The Treasure Chest

These are the new packages posted to CTAN (`ctan.org`) from October 2019–March 2020, along with a few notable updates. 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 of especially wide interest or otherwise notable are starred (`*`); of course, this is not intended to slight the other contributions.

Nearly all the packages in this column are included in the TEX Live 2020 release; the few exceptions are those where the package did not meet TEX Live's criteria for inclusion. For notable updates to the TEX engines and other software in TL'20 (and previous years), see `tug.org/texlive/doc/texlive-en/texlive-en.html#news`.

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
`tugboat (at) tug dot org`

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fonts

`clara` in `fonts`
   Extensive family created by Séamas Ó Brógáin for *A Dictionary of Editing* (2015).

`cmupint` in `fonts`
   Upright integral symbols for Computer Modern.

`domitian` in `fonts`
   Extended Palladio (Palatino) with small caps, old-style figures, scientific inferiors, etc.

`erewhon-math` in `fonts`
   Utopia-based OpenType math font.

`etbb` in `fonts`
   Extended XETBook (which extended Tufte's ETBook).

`gfsdidotclassic` in `fonts/greek/gfs`
   Classic GFSDidot font in OpenType.

`haranoaji` in `fonts`
   Harano Aji fonts, Mincho and Gothic.

`haranoaji-extra` in `fonts`
   Additional variants of Harano Aji fonts.

`lexend` in `fonts`
   Lexend variable font.

mpfonts in `fonts`
> Computer Modern Type 3 fonts, a direct conversion from METAFONT via MetaPost.

* newcomputermodern in `fonts`
> OpenType Computer Modern with Greek and Cyrillic; additions requested.

noto-emoji in `fonts`
> Noto Color Emoji.

qualitype in `fonts`
> 45 now-free OpenType fonts from Qualitype; a wide variety of designs.

scholax in `fonts`
> Extended TeXGyreSchola (New Century Schoolbook) with math support and more.

twemoji-colr in `fonts`
> COLR/CPAL-based color emoji from the Twemoji collection.

wasy-type1 in `fonts`
> Type 1 version of Roland Waldi's `wasy` fonts, version 2.4.

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graphics

circuit-macros in `graphics`
> M4 macros for electric circuit diagrams.

chemplants in `graphics/pgf/contrib`
> Process flow diagrams of chemical processes.

kblocks in `graphics/pgf/contrib`
> Typeset control block diagrams and signal flow graphs.

lie-hasse in `graphics/pgf/contrib`
> Draw Hasse diagrams for Lie algebras.

pinoutikz in `graphics/pgf/contrib`
> Draw chip pinouts.

tikz-3dtools in `graphics/pgf/contrib`
> Manipulate 3d coordinates and other tools.

tikz-trackschematic in `graphics/pgf/contrib`
> Create railway track diagrams.

yquant in `graphics/pgf/contrib`
> Typeset quantum circuits from a description that is human-readable.

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info

expose-expl3-dunkerque-2019 in `info`
> Article (in French) on using `expl3` to implement numerical algorithms.

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language/japanese

bxjatoucs in `language/japanese`
> Convert character code values from Japanese encodings to Unicode.

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language/korean

pmhanguljamo in `language/korean`
> Poor man's Hangul Jamo input method.

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language/mongolian

xecyrmongolian in `language/mongolian`
> Basic support for Cyrillic Mongolian in Unicode.

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macros/generic

expkv-def in `macros/generic`
> Define keys for `expkv`.

expkv in `macros/generic`
> Expandable key=val implementation.

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macros/latex/contrib

accessibility in `macros/latex/contrib`
> Generate tagged and structured PDF files, with special support for KOMA-Script.

algxpar in `macros/latex/contrib`
> Support multiple lines of pseudo-code text.

apa7 in `macros/latex/contrib`
> Format documents in 7th edition APA style.

autofancyhdr in `macros/latex/contrib`
> Compute `headlength` for `fancyhdr`.

bearwear in `macros/latex/contrib`
> Shirts for `tikzbears`.

biblatex2bibitem in `macros/latex/contrib`
> Convert BibLaTeX-generated bibliography to `\bibitem`s.

bibleref in `macros/latex/contrib`
> Format bible citations.

brandeis-thesis in `macros/latex/contrib`
> Class for Brandeis University M.A. theses.

circledsteps in `macros/latex/contrib`
> Typeset circled numbers.

euclideangeometry in `macros/latex/contrib`
> Extended `picture` environment for geometric ruler and compass constructions.

fewerfloatpages in `macros/latex/contrib`
> Produce fewer half-empty float pages. See article in this issue, pp. 54–68.

fontsetup in `macros/latex/contrib`
> Easily switch between different math fonts.

fontsize in `macros/latex/contrib`
> Set main document font to an arbitrary size.

hep-paper in `macros/latex/contrib`
> Support for high energy physics writing.

hitszthesis in `macros/latex/contrib`
> Template for bachelor dissertations at Harbin Institute of Technology.

hvqrurl in `macros/latex/contrib`
> Typeset the QR code for a url in the margin.

langsci-avm in `macros/latex/contrib`
> Attribute–value matrices and feature structures for linguistics.

latino-sine-flexione in `macros/latex/contrib`
> Support for Peano's Interlingua.

`leileletter` in `macros/latex/contrib`
  Letter class for Leiden University.
`letterswitharrows` in `macros/latex/contrib`
  Scalable arrows over math symbols.
`metastr` in `macros/latex/contrib`
  Store and compose arbitrary strings.
`oops` in `macros/latex/contrib`
  Framework for organizing definitions inline.
`pdfpc` in `macros/latex/contrib`
  Support for `pdfpc` presentation viewer.
`physconst` in `macros/latex/contrib`
  Macros for commonly used physical constants,
  per CODATA 2018.
`physunits` in `macros/latex/contrib`
  Macros for physical units, including both SI
  and cgs.
`pmdb` in `macros/latex/contrib`
  Poor man's database for building exams,
  homework, etc.
`rest-api` in `macros/latex/contrib`
  Format a REST API description.
`schulmathematik` in `macros/latex/contrib`
  Support for German-speaking teachers of
  math and physics.
`sdaps` in `macros/latex/contrib`
  Creating machine-readable questionnaires
  processable with SDAPS.
`secnum` in `macros/latex/contrib`
  Specify section numbering intuitively.
`shortmathj` in `macros/latex/contrib`
  Shorten titles of mathematical journals.
`simplebnf` in `macros/latex/contrib`
  Typeset Backus-Naur form expressions, possibly
  annotated.
`thorshammer` in `macros/latex/contrib`
  Assessment based on AcroTeX quizzes.
`tkz-base` in `macros/latex/contrib/tkz`
  Drawing tools for cartesian coordinate systems.
`verifica` in `macros/latex/contrib`
  Typeset exercises, especially for Italian high
  schools.
`xkcdcolors` in `macros/latex/contrib`
  Color names from the xkcd survey.
  (`xkcd.com/color/rgb`)

macros/latex/contrib/beamer-contrib/themes

`hitszbeamer` in `m/l/c/b-c/themes`
  Harbin Institute of Technology beamer theme.

macros/latex/contrib/biblatex-contrib

`biblatex-ajc2020unofficial` in
  `m/l/c/biblatex-contrib`
  BibLaTeX style for the *Australasian Journal
  of Combinatorics*.

`biblatex-german-legal` in
  `m/l/c/biblatex-contrib`
  Citation style for German legal texts.
`biblatex-jura2` in `m/l/c/biblatex-contrib`
  Citation style for the German legal profession.

macros/luatex

`barracuda` in `luatex/generic`
  Lua package to draw barcode symbols.
`emoji` in `luatex/latex`
  Emoji support.
`lua-ul` in `luatex/latex`
  Underlining for LuaLaTeX.
`optex` in `luatex`
  LuaTeX format based on plain TeX and OPmac.

macros/xetex/latex

`parsa` in `macros/xetex/latex`
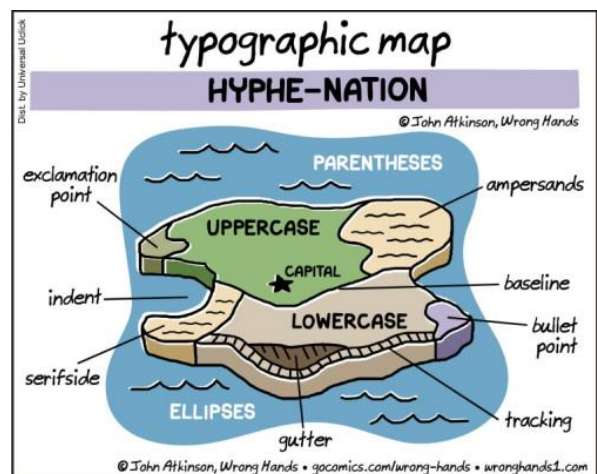 Theses and dissertations at Iranian universities.
`xepersian-hm` in `macros/xetex/latex`
  Fix kashida feature in `xepersian`.

support

∗ `lua-uca` in `support`
  Lua implementation of the Unicode collation
  algorithm.
`texlab` in `support`
  Cross-platform Language Server Protocol, for
  LaTeX code completion.
`texlive-dummy-enterprise-linux-8` in
  `support/texlive`
  Dummy rpm to satisfy dependencies on TeX
  Live resources without additional installation.
`texplate` in `support`
  Create document structure based on templates.

Comic by John Atkinson (`https://wronghands1.com`).