

# The fixmath package for L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>

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L<sup>A</sup>T<sub>E</sub>X's default style of typesetting mathematics does unfortunately not comply with the International Standards ISO31-0:1992 to ISO31-13:1992, as summarized, e. g. in <http://physics.nist.gov/Document/typefaces.pdf>:

- Uppercase Greek letters are always typeset upright, as opposed to italic, even though they are usually to represent variables.
- There is no obvious way to typeset variables in a boldface italic style, even though the required fonts are available. (The `bm` package is difficult to use and unnecessarily complicated.)

If you are using the default Computer Modern math fonts, this can be fixed by loading the package `fixmath`:

- Uppercase Greek will be typeset in italic style then.
- Upright  $\Delta$  and  $\Omega$  symbols are still available through the commands `\upDelta` and `\upOmega`.
- A new math alphabet `\mathbold` will provide boldface italic letters, including Greek.

Note that several packages for using alternative math fonts, such as `mathpazo` (Palatino) or `hvmaths` (Helvetica), already provide the `\mathbold` alphabet, and they can be loaded with an option `slantedGreek` to make the uppercase Greek letters cursive.

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