iaria-lite
An Unofficial IARIA LaTeX Class (Lite Version)

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Version 0.9.1

Abstract

The `iaria-lite`–class provides a convenient environment for writing IARIA scholary publications. (The lite version of the class file does not implement IARIA specifications for citation style, because this would require to make presumption about technological stacks like biblatex/biber). The `iaria-lite`–class should be compatible with with all latex distributions.

1 Installation

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

To extract the class files call:

```
$ latex iaria-lite.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 iaria-lite 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 iaria-lite into your TeX installation, create a directory `tex/latex/iaria-lite` 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 iaria-lite 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 iaria-lite.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 `iaria-lite-example-ctan.zip` file.

Especially beginners should NOT start from scatch! Use the example file! The iaria-lite package assumes that the LaTeX user has former experience with IEEEtran! For example, the formatting of the author block is not documented here, please refer to the IEEEtran documentantion. For shared affiliations, there is a formatting option called "alternate long format", which you can find in the well-known IEEEtran_HOWTO.pdf; it is also the superior option for IARIA papers with shared affiliations.

BEWARE: If you are completely new to LaTeX, then do NOT use iaria-lite class for your first LaTeX experiment, but please use the IARIA Word template. The same advice is true when you have no former IEEEtran experience and when you are not willing to acquire IEEEtran knowledge on your own.

DISCLAIMER: Using this package still requires that you additionally MUST read the IARIA formatting guide (www.iaria.org/formatting.doc) as well as the IARIA editorial rules (www.iaria.org/editorialrules.html). Simply using this package does not relieve you of your responsibility! This applies to all aspects: IARIA style and LaTeX/BibTeX know how (like interfering packages) as well as IEEEtran implications (like conference mode, author block, shared affiliation, or cite compression). In case of doubt, you are required to understand the content of the iaria-lite.cls file, because before this this community-provided you had to make all these adjustments yourself.

3 Documentclass

`documentclass iaria-lite` This package provides the documentclass `iaria-lite`. The documentclass supports the following options:

- `conference` Passed to IEEEtran (i. a., it suppresses page numbers)

- `a4paper` Passed to IEEEtran

- `subfig` Loads subfig package with IARIA style settings

- `subcaption` Loads subcaption package with IARIA style settings

- `flushend` Activate flushend package (compatible with arXiv build process)

- `pbalance` Activate pbalance package (incompatible with arXiv build process)

BEWARE: Usually, you will/must provide IEEEtran option "conference" to the iaria package, both for IARIA conferences AND for IARIA journals! Because for IARIA, the formatting rules are the same for conferences and journals – in contrast to IEEE. Its conference style is the base for IARIA formatting. The example file (see above) prominently applies this option.

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 incampatibility 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 IARIA submission and 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. Both require dedicated style settings to be compatible with IARIA formatting rules. Thus, the document class provides options to load them for you with correct settings.

In order, to configure table/figure captions correctly for IARIA requirements, the package caption is used. There would be other options to achieve this, however, the babel package is disruptive to the table label – using package caption provides stability to the label configuration against babel intervention. There are minor downsides of using caption package: it results in a warning about unknown document class that cannot be suppressed, and if you do not use any tables or figures, caption package also results in a warning about "unused captionsetup" that cannot be suppressed, either.

4   Requirements

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

- IEEEtran
- extdash
- floatrow
- flushend
- graphicx
- hyperref
- orcidlink

- pbalance

- subcaption

- subfig

- times

- url

- xcolor

- xpatch

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) 2023-2026 Christoph P. Neumann
16
17 % DISCLAIMER:
18 % I had to decide whether to hardcode required usage of IEEEtran "conference"
19 % option into my class. I decided against it.
20 % Thus, it is required to use IARIA class like this:
21 % \documentclass[conference]{iaria}.
22 % The iaria class passes all class options (like "conference") to IEEEtran.
23 % The reasoning: There might be a future use case (speculatively) to pass
24 % IEEEtran options like "a4paper", for IARIA purposes (?)
25 % For now, IARIA requires IEEE "conference" option, only.
26
27 \NeedsTeXFormat{LaTeX2e}
28
29 \ProvidesClass{iaria-lite}[2026/01/26 IARIA-lite template v0.9.1]
30
31 % Define marker counter for options (counter are global in latex):
32 \newcounter{iaria@subfigtracker}
33 \newcounter{iaria@subcaptiontracker}
34 \newcounter{iaria@pbalancetracker}
35 \newcounter{iaria@flushendtracker}
36
37 % Declare options:
38
```

```
39 \DeclareOption{subfig}{
40   \setcounter{iaria@subfigtracker}{1}
41   \typeout{iaria class: subfig option is set (use subfloat command).}
42 }
43 \DeclareOption{subcaption}{
44   \setcounter{iaria@subcaptiontracker}{1}
45   \typeout{iaria class: subcaption option is set (use subfigure command).}
46 }
47
48 % IEEE option onecolumn will be ignored
49 \DeclareOption{onecolumn}{\OptionNotUsed}
50
51 \DeclareOption{pbalance}{
52   \setcounter{iaria@pbalancetracker}{1}
53   \typeout{iaria class: pbalance option is set.}
54 }
55 \DeclareOption{flushend}{
56   \setcounter{iaria@flushendtracker}{1}
57   \typeout{iaria class: flushend option is set.}
58 }
59
60 % We'll pass any document class options along to the underlying class
61 % required IEEE options: conference! For IARIA purposes.
62 \DeclareOption*{%
63   \PassOptionsToClass{\CurrentOption}{IEEEtran}
64 }
65
66 % Now we'll execute any options passed in
67 \ProcessOptions\relax
68
69 % Instead of defining each and every little detail
70 % required to create a new document class,
71 % you can base your class on an existing document class.
72 \LoadClass{IEEEtran}
73
74 \RequirePackage{times} % Times New Roman
75
76 \RequirePackage{graphicx}
77 \RequirePackage{xcolor}
78
79 \RequirePackage{url}
80 \RequirePackage{orcidlink}
81 \RequirePackage{hyperref}
82 \hypersetup{hidelinks,unicode}
83
84 \makeatletter
85 % Diferring from IEEE, IARIA requires non-abbreviated references:
86 \renewcommand{\fnum@figure}{Figure~\thefigure}
87 % Diferring from IEEE, IARIA requires 14 point bold Times for the title
88 \renewcommand{\title}[1]{\renewcommand{\@title}{\bfseries\Large #1}}
89 % Diferring from IEEE, IARIA requires "Keywords" instead of "Index Terms":
90 \renewcommand\IEEEkeywordsname{Keywords}
91 \makeatother
92
```

```latex
 93 \RequirePackage{xpatch}
 94 % Diferring from IEEE, IARIA requires a hyphen
 95 % after "Keywords" instead of an  emdash:
 96 \xpatchcmd\IEEEkeywords{---}{-}{}{}
 97
 98 % Diferring from IEEE, IARIA requires also the keywords in Italic
 99 % (and Bold)(and lower case!):
100 \let\oldIEEEkeywords\IEEEkeywords
101 \def\IEEEkeywords{\oldIEEEkeywords\itshape\ignorespaces}
102
103 \makeatletter
104 \renewcommand{\IEEEauthorblockN}[1]{%
105 % copied from IEEEtran.cls:
106     \relax\@IEEEauthorblockNstyle% set the default text style
107     \gdef\@IEEEauthorblockXinterlinespace{0pt}% disable strut for spacer row
108     \if@IEEEprevauthorblockincol\expandafter\@IEEEauthorblockNtopspaceline\fi
109     \global\@IEEEprevauthorblockincoltrue% we now have a block in this column
110     \gdef\@IEEEauthorblockXinterlinespace{\@IEEEauthorblockNinterlinespace}%
111     \large
112     #1%
113     \crcr}
114 \makeatother
115
116 % IARIA requires to bring the table caption
117 % in the same line as label "TABLE I"
118 \usepackage{etoolbox}
119 \makeatletter
120 \patchcmd{\@makecaption}
121   {\\}
122   {.\ }
123   {}
124   {}
125 \makeatother
126
127 % caption is compatible with babel that intervenes with tablename
128 \RequirePackage{caption}
129 % IARIA requires table caption to be
130 % above, centered, with upper case label ('TABLE'), and small caps text.
131 % (note that the caption package is only controlling the look & feel of the captions,
132 %  it does not control the placement of the captions.)
133 \captionsetup[table]{
134   style=base,
135   name=TABLE,
136   position=auto, % position option is NOT about forcing the label above/below, but ONLY about
137   justification=centering,
138   labelsep=period,
139   textfont={footnotesize, sc},
140   labelfont=footnotesize}
141 % IARIA requires figure caption to be
142 % below and centered
143 \captionsetup[figure]{
144   style=base,
145   position=auto, % position option is NOT about forcing the label above/below, but ONLY about
146   justification=centering,
```

```
147   labelsep=period,
148   font={footnotesize,rm}}
149 % For controlling the placement of the captions
150 % (table: top | figure: bottom), the package caption
151 % recommends to use package floatrow:
152 % (Without foatrom, the positioning is determined by
153 %  the textual (!) position of command \label in relation to
154 %  includegraphics/begin-tabular; a well-known latex aspect.)
155 \RequirePackage{floatrow}
156 \floatsetup[table]{capposition=top,captionskip=5pt}
157 \floatsetup[figure]{capposition=bottom,captionskip=8pt}
158
159 % IARIA subfigure captions require parentheses and footnotesize:
160 \ifnum\value{iaria@subfigtracker}=1
161   \typeout{iaria class: load subfig package (use subfloat command).}
162   \RequirePackage[caption=false,font=footnotesize]{subfig}
163 \fi
164 \ifnum\value{iaria@subcaptiontracker}=1
165   \typeout{iaria class: load subcaption package (use subfigure command).}
166   \RequirePackage{subcaption}
167   % IARIA requires subfigure caption to number them with
168   % parentheses around latin chars (like "(a)" and "(b)")
169   \captionsetup[subfigure]{labelformat=parens,font=footnotesize}
170 \fi
171
172 % Balance/level columns at the last page / in bibliography
173 % DISCLAIMER: No solution is a 100%/perfect one!
174 % Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
175 % BUT: incompatible with arxiv automated process (!)
176 \ifnum\value{iaria@pbalancetracker}=1
177   \typeout{iaria class: load pbalance package.}
178   \RequirePackage{pbalance}
179 \fi
180 % Flushend => works with arxiv, but major incampatibility with lineno
181 % (and, thus, also with mindflow et al.)
182 \ifnum\value{iaria@flushendtracker}=1
183   \typeout{iaria class: load flushend package.}
184   \RequirePackage{flushend}
185 \fi
186
187 % =======================================================
188 % Packages with recommendation to load them last:
189
190 % Allows to hyphenate a word that contains a dash:
191 % https://stackoverflow.com/questions/2193307
192 % /how-do-i-get-latex-to-hyphenate-a-word-that-contains-a-dash
193 % Use \-/ for a breakable dash that does not prevent the
194 % remaLner of the word to be hyphenated.
195 \RequirePackage[shortcuts]{extdash}
196 % =======================================================
197
198 % Finally, we'll use \endinput to indicate that LaTeX can stop
199 % reading this file. LaTeX will ignore anything after this line.
200 \endinput
```