

The webofc Class User Manual
for Authors Using L^AT_EX to Submit Articles Intended
for the Web of Conferences Journal

Version 2.0

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1 Introduction

This user manual describes the `webofc` document class and is not intended to serve as a general introduction manual for $\text{T}_{\text{E}}\text{X}$ or $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$. For that purpose, you should refer to [1, 2, 3]. The `webofc` class prompts the article class and loads several extensions including some which propose public commands (other extensions are only used to obtain the commands particular to the class).

Since the `webofc` class is derived from `article.cls`, it uses most of the standard article commands as well as the $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ commands of course.

While reading this support document is in every interest of authors, the more impatient will be capable of immediately using this class by merely filling out the `template.tex` file which summarises the syntax of all of the usual commands and then looking up additional commands as needed.

2 Use of the Class

2.1 Page Layout

The Web of Conferences Journal allows 2 formats: A4 paper size, two columns (169x249 mm) or 170x250 mm paper size, one column (142x210 mm).

Depending of the choice of the organizer, the first line of your document consists of calling the class. The base command is:

```
\documentclass{webofc}
```

(default option) for the one column format,

```
\documentclass[twocolumn]{webofc}
```

for the two columns format.

Do not add any page numbers.

2.2 Class Options

The class automatically provides a certain number of functions which can be modified by class options.

2.2.1 Input Encoding

The class allows specification of the input encoding of the document. It is not necessary to use the `inputenc` package in particular because the class handles its management. By default, UTF-8 encoding is being used and the following options are given:

- `ascii` or only ASCII 7 bits is allowed — note that $\text{T}_{\text{E}}\text{X}$ -style accents must be used;
- `latin1` coding by default on Linux when UTF-8 is not being used;
- `latin9` coding similar to `latin1` and enabling direct access to certain other characters (œ for example);
- `ansinews` coding by default on Windows when UTF-8 is not being used;

- `applemac` coding by default on Mac when UTF-8 is not being used;
- `utf8` coding by default for the class, making it technically pointless to specify this.

If, by chance, you had been using an encoding which does not fit among those referred to above, you will need to get in contact with the author of this class.

2.2.2 Languages

Articles may be written in either French or English, while English is the default language. It does automatically change a certain number of typographical rules and the French option `français` must be indicated in cases where the article has to be written in French. Since English is the default language option, it is not necessary to indicate the language for an article in English.

2.2.3 Bibliography

Actual bibliographical datas can be given either at the end of the document in a `thebibliography` environment, or through an external file which must be processed using an external programme (`bibtex`). The `template.tex` file provided as an article skeleton for the Web of Conferences journal indicates how these datas should be provided. We have the following syntax:

```
\begin{thebibliography}{8}
\bibitem{key1}
Journal Author, Article title. Journal \textbf{Volume}, page numbers (year)
\bibitem{key2}
Book Author, \textit{Book title} (Publisher, place, year) page numbers
\bibitem{key3}
...
\end{thebibliography}
```

Element	Style
Authors	Normal
Article title	Normal
Journal title	Normal
Book title, Proceedings title	Italic
Volume number	Bold
Page number	Normal
Year	In brackets
DOI URL	Hyperlink

This syntax should be properly respected, particularly with regard to the manner in which several authors are indicated and the title of the work. Of course, this information must be modified for cases where a book is not concerned (see the `template.tex` file).

The `thebibliography` environment argument indicates the maximum length of the detail number. This only matters when we select display by issue number. Here, entering ‘8’ indicates that there are only single-digit numbers. If your bibliographical basis only includes several hundred entries, and less than one thousand, ‘888’ should be entered.

If you are using an external bibliographical data file, it will be assumed that you are familiar with the `bibtex` system. Whether with the environment `thebibliography` or indeed with the use of an external file, there is no need to specify the style of bibliography with `\bibliographystyle` (the class does this but ensure that the `woc.bst` style is copied in the same directory as the source file of the article), the command to quote a bibliographic reference in the class is exclusively `\cite` (and not `\citet`, `\citep` or any other). The command `\cite` requires an obligatory argument which is the entry key to the database or the entry key).

It likewise accepts an optional argument for specifying the additional data on the cited work: several pages, a chapter, etc.

To cite several references, the different keys must be separated by a comma. In the case of an issue number display, numbers will be automatically selected by increasing order and consecutive number series will be replaced by intervals. Do not worry about these details as they will be handled automatically.

2.3 Additional Packages

The class `webofc` loads a minimal number of packages: namely those which it is hard to avoid using. It is possible to load other packages. Here is the list of packages loaded by class and which would allow the user to obtain certain public commands as well as certain symbols.

- `calc`
- `textcomp`
- `amsmath`
- `amssymb`
- `graphicx`
- `enumerate`

If you have a very old $\text{T}_{\text{E}}\text{X}$ distribution (prior to 2005), there is a compressed `packages.zip` file containing all packages used either directly or indirectly by the class dating from 2010. By unzipping this file, you will have access to all of these packages. If you are familiar with a *texmf tree*, you will know where to position these packages so that they have a global action. If you are not familiar, simply place all packages in the same directory as the source file of the article.

Naturally you can use packages which have not been called by the class. It is nevertheless useful to not use packages that modify the general configuration at the risk of being inconsistent with the specifications of the Web of Conferences Journal.

For the moment, it is not possible to draw up a list of authorised packages and those which are not recommended or forbidden.

Certain packages are obviously authorised. For example, those which handle the management of tables (`array`, `tabularx`, etc.), the management of very particular components (`listings`, `pstricks`), and packages which offer special symbols (`stmaryrd`, `tipa`, etc.), etc.

Conversely, other packages are obviously forbidden. For example, any packages which modify the font family of the document (`fourier`, `pxfonts`, etc.), those which alter the geometry of the page (`geometry` which is already loaded by the class, `a4wide`, etc.), and packages which handle bibliographies.

2.4 Fonts Used

The `webofc` class uses fonts which can be directly accessed under $\text{T}_{\text{E}}\text{X}$ distributions. In this case, this journal will be typeset with the Times fonts. Therefore, the `txfonts` is used by default. This requires Times for roman and Helvetica for the sans-serif family. Insert the command:

```
\usepackage[varg]{txfonts}
```

in the preamble of your $\text{T}_{\text{E}}\text{X}$ file.

We chose to insert the package `txfonts` in the source file to avoid conflict, if there is, with packages which offer special symbols. I think for example to `wasysym` package. If needed, it must be called before `txfonts`.

3 Article Header

In this section we describe the usage of the high-level structuring commands for the article header. Header in this context means everything that comes before `\maketitle`.

The header of an article is typesetted of a certain number of components, some of which are optional, while others are obligatory. All of these components are specified via commands (there are no environments) and the actual header is typesetted using `\maketitle`.

All of these components are typesetted across the full width of the page (in a single column), while the rest of the article is typesetted in a double column. While this is not strictly an obligation, commands which provide that various components of the header should be placed after the `\begin{document}`.

3.1 Title

The commands for the `title` and `subtitle` of your article are

```
\title{your title}  
\subtitle{your subtitle}
```

If needed in addition to the title, which is obligatory, it is possible to declare a subtitle which is optional.

3.2 Authors

The authors of the article are indicated using

```
\author{author names}
```

You should enter the author name using the format First Name Last Name. We added the two commands `\firstname{author first name}` and `\lastname{author last name}` to properly structure the author tag.

If there is more than one author, the rule is to separate each author from the following using the macro `\and`. It is obligatory to have at least one author. Unless you use `author`, a compilation error will occur.

If the authors have different affiliations, each name must be followed by

```
\inst{number}
```

The argument `\inst` will contain the number(s) corresponding to the relevant institutions. If an author belongs to several institutes, a single command `\inst` must be used containing the list of numbers. The different numbers must be separated by commas. Here, too, the `template.tex` file will indicate how to proceed.

In addition, the journal makes it possible to display email addresses attached to authors. We can use:

```
\email{email address}
```

to provide your email address within `\author`. To make this clear, we provide an example:

```
\author{\firstname{Isaline} \lastname{Augusto}\inst{1,3}\fnsep\thanks{\email{revues@edpsciences.org}}  
 \and \firstname{Isabelle} \lastname{Houlbert}\inst{2}  
 \and \firstname{Agnès} \lastname{Henri}\inst{3}}
```

The class pays attention to automatically handling the spaces and no precaution is necessary for protecting the spaces around the names of authors.

3.3 Address data

In addition to authors, the affiliations to which they belong must also be cited. For this reason, `\institute` is used in the same way as the command for authors:

```
\institute{\i{address information}}
```

each institute is separated from the following using the macro `\and`. Here, too, the class automatically handles spacing and no special precaution is necessary for spaces surrounding the names of institutes. Please make sure that the numbers match those placed next to the authors' names.

Comes after an illustrative example:

```
\institute{EDP Sciences  
  \and Planck Institute}
```

3.4 Footnotes to Article Header

Footnotes in the header (title, subtitle, author's names or institute addresses) can be created using the macro

```
\thanks{\i{text of footnote}}
```

immediately after the word where the footnote indicator should be placed. These footnotes are marked by asterisks. If you need more than one consecutive footnote, use

```
\fnsep
```

between them to typeset the comma separating the asterisks.

3.5 Abstract and Keywords

Articles need a summary using the command `\abstract`¹. It is not necessary to ask to change languages with the macro `\selectlanguage`, the class automatically handles this if the summary whether in French or English.

Do not enter key words for this journal.

3.6 Dates of the Article

The command `\date` may be used anywhere in the document. The preamble is a good place, with all commands serving to complete the header.

Normally, the author will not have to use this command for this journal.

4 Class Commands and Environments

As the class is based on the article class, those commands are available. However, for some of them, there are modifications.

¹Contrary to the normal way of proceeding in \LaTeX , `\abstract` is in fact a command rather than an environment.

4.1 Sectioning Command

Sectioning commands are available with the exception of `part` and `subparagraph`. Using these commands in an article webofc will result in a compilation error. The other plan commands (`\section`, `\subsection`, `\subsubsection`, `\paragraph`) can be used freely and will retain their normal syntax. However, it should be noted that the optional argument of these commands cannot have any action since there is no table of contents covering the section titles and the page headers do not use this information either. On the other hand, it is possible to use the asterisk form of these commands to discontinue numbering.

It is possible to have appendix. Use the `\appendix` command for that.

4.2 Lists

Some modifications have also been made to lists. As a result of these changes, whether in French or English, itemize lists always comprise lists of dashes and the indentation is not the one normally used by L^AT_EX. The `description` environment now provides an optional parameter which makes it possible to indicate a text whose length will be taken as a minimal length for the description titles. One can, for example, put in the longest entry. The syntax now is

```
\begin{description}[\langle largelabel \rangle]
...
\end{description}
```

4.3 Floats

The environments `figure` and `table` have also been modified to adapt to the typographical demands of the journal. The underlying syntax remains the same, meaning that these environments have no obligatory argument, although they may have an optional argument indicating the positioning requirements and making it possible to have a legend using `\caption` and there are also asterisk forms so that these floats take up two columns. The differences are related to the configuration of these floats.

For the floating figures, `\caption` should be specified following the image, whereas for the floating tables, this command should be entered before the environment which is used to typeset the table itself. In fact, the review stipulates that the legends follow the figures and come before the tables.

4.4 Additional commands

We provide some additional useful commands which you can use in your manuscript. The first is the `acknowledgement` environment

```
\begin{acknowledgement}
...
\end{acknowledgement}
```

which is usually used as the last paragraph in the last section.

The next is an enhancement of the standard `\caption` command used inside of `figure` or `table` environments to produce the legend. The added command

```
\sidecaption
```

can be used to typeset the legends to one side of the body of the float (image or table). For this purpose, it is enough to say `\sidecaption` at the beginning of the environment `figure` or `table`. Here is an example of how this would look:

```

\begin{figure}
\sidecaption
\centering
\includegraphics{graphic_file_name}
\caption{Figure caption}
\label{fig-for-reference}
\end{figure}

```

It will be noted that centering only serves for centring the image, whereas the class handles the configuration of the caption.

5 Colour illustrations

You are free to use colour illustrations for the online version of the proceedings but any print version will be printed in black and white unless special arrangements have been made with the conference organiser. Please check with the conference organiser whether or not this is the case. If the print version will be black and white only, you should check your figure captions carefully and remove any reference to colour in the illustration and text. In addition, some colour figures will degrade or suffer loss of information when converted to black and white, and this should be taken into account when preparing them.

6 Equations and mathematics

Equations should be centred and should be numbered with the number on the right-hand side as standard \LaTeX commands.

$$T_s(l, t) = T_g(l, t) \tag{1}$$

$$T_s(l, t) = T_g(l, t)T_b(x, \beta, t) = 0 \tag{2}$$

Use italics for variables (*u*) and bold (**u**) for vectors. The order for brackets should be $\{[()]\}$, except where brackets have special significance.

7 Print-ready PDF File preparation

7.1 General instructions

- Embed all fonts, including those used in the pictures,
- Use over 300 dpi resolution,
- Do not protect your PDF by security options,
- Register your PDF under a suitable name,
- Check your final PDF document carefully to ensure that all fonts and special characters appear in the same style as originally intended. Please confirm the quality of your paper both on screen and on printed matter.

7.2 If you Use Acrobat Distiller to create your PDF file

- In the menu Properties in PDF settings, please uncheck “**Do not send fonts to Adobe PDF**”,
- Select one of the high print quality *joboptions* proposed by Adobe suitable for reliable viewing and printing of documents as **Print quality**, **Press quality**, **High quality**, etc.

References

- [1] Leslie Lamport, *LaTeX: A Document Preparation System 2nd ed.* (Addison-Wesley, Reading, 1994).
- [2] Frank Mittelbach, Michel Goossens, Johannes Braams, David Carlisle, Chris Rowley, *The LaTeX Companion 2nd ed.* (Pearson, Paris) 1116 pp.
- [3] Donald E. Knuth, *The TeXbook* (Addison-Wesley, Reading, Massachusetts, 1986). Revised to cover TeX3, 1991.