The Treasure Chest

These are the new packages posted to CTAN (ctan.org) from October 2021–April 2022. Descriptions are based on the announcements and edited for extreme brevity.

Entries are listed alphabetically within CTAN directories. More information about any package can be found at ctan.org/pkg/pkgname.

A few entries which the editors subjectively believe to be especially notable are starred (*); of course, this is not intended to slight the other contributions.

We hope this column helps people access the vast amount of material available through CTAN and the distributions. See also ctan.org/topic. Comments are welcome, as always.

⋄ Karl Berry
https://tug.org/TUGboat/Chest

* citation-style-language in biblio/biblatex/contrib
Bibliography formatting with the XML-based Citation Style Language.

ieejtran in biblio/biblatex/contrib
Unofficial BibLaTeX style for publications of the Institute of Electrical Engineers of Japan.

jieeetran in biblio/biblatex/contrib
Citing Japanese articles in IEEE format.

pbiblatex-manual in biblio/pbiblatex
Documentation for Japanese (u)pBibTeX.

andika in fonts
Fonts for beginning readers from SIL.

concmath-otf in fonts
OpenType math font for the Concrete design.

hamnosys in fonts
Font for sign languages.

talos in fonts/greek
Greek cult font from the 1980s.

vntex-nonfree in fonts
URW Classico and URW Garamond extended for Vietnamese.

xcharter-math in fonts
OpenType math companion for the XCharter text fonts.

hep-font in fonts/utilities
Latin Modern with extensions from Computer Modern and similar designs.

hep-math-font in fonts/utilities
Extended Greek and sans-serif math.

bodeplot in graphics/pgf/contrib
Making Bode, Nyquist, Nichols plots with gnuplot or pgfplots.

byrne in graphics/metapost/contrib/macros
Typeset geometric proofs in the style of Oliver Byrne’s 1847 edition of Euclid’s Elements, in MetaPost.

hexboard in graphics/pgf/contrib
Draw hex boards and games.

kinematikz in graphics/pgf/contrib
Design kinematic chains and mechanisms.

liftarm in graphics/pgf/contrib
Parameterized lift arms.

messagepassing in graphics/pgf/contrib
Communication protocol diagrams.

pgf-interference in graphics/pgf/contrib
Interference patterns.

pst-hsb in graphics/pstricks/contrib
Curves with continuous colors, in PSTricks.

robotarm in graphics/pgf/contrib
Parameterized 2D robot arms.

hsindex in indexing
Alternative to xindy and makeindex, in Haskell.

kaytannollista-latexia in info
Practical manual for LATEX, in Finnish.

knuth-hint in info
(C)WEB sources from \TeX Live in HINT format. See ctan.org/pkg/hitex about the engine.

latex-for-undergraduates in info
Tutorial aimed at undergraduates, with an introduction to \LaTeX Workshop in Visual Studio Code.

mathalphabets in info
Introduction to mathematical alphabets.

altsubsup in macros/latex/contrib
Writing sub/superscripts with square brackets and custom formatting.
annotate-equations in macros/latex/contrib
   Annotate math equations using \LaTeX.
atendofenv in macros/latex/contrib
   Add custom symbol at end of an environment.
bfh-ci in macros/latex/contrib
   Bern University of Applied Sciences design.
bmsstu in macros/latex/contrib
   Bauman Moscow State Technical Univ. support.
ccred in macros/latex/contrib
   Inserting definite articles for \cref references.
clistmap in macros/latex/contrib
   Map and iterate over \LaTeX{}3 clists.
codebox in macros/latex/contrib
   Highlighted source code in a fancy box.
commonunicode in macros/latex/contrib
   List of Unicode symbols with typeset output.
coop-writing in macros/latex/contrib
   Support for cooperative writing.
create-theorem in macros/latex/contrib
   Multilingual theorem-like environments.
dbshow in macros/latex/contrib
   Store and display data with custom filters, orders, and styles.
formal-grammar in macros/latex/contrib
   Typeset formal grammars (BNF).
functional in macros/latex/contrib
   \LaTeX{}3 interface for \LaTeX{}3 programming.
grading-scheme in macros/latex/contrib
   Typeset grading schemes in tabular format.
handoutwithnotes in macros/latex/contrib
   Notes next to scaled slides via \pgfpages.
hep-acronym in macros/latex/contrib
   Acronym extension for glossaries.
hep-bibliography in macros/latex/contrib
   Extend \BibTeX{} with all the fields from inspirehep.net and more.
hep-floating in macros/latex/contrib
   Convenience package for float placement.
hep-math in macros/latex/contrib
   Extended math macros.
hep-text in macros/latex/contrib
   Extensions for lists and text.
hep-title in macros/latex/contrib
   Title page extensions: preprint, affiliation, etc.
hvpygmentex in macros/latex/contrib
   Automatically run pygmentex from \TeX{} for syntax highlighting.
jmsdelim in macros/latex/contrib
   Bottom-up compositional delimiter sizing.
kanbun in macros/latex/contrib
   Typeset kanbun–kundoku with support for kanbun annotations.
llncs in macros/latex/contrib
   Document class and bibliography style for Lecture Notes in Computer Science (LNCS).
njustthesis in macros/latex/contrib
   Thesis template for Nanjing University of Science and Technology.
njuvisual in macros/latex/contrib
   Display logos related to Nanjing Univ.
numerica-plus in macros/latex/contrib
   Iterate functions, find fixed points, zeros, extrema, and more.
numerica-tables in macros/latex/contrib
   Multi-column tables of mathematical functions.
pascaltriangle in macros/latex/contrib
   Draw beautiful Pascal (Yang Hui) triangles.
prolycee in macros/latex/contrib
   Support for French high school mathematics teachers.
rbt-mathnotes in macros/latex/contrib
   Rebecca Turner’s personal macros and styles for math notes.
seu-ml-assign in macros/latex/contrib
   Template for Southeast University Machine Learning assignments.
sillypage in macros/latex/contrib
   John Cleese’s silly walk as page numbering style.
simplenodes in macros/latex/contrib
   Simple nodes and linking in \LaTeX{}.
snaptodo in macros/latex/contrib
   Put notes on closer side, and not overlapping.
tsimsim in macros/latex/contrib
   Simulate Windows 10, Ubuntu, and Mac terminals with various color themes.
unbtex in macros/latex/contrib
   Theses at University of Brasilia.
wrapfig2 in macros/latex/contrib
   Wrap text around figures, extension of \wrapfig{}.
yb-book in macros/latex/contrib
   Template for Y.B.-branded books.
zref-clever in macros/latex/contrib
   Clever \LaTeX{} cross-references based on \zref{}.
zref-vario in macros/latex/contrib
   Combine \varioref{} and \zref-clever.

\texttt{m/l/c/beamer-contrib/themes}
beamertheme-arguelles in m/l/c/b-c/themes
   Emphasizing simplicity and readability.

\texttt{macros/latex/contrib/biblatex-contrib}
biblatex-readbbl in m/l/c/biblatex-contrib
   Process a .bbl file created by Biber.
TEX Live 2022 news

Karl Berry

TEX Live 2022 was released online on April 3, 2020. The \TeX{} Collection DVD is in process.

As new versions of packages are uploaded to CTAN, they are imported into TL, and available over the Internet via the \texttt{tlmgr} program. See the TL web site and documentation for more.

The major update in 2022 is Hi\TeX{}, the new \TeX{} engine by Martin Ruckert. It generates its own HINT output format, intended for use on mobile devices. Martin has written a manual and several articles about the project; see \texttt{ctan.org/pkg/hitex} for links.

As always, in this year’s release there are also pervasive updates to hundreds of packages and programs. For a list of major changes, please see \texttt{tug.org/texlive/bugs.html}. For this note, I wanted to summarize some of the known problems in current TL; the same web page has more details.

Windows binaries in TL’22 are still 32-bit. We expect to switch to 64-bit binaries for Windows in 2023, and we cannot provide both simultaneously—so be forewarned.

Lua\TeX{}, unlike all other engines, does not look in a given \texttt{-output-directory} for input files. We expect this to be fixed for next year.

Some Lua-related formats are unsharable. The Lua\TeX{}, Con\TeX{}t, and Op\TeX{} .fmt files cannot be shared across different architectures (32-bit/64-bit and/or BigEndian/LittleEndian). This is not new this year, but was only discovered and reported relatively recently. No decision has been made about changing this for Lua\TeX{}; Con\TeX{}t and Op\TeX{} are not expected to ever change this, by decision of their authors.

On macOS Monterey 12 (the latest release at this writing), \texttt{install-tl} comes up as a black window, due to Apple’s intentional breakage of the \texttt{wish} program (Tcl/Tk). The solution, other than installing a working Tcl/Tk, is to run \texttt{install-tl -gui text}, which is now (post-release) the default.

On Windows, \texttt{install-tl} may output the cryptic message \texttt{fail bad gmtime} (repeatedly). It’s annoying but harmless; just ignore it. A fix is in the works.

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https://tug.org/texlive
doi.org/10.47397/tb/43-1/tb133berry-tl22news