LaTeX support for Lato
Version 3.0

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1 Introduction

Lato is a sans-serif typeface family designed in the Summer 2010 by Warsaw-based designer Łukasz Dziedzic [1] for the tyPoland foundry.

Lato consists of nine weights (plus corresponding italics) and supports more than 100 Latin-based languages, more than 50 Cyrillic-based languages as well as Greek and IPA phonetics.

The font is available at its web site [2] as TTF-flavored OpenType files licensed under the OFL version 1.1 [3].

This package provides support for this font in LaTeX, including XeLaTeX and LuaLaTeX. It includes the original OpenType fonts, as well as Type 1 versions, converted for this package using FontForge [4] and cfftot1 [5] for full support with LaTeX and Dvips.

2 Installation

These directions assume that your TeX distribution is TDS-compliant.

Once the `lato.zip` archive extracted:

1. Copy `doc/`, `fonts/`, and `tex/` directories to your `texmf/` directory (either your local or global `texmf/` directory).
2. Run `mktexlsr` to refresh the file name database and make TeX aware of the new files.
3. Run `updmap --enable Map lato.map`[1] to make Dvips, dvipdf and TeX aware of the new fonts.

Note that this package requires the following packages to work:

- `fontaxes`
- `fontspec` (for XeLaTeX/LuaLaTeX support)
- `ifluatex`
- `ifxetex`
- `xkeyval`

3 Usage

3.1 Calling Lato

You can use the Lato font in a LaTeX document by adding the command

```
\usepackage{lato}
```

to the preamble. The package supplies the `\lato` command to switch the current font to Lato.

[1] Starting with TeXLive 2017, use `updmap-user` for a local installation, or `updmap-sys` for a global one.

3.2 Options

3.2.1 Lato as default (sans-serif) font

You can set LaTeX to use Lato as standard font throughout the whole document by passing the `default` option to the package:

```
\usepackage[default]{lato}
```

To set Lato as default sans-serif only, use the `defaultsans` option:

```
\usepackage[defaultsans]{lato}
```

3.2.2 OpenType vs. Type 1

Depending on the LaTeX rendering engine used, the package will automatically use:

- OpenType fonts with XeLaTeX and LuaLaTeX (the `fontspec` package will be therefore loaded)
- Type 1 fonts with all other LaTeX rendering engines (especially pdfLaTeX)

The package was written to provide same functionalities whatever the TeX rendering engine used. Notice that OpenType fonts supply more typographic features like additional ligatures or stylistic alternatives. The table 1 on the following page describes all OpenType features supported by the Lato font family. Please refer to the `fontspec` package documentation [6] to enable such features in your documents with XeLaTeX or LuaLaTeX.

To force Type 1 fonts with XeLaTeX or LuaLaTeX, use the `type1` option. This may be useful to avoid loading the `fontspec` package.

3.2.3 Font scaling

The font can be up- and downscale by any factor. This can be used to make Lato more friendly when used in company with other type faces, e.g., to adapt the x-height. The package option `scale=`*ratio* will scale the font according to *ratio* (1.0 by default), for example:

```
\usepackage[scale=0.95]{lato}
```

3.2.4 Figure versions

Lato provides two figure styles (see table 2 on page 5):

- *Lining figures*, designed to match the uppercase letters in size and color
- *Old style figures* (also known as text figures), designed to match lowercase letters

Feature	Description	fontspec option
calt	Contextual Alternates	Contextuals=Alternate
case	Case-Sensitive Forms	Letters=Uppercase
dlig	Discretionary Ligatures	Ligatures=Rare
dnom	Denominators	VerticalPosition=Denominator
frac	Fractions	Fractions=On
kern	Kerning	Kerning=On
liga	Standard Ligatures	Ligatures=Common
lnum	Lining Figures	Numbers=Uppercase
mark	Mark Positioning	Diacritics=MarkToBase
numr	Numerators	VerticalPosition=Numerator
onum	Oldstyle Figures	Numbers=Lowercase
ordn	Ordinals	VerticalPosition=Ordinal
pnum	Proportional Figures	Numbers=Proportional
salt	Stylistic Alternates	Style=Alternate
sinf	Scientific Inferiors	VerticalPosition=ScientificInferior
ss01	Stylistic Set 1	Alternate=1
ss02	Stylistic Set 2	Alternate=2
ss03	Stylistic Set 3	Alternate=3
ss04	Stylistic Set 4	Alternate=4
subs	Subscript	VerticalPosition=Inferior
sups	Superscript	VerticalPosition=Superior
tnum	Tabular Figures	Numbers=Monospaced

Table 1: OpenType font features supported by Lato fonts

	Lining figures	Old style figures
Tabular figures	+142 521 458.11 € −21 173.91 $	+142 521 458.11 € −21 173.91 $
Proportional figures	+142 521 458.11 € −21 173.91 $	+142 521 458.11 € −21 173.91 $

Table 2: Figure styles

The `lato` package uses lining figures by default (`lining` option). To select old style figures, use the `oldstyle` option.

Two figure widths are also available:

- *Tabular figures*, which each have the same width
- *Proportional figures*, which vary in width according to their shape

The `lato` package uses tabular figures by default (`tabular` option). To select proportional figures, use the `proportional` option.

Notice that some characters, like math operators in text mode and currency units, will adapt to the select figure width and style combination.

The package also supports and loads the `fontaxes` [7] package. This package supplies macros to individually select figure style and width locally [8].

3.2.5 Encodings

The following LaTeX encodings are supported:

Latin OT1, T1, TS1 (partial)

Cyrillic T2A, T2B, T2C, X2

Greek LGR (monotonic and polytonic)

To use one or another encoding, give the LaTeX name to the `fontenc` package as usual, as in

```
\usepackage[T1]{fontenc}
\usepackage{lato}
```

As usual with OT1 encoded fonts, kerning with accented characters is treated poorly, if at all. Note difference in kerning between these two encoding in table 3 on the following page. It is therefore advised to always use the Lato font family in any encoding than OT1 when typing diacritics.

OT1-encoded	To Ta Té
T1-encoded	To Ta Té

Table 3: Kerning with OT1 and T1 encodings

Font	Series	Shape	OpenType font file
Lato Hairline	ul	n	Lato-Hairline.ttf
Lato Hairline Italic	ul	it (sl)	Lato-HairlineItalic.ttf
Lato Thin	el	n	Lato-Thin.ttf
Lato Light Thin	el	it (sl)	Lato-ThinItalic.ttf
Lato Light	l	n	Lato-Light.ttf
Lato Light Italic	l	it (sl)	Lato-LightItalic.ttf
Lato Regular	m	n	Lato-Regular.ttf
Lato Italic	m	it (sl)	Lato-Italic.ttf
Lato Medium	mb	n	Lato-Medium.ttf
Lato Medium Italic	mb	it (sl)	Lato-MediumItalic.ttf
Lato Semibold	sb	n	Lato-Semibold.ttf
Lato Semibold Italic	sb	it (sl)	Lato-SemiboldItalic.ttf
Lato Bold	b (bx)	n	Lato-Bold.ttf
Lato Bold Italic	b (bx)	it (sl)	Lato-BoldItalic.ttf
Lato Heavy	eb	n	Lato-Heavy.ttf
Lato Heavy Italic	eb	it (sl)	Lato-HeavyItalic.ttf
Lato Black	ub	n	Lato-Black.ttf
Lato Black Italic	ub	it (sl)	Lato-BlackItalic.ttf

Table 4: Available font styles

	Lining figures	Old style figures
Tabular figures	`lato-TLF`	`lato-TOsF`
Proportional figures	`lato-LF`	`lato-OsF`

Table 5: Available NFSS families

3.3 Available weights, shapes and variants

Table 4 on the previous page lists the available font series and shapes with their NFSS classification. Parenthesized combinations are provided via substitutions.

In addition, each font variant combination (figure width/figure style) corresponds to a NFSS family (see table 5).

Samples of the font are available in the `lato-samples.pdf` file.

3.4 Math support

The `lato` package doesn't provide math support. However the `mdsymbol` package [9] provides mathematical symbol fonts which fit very well with Lato. In addition, the `mathspec` [10] package (for XeLaTeX or LuaLaTeX engines) or the `mathastext` [11][2] package (for other LaTeX engines) can be called to use Lato as math font.

4 Known bugs and improvements

Please send bug reports and suggestions about the Lato LaTeX support to Mohamed El Morabity.

4.1 Compatibility with previous versions

4.1.1 Legacy `fla` family

Previous versions of the package used to provide `fla` as default NFSS family for Lato, and the corresponding `\flafamily` switch command. Such family and macro are still available in newer package versions. In particular, the `fla` family is now an alias for the `lato-TLF` one.

4.1.2 Smallcaps

Since the Lato font family doesn't provide yet "real" smallcaps, faked ones were supplied by previous versions of the `lato` package (by scaling down uppercase letters), with a very poor result. Furthermore, there's no convenient way to generate fake smallcaps with XeTeX or LuaTeX engines and native OpenType fonts.

[2] In particular with the LGR option to get Greek letters from the Lato fonts

For these reasons, faked small caps are no longer provided, starting with version 3.0 of the `lato` package. Anyway LaTeX should automatically substitute missing smallcap shapes by normal ones.

5 License

This package is released under the LaTeX project public license, either version 1.3c or above [12]. Anyway both OpenType and Type 1 files are delivered under the Open Font License version 1.1 [3].

References

[1] http://www.lukaszdziedzic.eu/

[2] http://www.latofonts.com/

[3] http://scripts.sil.org/OFL_web

[4] https://fontforge.github.io/

[5] https://www.lcdf.org/type/cfftot1.1.html

[6] https://mirrors.ctan.org/macros/xetex/latex/fontspec/fontspec.pdf

[7] https://www.ctan.org/pkg/fontaxes

[8] http://mirrors.ctan.org/macros/latex/contrib/fontaxes/fontaxes.pdf

[9] https://www.ctan.org/pkg/mdsymbol

[10] https://www.ctan.org/pkg/mathspec

[11] https://www.ctan.org/pkg/mathastext

[12] http://www.latex-project.org/lppl/lppl-1-3c.html