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

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Version 0.6

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-neumann.zip` file.

```
$ make
```

to build the pdf. The file `porttrait.eps` contains a dummy porttrait for the first page of the curriculum vitae.

3 Documentclass

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

- `conference` Passed to IEEEtran
- `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)

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

- 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) 2023-2025 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}[2025/01/16 IARIA-lite template v0.6]
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*{%
```

4

```
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
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 in the same line of "Table I"
```

```latex
117 \usepackage{etoolbox}
118 \makeatletter
119 \patchcmd{\@makecaption}
120   {\\}
121   {.\ }
122   {}
123   {}
124 \makeatother
125
126 % caption is compatible with babel that intervenes with tablename
127 \RequirePackage{caption}
128 % IARIA requires table caption to be
129 % above, centered, with upper case label ('TABLE'), and small caps text.
130 \captionsetup[table]{
131   name=TABLE,
132   position=above,
133   justification=centering,
134   labelsep=period,
135   textfont={footnotesize, sc},
136   labelfont=footnotesize}
137 % IARIA requires figure caption to be
138 % below and centered
139 \captionsetup[figure]{
140   position=below,
141   justification=centering,
142   labelsep=period,
143   font={footnotesize,rm}}
144
145 % IARIA subfigure captions require parentheses and footnotesize:
146 \ifnum\value{iaria@subfigtracker}=1
147   \typeout{iaria class: load subfig package (use subfloat command).}
148   \RequirePackage[caption=false,font=footnotesize]{subfig}
149 \fi
150 \ifnum\value{iaria@subcaptiontracker}=1
151   \typeout{iaria class: load subcaption package (use subfigure command).}
152   \RequirePackage{subcaption}
153   % IARIA requires subfigure caption to number them with
154   % parentheses around latin chars (like "(a)" and "(b)")
155   \captionsetup[subfigure]{labelformat=parens,font=footnotesize}
156 \fi
157
158 % Balance/level columns at the last page / in bibliography
159 % DISCLAIMER: No solution is a 100%/perfect one!
160 % Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
161 % BUT: incompatible with arxiv automated process (!)
162 \ifnum\value{iaria@pbalancetracker}=1
163   \typeout{iaria class: load pbalance package.}
164   \RequirePackage{pbalance}
165 \fi
166 % Flushend => works with arxiv, but major incampatibility with lineno
167 % (and, thus, also with mindflow et al.)
168 \ifnum\value{iaria@flushendtracker}=1
169   \typeout{iaria class: load flushend package.}
170   \RequirePackage{flushend}
```

```
171 \fi
172
173 % ========================================================
174 % Packages with recommendation to load them last:
175
176 % Allows to hyphenate a word that contains a dash:
177 % https://stackoverflow.com/questions/2193307
178 % /how-do-i-get-latex-to-hyphenate-a-word-that-contains-a-dash
179 % Use \-/ for a breakable dash that does not prevent the
180 % remainer of the word to be hyphenated.
181 \RequirePackage[shortcuts]{extdash}
182 % ========================================================
183
184 % Finally, we'll use \endinput to indicate that LaTeX can stop
185 % reading this file. LaTeX will ignore anything after this line.
186 \endinput
```