

# **iaria**

## An Unofficial IARIA LaTeX Class

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Version 0.2

### **Abstract**

The `iaria`-class provides a convenient environment for writing IARIA scholarly publications. This version also implements full IARIA specifications for citation style, which can only be templated for a specific technological combination like `latex/pdflatex` in combination with `biblatex` using a `biber` backend.

## **1 Installation**

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

To extract the class files call:

```
$ latex iaria.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` 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` into your  $\TeX$  installation, create a directory `tex/latex/iaria` 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` 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.ins` to install the package to its right place.

## 2 Templates

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

## 3 Documentclass

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

- `conference` Passed to `IEEEtran`
- `a4paper` Passed to `IEEEtran`
- `flushend` Activate `flushend` package
- `pbalance` Activate `pbalance` package

## 4 Requirements

We instrument several other  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$  packages for different purposes, which must be available under your installation.

- `IEEEtran`
- `biblatex`
- `extdash`
- `flushend`
- `fontenc`
- `graphicx`
- `hyperref`
- `inputenc`
- `orcidlink`
- `pbalance`
- `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 % !TeX spellcheck = en-US
18 % LTeX: language=en-US
19 % !TeX encoding = utf8
20 % !TeX program = pdflatex
21 % !BIB program = biblatex / biber
22
23 %# DISCLAIMER: Only for latex/pdflatex in combination with biblatex using a biber backend.
24 %# (And neither for XeLaTeX or LuaTeX nor for bibtex or natbib.)
25 %# Because to set the required bibliography configuration, the biblatex package needs to be loaded.
26 %# I also need to adjust formatting of ONLINE entries, thus, I have to make some assumptions
27 %# And inputenc must be loaded before biblatex.
28 %# Thus, inputenc, fontenc and biblatex with backend=biber are hard coded part of this template.
29 %# I could remove these from the cls and make this part of the example.tex, but then it would be less
30 %# I apologize for this opinionated design decision to anyone who is jeopardised by it.
31 %#
32 %# I also had to decide whether to hardcode required usage of IEEEtran "conference" option in the
33 %# I decided against it.
34 %# Thus, it is required to use IARIA class like this: \documentclass[conference]{iaria}.
35 %# The iaria class passes all class options (like "conference") to IEEEtran.
36 %# The reasoning: There might be a future use case (speculatively) to pass IEEEtran options to the
37 %# For now, IARIA requires IEEE "conference" option, only.
38
39 % Declare that this document class file requires at least LaTeX version 2e.
40 \NeedsTeXFormat{LaTeX2e}
41
42 % Provide the name of your document class, the date it was last updated, and a comment about
43 \ProvidesClass{iaria}[2024/04/10 unofficial IARIA conference template v0.2]
44
45 % Define marker counter for options (counter are global in latex):
46 \newcounter{iaria@pbalancetracker}
47 \newcounter{iaria@flushendtracker}
48
49 % Declare options:
50 \DeclareOption{onecolumn}{\OptionNotUsed} % IEEE option onecolumn will be ignored
51
52 \DeclareOption{pbalance}{
```

```

53 \setcounter{iaria@pbalancetracker}{1}
54 \typeout{iaria class: pbalance option is set.}
55 }
56 \DeclareOption{flushend}{
57 \setcounter{iaria@flushendtracker}{1}
58 \typeout{iaria class: flushend option is set.}
59 }
60
61 % We'll pass any document class options along to the underlying class
62 \DeclareOption*{%
63 \PassOptionsToClass{\CurrentOption}{IEEEtran}% required IEEE options: conference (for IARIA)
64 }
65
66 % Now we'll execute any options passed in
67 \ProcessOptions\relax
68
69 % Instead of defining each and every little detail required to create a new document class,
70 % you can base your class on an existing document class.
71 \LoadClass{IEEEtran}
72
73 % Now paste your code from the preamble here.
74 % Replace \usepackage with \RequirePackage. (The syntax for both commands is the same.)
75
76 \RequirePackage{times} % Times New Roman
77
78 % inputenc must be loaded before biblatex
79 \RequirePackage[utf8]{inputenc}
80
81 % https://tex.stackexchange.com/questions/664/why-should-i-use-RequirePackage1fontenc
82 % Has to be loaded AFTER any font packages. See https://tex.stackexchange.com/a/2869/9075.
83 \RequirePackage[T1]{fontenc}
84
85 \RequirePackage{graphicx}
86 \RequirePackage{xcolor}
87
88 \RequirePackage{url}
89 \RequirePackage{orcidlink}
90 \RequirePackage{hyperref}
91 \hypersetup{hidelinks,unicode}
92
93 % Diferring from IEEE, IARIA requires
94 % in bibliography: 6+ authors as first author et al.
95 % in \citeauthor: any case of et al. with just first author et al.
96 \RequirePackage[style=ieee, backend=biber, url=false, hyperref, maxnames=5, minnames=1, maxcites=5]{biblatex}
97 \renewcommand*{\bibfont}{\small}
98
99 % Diferring from IEEE, IARIA requires, for ONLINE entries, no point but a comma between author and title
100 % For style=ieee
101 \DeclareBibliographyDriver{online}{%
102 \usebibmacro{bibindex}%
103 \usebibmacro{begentry}%
104 \usebibmacro{author/editor+others/translator+others}%
105 \setunit{\labelnamepunct}\newblock
106 \usebibmacro{title}%

```

```

107 \newunit
108 \printlist{language}%
109 \newunit\newblock
110 \usebibmacro{byauthor}%
111 \newunit\newblock
112 \usebibmacro{byeditor+others}%
113 \newunit\newblock
114 \printfield{version}%
115 \newunit
116 \printfield{note}%
117 \newunit\newblock
118 \printlist{organization}
119 \newunit\newblock
120 \usebibmacro{date}%
121 \newunit\newblock
122 \iftoggle{bbx:eprint}
123 {\usebibmacro{eprint}}
124 {}%
125 \newunit\newblock
126 \usebibmacro{url+urldate}%
127 \newunit\newblock
128 \usebibmacro{addendum+pubstate}%
129 \setunit{\bibpagerefpunct}\newblock
130 \usebibmacro{pageref}%
131 \usebibmacro{finentry}}
132
133 \makeatletter
134 % Diferring from IEEE, IARIA requires non-abbreviated references:
135 \renewcommand{\fnum@figure}{Figure~\thefigure}
136 % Diferring from IEEE, IARIA requires 14 point bold Times New Roman for the title
137 \renewcommand{\title}[1]{\renewcommand{@title}{\bfseries\Large #1}}
138 % Diferring from IEEE, IARIA requires "Keywords" instead of "Index Terms":
139 \renewcommand\IEEEkeywordsname{Keywords}
140 \makeatother
141
142 \RequirePackage{xpatch}
143 % Diferring from IEEE, IARIA requires a hyphen after "Keywords" instead of an emdash:
144 \xpatchcmd\IEEEkeywords{---}{-}{}{}
145
146 % Diferring from IEEE, IARIA requires also the keywords in Italic (and Bold)(and lower case!)
147 \let\oldIEEEkeywords\IEEEkeywords
148 \def\IEEEkeywords{\oldIEEEkeywords\itshape\ignorespaces}
149
150 \makeatletter
151 \renewcommand{\IEEEauthorblockN}[1]{%
152 % copied from IEEEtran.cls:
153 \relax\@IEEEauthorblockNstyle% set the default text style
154 \gdef\@IEEEauthorblockXinterlinespace{0pt}% disable strut for spacer row
155 % the \expandafter hides the \cr in conditional tex, see the array.sty docs
156 % for details, probably not needed here as the \cr is in a macro
157 % do a spacer row if needed
158 \if@IEEEprevauthorblockincol\expandafter\@IEEEauthorblockNtopspaceline\fi
159 \global\@IEEEprevauthorblockincoltrue% we now have a block in this column
160 %restore the correct strut value

```

```

161 \gdef\@IEEEauthorblockXinterlinespace{\@IEEEauthorblockNinterlinespace}%
162 % input the author names
163 \large
164 #1%
165 % end the row if the user did not already
166 \crcr}
167 \makeatother
168
169 % IARIA subfigure captions require this:
170 \RequirePackage[caption=false,font=footnotesize]{subfig}
171
172 % IARIA requires to bring the table caption in the same line of "Table I"
173 \usepackage{etoolbox}
174 \makeatletter
175 \patchcmd{\@makecaption}
176 {\}
177 {\.\ }
178 {}
179 {}
180 \makeatother
181
182 % Allows to hyphenate a word that contains a dash:
183 % https://stackoverflow.com/questions/2193307/how-do-i-get-latex-to-hyphenate-a-word-that-con
184 \RequirePackage[shortcuts]{extdash} % Use \-/ for a breakable dash that does not prevent the
185
186 % Balance/level columns at the last page / in bibliography
187 % DISCLAIMER: No solution is a 100%/perfect one!
188 % Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
189 % BUT: incompatible with arxiv automated process (!)
190 \ifnum\value{iarial@pbalancetracker}=1
191 \typeout{iarial class: load pbalance package.}
192 \RequirePackage{pbalance}
193 \fi
194 % Flushend => works with arxiv, but major incompatibility with lineno (and, thus, also with m
195 \ifnum\value{iarial@flushendtracker}=1
196 \typeout{iarial class: load flushend package.}
197 \RequirePackage{flushend}
198 \fi
199
200 % Finally, we'll use \endinput to indicate that LaTeX can stop reading this file. LaTeX will
201 \endinput

```