

iaria-lite

An Unofficial IARIA LaTeX Class (Lite Version)

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Version 0.5

Abstract

The `iaria-lite-class` provides a convenient environment for writing IARIA scholarly 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.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 `portrait.eps` contains a dummy portrait 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 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 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.

4 Requirements

We instrument several other L^AT_EX 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
16
17 % # Copyright (c) 2023-2024 Christoph P. Neumann
18 %
19 % DISCLAIMER:
20 % I had to decide whether to hardcode required usage of IEEEtran "conference"
21 % option into my class. I decided against it.
22 % Thus, it is required to use IARIA class like this:
23 % \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}[2024/10/24 unofficial IARIA-lite conference template v0.5]
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
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     \cr}
114 \makeatother
115
116 % IARIA requires to bring the table caption in the same line of "Table I"
117 \usepackage{etoolbox}
118 \makeatletter
119 \patchcmd{\makecaption}
120   {\}
121   {\.\ }
122   {}
123   {}
124 \makeatother
125
126 % IARIA subfigure captions require parentheses and footnotesize:
127 \ifnum\value{iaria@subfigtracker}=1
128   \typeout{iaria class: load subfig package (use subfloat command).}
129   \RequirePackage[caption=false,font=footnotesize]{subfig}

```

```

130 \fi
131 \ifnum\value{iaria@subcaptiontracker}=1
132 \typeout{iaria class: load subcaption package (use subfigure command).}
133 \RequirePackage{subcaption}
134 \captionsetup[subfigure]{labelformat=parens,font=footnotesize}
135 \fi
136
137 % Balance/level columns at the last page / in bibliography
138 % DISCLAIMER: No solution is a 100%/perfect one!
139 % Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
140 % BUT: incompatible with arxiv automated process (!)
141 \ifnum\value{iaria@pbalancetracker}=1
142 \typeout{iaria class: load pbalance package.}
143 \RequirePackage{pbalance}
144 \fi
145 % Flushend => works with arxiv, but major incompatibility with lineno
146 % (and, thus, also with mindflow et al.)
147 \ifnum\value{iaria@flushendtracker}=1
148 \typeout{iaria class: load flushend package.}
149 \RequirePackage{flushend}
150 \fi
151
152 % Finally, we'll use \endinput to indicate that LaTeX can stop
153 % reading this file. LaTeX will ignore anything after this line.
154 \endinput

```