\LaTeX{} support for Lato

Version 3.3

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Contents

1 Introduction 1
2 Installation 2
3 Usage 2
   3.1 Calling Lato 2
   3.2 Options 3
      3.2.1 Lato as default (sans-serif) font 3
      3.2.2 OpenType vs. Type 1 3
      3.2.3 Font scaling 3
      3.2.4 Figure versions 3
      3.2.5 Encodings 5
   3.3 Available weights, shapes and variants 7
   3.4 Math support 7
4 Known bugs and improvements 7
   4.1 Compatibility with previous versions 7
      4.1.1 Legacy \texttt{f1a} family 7
      4.1.2 Smallcaps 7
5 License 8

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 family 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 family in \LaTeX, including \TeXeX and \Lua\TeX. It includes the original OpenType fonts, as well as Type 1 versions, converted for this package using FontForge [4] for full support with \TeXeX and Dvips.

2 Installation

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

Once the lato.tds.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-user --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 \TeXeX/Lua\TeX 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}

\lato

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

$^1$Use the updmap-sys command instead for a global installation.
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:
\begin{verbatim}
\usepackage[default]{lato}
\end{verbatim}

To set Lato as default sans-serif only, use the defaultsans option:
\begin{verbatim}
\usepackage[defaultsans]{lato}
\end{verbatim}

3.2.2 OpenType vs. Type 1

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

- OpenType fonts with \TeX{}L\LaTeX{} and Lua\TeX{} (the fontspec package will be therefore loaded)
- Type 1 fonts with all other \LaTeX{} rendering engines (especially pdf\LaTeX{})

The package was written to provide same features whatever the \TeX{} rendering engine used. Notice that OpenType fonts supply more typographic features like additional ligatures or stylistic alternatives. The table 1 describes all OpenType features supported by the Lato font family. Please refer to the fontspec package documentation to enable such features in your documents with \TeX{}L\LaTeX{} or Lua\TeX{}.

To force Type 1 fonts with \TeX{}L\LaTeX{} or Lua\LaTeX{}, 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 downscaled 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 (or scaled=ratio) will scale the font according to ratio (1.0 by default), for example:
\begin{verbatim}
\usepackage[scale=0.95]{lato}
\end{verbatim}

3.2.4 Figure versions

Lato provides two figure styles (see table 2):

- \textit{Lining figures}, designed to match the uppercase letters in size and color
- \textit{Old style figures} (also known as text figures), designed to match lowercase letters
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>fontspec option</th>
</tr>
</thead>
<tbody>
<tr>
<td>calt</td>
<td>Contextual Alternates</td>
<td>Contextuals=Alternate</td>
</tr>
<tr>
<td>case</td>
<td>Case-Sensitive Forms</td>
<td>Letters=Uppercase</td>
</tr>
<tr>
<td>dlig</td>
<td>Discretionary Ligatures</td>
<td>Ligatures=Rare</td>
</tr>
<tr>
<td>dnom</td>
<td>Denominators</td>
<td>VerticalPosition=Denominator</td>
</tr>
<tr>
<td>frac</td>
<td>Fractions</td>
<td>Fractions=On</td>
</tr>
<tr>
<td>kern</td>
<td>Kerning</td>
<td>Kerning=On</td>
</tr>
<tr>
<td>liga</td>
<td>Standard Ligatures</td>
<td>Ligatures=Common</td>
</tr>
<tr>
<td>lnum</td>
<td>Lining Figures</td>
<td>Numbers=Uppercase</td>
</tr>
<tr>
<td>mark</td>
<td>Mark Positioning</td>
<td>Diacritics=MarkToBase</td>
</tr>
<tr>
<td>numr</td>
<td>Numerators</td>
<td>VerticalPosition=Numerator</td>
</tr>
<tr>
<td>onum</td>
<td>Oldstyle Figures</td>
<td>Numbers=Lowercase</td>
</tr>
<tr>
<td>ordn</td>
<td>Ordinals</td>
<td>VerticalPosition=Ordinal</td>
</tr>
<tr>
<td>pnum</td>
<td>Proportional Figures</td>
<td>Numbers=Proportional</td>
</tr>
<tr>
<td>salt</td>
<td>Stylistic Alternates</td>
<td>Style=Alternate</td>
</tr>
<tr>
<td>sinf</td>
<td>Scientific Inferiors</td>
<td>VerticalPosition=ScientificInferior</td>
</tr>
<tr>
<td>ss01</td>
<td>Stylistic Set 1</td>
<td>Alternate=1</td>
</tr>
<tr>
<td>ss02</td>
<td>Stylistic Set 2</td>
<td>Alternate=2</td>
</tr>
<tr>
<td>ss03</td>
<td>Stylistic Set 3</td>
<td>Alternate=3</td>
</tr>
<tr>
<td>ss04</td>
<td>Stylistic Set 4</td>
<td>Alternate=4</td>
</tr>
<tr>
<td>subs</td>
<td>Subscript</td>
<td>VerticalPosition=Inferior</td>
</tr>
<tr>
<td>sups</td>
<td>Superscript</td>
<td>VerticalPosition=Superior</td>
</tr>
<tr>
<td>tnum</td>
<td>Tabular Figures</td>
<td>Numbers=Monospaced</td>
</tr>
</tbody>
</table>

Table 1: OpenType font features supported by Lato fonts
Lining figures | Old style figures
---|---
Tabular figures | +142 521 458.11 € | +142 521 458.11 € |
 | -21 173.91 $ | -21 173.91 $ |
Proportional figures | +142 521 458.11 € | +142 521 458.11 € |
 | -21 173.91 $ | -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 [5] package. This package supplies macros to individually select figure style and width locally.

### 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. It is therefore advised to always use the Lato font family in any encoding than OT1 when typing diacritics.
## Table 3: Kerning with OT1 and T1 encodings

<table>
<thead>
<tr>
<th>Font Style</th>
<th>Basic Font</th>
<th>Italic Font</th>
<th>Shape</th>
<th>Font File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lato Hairline</td>
<td>ul</td>
<td>n</td>
<td></td>
<td>Lato-Hairline.ttf</td>
</tr>
<tr>
<td>Lato Hairline Italic</td>
<td>ul</td>
<td>it (sl)</td>
<td></td>
<td>Lato-HairlineItalic.ttf</td>
</tr>
<tr>
<td>Lato Thin</td>
<td>el</td>
<td>n</td>
<td></td>
<td>Lato-Thin.ttf</td>
</tr>
<tr>
<td>Lato Light Thin</td>
<td>el</td>
<td>it (sl)</td>
<td></td>
<td>Lato-ThinItalic.ttf</td>
</tr>
<tr>
<td>Lato Light</td>
<td>l</td>
<td>n</td>
<td></td>
<td>Lato-Light.ttf</td>
</tr>
<tr>
<td>Lato Light Italic</td>
<td>l</td>
<td>it (sl)</td>
<td></td>
<td>Lato-LightItalic.ttf</td>
</tr>
<tr>
<td>Lato Regular</td>
<td>m</td>
<td>n</td>
<td></td>
<td>Lato-Regular.ttf</td>
</tr>
<tr>
<td>Lato Italic</td>
<td>m</td>
<td>it (sl)</td>
<td></td>
<td>Lato-Italic.ttf</td>
</tr>
<tr>
<td>Lato Medium</td>
<td>mb</td>
<td>n</td>
<td></td>
<td>Lato-Medium.ttf</td>
</tr>
<tr>
<td>Lato Medium Italic</td>
<td>mb</td>
<td>it (sl)</td>
<td></td>
<td>Lato-MediumItalic.ttf</td>
</tr>
<tr>
<td>Lato Semibold</td>
<td>sb</td>
<td>n</td>
<td></td>
<td>Lato-Semibold.ttf</td>
</tr>
<tr>
<td>Lato Semibold Italic</td>
<td>sb</td>
<td>it (sl)</td>
<td></td>
<td>Lato-SemiboldItalic.ttf</td>
</tr>
<tr>
<td>Lato Bold</td>
<td>b (bx)</td>
<td>n</td>
<td></td>
<td>Lato-Bold.ttf</td>
</tr>
<tr>
<td>Lato Bold Italic</td>
<td>b (bx)</td>
<td>it (sl)</td>
<td></td>
<td>Lato-BoldItalic.ttf</td>
</tr>
<tr>
<td>Lato Heavy</td>
<td>eb</td>
<td>n</td>
<td></td>
<td>Lato-Heavy.ttf</td>
</tr>
<tr>
<td>Lato Heavy Italic</td>
<td>eb</td>
<td>it (sl)</td>
<td></td>
<td>Lato-HeavyItalic.ttf</td>
</tr>
<tr>
<td>Lato Black</td>
<td>ub</td>
<td>n</td>
<td></td>
<td>Lato-Black.ttf</td>
</tr>
<tr>
<td>Lato Black Italic</td>
<td>ub</td>
<td>it (sl)</td>
<td></td>
<td>Lato-BlackItalic.ttf</td>
</tr>
</tbody>
</table>

## Table 4: Available font styles

### 3.3 Available weights, shapes and variants

Table 4 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 [6] provides mathematical symbol fonts which fit very well with Lato. In addition, the `mathspec` [7] package (for Xe\TeX or Lua\TeX engines) or the `mathastext` [8] package (for other \TeX engines) can be called to use Lato as math font.

### 4 Known bugs and improvements

Please send bug reports and suggestions about the Lato \TeX 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 Xe\TeX or Lua\TeX engines and native OpenType fonts.

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2In 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 \texttt{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 [9]. Anyway both OpenType and Type 1 files are delivered under the Open Font License version 1.1 [3].

References

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