}{%
              290
                     \begin{enumerate}%
              291
              292
                     \renewcommand\theenumi{\textbf{\Roman{enumi}}}%
              293
                   }{\end{enumerate}}%
                   \subsection*{\participationname}
              294
                   \kua@listof{pcp}{participation in appended papers}{}{}%
              295
              296 }
              297
              298 \newcommand\l@paper[2]{%
                   \item #1%
              299
              300 }
              302 \newcommand\listofsummaries{%
              303
                   \kua@listof{sum}{paper summaries}{}{}%
              304 }
              305
              306 \newcommand\l@summary[2]{%
                   #1\par%
              307
              308 }
              309
              310 \newcommand\l@limit[2]{%
                   %\paragraph{Limitations.}
              311
              312
                   #1%
              313 }
              314
              315 \newcommand\l@participation[2]{%
              316
                   #1%
              317 }
              318
              319 \newcommand\papercover{%
                   \begin{tikzpicture}[remember picture,overlay]%
                     \path (current page.center)%
              321
              322
                       node%
              323
                         [ node distance=\baselineskip%
              324
                         , text width=\textwidth%
              325
                          , text centered%
                         ] (refstr) {\kua@refstr};%
              326
                       327
                         \node%
              328
              329
                            [ node distance=1.5\baselineskip%
                            , above=of refstr%
              330
```

```
text centered%
332
                              font=\LARGE\bfseries%
333
                             {\nohyphens{\kua@title}};%
334
                  }{%
335
                      \node%
336
                          [ node distance=1.5\baselineskip%
337
                          , above=of refstr%
338
339
                             text width=\textwidth%
340
                            text centered%
                            font=\large\bfseries%
341
                          ] (sub) {\nohyphens{\kua@subtitle}};%
342
                      \node%
343
                          [ node distance=1pt%
344
                          , above=of sub%
345
                             text width=\textwidth%
346
                             text centered%
347
                             font=\LARGE\bfseries%
348
349
                          }%
350
                  \node%
351
                      [ node distance=\baselineskip%
352
                       , below=of refstr%
353
                       , text width=\textwidth%
354
                       , text centered%
355
356
                         font=\large%
                      [ ] {\nohyphens{\kua@reference}}%
357
              ;%
358
          \end{tikzpicture}%
359
360 }
361
362 \newenvironment{kaupaper}[1][]{%
          \verb|\counter{kua@section}{\value{section}}||
363
          \setcounter{kua@equation}{\value{equation}}%
364
          \setcounter{kua@figure}{\value{figure}}%
365
          \setcounter{kua@table}{\value{table}}%
366
          \setcounter{section}{0}%
367
368
          \setcounter{equation}{0}%
          \setcounter{figure}{0}%
370
          \setcounter{table}{0}%
371
          \setkeys[kua]{paper}{subtitle=,vanity=,subdelimiter={---},label=,summary={\string\textcolor-
372
          \setcounter{kua@paper}{\value{kup@part}}\stepcounter{kua@paper}%
373
          \ifthenelse{\equal{\kua@subtitle}{}}%
              374
                \addcontentsline{toc}{part}{\textsc{\papername} \Roman{kua@paper}\\\kua@title}}%
375
              {\downward} {\do
376
377
                \addcontentsline{toc}{part}{\textsc{\papername} \Roman{kua@paper}\\\kua@title\kua@subdel:
          \addcontentsline{sum}{summary}{\string\subsection*{\papername~\Roman{kua@paper} -- \kua@tit:
378
          \ifthenelse{\equal{\kua@limitations}{}}{}{}
379
380
              \addcontentsline{sum}{limit}{\kua@limitations}}%
          381
382
          \kaupart[tocentry=false,label=\kua@label,body=\papercover\kua@vanity]{\papername}%
383
          \renewcommand*\thepaper{\papername~\Roman{kua@paper}}%
```

text width=\textwidth%

331

\renewcommand\*\thepapertitle{\kua@title}%

384

```
\renewcommand\maketitle{%
385
       \thispagestyle{plain}%
386
       \centering%
387
          \Large\bfseries%
388
          \vspace*{0.15\textheight}%
389
          \kua@title\par%
390
391
          \addvspace{1ex}%
         \label{large-kua@subtitle}{}{}{\large-kua@subtitle}%
392
          \par\addvspace{\baselineskip}%
393
          \normalsize%
394
          \kua@author\\[0.25\baselineskip]%
395
          \normalfont%
396
          \kua@email%
397
        \par\addvspace{2\baselineskip}\justifying%
398
     }%
399
400 }{%
     \setcounter{section}{\value{kua@section}}%
401
402
     \setcounter{equation}{\value{kua@equation}}%
     \setcounter{figure}{\value{kua@figure}}%
403
     \setcounter{table}{\value{kua@table}}%
404
     \clearpage%
405
406 }
407 \langle /paper \rangle
```

#### 2.8 The kaustudies package

```
408 (*studies)
409 \RequirePackage{xkeyval}
410
411 \ensuremath{\mbox{\mbox{$1$}}} \{pkg\} \ensuremath{\mbox{$kus@]$}} \{tinyfontswitch} \ensuremath{\mbox{$true$}} \{\}
413 \presetkeys[kus]{pkg}{tinyfontswitch}{}
414 \ProcessOptionsX[kus] < pkg>
416 \RequirePackage[twoside]{geometry}
417 \ \texttt{\ensuremath{\mbox{\sc NequirePackage[urw-garamond]\{mathdesign\}}}
418
419 \geometry
420 { paperwidth=165mm
421
      , paperheight=242mm
422
      , inner=27mm
423
      , outer=27mm
      , top=24mm
425
      , bottom=22mm
426
427
428 \ \text{ifkus@tinyfontswitch}
      \let\kus@tiny@orig\tiny
      \renewcommand*\tiny{\sffamily\kus@tiny@orig}
430
431 \fi
432 (/studies)
```

#### 2.9 The pgfcropmarks package

No options are parsed.

```
433 (*crop)
              434 \ProcessOptions\relax
              435 \RequirePackage{pgfpages}%
              No files are created or updated.
              436 \nofiles%
              Boolean, true on odd pages.
              437 \newif\if@kus@isodd%
              438 \@kus@isoddtrue%
\cropmarklen The length of the crop mark lines.
              439 \newlength{\cropmarklen}\setlength{\cropmarklen}{40pt}%
              The space between cropmark and paper edge.
\cropmarksep
              440 \newlength{\cropmarksep}\setlength{\cropmarksep}{15pt}%
              The cropmark page layout.
              441 \pgfpagesdeclarelayout{cropmarks}%
              442 {%
              443 }%
              444 {%
                   \pgfpagesphysicalpageoptions%
              445
                   {%
              446
              447
                     logical pages=1,%
              448
                     physical height=297mm,%
                     physical width=210mm%
              449
              450
              451
                   \pgfpageslogicalpageoptions{1}%
              452
              453
                     border code=%
              454
                       \if@kus@isodd
                         \global\@kus@isoddfalse
              455
                         \pgfsetlinewidth{0.6pt}%
              456
                         \pgfusepath{discard}%
              457
                         \protect{pgfpoint{-\cropmarksep}{0pt}}\%
              458
              459
                            \pgflineto{\pgfpoint{-\cropmarklen}{0pt}}%
              460
                         \pgfmoveto{\pgfpoint{0pt}{-\cropmarksep}}%
              461
                            \pgflineto{\pgfpoint{0pt}{-\cropmarklen}}%
                         \pgfmoveto{\pgfpoint{\paperwidth+\cropmarksep}{0pt}}%
              462
                            \pgflineto{\pgfpoint{\paperwidth+\cropmarklen}{0pt}}%
              463
              464
                         \pgfmoveto{\pgfpoint{\paperwidth}{-\cropmarksep}}%
              465
                            \pgflineto{\pgfpoint{\paperwidth}{-\cropmarklen}}%
                         \pgfmoveto{\pgfpoint{-\cropmarksep}{\paperheight}}%
              466
                            \pgflineto{\pgfpoint{-\cropmarklen}{\paperheight}}%
              467
                         \protect{pgfpoint{0pt}{\scriptstyle paperheight+\tt cropmarksep}}{\tt %}
              468
                            \pgflineto{\pgfpoint{0pt}{\paperheight+\cropmarklen}}%
              469
                         \pgfmoveto{\pgfpoint{\paperwidth}{\paperheight+\cropmarksep}}%
              470
              471
                            \pgflineto{\pgfpoint{\paperwidth}{\paperheight+\cropmarklen}}%
              472
                         \pgfmoveto{\pgfpoint{\paperwidth+\cropmarksep}{\paperheight}}%
              473
                            \pgflineto{\pgfpoint{\paperwidth+\cropmarklen}{\paperheight}}%
```

```
474 \pgfusepath{stroke}%
475 \else
476 \global\@kus@isoddtrue
477 \fi,%
478 center=\pgfpoint{.5\pgfphysicalwidth}{.5\pgfphysicalheight}%
479 }%
480 }%
Activate the cropmark page layout.
481 \pgfpagesuselayout{cropmarks}%
482 \/crop\
```

# **Change History**

v1.0	v1.5
General: SBe's licentiate version 1	General: Added templates for kau-
v1.1	collection and kaureport $\dots$ 1
General: Initial public release 1	v1.6
v1.2	General: Merged the styles' dtx
General: Support for babel.sty,	files 1
Documentation added 1	v1.7
v1.3	General: Added macros for supervi-
General: Merged the classes' dtx	sor and examiner in kaumeta $\dots$ 1
files 1	v1.8
v1.4	General: Added macros pretty
General: Fixed babel.sty support . 1	printing lists in kaulist 1

### Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols	\\ 375, 377, 395	. 323, 329, 337,
\@author 43		352, 393, 395, 398
$\c$ currentlabel 194	A 240	\begin . 15, 134, 141,
\@examiner 74, 75	\aa 240	196, 210, 291, 320
\@ifpackageloaded .	\addcontentsline	\bfseries $9, 182, 184,$
$\dots $ 81, 86, 234	. 192, 208, 289,	333, 341, 348, 388
\@institute $\dots$ 5, 60, 63	374–378, 380, 381	
<b>\@kus@isoddfalse</b> $455$	\addvspace 391, 393, 398	$\mathbf{C}$
$\c$ 0kus0isoddtrue $438, 476$	\andname $85$ , 99, 101 \appendedpapersname	\centering 387
\@latex@warning@no@line	. 237, 245, 288, 289	\cleardoublepage
$\dots 262, 274, 283$	\arabic 172	$121,  \underline{122},$
\@place 5, 70, 71	\AtBeginDocument	187, 201, 204, 215
\@shortinstitute	80, 85, 233	\cleardoubpage@orig
5, 31, 61, 65, 67	\AtEndDocument	$\dots \dots 121, 125$
\@starttoc 273, 277, 282	263, 274, 283	\clearpage $52, 123, 405$
<b>\@subject</b> . $5, 26, 58, 59$		\commasign $80$ , $101$
\@supervisor $\dots$ 72,73	В	contributions (envi-
\@title 50	\baselineskip	ronment) $\dots$ $\underline{140}$

1 12 400 450	<b>T</b>	\*
\cropmarklen $439, 459,$	J	\Large 388
461, 463, 465,	\jobname 266, 269	\large 341, 356, 392
467, 469, 471, 473	\justifying 398	\LaTeX 272, 281
\cropmarksep $\underline{440}, 458,$		\ldots 272, 281
460,  462,  464,	$\mathbf{K}$	\listofpapers $287$
466, 468, 470, 472	\kaupart $3, 186, 203, 382$	$\label{listofsummaries} 1.302$
	\kaupart* 3, <u>203</u>	
D	\kua@author 374, 376, 395	$\mathbf{M}$
$\define@boolkey \dots 411$	\kua@dowarn 262, 275, 284	\maketitle $2$ , $12$ , $13$ , $385$
\define@boolkeys $165$	\kua@email 397	
\define@cmdkeys	\kua@label 382	${f N}$
7, 153, 164, 221	\kua@limitations	\newcounter $167$ ,
		168, 251-254, 256
${f E}$	\kua@listof	\newif 437
\else 96,	. 265, 290, 295, 303	\newlength 439, 440
100, 103, 276, 475	$\kua@participation . 381$	\newread 268
\emph 137, 144, 146	\kua@reference	\node . $328, 336, 343, 351$
\end $51, 139, 148,$	$\dots 357, 374, 376$	\nofiles 436
198, 212, 293, 359	\kua@refstr 326	\nohyphens $50$ ,
environments:	\kua@subdelimiter .	334, 342, 349, 357
contributions $\underline{140}$		\nopagebreak 137
researchquestions	\kua@subtitle	\normalfont 396
133	327, 342,	\normalsize 394
\equal 64, 195,	373, 376, 377, 392	\num 92, 97, 98
327, 373, 379, 392	\kua@summary 378	\numberline 192
\examiner 74	\kua@title 334, 349,	(Hamberline 102
<u> </u>	374–378, 384, 390	О
$\mathbf{F}$	\kua@vanity 382	\openin 269
<b>F</b> \fi 102, 105, 106, 193,	\kua@vanity $382$ \kua@warning $261-263$	\openin 269
<del>-</del>		\openin 269
\fi 102, 105, 106, 193,	$\verb \kua@warning  261-263$	_
\fi 102, 105, 106, 193, 209, 278, 431, 477	$\label{eq:kua@warning} \ . \ 261-263 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	P
\fi 102, 105, 106, 193, 209, 278, 431, 477 \fontfamily 9, 10	\kua@warning 261-263 \kuc@currentpagestyle <u>112</u> , 115, 119	${\bf P} \\ \texttt{\pagestyle}  \dots  \underline{113}$
\fi 102, 105, 106, 193, 209, 278, 431, 477 \fontfamily 9, 10 \fontsize 9, 10	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
\fi 102, 105, 106, 193, 209, 278, 431, 477 \fontfamily 9, 10 \fontsize 9, 10	$eq:local_continuous_cont$	P \pagestyle 113 \pagestyle@orig 113, 116, 119, 124
\fi 102, 105, 106, 193, 209, 278, 431, 477 \fontfamily \cdots \cdot 9, 10 \fontsize \cdots 91, 93	$\label{eq:linear_constraint} $$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	P \pagestyle 113 \pagestyle@orig 113, 116, 119, 124 \papercover 319, 382
\fi 102, 105, 106, 193, 209, 278, 431, 477 \fontfamily 9, 10 \fontsize 9, 10 \foreach 91, 93	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	P \pagestyle 113 \pagestyle@orig
\fi 102, 105, 106, 193,	$\label{eq:linear_constraint} $$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	P \pagestyle 113 \pagestyle@orig 113, 116, 119, 124 \papercover 319, 382 \paperheight 466-473 \papername 241, 247, 375,
\fi 102, 105, 106, 193,	$\label{eq:linear_constraint} $$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	P \pagestyle 113 \pagestyle@orig
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle 112, 115, 119 \kuc@restorepagestyle 118, 126 \kue@item	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning 261-263 \kuc@currentpagestyle 112, 115, 119 \kuc@restorepagestyle 118, 126 \kue@item	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle 112, 115, 119 \kuc@restorepagestyle 118, 126 \kue@item 135, 137, 142, 146 \kup@body 199, 213 \kup@label 195 \kup@partheadline 171, 197, 211 \kup@vshift 172 \kup@vstep 172 \kup@vstep	P \pagestyle
\fi 102, 105, 106, 193,	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	P \pagestyle
\fi 102, 105, 106, 193,	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	P \pagestyle
\fi 102, 105, 106, 193,	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	P \pagestyle
\fi 102, 105, 106, 193,	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle 112, 115, 119 \kuc@restorepagestyle 18, 126 \kue@item	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning	P \pagestyle 113 \pagestyle@orig 113, 116, 119, 124 \papercover 319, 382 \paperheight 466-473 \papername 241, 247, 375, 377, 378, 381-383 \paperwidth 462-465, 470-473 \par 137, 307, 390, 393, 398 \paragraph 311, 381 \participationname 239, 246, 294 \path 16-23, 27, 32, 37, 44, 45, 172, 321 \pgfimage 21
\fi 102, 105, 106, 193,	\kua@warning	P \pagestyle 113 \pagestyle@orig 113, 116, 119, 124 \papercover 319, 382 \paperheight 466-473 \papername 241, 247, 375, 377, 378, 381-383 \paperwidth 462-465, 470-473 \par 137, 307, 390, 393, 398 \paragraph 311, 381 \participationname 239, 246, 294 \path 16-23, 27, 32, 37, 44, 45, 172, 321 \pgfimage 21, 22 \pgflineto 459,
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle	P \pagestyle
\fi 102, 105, 106, 193,	\kua@warning . 261-263 \kuc@currentpagestyle	P \pagestyle

\pgfpagesdeclarelayout	\RequirePackage	\textcolor
$\dots \dots $	3–6, 79, 131,	. 144, 272, 281, 371
\pgfpageslogicalpageoptio	ons 132, 151, 158-	\textheight 389
$\dots \dots $	161, 219, 226-	\textsc $192, 208, 375, 377$
\pgfpagesphysicalpageopti	ons 228, 230, 231,	\texttt 145, 371
	409, 416, 417, 435	$\t 324,$
\pgfpagesuselayout . 481	researchquestions	331, 339, 346, 354
\pgfphysicalheight . 478	(environment) $\underline{133}$	\theenumi 292
\pgfphysicalwidth . 478	\Roman 192, 194,	\thepaper 258, 383
\pgfpoint . 458-473, 478	197, 292, 375,	\thepapertitle $259, 384$
\pgfsetlinewidth 456	377, 378, 381, 383	\thispagestyle
\pgfusepath 457, 474		. 14, 188, 205, 386
\place 70	${f S}$	\tiny 429, 430
\presetkeys 413	\section 288	U
\prettylist 90	\selectfont 9, 10	
	\setcounter $169, 363-$	\usepackage 57 \usetikzlibrary 162
\ProcessOptions . 2,	370, 372, 401–404	usecikziibiary 102
56, 78, 111, 130, 434	\setkautitlefont . $2, \overline{7}$	${f v}$
\ProcessOptionsX	\setkeys . 8, 11, 154,	\value 363-
156, 224, 414	190, 206, 222, 371	366, 372, 401–404
\providecommand $258, 259$	\setlength 439, 440	\vphantom
<b>.</b>	\sffamily 430	25, 30, 41, 48, 211
${f R}$	\stepcounter	\vspace 389
\read 270	. 189, 200, 214, 372	
\reader $268-271$	\string 145, 371, 378, 381	$\mathbf{W}$
\readmacro 270	\subject $\underline{58}$	\WithSuffix 203
\relax 2,	\subsection 294, 378	
56, 78, 111, 130,	\supervisor $\underline{72}$	$\mathbf{X}$
190, 206, 261, 434		\x 91, 93, 95, 99, 101, 104
\reprintedname	${f T}$	\xi 91-94, 97
$\dots 222, 235, 244$	\textbf 292	\xspace 146