The HEP-FONT package*

Latin Modern and New Computer Modern text fonts with numeral styles and Greek letters

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Abstract

The HEP-FONT package sets up the text fonts for the HEP package suite. It keeps or sets the document font size, switches between serif and sans-serif documents, chooses lining or oldstyle numerals, and provides Greek letters in text. With pdfLaTeX it uses latin modern (LM) extended by computer modern (CM) shapes, with LuaLaTeX and XeLaTeX it uses new computer modern (NCM). The package configures text only; the matching math fonts are provided by the HEP-MATH-FONT package.

The package is loaded using `\usepackage{hep-font}`. When the HEP-MATH-FONT package is used as well, it has to be loaded after this package.

1 Options

`size` The `size=`⟨*size*⟩ option sets the document font size, for example `size=10.5pt`, using the FONTSIZE package. The default `size=default` keeps the font size chosen by the document class. Sizes that are not positive point sizes are reported as errors.

`sans` `serif` The `sans` option switches the main text to the sans-serif font, the default `serif` option keeps the serif font.

`oldstyle` `lining` The `oldstyle` option switches to oldstyle numerals such as 123 in text mode instead of the default lining numerals such as 123. Numerals in math mode are always lining.

2 Fonts

The fonts depend on the engine, see table 1.

For pdfLaTeX the `T1` and LGR font encodings are loaded with the FONTENC package [1], together with the INPUTENC package [2] and the `utf8` option. The LM fonts are loaded using the CFR-LM package [3], which extends the LaTeX new font selection scheme with the NFSSEXT-CFR package [4]. Some restrictions of CM fonts are lifted with the FIX-CM package [5] and the text companion fonts are loaded [6].

`\textsc` Bold **Small Caps** and sans-serif Small Caps are taken from the CM fonts [7], using the SANSMATHFONTS [8], HFOLDSTY [9] and SLANTSC [10] packages.

`\textui` A sans-serif upright italic font is provided using the SANSMATHFONTS package [8].

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Role	pdfLaTeX	LuaLaTeX and XeLaTeX
Text	Latin modern (LM) via CFR-LM	New computer modern (NCM) roman, sans and mono
Greek	CB Greek via local Greek (LGR)	NCM
Small caps	Computer modern (CM) bold and sans small caps	NCM

Table 1: Text fonts used by the different engines.

For LuaLaTeX and XeLaTeX the NCM text fonts are loaded with the FONTSPEC package [11]. Below 9 pt the optical sizes designed for 8 pt are used. Slanted roman and typewriter text uses synthetic slanting, as the FONTSETUP package [12] did previously. The uncial font is available via `\uncial` and `\textuncial{`⟨*text*⟩`}`.

`\uncial`
`\textuncial`

In both cases the MICROTYPE [13] optimisations are activated.

3 Macros

The numeral style can be changed locally with `\textl{`⟨*text*⟩`}` for lining, `\texto{`⟨*text*⟩`}` for oldstyle, `\textp{`⟨*text*⟩`}` for proportional and `\textt{`⟨*text*⟩`}` for tabular numerals. The combinations are available as `\textpl`, `\textpo`, `\texttl` and `\textto`. The corresponding declarations are `\lstyle`, `\ostyle`, `\pstyle`, `\tstyle`, `\plstyle`, `\postyle`, `\tlstyle` and `\tostyle`.

`\textl`
`\texto`
`\textp`
`\textt`
`\textpl`
`\textpo`
`\texttl`
`\textto`
`\lstyle`
`\ostyle`
`\pstyle`
`\tstyle`

The `\tmstyle` declaration selects the usual fixed-width typewriter font and `\tvstyle` selects the proportional LM typewriter font. With LuaLaTeX and XeLaTeX the proportional typewriter font does not contain Greek letters.

`\tmstyle`
`\tvstyle`

The `\codestyle` declaration selects fixed-width typewriter with lining numerals and is used for verbatim text. The `\code{`⟨*code*⟩`}` macro typesets its argument verbatim in this style.

`\codestyle`
`\code`

Greek letters such as `\alpha` and `\Gamma` typeset text Greek outside of math, using the ALPHABETA package [14], e.g. αβΓ. In math mode they keep their usual meaning. Hyphenation and other language settings are left to language packages.

`\alpha`

Entries of the table of contents, tabulars and equation numbers use tabular numerals, which are lining or oldstyle like the numerals of the text. Tabulars are covered whether they are inside a float or not, while float captions keep the proportional numerals of the text. With XeLaTeX the regular and italic serif faces of NCM keep proportional oldstyle numerals, since the order of their OpenType features cannot be changed there. The equation counter itself is not changed, so that references and hyperlinks are unaffected.

`\tableofcontents`

The macros can be used in sectioning titles together with the HYPERREF package [15]. Its bookmarks keep the argument of the text commands such as `\textl` and ignore the declarations such as `\ostyle`, and the Greek letters become Unicode characters. In bookmarks and document information `\code` keeps its argument as it is, including underscores, but as a verbatim command it cannot be used in sectioning titles.

References

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