

Support for the DejaVu TrueType fonts and Math OpenType font

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1 Introduction

Fooflamitk

The DejaVu fonts are modifications of the Bitstream Vera fonts designed for greater coverage of Unicode, as well as providing more styles. The Bitstream Vera family was limited mainly to the characters in the Basic Latin and Latin-1 Supplement portions of Unicode, roughly equivalent to ISO/IEC 8859-15, but was released with a license that permitted changes. The DejaVu fonts project was started with the aim to “provide a wider range of characters ... while maintaining the original look and feel through the process of collaborative development”. The development of the fonts is done by many contributors, and is organized through a wiki and a mailing list. [\[2\]](#)

A brief overview:

- Math fonts: TeXGyre DejaVu Math Regular, created by the Polish T_EX User group GUST.
- Three text families (regular, italic, bold, bold italic) coming from the original Bitstream Vera.

The package `dejavu-otf` supports all families with specific optional arguments:

| <i>name</i> | <i>value</i> | <i>meaning</i> |
|------------------------------|-------------------------|--|
| <code>mono</code> | <code>true/false</code> | use only the DejaVu Sans Mono |
| <code>serif</code> | <code>true/false</code> | use only the DejaVu Serif |
| <code>sans</code> | <code>true/false</code> | use only the DejaVu Sans |
| <code>math</code> | <code>true/false</code> | use only the T _E X Gyre DejaVu Math |
| <code>RM</code> | <code>code</code> | options for DejaVu Serif |
| <code>SS</code> | <code>code</code> | options for DejaVu Sans |
| <code>TT</code> | <code>code</code> | options for DejaVu Sans Mono |
| <code>MM</code> | <code>code</code> | options for TeXGyre DejaVu Math |
| <code>DefaultFeatures</code> | <code>code</code> | for all font styles |

Except `math` all fonts are preset with `Scale=0.92`. For this documentation we use instead:

```
\usepackage[TT={Scale=0.88,FakeStretch=0.9},
             SS={Scale=0.9},
             RM={Scale=0.9},
             DefaultFeatures={Ligatures=TeX}]{dejavu-otf} % support opentype DejaVu fonts
```

The standard font families `rm`, `sf`, and `tt` can be used as usual for any L^AT_EX engine. By default the fonts are defined by their symbolic name. As an alternative you can load the package with the option `usefilenames`.

```
\usepackage[usefilenames=true,
             TT={Scale=0.88,FakeStretch=0.9},
             SS={Scale=0.9},
             RM={Scale=0.9},
             DefaultFeatures={Ligatures=TeX}]{dejavu-otf} % supports also opentype math fonts
```

Then all definitions uses the extension `.ttf` (roman, sans serif, mono) and `.otf` (math) for the filenames of the fonts:

```
DejaVuSans-BoldOblique.ttf
DejaVuSans-Bold.ttf
DejaVuSansCondensed-BoldOblique.ttf
DejaVuSansCondensed-Bold.ttf
DejaVuSansCondensed-Oblique.ttf
DejaVuSansCondensed.ttf
DejaVuSans-ExtraLight.ttf
```

DejaVuSansMono-BoldOblique.ttf
 DejaVuSansMono-Bold.ttf
 DejaVuSansMono-Oblique.ttf
 DejaVuSansMono.ttf
 DejaVuSans-Oblique.ttf
 DejaVuSans.ttf
 DejaVuSerif-BoldItalic.ttf
 DejaVuSerif-Bold.ttf
 DejaVuSerifCondensed-BoldItalic.ttf
 DejaVuSerifCondensed-Bold.ttf
 DejaVuSerifCondensed-Italic.ttf
 DejaVuSerifCondensed.ttf
 DejaVuSerif-Italic.ttf
 DejaVuSerif.ttf
 texgyredejavu-math.otf

The condensed and extra-light versions are defined by `\newfontfamily` and can be accessed by the macros:

`\DejaVuSerifCondensed`
`\DejaVuSansCondensed`
`\DejaVuSansLight`

2 Text examples

The DejaVu fonts have no Small Caps and no oldstyle figures!

The basic text family is `DejaVuSerif`, with the usual four variants—regular, italic, bold, and bold italic.

For £45, almost anything can be found floating in fields.
 ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890
 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres
 often naïve vis-à-vis the dæmonic phœnix's official rôle in
 fluffy soufflés? Sphinx of black quartz, judge my vow.
 0123456789.

DejaVu Serif

For £45, almost anything can be found floating in fields.
;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890
JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres
often naïve vis-à-vis the dæmonic phœnix's official rôle in
fluffy soufflés? 0123456789.

DejaVu Serif Italic

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés? Sphinx of black quartz, judge my vow. 0123456789.

DejaVu Serif Bold

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés? 0123456789.

DejaVu Serif BoldItalic

For £45, almost anything can be found floating in fields.
¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890
JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres
often naïve vis-à-vis the dæmonic phoenix's official rôle in
fluffy soufflés?

DejaVu Sans

*For £45, almost anything can be found floating in fields.
¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890
JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres
often naïve vis-à-vis the dæmonic phoenix's official rôle in
fluffy soufflés?*

DejaVu Sans Italic

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés?
For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés?

DejaVu Sans Bold

DejaVu Sans BoldItalic

For £45, almost anything can be found floating in fields.
¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! —
¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve
vis-à-vis the dæmonic phoenix's official rôle in fluffy
soufflés?

DejaVu Sans Mono

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! – ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Sans Mono Italic

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! – ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Sans Mono Bold

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! – ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Sans Mono Bold Italic

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Serif Condensed

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Serif Condensed Italic

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Serif Condensed Bold

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Serif Condensed Bold Italic

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? DeJaVu Sans Condensed

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés?

DejaVu Sans Condensed Italic

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés?

DejaVu Sans Condensed Bold

For £45, almost anything can be found floating in fields. ;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phoenix's official rôle in fluffy soufflés?

DejaVu Sans Condensed Bold Italic

For £45, almost anything can be found floating in fields.
;THE DAZED BROWN FOX QUICKLY GAVE 12345-67890
JUMPS! — ;But aren't Kafka's Schloß and Æsop's Œuvres
often naïve vis-à-vis the dæmonic phoenix's official rôle in
fluffy soufflés?

DejaVu Sans Light

3 Math examples

There is only the regular version of the math font `\mathnormal`. With running \LaTeX it is possible to fake the fonts for a bold version:

```
\setmathfont{texgyredejavu-math.otf}[AutoFakeBold=1.6,\DejaVuMM@features,version=normal]
```

Here's some text. And here's some math:

```
\[
  \phi(x)=\int_{-\infty}^x e^{-x^2/2}
\]
```

And now bold math:

```
\boldmath % works only for xelatex
```

```
\[
  \phi(x)=\int_{-\infty}^x e^{-x^2/2}
\]
```

```
\unboldmath
```

Euro and copyright symbols are available: `\texteuro` `\textcopyright`.

Here's some text. And here's some math:

$$\phi(x) = \int_{-\infty}^x e^{-x^2/2}$$

And now bold math:

$$\phi(x) = \int_{-\infty}^x e^{-x^2/2}$$

Euro and copyright symbols are available: € ©.

$$f(x) = 13 \int f(x) = 13 \int$$

4 Closing

The font list of this documentation is:

| name | type | encoding | emb | sub | uni | object | ID |
|--|------------------------|------------|-----|-----|-----|--------|----|
| JRMSDU+DejaVuSerif | CID TrueType | Identity-H | yes | yes | yes | 5 | 0 |
| TCERIQ+DejaVuSerif-Bold | CID TrueType | Identity-H | yes | yes | yes | 7 | 0 |
| XQCLIF+DejaVuSerif-Italic | CID TrueType | Identity-H | yes | yes | yes | 18 | 0 |
| IROYBD+DejaVuSansMono | CID TrueType | Identity-H | yes | yes | yes | 20 | 0 |
| RWHWNP+DejaVuSansMono-Oblique | CID TrueType | Identity-H | yes | yes | yes | 22 | 0 |
| TMSQJX+DejaVuSerif-BoldItalic | CID TrueType | Identity-H | yes | yes | yes | 30 | 0 |
| XIPATX+DejaVuSans | CID TrueType | Identity-H | yes | yes | yes | 32 | 0 |
| HDQVCR+DejaVuSans-Oblique | CID TrueType | Identity-H | yes | yes | yes | 34 | 0 |
| BTQIRD+DejaVuSans-Bold | CID TrueType | Identity-H | yes | yes | yes | 36 | 0 |
| YGOMFT+DejaVuSans-BoldOblique | CID TrueType | Identity-H | yes | yes | yes | 38 | 0 |
| ZYFRPQ+DejaVuSansMono-Bold | CID TrueType | Identity-H | yes | yes | yes | 43 | 0 |
| QMYFOT+DejaVuSansMono-BoldOblique | CID TrueType | Identity-H | yes | yes | yes | 45 | 0 |
| EWXURB+DejaVuSerifCondensed | CID TrueType | Identity-H | yes | yes | yes | 47 | 0 |
| OSWEDO+DejaVuSerifCondensed-Italic | CID TrueType | Identity-H | yes | yes | yes | 49 | 0 |
| JBWYPB+DejaVuSerifCondensed-Bold | CID TrueType | Identity-H | yes | yes | yes | 51 | 0 |
| TOBYHQ+DejaVuSerifCondensed-BoldItalic | CID TrueType | Identity-H | yes | yes | yes | 53 | 0 |
| OAFQFT+DejaVuSansCondensed | CID TrueType | Identity-H | yes | yes | yes | 55 | 0 |
| JMRGGL+DejaVuSansCondensed-Oblique | CID TrueType | Identity-H | yes | yes | yes | 60 | 0 |
| HWFEAI+DejaVuSansCondensed-Bold | CID TrueType | Identity-H | yes | yes | yes | 62 | 0 |
| UMLQMA+DejaVuSansCondensed-BoldOblique | CID TrueType | Identity-H | yes | yes | yes | 64 | 0 |
| TFOUDY+DejaVuSans-ExtraLight | CID TrueType | Identity-H | yes | yes | yes | 66 | 0 |
| NTYUHF+TeXGyreDejaVuMath-Regular | Identity-H CID Type 0C | Identity-H | yes | yes | yes | 71 | 0 |
| SIWXXM+LinLibertine0 | Identity-H CID Type 0C | Identity-H | yes | yes | yes | 80 | 0 |

References

- [1] freedesktop.org. *Fontconfig. A library for configuring and customizing font access.* June 15, 2016. url: <https://www.freedesktop.org/wiki/Software/fontconfig/> (visited on 03/18/2017).
- [2] Štěpán Roh and other. *DejaVu Fonts.* Sept. 29, 2017. url: https://en.wikipedia.org/wiki/DejaVu_fonts.

- [3] unknown. *DejaVu Fonts*. Sept. 29, 2017. url: <https://dejavu-fonts.github.io>.
- [4] WIKIPEDIA. *DejaVu*. Oct. 19, 2016. url: <https://en.wikipedia.org/wiki/Lucida> (visited on 04/03/2017).
- [5] WIKIPEDIA. *List of typographic features*. Feb. 21, 2017. url: https://en.wikipedia.org/wiki/List_of_typographic_features (visited on 03/24/2017).