The `mystyletau` package

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1 Introduction

The `mystyletau` package introduces two custom glyphs for the letter τ. While the standard notation for a topological space (X, τ_X) is functional, the authors believe these variants offer superior aesthetic appeal for denoting topologies or algebraic structures.

2 New in Version 2.3

Version 2.3 refines cross-engine visual consistency and proportional scaling across all major TeX engines:

- **Math-Metric Proportional Scaling:** Anchors glyph scaling directly to math-mode font metrics (X), ensuring consistent proportions across display, text, subscript/superscript styles, and sans-serif or reduced-size text environments.
- **Unified Unicode Mapping:** Harmonizes Private Use Area codepoint mapping in `mytautwo.ttf` (under LuaLaTeX and XeLaTeX) with the vector PDF fallbacks (`mystyletau-vtau.pdf` and `mystyletau-atau.pdf` under pdfLaTeX).
- **Universal Engine Support:** Works seamlessly out of the box with `pdflatex`, `lualatex`, and `xelatex` via dynamic engine detection (`iftex`), preserving full `xcolor` and math/text mode compatibility.

3 Usage

Simply include the package in your preamble:

```
\usepackage{mystyletau}
```

The package works out of the box regardless of whether you compile with `pdflatex`, `lualatex`, or `xelatex`. The following commands provide access to the custom glyphs:

- `\vtau`: $\vartau$
- `\atau`: $\atau$

4 Examples

Consider the following statements to compare the visual impact:

1. Standard: Let (X, τ_X) be a topological space.
2. Variant A: Let $(X, \vartau_X)$ be a topological space.
3. Variant B: Let $\left(X, \atau_X\right)$ be a topological space.

The authors suggest that notations like $(X, \vartau_X)$ and $(X, \atau_X)$ provide a more elegant visual impact compared to the standard Computer Modern (X, τ_X).