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

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Version 0.4

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.

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

```
@echo off

rem ******************************************************************************
rem * author: Christoph P. Neumann
rem ******************************************************************************
cd /d "%~dp0"

echo == ..\examples\* ==
for /D %%D in (..\examples\*) do (
 echo == %%D ==
 xcopy /Y ".\*.cls" "%%~D"
)

pause
```

```
%# Copyright (c) 2023 Christoph P. Neumann,

%# DISCLAIMER:
%# I had to decide whether to hardcode required usage of IEEEtran "conference" option into my
%# I decided against it.
%# Thus, it is required to use IARIA class like this: \documentclass[conference]{iaria}.
%# The iaria class passes all class options (like "conference") to IEEEtran.
```

```
%# The reasoning: There might be a future use case (speculatively) to pass IEEEtran options l
%# For now, IARIA requires IEEE "conference" option, only.

% Declare that this document class file requires at least LaTeX version 2e.
\NeedsTeXFormat{LaTeX2e}

% Provide the name of your document class, the date it was last updated, and a comment about
\ProvidesClass{iaria-lite}[2024/09/16 unofficial IARIA-lite conference template v0.4]

% Define marker counter for options (counter are global in latex):
\newcounter{iaria@subfigtracker}
\newcounter{iaria@subcaptiontracker}
\newcounter{iaria@pbalancetracker}
\newcounter{iaria@flushendtracker}

% Declare options:

\DeclareOption{subfig}{
  \setcounter{iaria@subfigtracker}{1}
  \typeout{iaria class: subfig option is set (use subfloat command).}
}
\DeclareOption{subcaption}{
  \setcounter{iaria@subcaptiontracker}{1}
  \typeout{iaria class: subcaption option is set (use subfigure command).}
}

\DeclareOption{onecolumn}{\OptionNotUsed} % IEEE option onecolumn will be ignored

\DeclareOption{pbalance}{
  \setcounter{iaria@pbalancetracker}{1}
  \typeout{iaria class: pbalance option is set.}
}
\DeclareOption{flushend}{
  \setcounter{iaria@flushendtracker}{1}
  \typeout{iaria class: flushend option is set.}
}

% We'll pass any document class options along to the underlying class
\DeclareOption*{%
  \PassOptionsToClass{\CurrentOption}{IEEEtran}% required IEEE options: conference (for IARIA
}

% Now we'll execute any options passed in
\ProcessOptions\relax

% Instead of defining each and every little detail required to create a new document class,
% you can base your class on an existing document class.
\LoadClass{IEEEtran}

\RequirePackage{times} % Times New Roman

\RequirePackage{graphicx}
\RequirePackage{xcolor}

```

```
\RequirePackage{url}
\RequirePackage{orcidlink}
\RequirePackage{hyperref}
\hypersetup{hidelinks,unicode}

\makeatletter
% Diferring from IEEE, IARIA requires non-abbreviated references:
\renewcommand{\fnum@figure}{Figure~\thefigure}
% Diferring from IEEE, IARIA requires 14 point bold Times New Roman for the title
\renewcommand{\title}[1]{\renewcommand{\@title}{\bfseries\Large #1}}
% Diferring from IEEE, IARIA requires "Keywords" instead of "Index Terms":
\renewcommand\IEEEkeywordsname{Keywords}
\makeatother

\RequirePackage{xpatch}
% Diferring from IEEE, IARIA requires a hyphen after "Keywords" instead of an  emdash:
\xpatchcmd\IEEEkeywords{---}{-}{}{}

% Diferring from IEEE, IARIA requires also the keywords in Italic (and Bold)(and lower case!)
\let\oldIEEEkeywords\IEEEkeywords
\def\IEEEkeywords{\oldIEEEkeywords\itshape\ignorespaces}

\makeatletter
\renewcommand{\IEEEauthorblockN}[1]{%
% copied from IEEEtran.cls:
    \relax\@IEEEauthorblockNstyle% set the default text style
    \gdef\@IEEEauthorblockXinterlinespace{0pt}% disable strut for spacer row
    % the \expandafter hides the \cr in conditional tex, see the array.sty docs
    % for details, probably not needed here as the \cr is in a macro
    % do a spacer row if needed
    \if@IEEEprevauthorblockincol\expandafter\@IEEEauthorblockNtopspaceline\fi
    \global\@IEEEprevauthorblockincoltrue% we now have a block in this column
    %restore the correct strut value
    \gdef\@IEEEauthorblockXinterlinespace{\@IEEEauthorblockNinterlinespace}%
    % input the author names
    \large
    #1%
    % end the row if the user did not already
    \crcr}
\makeatother

% IARIA requires to bring the table caption in the same line of "Table I"
\usepackage{etoolbox}
\makeatletter
\patchcmd{\@makecaption}
  {\\}
  {.\ }
  {}
  {}
\makeatother

% IARIA subfigure captions require parentheses and footnotesize:
\ifnum\value{iaria@subfigtracker}=1
  \typeout{iaria class: load subfig package (use subfloat command).}
```

```
  \RequirePackage[caption=false,font=footnotesize]{subfig}
\fi
\ifnum\value{iaria@subcaptiontracker}=1
  \typeout{iaria class: load subcaption package (use subfigure command).}
  \RequirePackage{subcaption}
  \captionsetup[subfigure]{labelformat=parens,font=footnotesize}
\fi

% Balance/level columns at the last page / in bibliography
% DISCLAIMER: No solution is a 100%/perfect one!
% Mainstream option: pbalance (see https://ctan.org/pkg/pbalance)
% BUT: incompatible with arxiv automated process (!)
\ifnum\value{iaria@pbalancetracker}=1
  \typeout{iaria class: load pbalance package.}
  \RequirePackage{pbalance}
\fi
% Flushend => works with arxiv, but major incampatibility with lineno (and, thus, also with m
\ifnum\value{iaria@flushendtracker}=1
  \typeout{iaria class: load flushend package.}
  \RequirePackage{flushend}
\fi

% Finally, we'll use \endinput to indicate that LaTeX can stop reading this file. LaTeX will
\endinput
```