THE MAXENT95 LATEX STYLE FILE:
INSTRUCTIONS FOR AUTHORS

Basic Instructions

A.N. AUTHOR
Affiliation
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1. Introduction

Most of this document is an unaltered reproduction of Kluwer's general instructions relevant to the CRCKAPB style file. Special instructions for the Proceedings of the MaxEnt Workshop are presented toward the end of this document in Sect. 11.

The CRCKAPB style file is a style file that should be used when preparing (submissions to) camera-ready books. The CRCKAPB style file is very similar to the ARTICLE style file of LaTeX.

Kluwer Academic Publishers distinguishes four types of camera-ready publications: an edited volume, a proceedings, a monograph and the NATO-series. The layout of the first two types is the same. Consequently, as far as the style file is concerned, we distinguish three types of camera-ready publications: (a) an edited volume or a proceedings, (b) a monograph and (c) a volume in the NATO-series.

2. The 'Opening' Environment

The title, subtitle, author names and affiliations and the date are handled by the `opening` environment in the preamble. The structure of this environment is similar for proceedings, edited volumes and the NATO books. Below an example of the `opening` environment for these types.

2.1. PROCEEDINGS, EDITED VOLUME, NATO

```
\documentstyle[proceedings]{crckapb} % or: editedvolume, NATO
\begin{opening}
\title{THE TITLE OF THE CONTRIBUTION}
\subtitle{If There Is Any}
\author{AUTHOR'S NAME}
\institute{Affiliation\\
```

[†]Email: ana@node.institute.cn

```
Institute address}
\end{opening}
\begin{document}
....
\end{document}
```

Note the documentstyle option that indicates the type of camera-ready publication. This is not a style file!

Both the title and the author's name will *always* be typeset in roman capitals, the affiliation in italics, capital and lower case. In case of more than one author, the `\author` command should be repeated for every author.

```
\author{A.N. Author 1}
\author{B.N. Author 2}
```

If there is more than one author at the same institute, you should first use the `\author` command for each author and then use the `\institute` command.

```
\author{A. Author 1}
\author{B. Author 2}
\institute{Affiliation of Author 1 and Author 2}
\author{C. Author 3}
\institute{Affiliation of Author 3}
```

Two backslashes (\\) can be used within the `\title` and the `\institute` command to split them at an appropriate place. In the title, a `\protect` command should precede the backslashes.

2.2. MONOGRAPH

```
\documentstyle[monograph]{crckapb}
\begin{opening}
\title{THE TITLE OF THE CHAPTER}
\subtitle{If There Is Any}
\end{opening}
\begin{document}
....
\end{document}
```

The `\author` and `\institute` commands are not necessary here. The style file will put the word 'CHAPTER' and the chapter number in figures on the running head line of the title page and all subsequent even pages automatically.

3. Running Heads

The style file automatically typesets the title of your document as the running headline of all odd pages. However, when the title of your chapter is too long, the running title will be omitted in the printout. You can then make a short running title by putting a `\runningtitle` command between the `\end{opening}` and `\begin{document}` commands. For instance, the running title of these instructions was created by the command:

`\runningtitle{THE CRCKAPB STYLE FILE}`

4. Abstract

If you want to make an abstract, you can use the `abstract` environment which is standard LaTeX. You need not enter the word 'Abstract'.

5. Headings

Please distinguish the following four levels of headings:

1. First-order Heading

This heading is created with the `\section` command.

1.1. SECOND-ORDER HEADING IN CAPITALS

This heading is created with the `\subsection` command. If no capital letters are used, it will automatically be converted to capital letters by the style file.

1.1.1. *Third-order Heading in Italics*
This heading is created with the `\subsubsection` command. You should use capital letters for every main word in this heading.

Fourth-order Heading in Italics. The `\paragraph` command created this heading. A full stop should be keyed in at the end of the heading. Again, you should use capital letters for every main word in this heading.

If you want to break one of the above-mentioned headings at a specific position, you can insert two backslashes in the heading, immediately preceded by a `\protect` command.

6. Figures and Tables

6.1. FIGURES

The `figure` environment produces space and a figure caption in the text. The numbering of figures is automatic.

```
\begin{figure}
\vspace{5cm}  % amount of vertical space needed
\caption{Caption text}
\end{figure}
```

The CRCKAPB style file puts figures wherever possible on the top of the page. This may not always work, in which case you need to be a little creative and consult the LaTeX manual.

6.2. TABLES

Tables can be generated in several environments for which we kindly advise you to refer to the LaTeX manual. An example of the convenient `tabular` environment for simple tables follows.

```
\begin{table}[htb]
\begin{center}
\caption{Caption text}
\begin{tabular}{lll}
\hline
Description 1 & Description 2 & Description 3\\
\hline
Row 1, Col 1 & Row 1, Col 2 & Row 1, Col 3\\
Row 2, Col 1 & Row 2, Col 2 & Row 2, Col 3\\
Row 3, Col 1 & Row 3, Col 2 & Row 3, Col 3\\
\hline
\end{tabular}
\end{center}
\end{table}
```

This produces:

TABLE 1. Caption text

Description 1	Description 2	Description 3
Row 1, Col 1	Row 1, Col 2	Row 1, Col 3
Row 2, Col 1	Row 2, Col 2	Row 2, Col 3
Row 3, Col 1	Row 3, Col 2	Row 3, Col 3

We wish to avoid using both vertical rules between columns and horizontal rules between rows. You should, however, always use the following three horizontal rules: a top rule, a middle rule and a bottom rule.

6.3. POSITIONING OF FIGURES AND TABLES

The position of a table in the text may not always be appropriate. As with figures, they are treated by TeX as 'floats'; the style file tries to put it wherever possible on the top of the page. On some occasions you may wish to put it at one particular spot in the text. The option `[h]` can then be used: `\begin{table}[h]`. However, if the table or figure cannot be placed on that particular position on the page, you will find it on a separate page at the end of your document. It is better, therefore, to use the option `\begin{table}[htb]` instead.

6.3.1. *Special Table Style File*

If it is necessary to create a table that stretches out over more than one page, you can obtain the style file SUPERTAB.STY from the Publisher.

7. Appendices

An Appendix can be generated by using the `\appendix` command, followed by a `\section` command. This results in a Roman numbered Appendix section.

8. References

When you use BibTeX for your references, we kindly refer you to Section 8.3 below.

References are inserted in the `thebibliography` environment. We distinguish two styles of References lists: alphabetically sorted and numbered. You can select one of these styles by including the appropriate document style option in the `\documentstyle` command. If no documentstyle option is included, the references will be sorted alphabetically.

You can make a list of empty `\bibitem{}` commands to create your reference list, e.g.:

```
\begin{thebibliography}{}  % Note the empty braces!
\bibitem{}
Smith, I.N., Johnes, R.S. and Hines, W.P. (1992) Title of the
Article, {\it Journal Title in Italics}, {\bf Vol.~no.~X},
pp.~00--00}
\bibitem{}
Meyers, R.T. (1988) {\it The Likelihood of Knowledge\/}.
Kluwer Academic Publishers, Dordrecht.
```

When the documentstyle option `[namedreferences]` is selected, the above reference list will be alphabetical (as sorted by the author). Please note that the `\begin{thebibliography}` command should be followed by an empty pair of curly braces. In case the documentstyle option `[numreferences]` was used, the references will be numbered automatically in a list and the pair of curly braces after the `\begin{thebibliography}` command should contain a number that corresponds with the widest number in the list below it.

You must do the formatting of the bibitems yourself. For the layout conventions we kindly refer you to the volume editor or your contact person at Kluwer Academic Publishers.

8.1. CROSS-REFERENCES TO AN ALPHABETICAL REFERENCES LIST

If you want to use the `\cite` command to make automatic cross-references to your reference list, you should give every `\bibitem{}` in the `thebibliography` environment a key to be referred to and a `\citeauthoryear` command as an option to generate the desired reference in your text. The `\citeauthoryear` command should have two arguments: the author's name(s) and the year. It should be preceded by a `\protect` command, i.e.:
`\bibitem[\protect\citeauthoryear{authorname(s)}{year}]{key}`

In case of more than two authors, the argument with the author's name(s) should contain the first author's name with an *et al.*, e.g.:

```
\begin{thebibliography}{} % Note the pair of empty curly braces!
\bibitem[\protect\citeauthoryear{Smith {\it et al.}}{1992}]{Smith92}
Smith, I.N., Johnes, R.S. and Hines, W.P. (1992) Title of the
Article, {\it Journal Title in Italics}{\bf Vol.~no.~X},
pp.~00--00}
```

The following `\cite` commands can now be used in your article: `\cite`, `\shortcite`, `\citeauthor` and `\citeyear`. For the sample `\bibitem` above, the four `cite` commands would generate the following reference in your text:

`\cite{Smith92}`	generates: (Smith *et al.*, 1992)
`\shortcite{Smith92}`	generates: (1992)
`\citeauthor{Smith92}`	generates: Smith *et al.*
`\citeyear{Smith92}`	generates: 1992

With these commands or combinations of them you can create any reference in your text according to the references style that is agreed upon.

8.2. CROSS-REFERENCES TO A NUMBERED REFERENCES LIST

If you want to use the `\cite` command to make automatic cross-references to your reference list, you should give every `\bibitem{}` in the `thebibliography` environment a key to be referred to, e.g.: `\bibitem{Smith92}`. In your article you can refer to this `\bibitem` with `\cite{Smith92}`.

The `\cite` command will produce the number of the reference in square brackets, e.g. [2]. The `\shortcite`, `\citeauthor` and `\citeyear` commands as mentioned in Section 8.1 can also be used but they will produce the same output as `\cite`.

8.3. BIBTEX

You may use BIBTEX. But if you do so, please be sure that you send all the necessary files with the LATEX source file, i.e. the `bbl` file. We kindly refer you to the LATEX manual for its use.

9. Index

An index can be formatted within the `theindex` environment. This environment will create a new chapter with the title 'INDEX'. Within this environment, a two-column index can be formatted with `\item`, `\subitem` and `\subsubitem` commands (three levels of indentation).

10. Special Fonts

If you need to use the special fonts from the American Mathematical Society in your document, we have the file KAPFONTS.TEX available that enables you to use them in LaTeX, provided you have the necessary .TFM files available on your computer. The file KAPFONTS.TEX makes the following fonts accessible within your LaTeX file: MSAM, MSBM, the Euler Fraktur font and the Blackboard Bold letters.

11. Special Instructions for MaxEnt95

In this section the editors for the MaxEnt95 Workshop present instructions specific to the proceedings of the Workshop. We require that the manuscripts to be prepared using LaTeX, the ubiquitous document-formatting tool developed by Leslie Lamport [1], with the style file `maxent95.sty`.

11.1. OBTAINING THE STYLE FILES

We have established for the MaxEnt95 Workshop a Web homepage, which may be found at the URL `http://cnls.lanl.gov/maxent95/`. Besides program and registration information, our homepage contains the files necessary for preparation of the manuscripts: `instruct.tex, maxent95.sty, maxent95.bst, report.bib`. You should be able to download these files using a Web browser, such as Mosaic or Netscape. Once you have these files in a directory, you should be able to run LaTeX on `instruct.tex` and get a properly formatted `instruct.dvi` file. To obtain the bibliography and cross-referenced citations, do the usual thing: run LaTeX once, then BibTeX, then LaTeX twice.

The LaTeX-formatted PostScript file of these instructions is also available on our homepage to show what the `instruct.dvi` should look like when displayed.

The style files can also be obtained electronically by email or overland by diskette from the Workshop coordinator, Barbara Rhodes, at email: `maxent@cnls.lanl.gov`, telephone: 505-667-1444, or fax: 505-665-2659.

11.2. BEGINNINGS AND ENDINGS

The first command of the LaTeX document for a MaxEnt95 manuscript should be

```
\documentstyle[proceedings,numreferences]{maxent95}
```

The occurrence of the `numreferences` option signals the numbering of references in their cited order. To complete this process, the bibliography must be handled appropriately. We recommend that you use the file provided (`maxent95.bst`), which is a slight modification of the IEEE bibliography style file `ieeetr.bst`, as is done in this document. Assuming that your references are entered in `report.bib` in the BibTeX format, just before the `\end{document}` statement, you use

```
\bibliography{report}
\bibliographystyle{maxent95}
```

To illustrate, citations are placed in the body of the document by including `\cite{Skilling84,Hanson83a,Silver93}`, where `Skilling84` refers to the *key* that identifies a reference in the bibliography `.bib` file, which results in [2–4]. The corresponding References section is shown at the end of this article.

Although we recommend the above method of citation, you may alternatively use the method of citation suggested by Kluwer by removing `numreferences` from the `\documentstyle` command and placing the references, as described in Sect. 8, in place of the `\bibliography` and `\bibliographystyle` commands.

Alternative means of contacting the authors, e.g. email addresses, may be included by appending the `Institute address` in the `\institute` command, such as `\footnote{Email: ana@node.institute.cn}`, as is done at the beginning of this document.

11.3. GENERAL INSTRUCTIONS

Please start your article with an abstract and keywords list. Your abstract should be a concise summary of the new results presented in your article. Avoid including general background material that should go in the introduction. Also list up to a dozen keywords at the end of the abstract to indicate the topics covered in the article. Right after the `\begin{document}`, the LaTeX entries are:

```
\begin{abstract}
  The text of the abstract goes here.
  \keywords{ word1, word2}     % keywords go at the end of the abstract
\end{abstract}
```

Your manuscript should include a relevant reference list. Make sure each reference is complete and accurate so readers can find it without undue effort. BibTeX will complain if you do not have sufficient information in your `.bib` file. Use standard abbreviations for the names of common journals, but provide enough of a clue for uncommon ones that a reader can find it.

Figures may be either included with special LaTeXcommands, or pasted into the final camera-ready copy. However, greyscale images should be sent separately so the publisher can size and screen them before pasting them into the manuscript.

We would like to compile a worthwhile index for the MaxEnt95 Proceedings. We request that authors aid us by specifying words or phases in their own manuscript that they think represent key concepts and should be incorporated in the index. To indicate the location of key concepts, use `\index{indexword}` in the LaTeX file. This command does not add anything to the formatted LaTeX document, but instead writes the `indexword` inside the braces to an index (`.idx`) file along with the page numbers of the formatted document at which this command appears. We will use the `.idx` file to create the index for the Proceedings. In order to generate this file, you must include a `\makeindex` command in the preamble of the LaTeX file, i.e. between the `\documentstyle` and the `\begin{opening}` commands.

While the definitive reference for the use of LaTeX is the book by Lamport [1], the recipe approach by Buerger [5] may be easier to follow for those without much LaTeX experience. Also, users of IBM PCs might like to know about an application called Scientific Word[1], which allows one to interact directly with the display of a formatted LaTeX document via a mouse in a manner similar to standard text editors, such as Microsoft Word.

[1]TCI Software Research, 1190 Foster Road, Las Cruces, NM 88001-3739, 800-874-2383, info@tcisoft.com.

11.4. MANUSCRIPT REQUIREMENTS

To have their manuscripts included in the Workshop proceedings, authors must provide by the due date, September 8, 1995: 1) a clean camera-ready hardcopy with all figures but greyscale images in their proper place, 2) a working copy of the manuscript with all figures in place, 3) any greyscale images, which the publisher will screen and paste into the manuscript, *and* the following files on a DOS-formatted diskette with your name and article title printed on it: 4) the LaTeX `article.tex` source file with the `article.bbl` file copied into it in place of the `\bibliography{report}` and `\bibliographystyle{maxent95}` commands, 5) the index file, `article.idx`, 6) any image files (in PostScript) that have been included electronically, 7) any special files that your source file requires to compile under standard LaTeX (the source file should input these from its own subdirectory). Note that we are not using LaTeX2e. The preceding filenames are based on the assumption that your LaTeX filename is `article.tex` and your bibliography file is `report.bib`.

Authors should submit their manuscripts by mail to: MaxEnt95; CNLS MS-B258; Los Alamos National Laboratory; Los Alamos, NM 87575; USA. Up to eight pages of formatted manuscript are allowed for oral presentations and up to six pages for poster presentations.

Please contact Barbara Rhodes at email: `maxent@cnls.lanl.gov`, telephone: 505-667-1444, or fax: 505-665-2659 about any logistical or procedural matters. If you have problems using the supplied LaTeX style files, contact Ken Hanson at email: `kmh@lanl.gov`, telephone: 505-667-1402, or fax: 505-665-3359.

12. Information

The CRCKAPB style file is available from:

KLUWER ACADEMIC PUBLISHERS
P.O. Box 17, 3300 AA Dordrecht, The Netherlands
Telephone: +31–78–334321; Fax: +31–78–334254
E-mail: EDITDEPT@WKAP.NL

The files SUPERTAB.STY and KAPFONTS.TEX are available from the same address.

If you encounter problems, or if you have suggestions for improving the CRCKAPB style file or these instructions, we would appreciate hearing from you.

References

1. L. Lamport, LaTeX, *A Document Preparation System*, Addison-Wesley, Reading, 1986.
2. J. Skilling and R. K. Bryan, "Maximum entropy image reconstruction: general algorithm," *Mon. Not. R. Ast. Soc.*, **211**, pp. 111–124, 1984.
3. K. M. Hanson and G. W. Wecksung, "Bayesian approach to limited-angle reconstruction in computed tomography," *J. Opt. Soc. Amer.*, **73**, pp. 1501–1509, 1983.
4. R. N. Silver, "Quantum statistical inference," in *Maximum Entropy and Bayesian Methods*, A. Mohammad-Djafari and G. Demoment, eds., pp. 167–182, Kluwer Academic, Dordrecht, 1993.
5. D. J. Buerger, LaTeX*for Scientists and Engineers*, McGraw-Hill, New York, 1990.