Environmetrics Author Submission Guide: Setting Up Your LaTeX 2ε Files

This guide explains the use of the `envauth` document classfile for LaTeX 2ε. This document class allows authors to prepare manuscripts for submission to *Environmetrics*. Authors should use the document class to prepare a postscript or PDF version of their papers for submission for consideration by the editors, as the *Environmetrics* Central Editorial Office and Blackwell Publishing do not have access to LaTeX 2ε software and therefore cannot process LaTeX 2ε source files directly. The *envauth* class file is based on the `mn` style file, which in turn is based on article style as discussed in Lamport's LaTeX manual (LaTeX: A Document Preparation System, Addison Wesley, Reading, Mass., 1994. ISBN 0201529831). Commands that differ from the standard LaTeX interface, or that are provided in addition to the standard interface, are explained in this guide. This guide is not a substitute for a comprehensive LaTeX manual itself. Authors planning to prepare their papers using LaTeX are advised to use *envauth.cls* as early as possible in the creation of their files so as to avoid possible conflicts that may emerge upon switching to the document class later.

Distributed with the *envauth.cls* file are the LaTeX source for two specimen (example) articles, *envsample.tex* and *envtemplate.tex*, whose content is nonsensical but which exhibit several features of the document class.

1. The ENV Document Class

The use of LaTeX document classes allows a simple change of class to transform the appearance of your document. The `envauth` class file preserves the standard LaTeX interface such that any document that can be produced using the standard LaTeX `article` class can also be produced with the `envauth` class file. However, the measure (or width of text) is broader than the default for `article`, and even narrower than for the `A4` style.

It is likely that, should your article be accepted for publication, the final formatting of will change slightly from that produced when you yourself process it using `envauth.cls`. For this reason, we ask that you ignore details such as slightly long lines, page stretching, or figures falling out of synchronization, because these details can be dealt with at a later stage by the publisher. Please also use symbolic references (`\ref`) in order to protect against late changes of order of sections, equations, etc.

All papers submitted to *Environmetrics* should be prepared using the `referee` option in the `documentclass` command, as discussed in Section 2. This option produces a version of the manuscript suitable for review by editors and referees, obeying the journal convention of 1 inch margins, 26 lines per page, and 12 point type. Submitted manuscripts prepared without invoking the `referee` option will be returned to the authors for reformatting.

2. Using the ENVAUTH Class File

If the file `envauth.cls` is not already in the appropriate system directory for LaTeX files, either arrange for it to be put there or copy it to your working directory. The `envauth` document class is implemented as a complete class, *not* a document style option. In order to use the *Environmetrics* document class, replace `article` by `envauth` in the `\documentclass` command at the beginning of your document; that is,

`\documentclass{article}`

is replaced by

`\documentclass[cmbright,fleqn,referee]{envauth}`

2.1 *Document Style Options*

`referee` – this enables the production of a version of the manuscript suitable for review by editors and referees. **All papers submitted for publication should be prepared using this option.**

`cmbright` – If `referee` option is removed, you will be showing font that would look like of the final output. However, this font will not be used in the final layout but will be replaced with commercial fonts instead.

`fleqn` – this makes equation to set flushed left

2.2 *Author Macros*

Please place any additional command definitions at the very start of the LATEX file, before the `\begin{document}`. For example, user-defined `\def` and `\newcommand` commands that define macros for technical expressions used in the manuscript. But, author-defined macros should be kept to a minimum as possible. Please do not include macros that are not used in the document. Also, please do not customize the *Environmetrics* macros or class file, or redefine macros that are already in the class file, and please do not include additional definitions unless they are actually used in the paper.

2.3 *Landscaping Pages*

If a table is too wide to fit the standard measure, it may be turned, with its caption, 90 degrees. The package `rotating` is already pre-loaded in the classfile and you just need to invoke the command; i.e., instead of `\begin{table}...\end{table}` change them to `\begin{sidewaystable}...\end{sidewaystable}` environments in your document to turn your table on the appropriate page of your document.

```
\begin{sidewaystable}
\caption{Landscape table to go here.}
\label{landtab}
\end{sidewaystable}
```

3. Additional Facilities

In addition to all the standard LATEX design elements, the `envauth` class file includes a number of custom features. These are noted throughout this guide. Once you have used these additional `envauth.cls` facilities in your document, do not process it with a standard LATEX class file.

3.1 *Titles and Author's Name(s)*

The title of the article and the author's name and affiliation (or authors' names and affiliations) are used at the beginning of the article for the main title. At the beginning of your article, the title should be generated in the usual way using the `\maketitle` command. See the specimen files and the template file for demonstration, and see the following sections for more details.

3.2 *Running Headline*

A shortened version of the title of the manuscript will be used as a running headline at the top of every odd-numbered page. Although the full manuscript title can run to several lines of text, the running headline must be a single line. Moreover, new line commands (e.g. `\\`) are not acceptable in a running headline. To specify a running head and running author, use the command `\runninghead{<Running Author(s)>}{<Running title>}` to produce such. The running headlines can be produced using the following code:

```
\runninghead{A. Author1 and N Author2}{This is a Shortened Article Title}
```

3.3 *Author Names and Affiliations*

The following are examples of how to create author and affiliation displays consistent with the journal conventions for several different scenarios. These examples appear in the template file and may be customized for your document.

(1) For a single authored manuscript

```
\author{John Author}
\address{Department of Statistics, University of Warwick, Coventry CV4 7AL, U.K.}
```

(2) Corresponding author. Add `\corrauth` command after the name of the author to indicate as the corresponding author; likewise, add `\corraddr{}` where to place the corresponding address as well as its E-mail address.

```
\author{John Author\corrauth}
\corraddr{John Author, Department of Statistics, University of Warwick, Coventry CV4 7AL, U.K.\\
 E-mail: Jauthor@gmail.com}
\address{Department of Statistics, University of Warwick, Coventry CV4 7AL, U.K.}
```

(3) For more than one author, use `\affil{}` and `\affilnum{}` to link the address of author to its name.

```
\author{John Author\affil{a}\corrauth and Second Author\affil{b}}
\corraddr{John Author, Department of Statistics, University of Warwick, Coventry CV4 7AL, U.K.
E-mail: Jauthor@gmail.com}
\address{\affilnum{a}Department of Statistics, University of Warwick, Coventry CV4 7AL, U.K.\\
        \affilnum{b}Department of Mathematics, University of Warwick, Coventry CV4 7AL, U.K.}
```

3.4 *Abstracts and Key Words*

The abstract should be enclosed within an abstract environment, followed immediately by the key words, presented in alphabetical order, enclosed in a keywords environment. For example:

```
\begin{abstract}
This is the summary for this paper...
\end{abstract}
\keywords{Class files; \LaTeXe\,; Sample text; User guide}
\maketitle
\section{Introduction}
```

4. Some Guidelines for Using Standard Facilities

The following notes may help you achieve the best effects with the `envauth` class file.

4.1 *Sections*

"LaTeX 2ε" provides three levels of section headings, and they are all defined in the `envauth` class file:

```
\section
\subsection
\subsubsection
```

4.2 *Lists*

The `envauth` class file uses the standard LaTeX 2ε list commands, i.e., `enumerate`, `itemize` and `description` environments:
  - numbered lists for example,

(1) The attenuated and diluted stellar radiation. The attenuated and diluted stellar radiation;
(2) Scattered radiation, and
(3) Reradiation from other grains.

was produced by:

```
\begin{enumerate}
\item The attenuated and diluted stellar radiation. The attenuated and diluted stellar radiation;
\item Scattered radiation, and
\item Reradiation from other grains.
\end{enumerate}
```

- bullet/itemize lists for example,

- First unnumbered item has no label and is indented from the left margin if it wraps to a second line, which in this example it definitely does
- Second unnumbered item.
- Third unnumbered item which has no label and is indented from the left margin.

was produced by:

```
\begin{itemize}
\item First unnumbered item which has no label and is indented from the left margin which has no label.
\item Second unnumbered item.
\item Third unnumbered item which has no label and is indented from the left margin.
\end{itemize}
```

- and description list for example,

First unnumbered item has no label and is indented from the left margin if it wraps to a second line, which in this example it definitely does
Second unnumbered item.
Third unnumbered item which has no label

was produced by:

```
\begin{description}
\item[] First unnumbered item...
\item[] Second unnumbered item.
```

```
\item[] Third unnumbered item which has no label
\end{description}
```

4.3 *Figures*

The `envauth` class file uses the standard LaTeX 2ε set of commands for figure floats, for example:

```
\begin{figure}
\centerline{%
\includegraphics[width=120mm]{figure1.eps}}
%% to include a figure, or to leave a blank space
\caption{An example figure caption.}
\label{sample-figure}
\end{figure}
```

The set of figure commands should be placed close to (but usually after) the points in the text where they are first referenced. When the `referee` option is used, all figures will be displayed at the end of the document, but you should nonetheless place them as for the final version.

4.4 *Tables*

The `envauth` class file uses the standard LaTeX 2ε set of command for table floats, for example:

```
\begin{table}
\caption{This is a simple table.}
\label{t:one}
\begin{center}
\begin{tabular}{lrrr}
\hline
Estimator & \multicolumn{1}{c}{$\beta_1$} &  \multicolumn{1}{c}{$\beta_2$} &
\multicolumn{1}{c}{$\beta_3$} \\ \hline
MLE & 10.18 & $-$3.26 & 0.13 \\
OLS & 9.92 & $-$3.19 & 0.11 \\
WLS & 9.88 & $-$3.33 & 0.12 \\
\hline
\end{tabular}
\end{center}
\end{table}
```

The set of figure commands should be placed close to (but usually after) the points in the text where they are first referenced. Again, with the referee option, they will be moved automatically to the end of the document.

As with figures, cross-referencing of tables is encouraged. For example, we would reference Table 1 using Table `\ref{symbols}`.

4.5 *Typesetting Mathematics*

4.5.1 *Displayed mathematics.* The `envauth` class file will set displayed mathematics flushed left using `fleqn` option in the `\documentclass` in the width of a column in the final version of a manuscript, provided that you use the LaTeX 2ε standard of open and closed square brackets as delimiters.

The equation

$$\sum_{i=1}^{p} \lambda_i \text{ trace}(\mathbf{S})$$

was typeset using the `envauth` class file with the commands

```
\[
\sum_{i=1}^p \lambda_i = \rmn{trace} (\mathbfss{S})
\]
```

Displayed equations should not be numbered unless they are referenced in the text. For such referenced equations, cross-referencing is encouraged. For example,

```
\begin{equation}
(n-1)^{-1} \sum^n_{i=1} (X_i - \overline{X})^2.
\label{eq:samplevar}
\end{equation}
Equation~(\ref{eq:samplevar}) gives the formula for sample variance.
```

4.5.2 *Bold math italic / bold symbols.* To get bold math italic you should use `\boldsymbol`, e.g.

```
\[
d(\boldsymbol{s_{t_u}}) = \langle [RM(\boldsymbol{X_y}
+ \boldsymbol{s_t}) - RM(\boldsymbol{x_y})]^2 \rangle
\]
```

to produce:

$$d(\boldsymbol{s_{t_u}}) = \langle [RM(\boldsymbol{X_y} + \boldsymbol{s_t}) - RM(\boldsymbol{x_y})]^2 \rangle$$

Thus, scriptstyle and scriptscriptstyle sizes will take care of themselves.

4.5.3 *Bold greek.* Upper and lowercase Greek characters are available in all typesizes. You can then use these definitions in math mode, as you would normal Greek characters:

```
\[
\boldsymbol{\alpha_{\mu}} = \boldsymbol\Theta \alpha.
\]
```

will produce

$$\boldsymbol{\alpha_{\mu}} = \boldsymbol{\Theta}\alpha.$$

4.6 Acknowledgements

An optional Acknowledgements section may be included. Authors may wish to thank or acknowledge the contributions of specific individuals who are not named as authors on the paper, or they may wish to cite a grant that supported the research being reported in the article.

```
\acks{The authors wish to thank...}
```

4.7 References

References to published literature should be quoted in the text by author and date, e.g., Draine (1978) or (Begelman and Rees, 1984). Where more than one reference is cited having the same author(s) and date, the letters a,b,c,. . . should follow the date, e.g., Smith (1988a), Smith (1988b), etc. For papers with two authors, the names of two author should be cited, e.g., Begelman and Rees (1984). For papers with more than three authors, the first author name plus "*et al.*" should always be used. In the bibliography list, all authors should be retained.

4.7.1 *"Do-it-yourself" references and citations.* One way to create the reference list is to type it yourself. Here is an example using the `thebibliography` environment; see also the template file.

```
\begin{thebibliography}{}
\bibitem[Butcher(1992)]{bu}
Butcher, J. (1992). Proper multivariate conditional autoregressive models for spatial data
analysis. {\it Environmetrics} {\bf 196,} 173.
\bibitem[Blanco(1991)]{bl}
Blanco, P. (1991). {\it NIFT\/} 2nd edition. Boca Raton, Florida: Chapman and Hall.
\bibitem[Brown and Jones(1989)]{bj} Brown, A. B. and Jones, C. D. (1989). {\it National Sangget Academy},
2nd edition. Hoboken, New Jersey: Wiley.
\bibitem[Edelson(1987)]{eda}
Edelson, R. A. (1987). Using counts to simultaneously estimate
abundance and detection probabilities in a salamander community. {\it
Herpetologica} {\bf 60,} 468--478.
\bibitem[Edelson(1987)]{edb}
Edelson, R. A. (1988). Using counts to simultaneously estimate
abundance and detection probabilities in a salamander community. {\it
Herpetologica} {\bf 61,} 520--532.
\end{thebibliography}
```

This code produces the following.

References

Butcher, J. (1992). Proper multivariate conditional autoregressive models for spatial data analysis. *Environmetrics* **196,** 173.

Blanco, P. (1991). *NIFT* 2nd edition. Boca Raton, Florida: Chapman and Hall.

Brown, A. B. and Jones, C. D. (1989). *National Sangget Academy*, 2nd edition. Hoboken, New Jersey: Wiley.

Edelson, R. A. (1987). Using counts to simultaneously estimate abundance and detection probabilities in a salamander community. *Herpetologica* **60,** 468–478.

Edelson, R. A. (1988). Using counts to simultaneously estimate abundance and detection probabilities in a salamander community. *Herpetologica* **61,** 520–532.

4.7.2 *Use of natbib.* If the `usenatbib` global option is specified, Patrick Daly's `natbib` package will be used for for cross-referencing (i.e., creating citations in the text). (Note that Patrick Daly's package `natbib` is required in order to use the `usenatbib` option and can be obtained as discussed at the beginning of this guide).

Here, the author should create the bibliography using the `thebibliography` environment, as in the last section. That is, items in the reference list must be of the form

`\bibitem[author names(year)]{key}`

Text of reference ... for one-, two- and multi-author papers, or

`\bibitem[first author etal(year)]{key}`

To cite the reference in the body text, use `\citet{x-ref label}` for direct citation and `\citep{x-ref label}` for indirect citations. The `{x-ref label}` corresponds to `\bibitem[]{x-ref label}`

- `\citet{key}` produces text citations, e.g., Jones et al. (1990),
- `\citep{key}` produces citations in parentheses, e.g., (Jones et al., 1990)

4.7.3 *Use of BiBTeX.* Authors may also use BibTeX to create the reference list and to make citations. We assume that authors choosing this route are already familiar with the use of BibTeX. Thus, we only review the main idea.

In order to use BibTeX, you must have a `.bib` file containing the database for your bibliography, and a `.bst` file, which is a `\bibliographystyle` file that produces the reference list according to the conventions incorporated in the file. Included with the distribution is a `.bst` file, `wb_env.bst`, that will ensure that your list of references is placed in the journal style. This `.bst` file should be used to ensure that the journal convention are followed.

BibTeX uses your style-independent bibliography database .bib file to produce a list of references, in a customizable style, from citations in a LᴬTEX document. LᴬTEX 2ε writes information about the citations and which `.bib` files to use in the `.aux` file. BibTeX reads this file and outputs a `.bbl` file containing LᴬTEX 2ε commands to produce the reference list (like those typed manually in the previous sections). One must compile the document again to incorporate the reference list in the document. In particular, the steps are:

(1) Include the '.bst file' and '.bbl file' in your document using the commands `\bibliographystyle{wb_env}` and `\bibliography{biblio}` at the position in the file where the references are to appear.

(2) Process your document using LᴬTEX (e.g., issue the command latex filename.tex in a Unix or Linux environment) to update the filename.aux file

(3) Process your document using BibTeX to generate the `.bbl` file (e.g., issue the command `bibtex` filename)

(4) Re-process your document using LᴬTEX (e.g., reissue `latex` filename.tex) to incorporate the `.bbl` in the document

(5) Process one more time using LᴬTEX (e.g., `latex` filename.tex) to generate the cross-references with the generated bibliography.

5. Appendices

The appendices in this guide were generated by typing:

```
\appendix
\section{}
......
\section{}
......
```