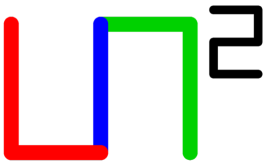

# LaTeX style for LIA documents

## how to use the LIA style file

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Reference: LIA-DOC-001-TEX-GUIDE
Version: 1.6
Date: 15/03/2013
Pages: 9

# Contents

# List of Tables

# 1 Introduction

## 1.1 Purpose

With this LaTeX document template you can produce uniform documents in the **LIA** research group whenever you use LaTeX. Most of the formatting tasks are placed into the LaTeX class file, so you, as the author of a document, can concentrate on its content, rather than on its format.

## 1.2 Revision history

**Version 1.6:**
- Description for usage of TeX-path to place files added.

**Version 1.5:**
- Logos revised.

**Version 1.4:**
- Logos for new **LIA** group added.
- Revision history added.

## 1.3 Acronyms

In this document there do not appear any acronyms. This section is merely used to demonstrate the usage of the implemented commands to deal with referenced acronyms.

| | |
|---|---|
| **SOME** | some acronym |

Table 1: Alphabetically ordered list of all acronyms used in this document.

# 2 Template description

## 2.1 LaTeX files

The class file is named `lia.cls`. No additional class options are implemented. All specific commands and environments start with the `Lia`-prefix, besides those dealing with acronyms. To process a document, you need two image files (the **LIA** logos) provided as `.png`-files

| | |
|---|---|
| `lia.cls` | the class file |
| `logo_lia_large_75.png` | small **LIA** logo |
| `logo_lia_Large_316.png` | large **LIA** logo |

Table 2: Files needed to process a document.

You can place the files either in your local directory where you generate the document, or you place is under a path that is inspected automatically by your LaTeX–processor. A typical location would be `$(HOME)/texmf/tex/latex/lia` where you should place all style and image files. Don't forget to run the data base update command of your LaTeX–system, e.g. the `texhash` command within your `texmf` path.

## 2.2 Preamble

The document preamble must contain all mandatory declarations and may contain optional declarations. As you can easily see, most of the commands are almost selfexplaining.

### 2.2.1 Mandatory preamble declarations

You must specify the author, the **LIA** document identification, and a version number. The document identification should be a string uniquely identifying the document among all **LIA** documents. The author should be a single name, if the document was written by more than one person, the main author should be listed and the other authors should be included in an appropriate section of the document. Usually, neither the author nor the identification number will be changed in the future; only the version number might increase with updates of the document.

```
\LiaWrittenBy{Arno Formella}
\LiaNumber{LIA-DOC-001-TEX-GUIDE}
\LiaVersion{1.5}
```

### 2.2.2 Optional preamble declarations

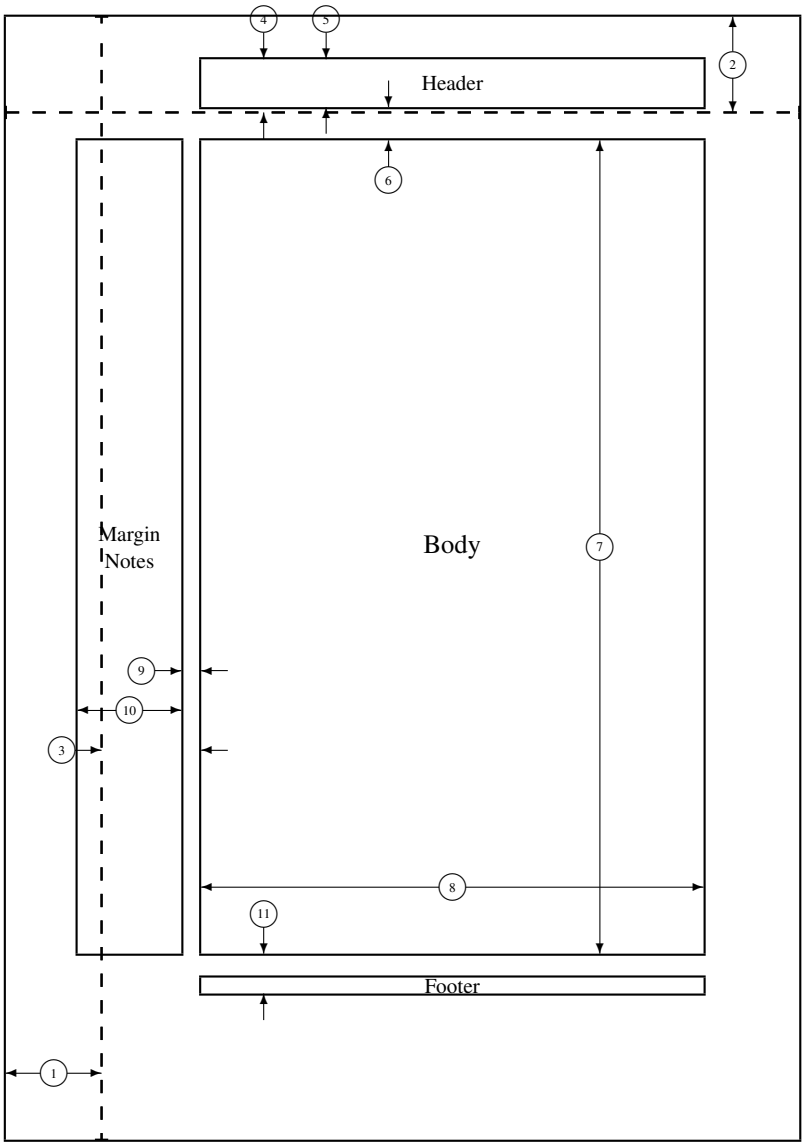
The optional declaration allow you to automatically include certain information at the beginning of the documents, mostly they are contents tables.

```
%\LiaDate{\ddmmyyyydate\today} % the default declaration
\LiaDate{10/01/2009}           % how you should set the date

\LiaSubTitle{A subtitle you want to add}
\LiaNoTableOfContents
\LiaListOfTables
\LiaListOfTBD
\LiaListOfFigures
```

## 2.3 Page layout

The general page layout as generated by this style is shown on the next page.




```
 1   one inch + \hoffset          2   one inch + \voffset
 3   \oddsidemargin = 75pt        4   \topmargin = -40pt
 5   \headheight = 36pt           6   \headsep = 25pt
 7   \textheight = 612pt          8   \textwidth = 378pt
 9   \marginparsep = 15pt        10   \marginparwidth = 78pt
11   \footskip = 30pt                 \marginparpush = 5pt (not shown)
     \hoffset = 0pt                   \voffset = 0pt
     \paperwidth = 597pt              \paperheight = 845pt
```

## 2.4 Commands

The class file defines certain commands which are useful in many situations and they must be used, if the corresponding information they code is introduced readily in the document.

### 2.4.1 Simple commands

The following commands generate the fixed output as given:

| | |
|---|---|
| `\Lia` | **LIA** |
| `\LiaClsVersion` | 2010/25/12 v1.20 |
| `\LiaClsVersionDate` | 2010/25/12 |
| `\LiaClsVersionOnly` | v1.20 |

Table 3: Alphabetically ordered list of fixed content `Lia`-commands.

According to the settings in the preamble, the following commands generate the appropriate output:

| | |
|---|---|
| `\LiaAuthorVar` | Arno Formella |
| `\LiaDateVar` | 15/03/2013 |
| `\LiaNumberVar` | LIA-DOC-001-TEX-GUIDE |
| `\LiaVersionVar` | 1.6 |

Table 4: Alphabetically ordered list of variable content `Lia`-commands.

### 2.4.2 To–be–determined entries

The command `\LiaTBD{explainatory text}` produces a "to be determined" (**TBD**) entry in the text. The explainatory text is not written, rather it is added into a summary list of all remaining such notes in the document. You should switch-on the inclusion of the TBD table in the preamble whenever you use this feature.

### 2.4.3 Acronyms

Acronyms are handled with two commands: `\ACR{acronym}` and `\rACR{acronym}`. The first one defines an acronym which may be done, for instances, in a corresponding table. The second one references the acronym and should be used whenever the acronym is cited. An example is the SOME acronym.

### 2.4.4 Margin entries

margin text

Margin text is placed to the left of the text. Besides some short text like done here with the command `\LiaMargin{margin text}` you can use colored dots to mark certain lines or paragraphs. The predefined commands are `\LiaMarginDot`, `\LiaMarginDotRed`, `\LiaMarginDotGreen`, and `\LiaMarginDotBlue`. The available colors are the same colors as used for the **LIA** logo. Note that if you place several dots to close to each other they may not be placed exactly where you expect.

## 2.5 Already available packages

The **LIA**-class file includes already the following packages:

| | |
|---|---|
| `afterpage` | to act at the end of a page |
| `caption` | to typeset captions of tables and figures |
| `colortbl` | to use color in tables |
| `color` | to use color in the document |
| `datetime` | to specify date time easily |
| `fancyhdr` | to generate the header and footer lines |
| `geometry` | to set-up the page layout |
| `graphicx` | to include images in the document |
| `hyperref` | to allow for hypertext references |
| `ifthen` | for conditional executions |
| `lastpage` | to reference the last page |
| `longtable` | to make long tables available |
| `marginnote` | to typeset notes on the margins |
| `pdfpages` | to handle external pdf pages |
| `sectsty` | to deal with the section titles |
| `units` | to typeset units correctly |

Table 5: Alphabetically ordered list of all packages already included by the style file.

Consider reading their documentation if you want to use features of the packages that go beyond the issues described in this short guide.

## 2.6 Include complete PDF pages

Sometimes it might be necessary to include some or all pages of an external PDF-document into your **LIA**-document. An easy way is to take advantage of the `pdfpages` package, for instance with commands like:

```
\includepdf{filename}
\includepdf[pages=3]{filename}
\includepdf[pages=2-5]{filename}
\includepdf[pages=-5]{filename}
\includepdf[pages=5-]{filename}
```

Then at that point, the current page is finished and the pages to be included will be inserted without any change; page numbering etc. is continued afterwards correctly. If you first want to fill the current page with text located after your `\includepdf`-command, you can use:

```
\afterpage{\includepdf[pages=2-3]{filename}}
```

## 2.7 Mathematics

$$\sum_{i}^{n} \frac{\Delta(x)\sin(\alpha\omega t)}{\int_a^g f(x)y^2dx} \tag{1}$$

# 3 Invocation

You simply run

```
pdflatex your_document.tex
```

Make sure that the files as mentioned in Table 2 are accessible either in the same directory or in a search path of LaTeX. You should prefer soft links to some central place, rather than copying the files directly, so changes can be propagated easily.

As alternative you can use the `Makefile` for LaTeX–documents as described in the **LIA-DOC-002-TOOLS** document.