

# L<sup>A</sup>T<sub>E</sub>X SUPPORT FOR HEURISTICA

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Andrey V. Panov's *Heuristica* font family extends the *Utopia* font family, adding many accented glyphs, Cyrillic glyphs, ligatures, superior and oldstyle fixed-width figures in all styles, and Small Caps in Regular style only. The font package is widely distributed as a free font collection in OpenType, TrueType and Type1 formats, but not until now on CTAN with complete L<sup>A</sup>T<sub>E</sub>X support files in encodings T1+TS1, LY1, T2A, T2B and T2C.

The newtx package has been modified, as of version 1.26, to offer a new option `utopia` (or, equivalently, `heuristica`) that uses math italic glyphs taken from Utopia and oldstyle figures from *Heuristica*. Its slanted Greek alphabets are constructed from the txfonts slanted Greek letters by reducing their italic angle from 15.5° to 13°, matching Utopia's italic angle. So, for Heuristica text and matching math, you can use<sup>1</sup>:

```
\usepackage[osf,scaled=.92]{heuristica}
\usepackage[varqu,varl]{inconsolata} % typewriter
\usepackage[type1,scaled=.95]{cabin} % sans serif like Gill Sans
\usepackage[utopia,vvarbb,bigdelims]{newtxmath}
```

The effect of the option `osf` is to force the default figure style in `heuristica` to be oldstyle 0123456789 while using lining figures 0123456789 in math mode. The only other option of interest is `sup`s, which changes the footnote marker style to use the superior figures from *Heuristica* rather than the default mathematical superscripts. (The `superiors` package offers further options.)

*Heuristica* is so austere for a text font and *inconsolata* is so fancy for a typewriter font that you may find they blend together all too well. For more of a distinction replace the `inconsolata` line above with

```
\usepackage{zlmntt} % serified typewriter font extending cmtt
```

As I find Utopia text rather cramped, I've followed the lead of Walter Schmidt's `xutopia` package, constructing the tfm files with 5em extra space on each side of each character, and increasing the interword space by 20%. (See the `autoinst` recipe in the README.)

MACROS:

- `\textlf` and `\texttlf` render their arguments in tabular lining figures, no matter what the default figure style. Eg, `\textlf{345}` produces 345.
- `\textosf` and `\texttosf` render their arguments in tabular oldstyle figures, no matter what the default figure style. Eg, `\textosf{345}` produces 345.
- `\textsu` renders its argument in superior figures, no matter what the default figure style. Eg, `\textsu{345}` produces <sup>345</sup>.

VERY BRIEF, NONSENSICAL MATH EXAMPLE:

Let  $B(X)$  be the set of blocks of  $\Lambda_X$  and let  $b(X) := |B(X)|$  so that  $\hat{\phi} = \sum_{Y \subset X} (-1)^{b(Y)} b(Y)$ .

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<sup>1</sup>There is most likely also a way to use `MathDesign` or `fourier` with at least partial compatibility.