

The Baskervaldx package

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The fonts included in this package are extensions and modifications of regular and bold weights of the baskervald fonts, which serve as a replacement for Baskerville. The changes provide small caps in all four styles, and a total of four ordinary figure types {tabular, proportional}×{lining, oldstyle} in each of those styles. The xheights of the two upright shapes has been increased from 415em to 432em to better match the Italic and other subsidiary fonts, and the ascender sizes have been shortened to avoid height problems. Many new accented glyphs have been added so that all characters in T1 encoding are available except for the Sami characters Eng and eng. This left three unused slots in T1, and those have been filled with three ligatures f_j, f_f_j and c_t, only the first two of which are activated by default, along with the usual f-ligatures f_i, f_l, f_f_i, f_f_l, f_f. (In LY1, an additional two ligatures are available: s_p and s_t, also not activated by default.)

The package has the following options:

- scaled=1.02 would magnify all Baskervaldx fonts by the factor 1.02.
- lining (or lf) chooses lining figure style. This is the default.
- osf (or oldstyle) sets the figure style to oldstyle rather than lining for text. (Math mode will in any case use tabular lining figures.)
- tabular sets the figure alignment to fixed width rather than proportional. This is the default.
- proportional sets the figure alignment to depend on the figure rather than be fixed width.
- sups mandates the use of superior figures from Baskervaldx as footnote and endnote markers, replacing L^AT_EX's default method. For greater control, use the superiors package.
- swash determines which additional ligatures will be used throughout text in the document. As mentioned above, in both T1 and LY1 encodings (the only ones supported), the following are always used:
 - f_f (ff) replaces ff.
 - f_i (fi) replaces fi.
 - f_l (fl) replaces fl.
 - f_f_i (ffi) replaces ffi.
 - f_f_l (ffl) replaces ffl.
 - f_j (fj) replaces fj.
 - f_f_j (ffj) replaces ffj.

The option `swash` adds the following, depending on the encoding:

T1 encoding:

- `c_t` (ct) replaces `ct`.

LY1 encoding:

- `c_t` (ct) replaces `ct`.
- `s_p` (sp) replaces `sp`.
- `s_t` (st) replaces `st`.

Macros defined by the package:

- Figure styles may be set locally by the macros `\textlf`, `\texttlf`, `\textosf`, `\texttosf` and `\textsu`, whose meaning are:
 - `\textlf` (lining, proportional)
 - `\texttlf` (lining, tabular)
 - `\textosf` (osf, proportional)
 - `\texttosf` (osf, tabular)
 - `\textsu` (superior)

For example, though this document uses the options `osf`, `tabular`, `\textlf{123}` uses proportional lining figures for its argument—123, and `\textsu{123}` sets its argument in superior figures—¹²³.

- `\textcircled` draws a circle around a small cap rendition of its argument, which should be exactly one unaccented character. For example, `\textcircled{A}` yields \textcircled{A} and `\textcircled{8}` yields $\textcircled{8}$.
- `\swshape` switches on italic shape with all possible ligatures activated. (This depends of course on the encoding chosen.) For example, in both T1 and LY1,

`{\swshape Act effectively\}`

produces *Act effectively*.

Textcomp coverage

This is rather sparse at the moment.

	\acute{o}	$\acute{1}$	$\acute{2}$	$\acute{3}$	$\acute{4}$	$\acute{5}$	$\acute{6}$	$\acute{7}$	
$\acute{00x}$	0	1	2	3	4	5	6	7	$\text{~}\acute{0}\text{x}$
$\acute{01x}$	8	9	10	11	12	13	14	15	
$\acute{02x}$	16	17	18	19	20	21	22	23	$\text{~}\acute{1}\text{x}$
$\acute{03x}$	24	25	26	27	28	29	30	31	
$\acute{04x}$	32	33	34	35	36	37	38	39	$\text{~}\acute{2}\text{x}$
$\acute{05x}$	40	41	42	43	44	45	46	47	
$\acute{06x}$	48	49	50	51	52	53	54	55	$\text{~}\acute{3}\text{x}$
$\acute{07x}$	56	57	58	59	60	61	62	63	
$\acute{10x}$	64	65	66	67	68	69	70	71	$\text{~}\acute{4}\text{x}$
$\acute{11x}$	72	73	74	75	76	77	78	79	
$\acute{12x}$	80	81	82	83	84	85	86	87	$\text{~}\acute{5}\text{x}$
$\acute{13x}$	88	89	90	91	92	93	94	95	
$\acute{14x}$	96	97	98	99	100	101	102	103	$\text{~}\acute{6}\text{x}$
$\acute{15x}$	104	105	106	107	108	109	110	111	
$\acute{20x}$	128	129	130	131	132	133	134	135	$\text{~}\acute{8}\text{x}$
$\acute{21x}$	136	137	138	139	140	141	142	143	
$\acute{22x}$	144	145	146	147	148	149	150	151	$\text{~}\acute{9}\text{x}$
$\acute{23x}$	152	153	154	155	156	157	158	159	
$\acute{24x}$	160	161	162	163	164	165	166	167	$\text{~}\acute{A}\text{x}$
$\acute{25x}$	168	169	170	171	172	173	174	175	
$\acute{26x}$	176	177	178	179	180	181	182	183	$\text{~}\acute{B}\text{x}$
$\acute{27x}$	184	185	186	187	188	189	190	191	
$\acute{32x}$	208	209	210	211	212	213	214	215	$\text{~}\acute{D}\text{x}$
$\acute{33x}$	216	217	218	219	220	221	222	223	
$\acute{36x}$	240	241	242	243	244	245	246	247	$\text{~}\acute{F}\text{x}$
$\acute{37x}$	248	249	250	251	252	253	254	255	
	$\text{~}\acute{8}$	$\text{~}\acute{9}$	$\text{~}\acute{A}$	$\text{~}\acute{B}$	$\text{~}\acute{C}$	$\text{~}\acute{D}$	$\text{~}\acute{E}$	$\text{~}\acute{F}$	

Accompanying math packages

Baskervaldx works well with Times, so one may use math packages based on Times, or on one using Baskervaldx italics in place of Times italics.

For example, ordinary newtxmath works quite well, as in:

```
% If you use babel, load it here, before Baskervaldx
\usepackage[osf]{Baskervaldx} % tosf in text, tlf in math
\usepackage[vvarbb]{newtxmath} % math italic letters from Times
\usepackage[cal=boondoxo]{mathalfa} % mathcal from STIX, unslanted a bit
```

Here's an example to show both source and typeset text with this combination.

```
\textbf{Simplest form of the \textit{Central Limit Theorem}:} \textit{Let}
$X_1$, $X_2$, \cdots$ be a sequence of iid random variables with mean $0$
and variance $1$ on a probability space $(\Omega, \mathcal{F}, \mathbb{P})$. Then}
\[\mathbb{P}\left(\frac{X_1+\cdots+X_n}{\sqrt{n}}\leq y\right)\rightarrow\frac{1}{\sqrt{2\pi}}\int_{-\infty}^y\frac{e^{-t^2/2}}{\sqrt{2\pi}}dt\]
\textit{or, equivalently, letting} $\sum_{k=1}^n X_k$,
\[\mathbb{E}f\left(\frac{S_n}{\sqrt{n}}\right)\rightarrow\int_{-\infty}^{\infty}f(t)\frac{e^{-t^2/2}}{\sqrt{2\pi}}dt\]
\textit{for every $f\in\mathcal{C}(\mathbb{R})$}.
```

Simplest form of the *Central Limit Theorem*: *Let X_1, X_2, \dots be a sequence of iid random variables with mean 0 and variance 1 on a probability space $(\Omega, \mathcal{F}, \mathbb{P})$. Then*

$$\mathbb{P}\left(\frac{X_1 + \cdots + X_n}{\sqrt{n}} \leq y\right) \rightarrow \mathfrak{N}(y) := \int_{-\infty}^y \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt \quad \text{as } n \rightarrow \infty,$$

or, equivalently, letting $S_n := \sum_{k=1}^n X_k$,

$$\mathbb{E}f\left(\frac{S_n}{\sqrt{n}}\right) \rightarrow \int_{-\infty}^{\infty} f(t) \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt \quad \text{as } n \rightarrow \infty, \text{ for every } f \in \mathcal{C}(\mathbb{R}).$$

To use the version of newtxmath with Baskervaldx math italics, use the following:

```
% If you use babel, load it here, before Baskervaldx
\usepackage[osf]{Baskervaldx} % tosf in text, tlf in math
\usepackage[baskervaldx,vvarbb]{newtxmath} % math italic letters from Baskervaldx
\usepackage[cal=boondoxo]{mathalfa} % mathcal from STIX, unslanted a bit
```

Here's the same source rendered with this preamble.

Simplest form of the *Central Limit Theorem*: *Let X_1, X_2, \dots be a sequence of iid random variables with mean 0 and variance 1 on a probability space $(\Omega, \mathcal{F}, \mathbb{P})$. Then*

$$\mathbb{P}\left(\frac{X_1 + \cdots + X_n}{\sqrt{n}} \leq y\right) \rightarrow \mathfrak{N}(y) := \int_{-\infty}^y \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt \quad \text{as } n \rightarrow \infty,$$

or, equivalently, letting $S_n := \sum_{k=1}^n X_k$,

$$\mathbb{E}f\left(\frac{S_n}{\sqrt{n}}\right) \rightarrow \int_{-\infty}^{\infty} f(t) \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt \quad \text{as } n \rightarrow \infty, \text{ for every } f \in \mathcal{C}(\mathbb{R}).$$