

The KITposter package^{*}

Karlsruhe Institute of Technology

as of October 1st, 2025

Contents

1	Introduction	1
2	Package strategy and general usage	2
3	Main settings and package functionalities	2
3.1	Options for the document class	2
3.2	Language	3
3.3	Input encoding	3
3.4	Fonts	3
3.5	Typography	4
3.6	Page format and work mode	4
3.7	Colour	4
3.8	Tables	4
3.9	Graphics and images	5
3.10	Videos	5
3.11	Poster title	6
3.12	Boxes	6
3.13	Poster foot-line	7
3.14	Hypertext additions	7

1 Introduction

The **KITposter** package assists in preparing poster for Karlsruhe Institute of Technology with **L^AT_EX**. It adapts **L^AT_EX**'s standard **article** class to meet some requirements for poster, loads some packages, necessary for typical poster components and provides the layout.

The package consists of the following files:

- **KITposter.pdf** this documentation
- **KITposter.sty** the **L^AT_EX** style file with the layout adaptations and additional functionalities

^{*}This package was created by le-tex publishing services, Leipzig for Karlsruhe Institute of Technology (KIT). This file has version number v1.02, last revised 2025/03/17.

- `poster.tex` the L^AT_EX master file (to be used as a template or starting point for a poster project)
- logo files `kitlogo_*_rgb.eps/.pdf`.

This documentation is not intended to give an introduction to L^AT_EX. For questions concerning TeX systems/installations or the L^AT_EX mark-up language in general please visit www.tug.org, www.dante.de, uk.tug.org or any other TeX user group worldwide. The essential reference for L^AT_EX is *Mittelbach F., Fischer U. (2023) The L^AT_EX Companion. 3rd edn.*, but there are many other good books delivering insight into L^AT_EX.

2 Package strategy and general usage

We suggest to employ a recent TeX installation: the most important distributions, T_EX Live, MiK_TE_X/proT_EXt and MacT_EX, all provide at least 2024 versions. But older versions should (in principle) work as well.

KITposter tries to benefit as far as possible from the widely-used L^AT_EX standard classes and standard packages.¹ To learn more about the underlying class and packages we refer to their documentations (try e.g. `texdoc [package name]` at your shell prompt or visit <http://tug.ctan.org>).

KITposter can be used under the nowadays widely-used engines pdfT_EX, LuaT_EX and XeT_EX. The output will be in PDF format, under pdfT_EX optionally as DVI.

KITposter is designed to be used with the font *Arial*/*Helvetica* accepted by KIT's corporate design. Which font is applied also depends on the TeX engine in use. The well-established pdfT_EX requires TeX-installed fonts, and under these one normally has *Helvetica* (though the `arial` package provided by MiK_TE_X is not taken into account). The engines LuaT_EX and XeT_EX usually access OpenType fonts directly, and here, KITposter expects *Arial* or *Helvetica* OTF files to be available. In case that KITposter cannot find the required fonts, it automatically falls back to *TeX Gyre Heros*, an always available standard font in TeX systems, akin to *Helvetica*. For more information, cf. Section 3.4, *Fonts*.

To use the KITposter package, put the above listed files in your working directory, edit `poster.tex` in your preferred text editor and run L^AT_EX as usual. (See the following section for more detailed advises.)

3 Main settings and package functionalities

3.1 Options for the document class

L^AT_EX's document class `article` knows a set of options.

¹If you use only a light installation of your TeX distribution, please make sure that the following packages are installed: `cmmap`, `ragged2e`, `footmisc`, `eqparbox`, `amsmath`, `sansmathfonts`, `mathastext`, `xcolor`, `booktabs`, `colortbl`, `pgfcore`, `media9` (opt.), `zref-abspage`, `caption`, `sidecap`, `crop`, `hyperref`.

The following options should *not* be used together with `KITposter`: `a4paper`, `a5paper`, `b5paper`, `letterpaper`, `legalpaper`, `executivepaper`, `10pt`, `11pt`, `12pt`, `twoside`, `titlepage`, `notitlepage`, `onecolumn` und `twocolumn`. (Relevant settings will be made by the `KITposter` package.)

These options however, can be used smoothly: `draft`, `final`, `openright`, `openany`, `leqno`, `fleqn` and `openbib`.

3.2 Language

Because `KITposter` already loads the `babel` package, it is recommended to provide language option(s) together with `\documentclass`. Suitable language options are, e.g., `ngerman`, `UKenglish` or `USenglish`. (Note that `KITposter` itself passes `ngerman` as fallback language to the `babel` package anyway.)

3.3 Input encoding

Since 2018, the common TeX distributions select the nowadays wide-spread UTF-8 encoding as the standard encoding for `pdflatex` (what was already the case for `lualatex` and `xelatex`). An alternative input encoding can be declared in `poster.tex` by engaging the `inputenc` package with a respective option.

3.4 Fonts

Arial or *Helvetica* is used as the main font. With `pdfTeX`, the *Helvetica* variant is taken by default (`helvet` package).

When using one of the engines `LuaTeX` or `XeTeX`, the `fontspec` package is preloaded by `KITposter` in order to employ OpenType fonts. With the help of the `fontspec` package, it is firstly searched for a font with name “Arial”, then for one with name “Helvetica”.²

If the `helvet` package is not found or if the respective OTF font files are not found, then the TeX font *TeX Gyre Heros* is called as fallback; *TeX Gyre Heros* is a free variant of Helvetica that is TeX-installed on every recent TeX system as well as available as OTF.

The fallback font *TeX Gyre Heros* can also be selected directly via package option `heros` “`heros`”. In addition, when using OpenType fonts, one can avoid searching for `helvet` *Arial* with the package option “`helvet`”.

Please note that no serif font is used; therefore `KITposter` does not make a difference between `\rmfamily` and `\sffamily` (or between `\textrm{...}` and `\textsf{...}`).

As typewriter font, *Courier* is selected; fallback is the similar TeX font *TeX Gyre cursor* *Cursor*. Package option “`cursor`” forces the use of *TeX Gyre Cursor*.

²If no fonts with name “Arial” or “Helvetica” can be found, there will be an extra search in each case to find certain, `./fonts/`-locally stored font files. This can especially be useful when employing `XeTeX` on Overleaf. Please adapt file names and paths in `KITposter.sty`, if necessary.

Concerning mathematical formulas, **KITposter** uses *Fira Math* under **LuaTeX** or **XeTeX**, where more or less glyphs are taken from *Arial/Helvetica* or *TeX Gyre Heros*, respectively.

Under **pdfTeX**, the commonly installed sans-serif maths fonts of the TeX system will be used; but with the help of the **mathastext** package, as many as possible glyphs will be taken from the text font (*Helvetica* or *TeX Gyre Heros*). – Due to pre-loading the **amssymb** package, more mathematical symbols are provided. Further packages, like **stmaryrd**, can be loaded in the document preamble, of course. By the way: Under the present set-up, upright Greek uppercase letters are accessible with `\upDelta`,

3.5 Typography

The **textcase** package is pre-loaded in order to get phrases easily formatted in uppercase or lowercase.

The **microtype** package is pre-loaded; see its documentation for possible microtypographic settings.

3.6 Page format and work mode

KITposter produces the poster in format DIN A0. The portrait format is standard; **horizontal** the landscape format is chosen with the option “**horizontal**”.

The final DIN A0 poster can easily be transformed into one of the smaller formats DIN A1, DIN A2, or DIN A3, viz. by using **posterscaled.tex**. In this file, one has to choose the required page format, has to select the landscape format when indicated, and maybe has to adapt the name of the PDF file to be scaled (see the comments in **posterscaled.tex**). Then, **posterscaled.tex** must be processed with **L^AT_EX**.

KITposter knows a special output mode that can be activated with the option **work** “**work**”. It marks the type area so that adjustments of paragraphs and other elements on the page should be easier.

3.7 Colour

The poster layout uses colour. The primary colour is a green, provided as **KITgreen**. Further main colours are **KITcyan**, **KITlightgray** and **KITgray**. Besides that, additional colours are provided as **KITyellow**, **KITorange**, **KITlightgreen**, **KITred**, **KITpurple**, **KITbrown**, **KITcyan**. The primary colour and the main colours can also be used (modestly) within the document; the additional colours are reserved for charts, graphics and special cases. Other colours should not be used.

3.8 Tables

Some standard packages for tables are already loaded: **array**, **multirow**, **bigstrut**, **tabularx**, **booktabs** and **colortbl**.

KIT's corporate design suggests a certain layout for tables that `KITposter` provides with the new environments `{KITtabular}`, `{KITtabular*}` and `{KITtabularx}`. These environments can be used as their original counterparts `{tabular}`, `{tabular*}` and `{tabularx}`, and within their content one can add a `\midrule` command in order to determine where the table head finishes and the body begins; `\midrule` can also be placed directly after the tabular preamble what will produce a table without a head. For the mark-up of row-wise head cells, see the respective examples in the template document `slides.tex`.

3.9 Graphics and images

The standard interface for graphic inclusion is the `\includegraphics` command provided by the `graphicx` package (which is pre-loaded, too).

Remember that the `\graphicspath` command allows to declare one or more folders where the `graphicx` package looks for the image files; thus providing a path with each `\includegraphics` command is not necessary.

KIT-style documents display graphics and images in a “round-angular” style, i.e. they are surrounded by a light grey frame whose lower left and upper right corner are rounded. This is achieved by the new command `\KITincludegraphics` that has to be used as `\includegraphics` itself. But `\KITincludegraphics` provides also an additional `()`-optional argument. Example:

```
\KITincludegraphics(10 20 30 -10)[width=50mm]{testfig}
```

It is a “trim” argument that allows a value like the value of the `trim`-Option of `\includegraphics`, i.e. four space-separated numbers/lengths that determine how much less or more space the graphic/image requires, measured from left, from below, from right and from above.

3.10 Videos

There are different ways to integrate videos in a document.

Fist, one can just provide a link to a video file, which will open in an appropriate viewer by clicking the link in the PDF. A simple example is

```
\href{./video.avi}{\includegraphics{thumbnail}}
```

A more elaborate form of video linking is possible with the `\movie` command that one can get by loading the `multimedia` package in the document preamble. See the `beamer` documentation for more information.

Second, videos can be embedded into the PDF. But note that many PDF viewers are not able, or at least have problems, to play embedded videos. So probably viewers like Xpdf won't work; the viewers Evince and Okular work partially. FoxIt PDF Reader and Adobe Acroread DC do work; for Adobe Acroread DC make sure that in the “Preferences” menu under “Security (enhanced)” the item “Enable Enhanced Security” is not checked! The video formats MP4 and AVI are supposed to work best.

Nowadays, there are essentially two ways to embed videos: with the established `media9` package or with still experimental code published on `stackoverflow`

and/or `overleaf`. `media9` relies on flash player technology which seems more or less deprecated. So, to view videos that are embedded in PDFs with `media9` in FoxIt, flash player has to be installed additionally. On the other hand, Adobe Acroread DC shows `media9` embedded videos without the need of further installations. Try for example,

```
\includemedia[
  width=0.5\linewidth,height=0.5\linewidth,keepaspectratio,
  addresource=video.mp4,
  flashvars={source=video.mp4}
]{VPlayer.swf}
```

See the `media9` package documentation for further information.

The other way to embed videos, the experimental code, is stolen from [stackexchange user Fritz, 2021-04-14](#) and integrated in `KITposter`. The user command is

```
\simplemedia[<options>]{<poster or text>}{<media file>}{MIME type}
```

Possible options are `autoplay` and `showGUI` which can be set `true` or `false`. The first mandatory argument determines the area in which the video is played and can be any text or graphic or a \TeX box in general. The second mandatory argument is for the video file. The last argument should have values like `video/mp4` or `video/avi`. Example:

```
\simplemedia[showGUI=true]{\colorbox{blue}{\hbox to0.5\hsize{\hss
  Video\rule[-20mm]{0mm}{50mm}\hss}}}{video.mp4}{video/mp4}
```

Please note that embedded videos will get lost when scaling a final PDF with the method described in Sect. 3.6.

3.11 Poster title

The title of the poster will be generated by `\maketitle`. The required content should be declared in the document preamble using the following interfaces:

- `\title{...}`,
- `\subtitle{...}`,
- `\author{...}`,
- `\institute{...}`.
- `\instadd{...}` (for additional institute or department information).

The contents of `\institute{...}` and `\instadd{...}` will be placed at the upper right corner in the poster header. Following KIT's corporate design, the main title can optionally be output in green; please use `\textcolor{KITgreen}{...}` to achieve this. Similarly, the subtitle and the authors may appear grey; please use `\textcolor{KITgray}{...}`.

3.12 Boxes

Composition of the main part of the poster is completely free. `KITposter` provides two box environments: Boxes with a grey background and green font/foreground colour, `{boxgray}`, and those with a green background and white font/foreground colour, `{boxgreen}`. These box environments know two mandatory arguments:

one for a headings of level 1 und one for a heading of level 2; but these arguments may remain empty, too.

You can put three of the boxes side by side. In order to get side-by-side boxes with exactly the same height, the environments provide an optional argument to prescribe the desired height.

Furthermore, `KITposter` provides the environments `{boxgray2}`, `{boxgray3}` and `{boxgray4}` (and similarly `{boxgreen2}`, `{boxgreen3}` and `{boxgreen4}`), which have approximately the double, triple or quadruple width of the simple versions. (So of course, `{boxgray4}` and `{boxgreen4}` fit only with the landscape poster format.)

3.13 Poster foot-line

In the footer of the poster, one can add in free composition e.g. logos, contact information, additional URLs or QR codes, and other hints or notes. The corresponding macro is `\footline{...}`; it must be used in the document preamble (or at least before `\maketitle`).

3.14 Hypertext additions

The `hyperref` package is loaded, too. Besides the already made settings in `KITposter`, one can activate or deactivate further features by using the `\hypersetup` interface in the document preamble.

Happy T_EXing!

le-tex, publishing services, Leipzig
[Questions and comments to: giovanni at le-tex.de]