

iaria

An Unofficial IARIA LaTeX Class

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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 L^AT_EX stuff.

To extract the class files call:

```
$ latex iaria.ins
```

This call will extract all L^AT_EX 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 T_EX 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 T_EX installation, create a directory `tex/latex/iaria` beneath your T_EX 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 L^AT_EX.

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 L^AT_EX 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 `iaria-lite` distribution contains document templates. The templates can be found in the `iaria-example-neumann.zip` file.

3 Documentclass

`documentclass iaria` This package provides the documentclass `iaria`. 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 \LaTeX 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 %# Copyright (c) 2023 Christoph P. Neumann,
2
3 % !TeX spellcheck = en-US
4 % LTeX: language=en-US
5 % !TeX encoding = utf8
6 % !TeX program = pdflatex
7 % !BIB program = biblatex / biber
8
9 %# DISCLAIMER: Only for latex/pdflatex in combination with biblatex using a biber backend.
10 %# (And neither for XeLaTeX or LuaTeX nor for bibtex or natbib.)
11 %# Because to set the required bibliography configuration, the biblatex package needs to be loaded.
12 %# I also need to adjust formatting of ONLINE entries, thus, I have to make some assumptions
13 %# And inputenc must be loaded before biblatex.
14 %# Thus, inputenc, fontenc and biblatex with backend=biber are hard coded part of this template.
15 %# I could remove these from the cls and make this part of the example.tex, but then it would be less
16 %# I apologize for this opinionated design decision to anyone who is jeopardised by it.
17 %#
18 %# I also had to decide whether to hardcode required usage of IEEEtran "conference" option in the
19 %# I decided against it.
20 %# Thus, it is required to use IARIA class like this: \documentclass[conference]{iaria}.
21 %# The iaria class passes all class options (like "conference") to IEEEtran.
22 %# The reasoning: There might be a future use case (speculatively) to pass IEEEtran options like
23 %# For now, IARIA requires IEEE "conference" option, only.
24
25 % Declare that this document class file requires at least LaTeX version 2e.
26 \NeedsTeXFormat{LaTeX2e}
27
28 % Provide the name of your document class, the date it was last updated, and a comment about
29 \ProvidesClass{iaria}[2023/01/01 unofficial IARIA conference template]
30
31 % Define marker counter for options (counter are global in latex):
32 \newcounter{iaria@pbalancetracker}
33 \newcounter{iaria@flushendtracker}
34
35 % Declare options:
36 \DeclareOption{onecolumn}{\OptionNotUsed} % IEEE option onecolumn will be ignored
37
38 \DeclareOption{pbalance}{
39   \setcounter{iaria@pbalancetracker}{1}
40   \typeout{iaria class: pbalance option is set.}
41 }
42 \DeclareOption{flushend}{
43   \setcounter{iaria@flushendtracker}{1}
44   \typeout{iaria class: flushend option is set.}
45 }
46
47 % We'll pass any document class options along to the underlying class
48 \DeclareOption*{%
49   \PassOptionsToClass{\CurrentOption}{IEEEtran}% required IEEE options: conference (for IARIA)
50 }
51
52 % Now we'll execute any options passed in
```

```

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

```

```

107 \newunit\newblock
108 \iftoggle{bbx:eprint}
109 {\usebibmacro{eprint}}
110 {}%
111 \newunit\newblock
112 \usebibmacro{url+urldate}%
113 \newunit\newblock
114 \usebibmacro{addendum+pubstate}%
115 \setunit{\bibpagerefpunct}\newblock
116 \usebibmacro{pageref}%
117 \usebibmacro{finentry}}
118
119 \makeatletter
120 % Diferring from IEEE, IARIA requires non-abbreviated references:
121 \renewcommand{\fnum@figure}{Figure~\thefigure}
122 % Diferring from IEEE, IARIA requires 14 point bold Times New Roman for the title
123 \renewcommand{\title}[1]{\renewcommand{\@title}{\bfseries\Large #1}}
124 % Diferring from IEEE, IARIA requires "Keywords" instead of "Index Terms":
125 \renewcommand\IEEEkeywordsname{Keywords}
126 \makeatother
127
128 \RequirePackage{xpatch}
129 % Diferring from IEEE, IARIA requires a hyphen after "Keywords" instead of an emdash:
130 \xpatchcmd\IEEEkeywords{---}{-}{-}{}{}
131
132 \makeatletter
133 \renewcommand{\IEEEauthorblockN}[1]{%
134 % copied from IEEEtran.cls:
135 \relax\@IEEEauthorblockNstyle% set the default text style
136 \gdef\@IEEEauthorblockXinterlinespace{0pt}% disable strut for spacer row
137 % the \expandafter hides the \cr in conditional tex, see the array.sty docs
138 % for details, probably not needed here as the \cr is in a macro
139 % do a spacer row if needed
140 \if@IEEEprevauthorblockincol\expandafter\@IEEEauthorblockNtopspaceline\fi
141 \global\@IEEEprevauthorblockincoltrue% we now have a block in this column
142 %restore the correct strut value
143 \gdef\@IEEEauthorblockXinterlinespace{\@IEEEauthorblockNinterlinespace}%
144 % input the author names
145 \large
146 #1%
147 % end the row if the user did not already
148 \crrcr}
149 \makeatother
150
151 % Allows to hyphenate a word that contains a dash:
152 % https://stackoverflow.com/questions/2193307/how-do-i-get-latex-to-hyphenate-a-word-that-con
153 \RequirePackage[shortcuts]{extdash} % Use \-/ for a breakable dash that does not prevent the
154
155 % Balance/level columns at the last page / in bibliography
156 % DISCLAIMER: No solution is a 100%/perfect one!
157 % Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
158 % BUT: incompatible with arxiv automated process (!)
159 \ifnum\value{iaria@pbalance} = 1
160 \typeout{iaria class: load pbalance package.}

```

```

161 \RequirePackage{pbalance}
162 \fi
163 % Flushend => works with arxiv, but major incompatibility with lineno (and, thus, also with m
164 \ifnum\value{iaria@flushendtracker}=1
165 \typeout{iaria class: load flushend package.}
166 \RequirePackage{flushend}
167 \fi
168
169 % Finally, we'll use \endinput to indicate that LaTeX can stop reading this file. LaTeX will
170 \endinput

```