PREPARING ARTICLES WITH LaTeX

INSTRUCTIONS TO AUTHORS FOR PREPARING COMPUSCRIPTS

ELSEVIER
SCIENCE
PUBLISHERS B.V.

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Contents

1. Introduction

Nowadays, it is becoming more and more customary for authors to type their manuscripts using some kind of electronic device and composing the result with some text-processing system. Systems that are quite popular are TEX and LATEX. In order to assist authors in preparing their papers for articles published by Elsevier Science Publishers in such a way that their files can be used to print the article from, we have developed LATEX document styles for our journals. The following is a description of these document styles. For best understanding, authors should be reasonably familiar with the LATEX manual written by Leslie Lamport [1].

In order to enable the publisher to bring the article into the uniform layout and style of the journal in which it will appear, authors are kindly requested to follow the suggestions mentioned below. This has the advantage of keeping editorial changes to a minimum, which will considerably speed up the publication process.

Upon receipt of the compuscript, it is given to a technical editor, who prints the compuscript on paper, reads it carefully and makes changes when necessary. If sending proofs is part of the normal procedure for the particular journal, a proof is sent to the author. If the author finds something in the proof that should be changed, he/she should indicate this clearly in the margin, so that the technical editor can apply these corrections before making the paper ready for publication.

For all journals that accept author-prepared LATEX articles we have document styles. All these document styles, which are used for the actual production of the journals, have the same commands. Furthermore, there is a separate document style `elsart` that is fully compatible with the production document styles. Authors can use this document style `elsart` to obtain preprint output. When the article is prepared for publication, this document style is replaced by a document style for the journal in which the article is published.

This documentation contains a user's guide, guidelines for submitting the article for publication and information on where to get help in case problems occur.

2. Preparing a compuscript

The documentstyle elsart, with which the article can be prepared and preprint output can be obtained, is compatible with the standard document styles of LaTeX, except for the specification of the front matter, i.e. the title, author, addresses and abstract.

In the following sections we will describe the differences between normal LaTeX usage and the usage of the Elsevier document styles. Also, we will summarize some of the important aspects of coding a compuscript with LaTeX.

2.1. Title and author

In the Elsevier document styles the commands `\title`, `\author` etc., have been replaced by a more general `frontmatter` environment. Since the standard LaTeX document styles do not differentiate between author name and address, extra mark-up instructions have been added to the Elsevier document styles. Within the `frontmatter` environment, you should specify the title, names and addresses of the authors, followed by the abstract and – in some cases – a keyword abstract.[1] Title, author, collaboration, address, abstract and keyword abstract should be indicated with the instructions `\title`, `\author`, `\collab` and `\address`, and the `abstract` and `keyword` environments, respectively. The instruction `\maketitle` has become obsolete in the Elsevier document style.

There are two types of author–address lists. These are illustrated by Examples 1 and 2 in Appendix A. The first type of author–address list consists of one or more groups of authors followed by an address (affiliation). In this type of list there is an implicit link between authors and addresses. The second type of author–address list consists of one list of all authors, followed by one list of all addresses (affiliations), and with explicit links between authors and addresses. The links are written as optional arguments to the `\author`, `\collab` and `\address` commands and are usually formatted as footnote-like symbols.

The `\thanks` command can be used to produce notes that are added to the title, author or address. In the Elsevier document styles this command should be written *inside* the `frontmatter` environment, but *outside* the argument of `\title`, `\author`, `\collab` and `\address`; see also Examples 1 and 2. The modified `\thanks` command has an optional argument that can be used to attach a label to a note:

```
\thanks[CAICYT]{Partially supported by CAICYT, Spain.}
```

[1] Optional, not present in some journals.

Inside the argument of `\title`, `\author`, `\collab` and `\address` one can refer to this note with the command `\thanksref`, which takes the label of a `\thanks` command as argument:

```
\author{L.A. Fernandez\thanksref{CAICYT}}
```

The command `\and` has its usual meaning.

In some journals, authors of experimental papers have to add keyword abstracts. These abstracts are specified by using an equivalent of the `abstract` environment: the `keyword` environment. The following input gives an example of the use of this environment.

```
\begin{keyword}
Radioactivity.
($\beta^+$, EC) [from Pt(p, $x$n)Au or ...
\end{keyword}
```

might generate this output

Keywords: Radioactivity. (β^+, EC) [from Pt(p, xn)Au or ...

The proper position of the `keyword` environment is *inside* the `frontmatter` environment, before or after the `abstract` environment.

2.2. Simple text

Text should be typed as usual. Hyphens are typed as `-`, number ranges are typed as `--`. The en dash `--` is also used, e.g., in 'Theorem of Cantor–Schröder–Bernstein'.

Emphasized text is obtained with the command `\em`. In most cases this will result in italic text representing emphasis. Italic text should be terminated by an italic correction, i.e.

```
{\em heavy quarks\/}
```

unless the text in italics is immediately followed by a full stop (.) or comma (,).

Extra or exceptional hyphenations are added to TEX's list of abbreviated words by means of the command `\hyphenation`, which should be placed in the preamble of the document. An example:

```
\hyphenation{caus-al min-i-mi-za-tion pro-ven}
```

Introduce macros (with care, see 2.13) for notations and abbreviations that occur more than once, for example 'e.g.' and 'i.e.'. This facilitates changes in notation. If you introduce macros for abbreviations, these are often parameterless macros, so you should be aware of TEX's behaviour with regard to spaces following a parameterless macro. An instruction without parameters should be defined and used as

```
\newcommand{\ie}{i.e.}
...
... extra particles,
\ie{} particles ...
```

... extra particles, i.e. particles ...

Alternatives to `\ie{}` are `\ie\␣` and `{\ie}`. The `\␣` after `\ie` produces a space, whereas `\ie␣particles` will result in 'i.e.particles' [1, p. 16].

Putting a space in the definition of `\ie` is not the right solution, since it can result in a space before a punctuation mark, e.g.

```
\newcommand{\ie}{i.e. }
...
... extra particles,
\ie, particles ...
```

... extra particles, i.e. , particles ...

2.3. Sectional units

Sectional units are obtained in the usual way, i.e. with the LaTeX instructions `\section`, `\subsection`, `\subsubsection`, `\paragraph` and `\subparagraph`.

A new environment `ack` – see also Section 2.7 – has been added to produce an 'Acknowledgements' section, which should be placed at the end of the article, just before the references.

2.4. Lists

Lists of items are produced with the usual `itemize` and `enumerate` environments. The `itemize` environment is used for unnumbered lists and the `enumerate` environment for numbered lists. Even if the layout of these lists is not precisely what you would like, we prefer lists to be coded this way instead of by hand. This enables the document style for the specific journal to determine the list layout.

2.5. Cross-references

Use `\label` and `\ref` for cross-references to equations, figures, tables, sections, subsections, etc., instead of plain numbers. For references to the literature list at the end of the article see Section 2.9.

Every numbered part to which one wants to refer, should be labelled with the instruction `\label`. For example:

```
\begin{equation}
  e^{i\pi} + 1 = 0   \label{eq:euler}
```

```
\end{equation}
```

With the instruction `\ref` one can refer to a numbered part that has been labelled:

```
..., see also eq. (\ref{eq:euler})
```

The `\label` instruction should be typed

- immediately after (or one line below), but *not inside* the argument of a number-generating instruction such as `\section` or `\caption`, e.g.:

  ```
  \caption{Cross section}  \label{fig:crosssec}
  ```
- roughly in the position where the number appears, in environments such as `equation`, e.g.:

  ```
  \begin{equation}
    e^{i\pi} + 1 = 0   \label{eq:euler}
  \end{equation}
  ```

2.6. Mathematical formulas

For in-line formulas use `\( ... \)` or `$ ... $`. Avoid built-up constructions, for example fractions and matrices, in in-line formulas.

For unnumbered displayed one-line formulas use the `displaymath` environment or the shorthand notation `\[ ... \]`. For numbered displayed one-line formulas use the `equation` environment. Do not use `$$ ... $$`, but only the LaTeX environments, so that the document style determines the formula layout. For example, the input for:

$$\left(P + \frac{a}{V^2} \right) (V-b) = RT, \tag{1}$$

is:

```
\begin{equation}
\left( P + \frac{a}{V^2} \right) (V-b) = RT ,
\end{equation}
```

For displayed multi-line formulas use the `eqnarray` environment. For example,

```
\begin{eqnarray}
f(x) & = & \sum_{n=1}^{\infty} a_n\cos(nx) +
                              b_n\sin(nx) \nonumber \\
     & = & \sum_{n=-\infty}^{\infty}
                           c_n\exp(-\mathrm{i} xn)\, .
\end{eqnarray}
```

produces:

$$\begin{aligned} f(x) &= \sum_{n=1}^{\infty} a_n \cos(nx) + b_n \sin(nx) \\ &= \sum_{n=-\infty}^{\infty} c_n \exp(-\mathrm{ixn})\,. \end{aligned} \tag{2}$$

Angle brackets, which are used in, e.g., the inner product notation, the 'bra-ket' notation (physics), and in BNF (computer science), are obtained with `\langle` and `\rangle`:

```
\langle x, y   \rangle = 0
\langle p|A|p' \rangle = 0
\langle \mbox{sign} \rangle
\longrightarrow + | -
```

$\langle x, y \rangle = 0$

$\langle p|A|p' \rangle = 0$

$\langle \mbox{sign} \rangle \longrightarrow +|-$

Superscripts and subscripts that are words or abbreviations, as in σ_{low}, should be typed as roman letters; this is done as follows:

```
\( \sigma_{\mathrm{low}} \)
```

σ_{low}

instead of

```
\( \sigma_{low} \)
```

σ_{low}

The most common symbols that are conventionally typeset in a roman typeface, for example units, are listed below. For some of these, see also Table 1 on page 16.

- The Euler number, for example, e^{x}.
- i when used as imaginary unit, e.g. $a+b\mathrm{i}$ or $\mathrm{e}^{\mathrm{i}\phi}$, etc. The Euler equation, which was used as an example earlier, can therefore also be typed as
```
\begin{equation}
  \mathrm{e}^{\mathrm{i}\pi} + 1 = 0
                                \label{eq:euler}
\end{equation}
```
- Geometric functions, e.g. exp, sin, cos, tan, etc. LaTeX provides macros `\sin`, `\cos`, `\tan` for these and similar functions. These macros also give the proper spacing in mathematical formulas.
- The differential operators, e.g. dx, and the operators Im and Re for the imaginary and real parts of complex numbers, respectively.[2]
- Groups, for example SU(2) and SU(3).
- Labels for atomic orbitals and atomic shells. Example: 4s, 4p, K, L.

[2] The normal shape of Greek capital letters is upright. The slanted shape of, e.g., the letter Δ is obtained with `\varDelta`, as in AMS-LaTeX: $\varDelta$.

- Greek letters when used as a unit, e.g. Ω for ohm.
- Units in general. Example: cm, Å, and b for barn.
- Subscripts and superscripts that are used as an abbreviation. Examples: T_{C} (Curie temperature), T_{c} (critical temperature), and $\mathrm{C}_{3\mathrm{v}}$ (identifier of space group)
- Operator or function names, or their abbreviatons, e.g. Ker, Im, Hom, Re, etc.

Of the advanced features of TeX we mention the possibility to define extra symbols. Extra relation symbols can be defined as in the following example (see also Section 2.13):

```
\newcommand{\leL}{\mathrel{\le_{\mathrm{L}}}}
\( a \leL b \)
```

produces the following result:

$a \le_{\mathrm{L}} b$

Extra log-like functions or operators can be defined as follows:

```
\newcommand{\re}{\mathop{\mathrm{Re}}}
\newcommand{\im}{\mathop{\mathrm{Im}}}
\( z + \bar{z} = 2 \re z,  \quad
   z - \bar{z} = 2 \mathrm {i} \im z \)
```

produces the following result:

$z + \bar{z} = 2 \mathop{\mathrm{Re}} z, \quad z - \bar{z} = 2\mathrm{i} \mathop{\mathrm{Im}} \mathrm{z}$

For more information on TeX's advanced mathematical features we refer to chapters 16–18 of the TeX book [3]. It is also possible to use the AMS-LaTeX package [4], which can be obtained from the AMS, from various TeX archives, or from us (see Section 4).

2.7. Theorems and definitions

LaTeX provides `\newtheorem` to create theorem environments. The Elsevier document styles contain a set of pre-defined environments for theorems, definitions, proofs, remarks and the like.

The following environments are defined (analogous to the example given in the AMS-LaTeX user's guide [4, §31.5]):

Environment name	Heading	Environment name	Heading
`thm`	Theorem	`exmp`	Example
`lem`	Lemma	`prob`	Problem
`cor`	Corollary	`rem`	Remark
`prop`	Proposition	`note`	Note
`crit`	Criterion	`claim`	Claim
`alg`	Algorithm	`summ`	Summary
`defn`	Definition	`case`	Case
`conj`	Conjecture	`ack`	Acknowledgement

To add theorem-type environments to an article, use the `\newtheorem` command – see the LaTeX user manual [1].

2.8. Proofs

The Elsevier document styles also provide a predefined `pf` environment, and a starred form `pf*`, for proofs. The `pf` environment produces the heading 'Proof' with appropriate spacing and punctuation. A 'Q.E.D.' symbol, □, can be appended at the end of a proof with the command `\qed`.

The starred form, `pf*`, of the proof environment takes an argument in curly braces, which allows you to substitute a different name for the standard 'Proof'. If you want to substitute, say, 'Proof (sufficiency)', then write

```
\begin{pf*}{Proof (sufficiency)}
```

2.9. Literature references

The list of literature references can be produced in two ways, by using

- the environment `thebibliography`, or
- BibTeX

Example 3 shows a bibliography produced with the `thebibliography` environment.

If the references are collected in one, not too large, BibTeX file (`.bib`), it would be appreciated if you would let us have this file as well. In a future release we will include a BibTeX bibliography style in the author package as well.

The instruction `\cite` should be used to obtain references to this list, i.e. citations. The Elsevier document styles take care of the actual formatting of the citation, e.g. as roman numbers between brackets, or as a superscript number.

For multiple citations do not use `\cite{Knuth}\cite{Lamport}`, but use `\cite{Knuth,Lamport}` instead. Consecutive numbers in a citation appear as a range, i.e. [1,2,3] is automatically converted by the document style to

[1–3]. For a note added to a citation use `\cite[`*note*`]{`*key*`}`, for example: `\cite[p. 217]{Knuth}`.

2.10. Tables and figures

Put the tables and figures in the text with the `table` and `figure` environments, and position them near the first reference of the table or figure in the text. Do not put them at the end of the article.

A figure is obtained with

```
\begin{figure}
\vspace{30mm} % height of figure
\caption{ ... text below figure ... }
\end{figure}
```

Instead of the instruction `\vspace{30mm}` for the white space to be reserved for a separate figure, you can insert diagrams. Simple diagrams can be drawn with the `picture` environment; Feynman diagrams with the `feynman` package. Originals of separate figures should be sent via ordinary mail; sometimes good-quality prints are also acceptable. These should be submitted in the usual way. We can also process figures in PostScript form, but not in any other electronic form.

A table is obtained with

```
\begin{table}
\caption{ ... text above table ... }
\begin{tabular}{ ... }
...
\end{tabular}
\end{table}
```

Please avoid long caption texts – in figures *and* tables – and vertical rules.

2.11. Programs and algorithms

Fragments of computer programs and descriptions of algorithms should be prepared as if they were normal text. Use the same fonts for keywords, variables, etc., as in the text; do not use small typeface sizes to make program fragments and algorithms fit within the margins set by the document style.

An example, with only the `tabbing` environment and one new definition:

```
\newcommand{\keyw}[1]{{\bf #1}}
\begin{tabbing}
\quad \=\quad \=\quad             \kill
\keyw{for} each $x$ \keyw{do}     \\
\> \keyw{if} extension$(p, x)$    \\
```

```
\> \> \keyw{then} $E:=E\cup\{x\}$\\
\keyw{return} $E$
\end{tabbing}
```

This produces the following:

for each x **do**
  if extension(p, x)
    then $E := E \cup \{x\}$
return E

2.12. Large articles

A compuscript can be submitted as one or more files. If there is more than one file, one of them should be a root file. The root file inputs the files that constitute the entire article by means of `\input` or `\include`.

2.13. Private definitions

Private definitions should be placed in the preamble of the article, and not at any other place in the document. Such private definitions, i.e. definitions made using the commands `\newcommand`, `\renewcommand`, `\newenvironment` or `\renewenvironment`, should be used with great care.

Sensible, restricted usage of private definitions is encouraged. Large macro packages should be avoided. Definitions that are not used in the article should be omitted. Do not change existing environments, commands and other standard parts of LaTeX. Definitions that are merely abbreviations for keystrokes, such as `\bt` for `\begin{theorem}`, should be avoided (use the facilities of your editor program to minimize keystrokes). A short description of the various definitions, in the form of TeX comment lines, is appreciated.

Deviation from these rules may cause inaccuracies in the article or a delay in publication, or may even result in the LaTeX file being discarded altogether so that the article is typeset conventionally.

2.14. Layout

The document style `elsart`, which is part of this package, can be used to obtain preprint output. When the article is prepared for publication, this document style is replaced by a document style for the journal in which the article will be published.

The `elsart` style is compatible with *all* Elsevier's journal styles, so that preparation of the article for final publication is straightforward.

In order to facilitate our processing of your article, please give easily identifiable structure to the various parts of the text by making use of the usual

LaTeX commands or by your own commands defined in the preamble, rather than by using explicit layout commands, such as `\hspace`, `\vspace`, `\large`, `\centering`, etc. Also, do not redefine the page-layout parameters.

2.15. Deviations from standard document styles

The document style `elsart` deviates from the standard document styles in the following areas

- specification of the front matter
- extra commands

The document style defines several extra instructions. These are summarized in Table 1.

The document style redefines the standard command `\vec`: it formats vector symbols according to the layout of the journal, often italic boldface letters. The command `\pol` produces the standard vector notation, i.e. with a small right arrow on top of the argument.

2.16. Technical information, and versions of LaTeX

In June 1994 a new version of LaTeX was released, LaTeX 2_ε; Elsevier will continue to support users of the old LaTeX209 for the foreseeable future, but would like authors to switch to LaTeX 2_ε as soon as practical. It is documented in the second edition of Lamport's book [**?**], and described in great detail in [2].

Our preprint style is available in two forms, as `eslart.sty` and `eslart.cls`. The document style `elsart.sty`, with the corresponding `elsart12.sty` has been designed for LaTeX 2.09 (version of January 1992 or later). The document class `eslart.cls` (no extra size file) has been designed for LaTeX2e (versions from June 1994).

It is also possible to use the document style or class in combination with the $\mathcal{AMS}$-LaTeX package [4], in its LaTeX209 or LaTeX 2_ε version, and we recommend this to authors who have more complex mathematical needs.

Table 1: Extra commands.

Front matter commands	
`\title`{*string*}	title of article
`\author`[*key*]{*string*}	name of one author
`\collab`[*key*]{*string*}	name of collaboration (group of authors)
`\address`[*key*]{*string*}	address of author or collaboration
`\thanks`[*key*]{*string*}	note to one of the above elements
`\thanksref`{*key*}	reference to `\thanks` note
Case fractions	
`\half`	small $\frac{1}{2}$
`\threehalf`	small $\frac{3}{2}$
`\quart`	small $\frac{1}{4}$
Theorem environments	
–	see Sections 2.7 and 2.8
Extra mathematical operators	
`\d`	differential 'd'
`\e`	base of natural logarithm
other operators	see below
Blackboard bold symbols	($\mathcal{AMS}$Fonts version 2.1 must be present)
`\Nset`	$\mathbb{N}$, set of positive integer numbers
`\Zset`	$\mathbb{Z}$, set of integer numbers
`\Qset`	$\mathbb{Q}$, set of rational numbers
`\Rset`	$\mathbb{R}$, set of real numbers
`\Cset`	$\mathbb{C}$, set of complex numbers
`\Hset`	$\mathbb{H}$, set of quaternions
other letters	use `\Bbb{...}` from `amsfonts`
Extra notations for physics	
`\nuc`	nuclides, `\nuc{183}{Ir}` produces '^{183}Ir'
`\vec`	boldface vector
`\pol`	polarization (right arrow on top of argument)
`\FMslash`	small slash through letter (Feynman notation)
`\FMSlash`	large slash through letter (Feynman notation)

3. Submitting a compuscript

The guidelines for submission of compuscripts can be found on the inside cover pages of the journal to which you would like to submit the article. If submission via electronic mail is allowed, you will find the network address to which you can send your compuscript in those guidelines as well.

For passing a compuscript to the publisher for final processing we give the following guidelines.

3.1. Sending via electronic mail

Short articles (say, less than 30 pages) should be prepared as one LaTeX file and be sent via electronic mail as one message. Large files may be split into several parts, which are input in the root file.

- Send all files in separate messages; do not concatenate them together in one large message.
- Identify each part in the subject line as ‘part m of n’ in addition to the identification described above; note that without proper identification the order of the parts will be lost in the mail.
- If the article consists of more than five files, we prefer submission on diskette (see below) or via FTP. Please contact the publisher for more information on the latter.

If you send your compuscript via electronic mail, prepare the file such that no line is longer than 72 characters. This also prevents loss of information in various networks. Include

1. name of sender,
2. journal identification and article number, and
3. name of the file

in the subject line of your electronic-mail message.

Also, include an ASCII table at the start of every file you send via electronic mail. An ASCII table, filename `ascii.tab`, is part of the package authors can obtain from the publisher. It contains the following:

```
% Upper-case    A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
% Lower-case    a b c d e f g h i j k l m n o p q r s t u v w x y z
% Digits        0 1 2 3 4 5 6 7 8 9
% Exclamation   !           Double quote "          Hash (number) #
% Dollar        $           Percent      %          Ampersand     &
% Acute accent  '           Left paren   (          Right paren   )
% Asterisk      *           Plus         +          Comma         ,
% Minus         -           Point        .          Solidus       /
% Colon         :           Semicolon    ;          Less than     <
% Equals        =           Greater than >          Question mark ?
```

```
% At            @          Left bracket [          Backslash     \
% Right bracket ]          Circumflex   ^          Underscore    _
% Grave accent  `          Left brace   {          Vertical bar  |
% Right brace   }          Tilde        ~
```

If this is included, any distortion can be detected and removed from the submitted files.

3.2. Submission on diskette

If you submit your compuscript on a diskette, prepare the file such that no line is longer than 72 characters. Try to use as few diskettes as possible, and put a label, with

1. name of sender, and
2. journal identification and article number

on each of them. Also add a file `readme` with a list of all the files on the diskettes and a description of their contents.

The allowed diskette types are: MS-DOS 3.5 inch, MS-DOS 5.25 inch and Macintosh, and for every diskette type all densities are possible.

4. Getting help

Although a lot of effort has been put in keeping the document style easy to use and in obtaining a concise description of the most common aspects of style, it is of course possible that authors encounter problems while using it. Also authors might have suggestions for additions. In those cases they should send their comments and suggestions to the address mentioned on the inside cover of the journal.

References

[1] Leslie Lamport: LaTeX, *A document preparation system*, 2nd edition, Addison-Wesley (Reading, Massachusetts, 1994)
[2] Michel Goossens, Frank Mittelbach and Alexander Samarin: *The LaTeXCompanion*, Addison-Wesley (Reading, Massachusetts, 1994)
[3] Donald E. Knuth: *The TeX book* Addison-Wesley (Reading, Massachusetts, 1986)
[4] *AMS-LaTeX Version 1.1—User's Guide*, American Mathematical Society, Providence, R.I., December 1990; distributed with the AMS-LaTeX package.

[5] Frank Mittelbach and Rainer Schöpf: *The new font family selection— user interface to standard LaTeX*
TUGBOAT **11** (1990) 297–305.

A. Examples

In this appendix we will show a few examples of the use of the document style `elsart`: two examples of the front matter, and one example of the `bibliography` environment. LaTeX 2_ε users should simply substitute `\documentclass` in place of `\documentstyle`.

```
\documentstyle{elsart}

\begin{document}
\begin{frontmatter}
\title{Integrability in
       random matrix models\thanksref{talk}}
\thanks[talk]{Expanded version of a talk
  presented at the Singapore Meeting on
  Particle Physics (Singapore, August 1990).}

\author{L. Alvarez-Gaum\'{e}}
\address{Theory Division, CERN,
  CH-1211 Geneva 23, Switzerland}
\author{C. Gomez\thanksref{SNSF}},
\address{D\'{e}partment de Physique Th\'{e}orique,
  Universit\'{e} de Gen\`{e}ve,
  CH-1211 Geneva 4, Switzerland}
\author{J. Lacki},
\address{School of Natural Sciences,
  Institute for Advanced Study,
  Princeton, NJ 08540, USA}
\thanks[SNSF]{Supported by the
  Swiss National Science Foundation}

\begin{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.
\end{abstract}
\end{frontmatter}

\section{Introduction}
Some aspects of the recently discovered non-perturbative
solutions to non-critical strings \cite{ref1} can be better
understood and clarified directly in terms of the
integrability properties of the random matrix model.
...
```

Example 1. Article opening with implicit links (input).

Integrability in random matrix models*

L. Alvarez-Gaumé

Theory Division, CERN, CH-1211 Geneva 23, Switzerland

C. Gomez[1]

Départment de Physique Théorique, Université de Genève, CH-1211 Geneva 4, Switzerland

J. Lacki

School of Natural Sciences, Institute for Advanced Study, Princeton, NJ 08540, USA

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 [1] can be better understood and clarified directly in terms of the integrability properties of the random matrix model.

...

* Expanded version of a talk presented at the Singapore Meeting on Particle Physics (Singapore, August 1990).
[1] Supported by the Swiss National Science Foundation

Example 1. Article opening with implicit links (output).

```
\documentstyle{elsart}

\begin{document}
\begin{frontmatter}
\title{A renormalization group study of a gauge \\
       theory: SU(3) at finite temperature}

\author[Madrid]{L.A. Fernandez\thanksref{CAICYT}},
\author[Pisa]{M.P. Lombardo},
\author[Rome]{R. Petronzio} and
\author[Zaragoza]{A. Tarancon\thanksref{CAICYT}}
\address[Madrid]{Departamento de F\'{\i}sica Te\'{o}rica,
  Universidad Complutense de Madrid, E-28040 Madrid, Spain}
\address[Pisa]{INFN, Sezione di Pisa, I-56100 Pisa, Italy}
\address[Rome]{Dipartimento di Fisica,
  Universit\`{a} di Roma II ``Tor Vergata'' and
  INFN, Sezione di Roma Tor Vergata,
  Via O. Raimondo, I-00173 Rome, Italy}
\address[Zaragoza]{Departamento de F\'{\i}sica Te\'{o}rica,
  Universidad de Zaragoza, E-50009 Zaragoza, Spain}
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\begin{abstract}
We apply a finite size renormalization group method to the
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\end{abstract}
\end{frontmatter}

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...
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Example 2. Article opening with explicit links (input).

A renormalization group study of a gauge theory: SU(3) at finite temperature

L.A. Fernandez[a,1], M.P. Lombardo[b], R. Petronzio[c], A. Tarancon[d,1]

[a] *Departamento de Física Teórica, Universidad Complutense de Madrid, E-28040 Madrid, Spain*
[b] *INFN, Sezione di Pisa, I-56100 Pisa, Italy*
[c] *Dipartimento di Fisica, Università di Roma II "Tor Vergata" and INFN, Sezione di Roma Tor Vergata, Via O. Raimondo, I-00173 Rome, Italy*
[d] *Departamento de Física Teórica, Universidad de Zaragoza, E-50009 Zaragoza, Spain*

Abstract

We apply a finite size renormalization group method to the study of the deconfining transition in pure gauge SU(3). By constructing renormalized systems with 2^3 and 2 variables suitably defined we obtain a very accurate determination of the transition point and of the thermal exponent ν.

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[1] Partially supported by CAICYT, Spain.

Example 2. Article opening with explicit links (output).

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Example 3. Literature references (output).

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