

cs-techrep

Technical Reports in Computer Science and Software Engineering

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Version 0.6

Abstract

The `cs-techrep` class provides a convenient environment for writing technical reports in computer science and software engineering. The style is adopted from IEEE. The `cs-techrep` class requires the `latex/pdflatex` in combination with `bibtex` using a `biber` backend.

1 Installation

The `zip` or `tar.gz` file comes with a `cs-techrep.ins` and a `cs-techrep.dtx` file included which contains the \LaTeX stuff.

To extract the class files call:

```
$ latex cs-techrep.ins
```

This call will extract all \LaTeX specific files to the current directory. You can either use the files for a single cv project or you can integrate the files into your \TeX installation.

If you just want to use `cs-techrep` for a single curriculum vitae project, the simplest way is just to copy the generated files to the folder of the project.

If you want to integrate `cs-techrep` into your \TeX installation, create a directory `tex/latex/cs-techrep` beneath your \TeX installation (e.g. beneath `/usr/share/texmf`) and copy all files from the current directory there. Now call:

```
$ mktexlsr
```

to update the file-cache of \LaTeX .

Hint: The `cs-techrep` distribution contains a sample `docstrip` configuration in `docstrip.cfg` via which files can be distributed automatically to their correct positions inside a \LaTeX installation. Feel free to adapt this file to your environment and afterwards call `latex cs-techrep.ins` to install the package to its right place.

2 Templates

For a quick start the `iaria-lite` distribution contains document templates. The templates can be found in the `cs-techrep-example-neumann.zip` file.

3 Documentclass

`documentclass cs-techrep` This package provides the documentclass `cs-techrep`. The documentclass supports the following options:

- `conference` Passed to `IEEEtran`
- `a4paper` Passed to `IEEEtran`
- `subfig` Loads `subfig` package with custom style settings
- `subcaption` Loads `subcaption` package with custom style settings
- `flushend` Activate `flushend` package (compatible with arXiv build process)
- `pbalance` Activate `pbalance` package (incompatible with arXiv build process)

A Remark about two-column document balancing on the last page: The `flushend` package is recommended, because it works within the arXiv automated build process. However, `flushend` has a major incompatibility with package `lineno`, which is, e.g., transitively loaded by package `mindflow`. Thus, in case when `flushend` does not have any effect, check whether one of your packages loads `lineno`. Usually you are stuck with your packages and, thus, will instead be forced to switch from `flushend` to `pbalance`. Please be aware that `pbalance` works great and has high compatibility, but unfortunately it will not have any effect within the arXiv automated build process. In case of both, a somehow needed `lineno` package and an intended arXiv upload, I recommend to do without two-column balancing on the last page and just to stay away from both `flushend` and `pbalance`, in order to ensure that your paper is layouted identically in any initial publication and a later arXiv upload. I hope this remark proves helpful, it took me some nerve to find out.

There is also another important difference between `flushend` and `pbalance`: the handling of footnotes on the last page. `Flushend` provides a decent result, but the result of `pbalance` is incomprehensible. I strongly recommend avoiding footnotes on the last page. If you absolutely need footnotes on the last page, consider staying away from two-column balancing on the last page.

About subfigures: Both well-known packages `subfig` and `subcaption` can be used. However, they are not compatible with each other and we can either load one or the other. The document class provides options to load them for you with some customized style settings.

4 Requirements

We instrument several other L^AT_EX packages for different purposes, which must be available under your installation.

- IEEEtran
- acronym
- afterpage
- babel
- biblatex
- booktabs
- ccicons
- cleveref
- csquotes
- diagbox
- doclicense
- etoolbox
- extdash
- flushend
- fontenc
- graphicx
- hypcap
- hyperref
- hyperref
- inputenc
- lipsum
- listings
- lmodern
- lscape
- microtype
- newtxtt
- orcidlink

- paralist
- pbalance
- pdfscape
- siunitx
- stfloats
- subcaption
- subfig
- tcolorbox
- times
- todonotes
- upquote
- url
- xcolor
- xpatch
- xspace

5 The Code

```

1 @echo off
2
3 rem *****
4 rem * author: Christoph P. Neumann
5 rem *****
6 cd /d "%~dp0"
7
8 echo == ..\examples\* ==
9 for /D %%D in (..\examples\*) do (
10 echo == %%D ==
11 xcopy /Y ".\*.cls" "%~D"
12 )
13
14 pause
15 %# Copyright (c) 2023-2025 Christoph P. Neumann,
16 %# Copyright (c) 2018-2021 Oliver Kopp
17 %# Reference: https://latextemplates.github.io/
18
19 % !TeX spellcheck = en-US
20 % LTeX: language=en-US
21 % !TeX encoding = utf8
22 % !TeX program = pdflatex
23 % !BIB program = biblatex / biber

```

```

24
25 \NeedsTeXFormat{LaTeX2e}
26
27 \ProvidesClass{cs-techrep}[2025/01/16 TechReps in CS and SWE v0.6]
28
29 % Define marker counter for options (counter are global in latex):
30
31 \newcounter{cstechrep@subfigtracker}
32 \newcounter{cstechrep@subcaptiontracker}
33 \newcounter{cstechrep@pbalancetracker}
34 \newcounter{cstechrep@flushendtracker}
35
36 % Declare options:
37
38 \DeclareOption{subfig}{
39   \setcounter{cstechrep@subfigtracker}{1}
40   \typeout{cs-techrep class: subfig option is set (use subfloat command).}
41 }
42 \DeclareOption{subcaption}{
43   \setcounter{cstechrep@subcaptiontracker}{1}
44   \typeout{cs-techrep class: subcaption option is set (use subfigure command).}
45 }
46
47 % IEEE option onecolumn will be ignored
48 \DeclareOption{onecolumn}{\OptionNotUsed}
49
50 \DeclareOption{pbalance}{
51   \setcounter{cstechrep@pbalancetracker}{1}
52   \typeout{cs-techrep class: pbalance option is set.}
53 }
54 \DeclareOption{flushend}{
55   \setcounter{cstechrep@flushendtracker}{1}
56   \typeout{cs-techrep class: flushend option is set.}
57 }
58
59 % We'll pass any document class options along to the underlying class
60 % (recommended IEEE options: conference,a4paper)
61 \DeclareOption*{%
62   \PassOptionsToClass{\CurrentOption}{IEEEtran}
63 }
64
65 % Now we'll execute any options passed in
66 \ProcessOptions\relax
67
68 % Instead of defining each and every little detail required to create a new
69 % document class, you can base your class on an existing document class.
70 \LoadClass{IEEEtran}
71
72 % This template has been tested with IEEEtran of 2015.
73
74 % =====
75 % USER PROVIDED VARIABLES
76
77 \makeatletter

```

```

78 \newcommand*\DefcstechrepVar[1]{%
79 \@namedef{cstechrep#1}##1{\global\@namedef{cstechrep#1}{##1}}}
80 \makeatother
81
82 \DefcstechrepVar{AuthorListTex}
83 \DefcstechrepVar{AuthorListBib} % Use *and* as author separator!
84 \DefcstechrepVar{TitleTex}
85 \DefcstechrepVar{TitleBib}
86 \DefcstechrepVar{Department} % e.g., Department of Computer Science
87 \DefcstechrepVar{Institution} % e.g., OTH Amberg-Weiden
88 \DefcstechrepVar{Address} % e.g., Amberg, Germany
89 \DefcstechrepVar{Type} % e.g., Technical Report
90 \DefcstechrepVar{Year} % e.g., 2024
91 \DefcstechrepVar{Title}
92 \DefcstechrepVar{Month} % e.g., 10 (for October)
93 \DefcstechrepVar{Number} % e.g., CL-2024-42
94 \DefcstechrepVar{Lang} % e.g., english = en-US (or: ngerman = DE)
95 % =====
96
97 % backticks (‘) are rendered as such in verbatim environments.
98 % See following links for details:
99 % - https://tex.stackexchange.com/a/341057/9075
100 % - https://tex.stackexchange.com/a/47451/9075
101 % - https://tex.stackexchange.com/a/166791/9075
102 \RequirePackage{upquote}
103
104 % Set English as language and allow to write hyphenated"=words
105 %
106 % Even though ‘american’, ‘english’ and ‘usenglish’ are synonyms
107 % for babel package (according to
108 % https://tex.stackexchange.com/questions/12775/babel-english-american-usenglish),
109 % the llncs document class is prepared to avoid the overriding of certain
110 % names (such as "Abstract." -> "Abstract" or "Fig." -> "Figure")
111 % when using ‘english’, but not when using the other 2.
112 % english has to go last to set it as default language
113 \RequirePackage[ngerman,main=english]{babel}
114 %
115 % Hint by http://tex.stackexchange.com/a/321066/9075 -> enable "=" as dashes
116 \addto\extrasenglish{\languageshorthands{ngerman}\useshorthands{}}
117
118 % CM variant with scalable font
119 % (to prevent "pdfTeX error (font expansion):
120 % auto expansion is only possible with scalable")
121 \RequirePackage{lmodern}
122 % Times New Roman, because IEEE is based on Times (and not CM/lmodern),
123 % however, package times is not a scalable font, thus, lmodern is required
124 % additionally and must be loaded before times.
125 \RequirePackage{times}
126
127 % Links behave as they should. Enables "\url{...}" for URL typesettings.
128 % Allow URL breaks also at a hyphen, even though it might be confusing:
129 % Is the "-" part of the address or just a hyphen?
130 % See https://tex.stackexchange.com/a/3034/9075.
131 \RequirePackage[hyphens]{url}

```

```

132
133 % When activated, use text font as url font, not the monospaced one.
134 % For all options see https://tex.stackexchange.com/a/261435/9075.
135 % \urlstyle{same}
136
137 % Improve wrapping of URLs - hint by http://tex.stackexchange.com/a/10419/9075
138 \makeatletter
139 \g@addto@macro{\UrlBreaks}{\UrlOrds}
140 \makeatother
141
142 % nicer // - solution by http://tex.stackexchange.com/a/98470/9075
143 % DO NOT ACTIVATE -> prevents line breaks
144 \makeatletter
145 %\def\url@twoslashes{\mathchar'\@ifnextchar/{\kern-.2em}{}}
146 \g@addto@macro\url@specials{\do\url@twoslashes}
147 \makeatother
148
149 % use nicer font for code
150 \RequirePackage[zerostyle=b,scaled=.75]{newtxtt}
151
152 % inputenc must be loaded before biblatex
153 \RequirePackage[utf8]{inputenc}
154
155 % Has to be loaded AFTER any font packages.
156 % See https://tex.stackexchange.com/a/2869/9075.
157 \RequirePackage[T1]{fontenc}
158
159
160 % Character protrusion and font expansion.
161 % See http://www.ctan.org/tex-archive/macros/latex/contrib/microtype/
162 \RequirePackage[
163   babel=true, % Enable language-specific kerning
164   expansion=alltext,
165   protrusion=alltext-nott, % Ensure no changes at the edge of the listing.
166   nopatch=eqnum, % fix unable to apply patch eqnum
167   final % Always enable microtype, even if in draft mode.
168   % This helps finding bad boxes quickly. In the standard
169   % configuration, this template is always in the final mode, so
170   % this option only makes a difference if "pros" use the draft mode.
171 ]{microtype}
172
173 % \texttt{test -- test} keeps the "--" as "--"
174 % (and does not convert it to an en dash)
175 \DisableLigatures{encoding = T1, family = tt* }
176
177 \RequirePackage{graphicx}
178
179 % Creative Commons
180 \RequirePackage{ccicons}
181
182 % Diagonal lines in a table
183 % http://tex.stackexchange.com/questions/17745/diagonal-lines-in-table-cell
184 % Slashbox is not available in texlive (due to licensing)
185 % and also gives bad results. Thus, we use diagbox

```

```

186 \RequirePackage{diagbox}
187
188 \RequirePackage[cmym, table]{xcolor}
189
190 \RequirePackage{relsize} % allows for \textsmaller{..}
191
192 \RequirePackage[nolist, smaller]{acronym}
193
194 % Code Listings
195 \RequirePackage{listings}
196
197 \definecolor{eclipseStrings}{RGB}{42,0.0,255}
198 \definecolor{eclipseKeywords}{RGB}{127,0,85}
199 \colorlet{numb}{magenta!60!black}
200
201 % JSON definition
202 % Source: https://tex.stackexchange.com/a/433961/9075
203
204 \lstdefinlanguage{json}{
205   basicstyle=\normalfont\ttfamily,
206   commentstyle=\color{eclipseStrings}, % style of comment
207   stringstyle=\color{eclipseKeywords}, % style of strings
208   numbers=left,
209   numberstyle=\scriptsize,
210   stepnumber=1,
211   numbersep=8pt,
212   showstringspaces=false,
213   breaklines=true,
214   frame=lines,
215   % backgroundcolor=\color{gray}, %only if you like
216   string=[s]{"}{"},
217   comment=[l]{: \ "},
218   morecomment=[l]{: "},
219   literate=
220     *{0}{{{\color{numb}0}}}{1}
221     {1}{{{\color{numb}1}}}{1}
222     {2}{{{\color{numb}2}}}{1}
223     {3}{{{\color{numb}3}}}{1}
224     {4}{{{\color{numb}4}}}{1}
225     {5}{{{\color{numb}5}}}{1}
226     {6}{{{\color{numb}6}}}{1}
227     {7}{{{\color{numb}7}}}{1}
228     {8}{{{\color{numb}8}}}{1}
229     {9}{{{\color{numb}9}}}{1}
230 }
231
232 \lstset{
233   % everything between (* *) is a latex command
234   escapeinside={(*}{*)},
235   %
236   language=json,
237   %
238   showstringspaces=false,
239   %

```

```

240 extendedchars=true,
241 %
242 basicstyle=\footnotesize\ttfamily,
243 %
244 commentstyle=\slshape,
245 %
246 % default: \rmfamily
247 stringstyle=\ttfamily,
248 %
249 breaklines=true,
250 %
251 breakatwhitespace=true,
252 %
253 % alternative: fixed
254 columns=flexible,
255 %
256 numbers=left,
257 %
258 numberstyle=\tiny,
259 %
260 basewidth=.5em,
261 %
262 xleftmargin=.5cm,
263 %
264 % aboveskip=0mm,
265 %
266 % belowskip=0mm,
267 %
268 captionpos=b
269 }
270
271 % Enable Umlauts when using \lstinputputlisting.
272 % See https://stackoverflow.com/a/29260603/873282 für details.
273 % listingsutf8 did not work in June 2020.
274 \lstset{literate=
275   {á}{\`a}}1 {ê}{\`e}}1 {í}{\`i}}1 {ó}{\`o}}1 {ú}{\`u}}1
276   {Á}{\`A}}1 {Ê}{\`E}}1 {Î}{\`I}}1 {Ó}{\`O}}1 {Û}{\`U}}1
277   {à}{\`a}}1 {è}{\`e}}1 {ì}{\`i}}1 {ô}{\`o}}1 {ù}{\`u}}1
278   {Ä}{\`A}}1 {Ë}{\`E}}1 {Ï}{\`I}}1 {Ö}{\`O}}1 {Ü}{\`U}}1
279   {ä}{\`a}}1 {ë}{\`e}}1 {ï}{\`i}}1 {ö}{\`o}}1 {ü}{\`u}}1
280   {Ä}{\`A}}1 {Ë}{\`E}}1 {Ï}{\`I}}1 {Ö}{\`O}}1 {Ü}{\`U}}1
281   {â}{\`a}}1 {ê}{\`e}}1 {î}{\`i}}1 {ô}{\`o}}1 {û}{\`u}}1
282   {Ã}{\`A}}1 {Ê}{\`E}}1 {Î}{\`I}}1 {Ï}{\`I}}1 {Ö}{\`O}}1 {Û}{\`U}}1
283   {Ã}{\`A}}1 {ã}{\`a}}1 {Õ}{\`O}}1 {ö}{\`o}}1
284   {œ}{\`oe}}1 {Œ}{\`OE}}1 {æ}{\`ae}}1 {Æ}{\`AE}}1 {ß}{\`ss}}1
285   {ł}{\`H{u}}1 {Ń}{\`H{U}}1 {ł}{\`H{o}}1 {Ń}{\`H{O}}1
286   {ç}{\`c c}}1 {Ç}{\`c C}}1 {ø}{\`o}}1 {á}{\`r a}}1 {A}{\`r A}}1
287 }
288
289 % Nicer tables (\toprule, \midrule, \bottomrule)
290 \RequirePackage{booktabs}
291
292 % Extended enumerate, such as \begin{compactenum}
293 \RequirePackage[alwaysadjust]{paralist}

```

```

294
295 % Read: Is there a disadvantage to using natbib=true with biblatex?
296 % https://tex.stackexchange.com/questions/149313
297 % /is-there-a-disadvantage-to-using-natbib-true-with-biblatex
298 % Substitutions:
299 % Natbib \textcite = biblatex \textcite
300 % Natbib \citep = biblatex \parencite
301
302 \RequirePackage[
303     defernumbers=true, % required due to self-cite
304     %style=ieee, % english only
305     sorting=none, % nty, nyt, nyvt, anyt, anyvt, ynt, ydnt, none, debug
306     sortcites=false,
307     citestyle=numeric-comp,
308     bibstyle=numeric,
309     backend=biber,
310     bibencoding=utf8, % = auto, utf8, ascii
311     hyperref=true, % activate hyperref support
312     backref=false, % activate backrefs
313     isbn=true,
314     url=true,
315     doi=true,
316     urldate=terse, % = iso, year, short, long, terse
317     maxnames=5, % max number of names in text ??
318     minnames=1, % min number of names in text ??
319     maxbibnames=99, % max number of names in bibliography
320     minbibnames=1, % number of names in bibliography (bevor et al)
321     maxcitenames=99, % max number of names in text ??
322     mincitenames=1, % max number of names in text ??
323     giveninits=false, % abbreviate first names
324     uniquename=init, % otherwise option conflict with firstinits=true
325     autolang=other
326 ]{biblatex}
327
328 % Due to applied option defernumbers=true:
329 % Prevent citations in the references are being numbered as '0' in ArXiv
330 % https://tex.stackexchange.com/questions/463556
331 % /all-the-citations-in-the-references-are-being-numbered-as-0-in-arxiv-while-upl
332 \makeatletter
333 \let\blx@rerun@biber\relax
334 \makeatother
335
336 % selfref.bib needs to be generated, containing a bibentry with key selfref
337 \addbibresource{selfref.bib}
338 \DeclareBibliographyCategory{selfref}
339 \addtocategory{selfref}{selfref}
340 % How to use: \printbibliography[notcategory=selfref]
341
342 % Same fontsize as without natbib
343 \renewcommand{\bibfont}{\normalfont\small}
344
345 % Enable hyperlinked author names in the case of \textcite
346 % Source: https://tex.stackexchange.com/a/76075/9075
347 \RequirePackage{etoolbox}

```

```

348 \makeatletter
349 \patchcmd{\NAT@test}{\else \NAT@nm}{\else \NAT@hyper@{\NAT@nm}}{-}{-}
350 \makeatother
351
352 \makeatletter
353 \DeclareCiteCommand{\citemonth}
354   {\usebibmacro{prenote}}
355   {%
356     \let\oldabx@bibmonth\abx@bibmonth%
357     \setkeys{blx@opt@pre}{dateabbrev=false}% nowork
358     \mkbibmonth{\thefield{month}}%
359     \let\abx@bibmonth\oldabx@bibmonth% restore
360   }
361   {\multicitedelim}
362   {\usebibmacro{postnote}}
363 \makeatother
364
365 %% Enable nice TODO comments
366 \RequirePackage[colorinlistoftodos,prependcaption,textsize=tiny]{todonotes}
367 \newcommand{\TODO}[1]{\todo[%
368   linecolor=red,backgroundcolor=red!25,bordercolor=red]{#1}}
369
370 % Put footnotes below floats
371 % Source: https://tex.stackexchange.com/a/32993/9075
372 \RequirePackage{stfloats}
373 \fnbelowfloat
374
375 \RequirePackage[group-minimum-digits=4,per-mode=fraction]{siunitx}
376 \addto\extrasgerman{\sisetup{locale = DE}}
377
378 % Enable that parameters of \cref{}, \ref{}, \cite{}, ...
379 % are linked so that a reader can click on the number
380 % and jump to the target in the document
381 \RequirePackage{hyperref}
382
383 % Enable hyperref without colors and without bookmarks
384 \hypersetup{
385   hidelinks,
386   colorlinks=true,
387   allcolors=black,
388   pdfstartview=Fit,
389   breaklinks=true
390 }
391
392 % Enable correct jumping to figures when referencing
393 \RequirePackage[all]{hypcap}
394
395 \RequirePackage{orcidlink}
396
397 % For easy quotations: \enquote{text}
398 % This package is very smart when nesting is applied,
399 % otherwise textcmds (see below) provides a shorter command
400 \RequirePackage[autostyle=true]{csquotes}
401

```

```

402 % Enable using "quote"
403 % See: https://tex.stackexchange.com/a/150954/9075
404 \defineshorthand{"'}{\openautoquote}
405 \defineshorthand{''}{\closeautoquote}
406
407 % amsmath must be loaded before cleveref
408 \usepackage{amsmath,amssymb,amsfonts}
409
410 % Extensions for references inside the document (\cref{fig:sample}, ...)
411 % Enable usage \cref{...} and \Cref{...} instead of \ref:
412 % Type of reference included in the link.
413 % That means, "Figure 5" is a full link instead of just "5".
414 \RequirePackage[capitalise,nameinlink,noabbrev]{cleveref}
415
416 \crefname{listing}{Listing}{Listings}
417 \Crefname{listing}{Listing}{Listings}
418 \crefname{lstlisting}{Listing}{Listings}
419 \Crefname{lstlisting}{Listing}{Listings}
420
421 \RequirePackage{lipsum}
422
423 \RequirePackage{tcolorbox}
424 \tcboxlibrary{listings}
425
426 %introduce \powerset
427 % See: http://matheplanet.com/matheplanet/nuke/
428 % html/viewtopic.php?topic=136492&post\_id=997377
429 \DeclareFontFamily{U}{MnSymbolC}{}
430 \DeclareSymbolFont{MnSyC}{U}{MnSymbolC}{m}{n}
431 \DeclareFontShape{U}{MnSymbolC}{m}{n}{
432 <-6> MnSymbolC5
433 <6-7> MnSymbolC6
434 <7-8> MnSymbolC7
435 <8-9> MnSymbolC8
436 <9-10> MnSymbolC9
437 <10-12> MnSymbolC10
438 <12-> MnSymbolC12%
439 }{}
440 \DeclareMathSymbol{\powerset}{\mathord}{MnSyC}{180}
441
442 \RequirePackage{xspace}
443 %\newcommand{\eg}{e.\,g.\,xspace}
444 %\newcommand{\ie}{i.\,e.\,xspace}
445 \newcommand{\eg}{e.\,g.\,\ }
446 \newcommand{\ie}{i.\,e.\,\ }
447
448 % Enable hyphenation at other places as the dash.
449 % Example: applicaiton\hydash specific
450 \makeatletter
451 \newcommand{\hydash}{\penalty\@M-\hskip\z@skip}
452 % Definition of "="
453 % See: http://mirror.ctan.org/macros/latex
454 % /contrib/babel-contrib/german/ngermanb.dtx
455 \makeatother

```

```

456
457 % Enable copy and paste of text from the PDF
458 % Only required for pdflatex. It "just works" in the case of lualatex.
459 \input glyphtounicode
460 \pdfgentounicode=1
461
462 \RequirePackage{lscape}
463 \RequirePackage{pdfscape}
464 \RequirePackage{afterpage}
465
466 % requires, e.g., \PassOptionsToPackage{
467 % type=CC,modifier=by,version=4.0}{doclicense} before \documentclass
468 \RequirePackage[hyperxmp=false,lang=English]{doclicense}
469
470 % Improve wrapping of URLs
471 % See: http://tex.stackexchange.com/a/10419/9075
472 \makeatletter
473 \def\ps@IEEEtitlepagestyle{
474   \def\@oddfont{\mycopyrightnotice}
475   \def\@evenfont{}
476 }
477 \def\mycopyrightnotice{
478   {\footnotesize
479     \begin{minipage}{0.8\textwidth}
480       \centering
481       % License based on doclicense package:
482       \href{\doclicenseURL}{\doclicenseIcon}
483       This work is licensed under a \doclicenseLongNameRef{}
484       (\doclicenseNameRef{}) license.}
485       % Citation advice:
486       \\Please cite as: \fullcite{selfref}.
487     \end{minipage}
488   }
489 }
490 \makeatother
491
492 \makeatletter
493 % allows for forcing command expansion inside a filecontents* environment
494 % (cf. https://tex.stackexchange.com/questions/534035
495 % /macros-commands-inside-a-filecontents-environment-does-not-expand)
496 \def\filecontentsForceExpansion#1#2#3{
497   \global\let\ltxspecials\dospecials
498   \gdef\dospecials{\ltxspecials
499     \catcode'#1=0
500     \catcode'#2=1
501     \catcode'#3=2
502     \global\let\dospecials\ltxspecials
503   }
504 }
505 \makeatother
506
507 \title{\cstechrepTitleTex}
508
509 \author{

```

```

510 \IEEEauthorblockN{\cstechrepAuthorListTex}
511 \IEEEauthorblockA{%
512 \cstechrepDepartment\\
513 \cstechrepInstitution\\
514 \cstechrepAddress
515 }}
516
517 \IEEEspecialpapernotice{\cstechrepType: \cstechrepNumber,
518 \citemonth{selfref} \cstechrepYear}
519
520 % subfigure captions with parentheses and footnotesize:
521 \ifnum\value{cstechrep@subfigtracker}=1
522 \typeout{cs-techrep class: load subfig package (use subfloat command).}
523 \RequirePackage[caption=false,font=footnotesize]{subfig}
524 \fi
525 \ifnum\value{cstechrep@subcaptiontracker}=1
526 \typeout{cs-techrep class: load subcaption package (use subfigure command).}
527 \RequirePackage{subcaption}
528 \captionsetup[subfigure]{labelformat=parens,font=footnotesize}
529 \fi
530
531 % Balance/level columns at the last page / in bibliography
532 % DISCLAIMER: No solution is a 100%/perfect one!
533 % Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
534 % BUT: incompatible with arxiv automated process (!)
535 \ifnum\value{cstechrep@pbalancectracker}=1
536 \typeout{cs-techrep class: load pbalance package.}
537 \RequirePackage{pbalance}
538 \fi
539 % Flushend => works with arxiv, but major incompatibility with lineno
540 % (and, thus, also with mindflow et al.)
541 \ifnum\value{cstechrep@flushendtracker}=1
542 \typeout{cs-techrep class: load flushend package.}
543 \RequirePackage{flushend}
544 \fi
545
546 % =====
547 % Packages that need to be loaded last:
548
549 % Allows to hyphenate a word that contains a dash:
550 % https://stackoverflow.com/questions/2193307
551 % /how-do-i-get-latex-to-hyphenate-a-word-that-contains-a-dash
552 % Use \-/ for a breakable dash that does not prevent the remainder
553 % of the word to be hyphenated.
554 \RequirePackage[shortcuts]{extdash}
555 % =====
556
557 % Finally, we'll use \endinput to indicate that LaTeX can stop reading
558 % this file. LaTeX will ignore anything after this line.
559 \endinput

```