Model Article for the preprint style elsart

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Abstract

This article discusses several features of preparing preprints with the elsart document style, using Harvard style bibliographic references.

Key words: preprint style, elsart, \LaTeX\ style, model article, guide lines

PACS: 01.30.−y

1 Introduction

This article discusses several features of preparing preprints with the elsart document style. For more general information about \LaTeX, see the \LaTeX\ manual written by Lamport (1986) or the booklet Preparing Articles with \LaTeX, which is part of Elsevier Science’s \LaTeX\ package (see below).

All macro packages recommended in this document can be obtained from one of the servers of the Comprehensive TeX Archive Network (CTAN). CTAN is a mirrored network of the FTP servers ftp.tex.ac.uk, ftp.dante.de and ctan.tug.org, which are widely mirrored (see ftp://ctan.tug.org/tex-archive/README.mirrors) and hold up-to-date copies of all the public-domain versions of \TeX, \LaTeX, Metafont and ancillary programs.

Elsevier Science has prepared a \LaTeX\ package for authors, which contains the following files:

- ascii.tab (ASCII table),
- elsart.cls (use this file if you are using \LaTeX\ 2\E, the current version of \LaTeX),

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URL: www.elsevier.com/locate/latex (S.A.M. Pepping).

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• `elsart.sty` and `elsart12.sty` (use these two files if you are using `\TeX 2.09`, the now obsolete version of `\LaTeX`),
• `instraut.dvi` and/or `instraut.ps` (instruction booklet),
• `readme`.

The package is freely available from Elsevier Science’s Web server `http://www.elsevier.com/locate/latex`, and from CTAN in the directory `/tex-archive/macros/latex/contrib/supported/elsevier`.

2 Options

There is an option to obtain double line spacing, as is sometimes required for copies submitted for review. It is called `doublespacing` or `reviewcopy`.

3 Frontmatter

The `elsart` document class has a separate `frontmatter` environment for the title, authors, addresses, abstract and keywords.

• `\title`: As in standard `\TeX`, e.g. `\title{Model}`.
• `\author`: Different from standard `\TeX`, the `\author` command contains only one author and no address. Multiple authors go into multiple `\author` commands, separated from each other by commas. The address goes into a separate `\address` command. Example: `\author{D.E. Knuth}`.
• `\address`: Here goes the address, e.g. `\address{CERN, Geneva}`.
• `\thanks` and `\thanksref`: These provide footnotes to the title, authors and addresses. The `\thanksref` command takes a label: `\thanksref{label}` to relate it to the `\thanks` command with the same label: `\thanks[label]`. There can be several references to a single `\thanks` command. Example: `\title{Model}\thanksref{titlefn}` and `\thanks[titlefn]{Supported by grants.}`
• `\corauth` and `\corauthref`: These provide footnotes to mark the corresponding author and the correspondence address. They are used in the same manner as `\thanks` and `\thanksref`. Example: `\author{A. Name}\corauthref{cor}` and `\corauth[cor]{Corresponding author. Address: ... .}`
• `\ead`: This command should be used for the email address or the URL of the author. It refers to the ‘current author’, i.e., the author last mentioned before the command. When it holds a URL, this should be indicated by setting the optional argument to ‘url’. Example: `\ead{s.pepping@elsevier.nl}`, `\ead[url]{www.elsevier.com/locate/latex}`.
It is not necessary to give a \texttt{\textbackslash maketitle} command. The title, authors and addresses are printed as soon as \LaTeX{} sees them.

The authors and addresses can be combined in one of two ways:

- The simplest way lists the authors of one address, followed by the address, and so on for all addresses.
- The other way first lists all authors, and then all addresses. The authors and addresses are related to each other by labels: \texttt{\textbackslash author[label1]{Name1}} corresponds to \texttt{\textbackslash address[label1]{Address1}}.

\texttt{\textbackslash author[South]{T.R. Marsh},} \texttt{\textbackslash address[South]{University of Southampton, UK}}
\texttt{\textbackslash author[Oxford]{S.R. Duck}} \texttt{\textbackslash address[Oxford]{University of Oxford, UK}}

See the examples in figs. 1, 2, 3, 4.

If you put the frontmatter in an included file, that file should contain the whole frontmatter, including its \texttt{begin} and \texttt{end} commands. Otherwise, the labels of the frontmatter will remain undefined.

4 Abstract

The abstract should be self-contained. Therefore, do not refer to the list of references. Instead, quote the reference in full, as follows: Wettig & Brown (1996, NewA, 1, 17).

5 Keywords

In electronic publications a proper classification is more important than ever. Elsevier Science’s physics journals use several keyword schemes:

**Keywords:** Uncontrolled keywords.

**PACS:** The PACS scheme, developed and maintained by the AIP, covers the whole field of Physics. See \url{http://www.aip.org/pacs/pacs.html} or \url{http://www.elsevier.com/locate/pacs}.

**MSC:** The MSC scheme, developed and maintained by the AMS, covers the whole field of Mathematics. See \url{http://www.ams.org/msc} or \url{http://www.elsevier.com/locate/msc}.
FO Aqr is a close binary star in which a magnetic white dwarf accretes from a cool companion. Light curves and spectra show variations on the orbital frequency, the white dwarf’s spin frequency and combinations of the two.

FO Aqr is a member of the DQ~Her class of stars which are close binary stars in which a magnetic white dwarf accretes from a late-type main-sequence secondary star. These stars have most recently been reviewed by \cite{Patterson94}.
Stroboscopic Doppler tomography of FO Aqr

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Abstract

FO Aqr is a close binary star in which a magnetic white dwarf accretes from a cool companion. Light curves and spectra show variations on the orbital frequency, the white dwarf’s spin frequency and combinations of the two.

Key words: Accretion, accretion disks, Line: profiles, Binaries: close, Novae, cataclysmic variables
PACS: 97.10.Gz, 97.30.Qt, 97.80.Gm

Introduction

FO Aqr is a member of the DQ Her class of stars which are close binary stars in which a magnetic white dwarf accretes from a late-type main-sequence secondary star. These stars have most recently been reviewed by Patterson (1994).

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We prove the equivalence between the recent matrix model formulation of 2D gravity and lattice integrable models. For even potentials this system is the Volterra hierarchy.
Abstract

We prove the equivalence between the recent matrix model formulation of 2D gravity and lattice integrable models. For even potentials this system is the Volterra hierarchy.

1. Introduction

Some aspects of the recently discovered non-perturbative solutions to non-critical strings (Patterson, 1994) can be better understood and clarified directly in terms of the integrability properties of the random matrix model.

Fig. 4. Article opening with implicit links (output)
Keywords are entered below the abstract in the following way:

\begin{keyword}
Keyword \sep Keyword
\PACS PACS code \sep PACS code
\MSC MSC code \sep MSC code
\end{keyword}

6 Cross-references

In electronic publications articles may be internally hyperlinked. Hyperlinks are generated from proper cross-references in the article.

For example, the words Fig. 1 will never be more than simple text, whereas the proper cross-reference \ref{mapfigure} may be turned into a hyperlink to the figure itself.

In the same way, the words Governato et al. (1997) will fail to turn into a hyperlink; the proper cross-reference is \citet{Gea97}.

Cross-referencing is possible in \LaTeX for sections, subsections, formulae, figures, tables, and literature references.

7 PostScript figures

\LaTeX and PostScript have had a long and successful relationship. In the current version of \LaTeX, \LaTeX\,\textsc{v2\,c}, there are three packages for including PostScript figures:

- **graphics**. This simple package provides the command
  \includegraphics*[<llx,lly>][<urx,ury>]{file}. The * is optional; it enables the PostScript feature of clipping. In its simplest form, \includegraphics{file}, it includes the figure in the PostScript file file without resizing.

- **graphicx**. This package provides the command
  \includegraphics*[key--value list]{file}. The * is optional; it enables the PostScript feature of clipping. Often used keys are:
  - scale=.40 to scale the size of the figure with 40%,
  - width=25pc, height=15pc to set the width or height of the figure,
  - angle=90 to rotate the figure over 90°.
Fig. 5. An example of a figure.

- **epsfig.** This package is really the `graphicx` package, but it allows one to include PostScript figures using the familiar commands from the earlier packages `epsfig` and `psfig`.

For detailed information, see the documentation of the `graphics` packages, in particular the file `grfguide.tex`.

8 Mathematical symbols

Many physics authors require more mathematical symbols than the few that are provided in standard `LaTeX`. A useful package for additional symbols is the `amssymb` package, developed by the American Mathematical Society. This package includes such oft used symbols as \textbackslash lesssim for \textlesssim, \textbackslash gtrsim for \textgtrsim or \textbackslash hbar for \texthbar. Note that your \TeX system should have the `msam` and `msbm` fonts installed. If you need only a few symbols, such as \textbackslash Box for \textbox, you might try the package `latexsym`.

In the `elsart` document class vectors are preferably coded as \textbackslash vec{a} instead of \textbackslash bf{a} or \textbackslash pol{a}.

9 The Bibliography

In `LaTeX` literature references are listed in the `thebibliography` environment. Each reference is a \textbackslash bibliitem; each \textbackslash bibliitem is identified by a label, by which it can be cited in the text: \textbackslash bibliitem[Elson et al. (1996)]{ESG96} is cited as \textbackslash citet{ESG96}. In connection with cross-referencing and possible future hyperlinking it is not a good idea to collect more that one literature item in one \textbackslash bibliitem.

The so-called Harvard or author-year style of referencing is enabled by the `LaTeX` package `natbib`. With this package the literature can be cited as follows:
• Parenthetical: \citep{WB96} produces (Wettig & Brown, 1996).
• Textual: \citet{ESG96} produces Elson et al. (1996).
• An affix and part of a reference: \citep[e.g.][Ch. 2]{Gea97} produces (e.g. Governato et al., 1997, Ch. 2).

10 Template article

There is a template article templat-harv.tex, which you can use as a skeleton for your own article.

References

Leslie Lamport: \LaTeX, A document preparation system, 2nd edition, Addison-Wesley (Reading, Massachusetts, 1994).