

# The lps class: layout for the *Logic & Philosophy of Science* journal\*

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## Abstract

The `lps` class modifies the standard L<sup>A</sup>T<sub>E</sub>X<sub>2</sub> $\epsilon$  article class in order to comply with the *L&PS* journal style specifications.

## Sommario

La classe `lps` modifica la classe `article` standard e impagina automaticamente il documento secondo le specifiche della rivista *Logic & Philosophy of Science*. È sufficiente richiamare la classe (`\documentclass{lps}`) e specificare alcuni comandi obbligatori (`\Title`, `\Author`, `\Affiliation`, `\Email` e `\Keywords`) per ottenere un articolo nel formato richiesto a partire da qualsiasi sorgente L<sup>A</sup>T<sub>E</sub>X standard. Gli altri nuovi comandi introdotti (`\Volume`, `\Number`, `\Year` e `\FirstPage`) si occupano delle informazioni editoriali relative al numero specifico della rivista.

## Contents

<b>1</b>	<b>Introduction</b>	<b>2</b>
1.1	Description of the class . . . . .	2
1.2	Required packages . . . . .	3
1.3	Known bugs . . . . .	3
<b>2</b>	<b>Usage</b>	<b>4</b>
2.1	Installation . . . . .	4
2.2	Loading the class . . . . .	4
2.3	New class commands . . . . .	4

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\*<http://www.univ.trieste.it/~episteme/>

<sup>†</sup>Please report any error, comment or incompatibility with other L<sup>A</sup>T<sub>E</sub>X packages to [g.cevolani@gmail.com](mailto:g.cevolani@gmail.com).

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## 1 Introduction

The *Logic & Philosophy of Science* journal (*L&PS* for short) is an online academic publication edited at the University of Trieste (Italy). The `lps` class allows  $\LaTeX$  authors to write their articles conforming to the standards of the journal.

The home address of *Logic & Philosophy of Science* is

<http://www.univ.trieste.it/~episteme/>

and the last version of the present files can also be found at:

<http://www.ctan.org/tex-archive/macros/latex/contrib>

or at:

[http://www.univ.trieste.it/~episteme/latex\\_L&PS.htm](http://www.univ.trieste.it/~episteme/latex_L&PS.htm)

**Notice.** Since I am not a  $\TeX$  hacker, with few exceptions I wrote the class' code (see Section 3) using high-level  $\LaTeX$  commands. **Suggestions are welcome** on how to improve, simplify or correct the present version of the code.

**Acknowledgements.** The layout of *Logic & Philosophy of Science* was designed by Luca Tambolo. Thanks are due to the participants to the discussion forum and mailing list of GuIT (Gruppo Utilizzatori Italiani di  $\TeX$ ), from which I learned much of what I know about  $\LaTeX$ . In particular, I am indebted to Enrico Gregorio for the many corrections to earlier versions of the code. I also thank “B. A.” for some good advice on the MiKTeX list on SourceForge.net.

### 1.1 Description of the class

The standard *L&PS* page's dimensions are the following. The textblock (including headers and footers) is  $155 \times 172,795$  mm. This amounts to 39 lines of text, given the default font dimension and leading, which are 11 pt and 12.5 pt, respectively. Since the document is designed for double-printing (twoside), the header is different for odd-numbered and even-numbered pages. Odd-numbered pages contain the author's name, even-numbered pages contain the article's title (possibly shortened). The footer contains the page number in italics and at center.

The first or title page has different header and footer. The header contains the name of the journal, the volume, number and year of the present

issue and the page range of the article. The footer does not contain the page number, but the copyright and journal information. The title is similar to standard L<sup>A</sup>T<sub>E</sub>X's one but also contains author's affiliation (typically Department, University and country) and electronic (e-mail) address. Finally, the title page also displays a simplified table of contents (without page numbers), the abstract and some keywords, all centered in a sort of minipage on the title page.

Section titles are centered in a bold face normal size font. At the present moment, the standard article does not consider subsections or lower divisions, which in any case would not enter in the table of contents.

Footnotes' text is separated from the main text by a continuous line of length `\textwidth`.

## 1.2 Required packages

At the present moment, the class requires three other packages, which should be present in any standard L<sup>A</sup>T<sub>E</sub>X distribution.<sup>1</sup>

Required packages are:

- `mathptmx`, which causes L<sup>A</sup>T<sub>E</sub>X to use Times New Roman fonts instead of standard Computer Modern fonts;
- `geometry`, which allows for a quick and straightforward configuration of the page's layout; and
- `titletoc`, which is part of `titlesec` but can be used independently and allows for a complete customization of the table of contents.
- `lastpage`, which defines a new label for the last page of the article, which can be then referred to with `\pageref`. This label is used to display the page range in the header of the title page.

In future versions, the class will maybe no longer use the `geometry` and `titletoc` packages.

## 1.3 Known bugs

Known problems include:

**Title:** formatted titles, such as `\title{My \emph{title}}` cause wrong headers; moreover, there is still no solution for long titles. Both problems will be solved in future version by a `\shorttitle` command.

**Author(s):** there is still no support for multiple authors.

Known incompatibilities with other standard packages include:

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<sup>1</sup>Otherwise, they can be obtained from [www.ctan.org](http://www.ctan.org).

**PdfDraftCopy:** the `pdfdraftcopy` package seems to cause problems with the class' layout.

## 2 Usage

This section describes the (very intuitive!) use of the class and of its commands. See the template file `lps-template.tex` for a complete sample document.

### 2.1 Installation

The class comes in two files, `lps.ins` and `lps.dtx`. Run first  $\LaTeX$  on `lps.ins`: this will create two files, `lps.cls` (the class file) and `lps-template.tex`, a sample file. Then run twice (PDF) $\LaTeX$  on `lps.dtx`: this will create the documentation for the class (the file you are reading). To test the installation, run twice (PDF) $\LaTeX$  on `lps-template.tex`.

### 2.2 Loading the class

The file `lps.cls` must be in a directory searched by  $\LaTeX$ , for instance the same directory containing also the source (`.tex`) file.

Your `.tex` document will then simply begin with `\documentclass{lps}`. Note that the class already sets the right paper and font dimension, so you do not need to specify them here.

### 2.3 New class commands

- `\Title` At the beginning of the document, one should specify the `\title` and
- `\Author` `\author` fields as usual; the two capitalized forms `\Title` and `\Author` are also available.<sup>2</sup> After that, the following commands should be used.
- `\Affiliation` The command `\Affiliation` normally takes as argument the author's Department and University.
- `\Email` The `\Email` command takes as argument the electronic address of the author, printing it under author's name and affiliation.
- `\Keywords` Finally, one should specify a short list of keywords, separated by commas, in the argument of the `\Keywords` command.

Note that the commands described above are mandatory, since they leave an empty space in the final document if not specified. For this reason, a warning will be issued if you don't specify them.

Some other commands and environments have been re-defined: these are `\maketitle`, `\tableofcontents` and `abstract`. Their usage, however, is exactly the standard one.

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<sup>2</sup>Note, in fact, that the standard commands have been redefined (section 3).

The following commands regard the information concerning the actual issue of the journal. You don't need to use these commands until the final version of your paper is ready, since this information will be supplied to you by the journal's editors. Each command has a default value which appears in the draft versions of the article.

- `\Volume`     The volume number, e.g. "III", has to be inserted by the user directly *in Roman capital letters*, using the `\Volume` command.
- `\Number`     The `\Number` command takes as argument the number of the present issue, in arabic digits, e.g. "1".
- `\Year`        The year of publication of the article is then inserted with the `\Year` command.
- `\FirstPage`   The `\FirstPage` command takes as argument the number of the first actual page of the article — once this has been inserted in the whole issue — and set the page counter to that value; by default, its value is 1. The page range of the article will be automatically displayed in the header of the title page (after at least *two* runs of (PDF) $\LaTeX$ ).

### 3 The code

This section describes each line of the `lps.cls` file.

First of all, we declare the class' name and description.

```
1 \*class
2 \NeedsTeXFormat{LaTeX2e}[1995/12/01]
3 \ProvidesClass{lps}[2006/09/22 v0.5%
4                               LaTeX document class for the L&PS journal]
```

The `lps` class is derived from the standard `article` class through minor modifications:

```
5 \LoadClass[11pt,twoside,onecolumn]{article}
```

At the present moment, the class require four standard  $\LaTeX$  packages:

```
6 \RequirePackage{mathptmx}
7 \RequirePackage{geometry}
8 \RequirePackage{titletoc}
9 \RequirePackage{lastpage}
```

We define or re-define some standard commands about article's author and title:

```
10 \newcommand{\the@title}%
11  {\@latex@warning@no@line{LPS warning: no \noexpand\Title given}}
12 \newcommand{\Title}[1]{\renewcommand{\the@title}{#1}}
13 \let\title\Title
14 \newcommand{\the@author}%
15  {\@latex@warning@no@line{LPS warning: no \noexpand\Author given}}
16 \newcommand{\Author}[1]{\renewcommand{\the@author}{#1}}
17 \let\author\Author
18 \newcommand{\the@affiliation}%
```

```

19 {\@latex@warning@no@line{No \noexpand\Affiliation given}}
20 \newcommand{\Affiliation}[1]{\renewcommand{\the@affiliation}{#1}}
21 \newcommand{\the@email}%
22 {\@latex@warning@no@line{No \noexpand\Email given}}
23 \newcommand{\Email}[1]{\renewcommand{\the@email}{e-mail: #1}}

```

and about the issue in question:

```

24 \newcommand{\the@volume}{III}
25 \newcommand{\Volume}[1]{\renewcommand{\the@volume}{#1}}
26 \newcommand{\the@number}{4}
27 \newcommand{\Number}[1]{\renewcommand{\the@number}{#1}}
28 \newcommand{\the@year}{2222}
29 \newcommand{\Year}[1]{\renewcommand{\the@year}{#1}}
30 \newcommand{\first@page}{1}
31 \newcommand{\FirstPage}[1]{\renewcommand{\first@page}{#1}}
32 \setcounter{page}{\first@page}

```

The first group of commands is used on the first page by a re-defined version of the `\maketitle` command:

```

33 \renewcommand{\@maketitle}{\newpage\null\vspace{4mm}
34   {\centering
35     \let\footnote\thanks
36     {\LARGE \the@title}\vskip 10mm
37     {\normalsize
38       \the@author\\\the@affiliation\\\the@email
39     }
40     \vskip 10mm}}

```

The `\tableofcontents` command is also redefined as follows:

```

41 \renewcommand{\tableofcontents}{
42   \begin{quotation}\small\noindent
43     \@starttoc{toc}
44   \end{quotation}}

```

The appearance of the ToC entries is controlled by the `titletoc` package with the following declaration:

```

45 \titlecontents{section}[1.4em]{}%
46           {\contentslabel[\bfseries\thecontentslabel ]%
47           {1.4em}}{\itshape}{}[]

```

Finally, the `abstract` environment is redefined in order to display a newly defined `keywords` field:

```

48 \newcommand{\the@keywords}%
49   {\@latex@warning@no@line{No \noexpand\Keywords given}}
50 \newcommand{\Keywords}[1]{\renewcommand{\the@keywords}{#1}}
51 \renewenvironment{abstract}%
52   {\setlength{\parskip}{0pt}
53   \begin{quotation}\noindent\small%
54     \textsc{\MakeLowercase\abstractname}.}%
55   {\vskip 1\baselineskip \noindent%
56   \textsc{keywords}: \the@keywords%

```

```
57 \end{quotation}\noindent}
```

This completes (apart from the header) the layout of the first page. The rest of the code accomplish other style- and layout-specifications.

The page layout is obtained trough the following geometry declarations:

```
58 \geometry{paperwidth=155mm,paperheight=230mm}
59 \geometry{textwidth=122mm,textheight=172.795mm}
60 \geometry{headsep=10mm,headheight=7mm,footskip=7mm}
61 \geometry{hcentering,top=33mm}
```

We define the new page style:

```
62 \newcommand{\ps@lps}{%
63 \renewcommand{\@oddhead}{%
64 {\hfil\small\scshape\MakeLowercase\the@title\hfil}%
65 \renewcommand{\@oddfont}{\hfil\itshape\thepage\hfil}%
66 \renewcommand{\@evenhead}{%
67 {\hfil\small\scshape\MakeLowercase\the@author\hfil}%
68 \renewcommand{\@evenfont}{\hfil\itshape\thepage\hfil}}
```

and re-define the standard plain style for the title page:

```
69 \renewcommand{\ps@plain}{%
70 \renewcommand{\@oddhead}{%
71 {\hfil\parbox[t]{80mm}{\centering\itshape%
72 L&PS -- Logic & Philosophy of Science\\
73 Vol. \the@volume, No. \the@number, \the@year, %
74 pp. \thepage -\pageref{LastPage}}\hfil}%
75 \renewcommand{\@oddfont}{%
76 \parbox[t]{80mm}{\footnotesize \copyright\ The Author \the@year\\
77 Published by L&PS -- Logic and Philosophy of Science\\
78 http://www.univ.trieste.it/~{episteme/ -- ISSN:\thinspace 1826-1043}\hfil}%
79 \renewcommand{\@evenhead}{}%
80 \renewcommand{\@evenfont}{\hfil\itshape\thepage\hfil}}
81 % \end{macrocode}
82 %
83 % Other specifications regard sections' and footnotes' style:
84 % \begin{macrocode}
85 \renewcommand{\thesection}{\arabic{section}.}
86 \renewcommand{\section}{\@startsection
87 {section}%
88 {1}%
89 {0mm}%
90 {2\baselineskip}%
91 {1\baselineskip}%
92 {\centering\normalfont\normalsize\bfseries}%
93 }
94 \renewcommand{\@makefnmark}[1]{%
95 {\indent\makebox[7mm][r]{\@makefnmark}\hspace{2mm}#1}
96 \renewcommand{\footnoterule}{%
97 {\noindent\vspace*{-2pt}\rule{\textwidth}{.4pt}\vspace*{5pt}}
98 \setlength{\skip\footins}{6mm}
```

Finally, we apply the new page style to the document:

```
99 \AtBeginDocument{\pagestyle{lps}}  
</class>
```