Instructions for Authors
The Chicago Journal of Theoretical Computer Science
The MIT Press

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The *Chicago Journal of Theoretical Computer Science* is a peer-reviewed scholarly journal in theoretical computer science. Articles are submitted and published in LaTeX source form, and distributed internationally over the InterNet. Articles are augmented by refereed forward references to improvements and subsequent related work. Readers may obtain articles through *ftp, Gopher,* and *World Wide Web* (*Mosaic* is a well-known interface to *World Wide Web*). Other widely used network tools will be supported as they arise in the future. The *Journal* is committed to minimizing publication delays, and to promoting maximum flexibility in the ways that readers use the journal for teaching, research, and scholarship. Readers' license is limited only as required to insure fair attribution to authors and the journal, and to prohibit use in a competing commercial product.

1 What is a Published Article?

The definitive version of an article published in the *Chicago Journal of Theoretical Computer Science* is a LaTeX source file (compatible with LaTeX 2_ε as well as older versions) containing the text of the article, an accompanying

BibTeX source file containing the bibliography, and optional encapsulated PostScript files containing drawings included in the article. The journal's copy editors prepare the source files for each article to present the logical structure of the article as clearly as possible, so as to maximize portability of the text, and to facilitate future development of browsing interfaces and information retrieval applications. Precompiled PostScript translations are provided for readers who cannot format LaTeX, or do not wish to, but the LaTeX source is the definitive copy.

Reader-Powered Publication

Electronically published journals have used a variety of different publication formats, including bitmapped page images, PostScript page layouts, typographical formats such as LaTeX, plain ASCII, and special proprietary formats closely integrated with browsing and information-retrieval software. Each of these choices favors different qualities of publication—for example, bitmaps, PostScript, and some proprietary formats give authors and publishers maximum control over the beauty of the final display, while plain ASCII requires the minimum equipment and skill on the part of the reader, etc. The publication format of the *Chicago Journal* is intended to maximize *readers' power* to use articles in whatever ways they find most productive. The problem is that we cannot anticipate precisely what readers will do, but we should assume at least that they display articles in a wide variety of typographical formats suited to their equipment, their paper or screen size, and their eyesight, and that they apply browsing and information-retrieval software acquired from other suppliers than MIT Press. To stretch our imaginations a bit, there is already experimental software providing audio browsing of LaTeX documents.

The way to maximize the power of readers in the long run, without precise knowledge of reader behavior, is to represent the logical structure of articles in the most transparent and easily parsable way that we can manage. SGML was designed precisely for this task, but it can also be done satisfactorily with a disciplined use of LaTeX. Furthermore, LaTeX supports the representation of mathematical formulae fairly well, and most of our reader and author community already has the software to typeset and display LaTeX. But, maximum power and flexibility for readers demands a certain amount of standardization in the *source* format of articles. Readers, and particularly readers' software packages, must be able to parse important components, such as sectional units, paragraphs, sentences, displayed subtexts such as theorems, easily and unambiguously. To provide this uniform clarity in the LaTeX source, copy editors must polish authors' manuscripts into a disciplined subset of LaTeX. As an author, you need not be concerned with the details of that disciplined subset, but by following the guidelines below you may improve the efficiency of the journal operation, avoid wasting your own effort on idiosyncratic layout that is incompatible with the discipline required for uniform clarity in the final published article, and minimize the delay in presenting your article to readers.

2 What Should You Submit?

All contributions to the *Chicago Journal of Theoretical Computer Science* are submitted by electronic mail in LaTeX (or LaTeX 2_ε) source format. The remainder of these instructions are intended to guide you in preparing a submission efficiently. The closer that you follow these rules, the more quickly and easily your contribution can be evaluated and published. When there are good reasons to use structures other than the normal ones, you should negotiate changes with the editors. But, when conventional forms are satisfactory, you will help everyone's efficiency by following them.

To submit an article for consideration by the editors, choose a short mnemonic *name* for your contribution, and prepare the following three files:

- *name*`.doc`, a plain ASCII file containing your name, as many ways of reaching you as possible (mail address, e-mail address, telephone number, FAX number), a list of the other files that you are submitting, and any special message that you would like to provide for the editors;

- *name*`.tex`, a LaTeX (or LaTeX 2_ε) source file containing the text of the article, formatted with the standard `article` style, using any of the AMS-LaTeX style options `amstex`, `amsbsy`, `amscd`, `amsfonts`, `amssymb`, `amstext` that you need;

- *name*`.bib`, a BibTeX source file containing bibliography for the article (BibTeX source includes a lot of useful markup of the components of bibliographical entries that is usually lost in `*.bbl` files or hand-coded bibliographies).

If you have a large BibTeX database, you may wish to use `aux2bib` or the combination of `citetags` and `citefind` (find them through the journal's network server) to select the items relevant to your submitted article.

Please include all local macro definitions (everything not defined in TeX, plain TeX, LaTeX, the `article` style, the $\mathcal{A}\mathcal{M}\mathcal{S}$-LaTeX options, or encapsulated PostScript support such as the `epsf` style) in the preamble to *name*`.tex`, rather than in a separate file of macro definitions. If you have written your article using other files of specialized macro definitions, you may find the UNIX command `texexpand` helpful in folding those definitions in to one file.

If you have drawings that cannot be represented conveniently in LaTeX, prepare in addition one of the following files for each such drawing:

- *name*`f`*i*`.eps`, encapsulated PostScript file with a picture for Figure *i*
- *name*`t`*j*`.eps`, encapsulated PostScript file with a picture for Table *j*

To create your drawings on a UNIX system, you may use `xfig`, `gnuplot`, `idraw`, or any other utility capable of producing encapsulated PostScript. On MacIntosh and DOS/Windows systems most widely available drawing programs can produce PostScript output.

3 How Should You Submit?

Submit your article by electronic mail to

    chicago-journal@cs.uchicago.edu

If you are computing on a UNIX system, the best form of submission is a single `shar` archive containing all of the files mentioned above in one message. Use the mnemonic name of your article as the `Subject` line of the message. The next best form is a separate message for each file transmitted, using the file name as the `Subject` line.

4 Guidelines for Your LaTeX Source

Try to use the simplest, most direct expression of the structure of your article in the main *name*`.tex` file. For example, mark sectional units with the standard LaTeX sectional commands `\section`, `\subsection`, etc., rather than hand-coding your own headings. Do not try to achieve a beautiful layout by clever use of TeX and LaTeX tricks: most of that layout work will be lost during copy editing anyway. In particular, specific font choices (except `\em` for emphasis, and special uses in defining mathematical symbols), type size choices, spacing by reference to absolute units (`in`, `cm`, `pc`, `pt`), and page breaking will be lost in copy editing. We are collecting macros to aid you in preparing submissions in the file `cjauthor.tex` (it has only one item so far). As this collection of macros grows, please use it as much as possible to avoid wasted effort on solved problems. You may contribute material for `cjauthor.tex`, but it will be incorporated only if it contributes to the efficiency of this journal. Use indentation and blank comment lines to make your LaTeX source file more readable.

To include encapsulated PostScript figures, use the command

`\epsfbox{`*filename*`}`

which is normally defined in a file named `epsf.sty`.

Your contribution is a late draft, and you may decide to revise it in light of the referees' comments. So, make full use of the LaTeX features that support the maintenance of a sequence of drafts. Avoid typing in absolute names and numbers for labels, cross-references, and citations. Use the automatically numbered version of the sectioning commands, floats, and theorem-like environments, as well as `\label`, `\ref`, and `\cite`. In this way `latex` will produce labels, cross-references, and citations automatically, and correct them after revisions. You may leave the final publication numbering scheme to the copy editors. Or, if you suggest a particular numbering scheme (for example, hierarchical within sectional units, or lemmas numbered hierarchically within the proofs that contain them) the editors will use it as long as it is internally consistent and compatible with the needs of readers for clear references into articles.

Mathematical Formulae

Mathematical formulae tend to blur the distinction between meaningful text and aesthetic layout, so you may need to exercise closer control of formatting than you do in normal English text. As much as possible, define sensible macros that stand for mathematically meaningful operations. Try to put all nitty-gritty typographical commands, such as type style choices and spacing adjustments, inside such macros. When you need to design special mathematical notation, use the standard type styles `\rm`, `\it`, `\bf`, `\sl`, `\sf`, `\sc`, `\tt`, `\cal`, or type styles supported by fonts distributed by the American Mathematical Society. Other type styles must be negotiated with the editors in advance, and they must be implemented by fonts that are available for free distribution to all readers. Use the `\mathstyleclass` command in `cjauthor.tex` to declare new classes of mathematical symbols using specific type styles.

5 Reviewing and Revising

Your contributed article will be assigned to a contact editor, who will use anonymous referees to help review it. Reviewing normally requires 6 weeks. After the review, the editors may decide to accept the article for publication, decline it, or ask for revisions. When revisions are required by the editors and referees, you should submit a complete revised version of your article, along with comments on how your revisions address the concerns of the editors and referees. Such revisions may be submitted in the same form as your original contribution, except that instead of the file *name*`.doc`, provide *name*`-resp1.tex` containing your response to the referees' comments, and mail the revised version to your contact editor. The journal also provides a way for the referees to communicate technical questions to you directly but anonymously when appropriate to speed reviewing. You may answer such queries in the normal way that you reply to network mail.

If your article is accepted for publication, it will be forwarded immediately to the copy editors, who will correct stylistic problems and edit your LaTeX source into the disciplined form that we designed to maximize readers' flexibility. Copy editing is not intended to introduce substantive changes in your article, but since the boundary between format and substance is not always simple, the copy editors will need to communicate with you to ask questions and to gain your approval of the final version. Please address all replies directly to the copy editors. If you wish to propose any revisions during copy editing, please describe the appropriate changes to the copy editors, instead of submitting fresh versions of the complete article. Copy editing requires 10 working days. In order to maintain this schedule, you need to respond to queries from the copy editor within 3 working days.

6 For More Information

More information and various materials associated with the *Chicago Journal* are available through

- *World Wide Web* to MIT Press (for example, using *Mosaic*)
  - use URL `http://www-mitpress.mit.edu/jrnls-catalog/science-toc.html`

  World Wide Web to U. Chicago
  - use URL `http://cs-www.uchicago.edu/publications/cjtcs`
- *Gopher* to MIT Press
  - connect to server `gopher.mit.edu`
  - select menu item `MIT Press Information & Catalog`
  - select `Journals 1994`
  - select `Science & Technology`
  - select `Chicago Journal of Theoretical Computer Science`
- *Gopher* to U. Chicago
  - connect to server `cs-gopher.uchicago.edu`
  - select menu item `Publications`
  - select `Chicago Journal of Theoretical Computer Science`

  Gopher with full path
  - connect to `cs-gopher.uchicago.edu` with the path `1/publications/cjtcs` (e.g., `gopher -p 1/publications/cjtcs cs-gopher.uchicago.edu`)
- Anonymous *ftp* to MIT Press
  - connect to `mitpress.mit.edu`
  - login as `anonymous`

    – change directory to `pub/CJTCS`

  Anonymous *ftp* to U. Chicago

    – connect to `cs.uchicago.edu`
    – login as `anonymous`
    – change directory to `pub/publications/cjtcs`

- Network mail to `chicago-journal@cs.uchicago.edu` and `journals-info@mit.edu`.

A Approved LaTeX Commands and Features

You are especially encouraged to use the following LaTeX features:

Commands: `\section`, `\subsection`, `\subsubsection`, `\appendix`, `\title`, `\author`, `\thanks`, `\maketitle`, `\newtheorem`, `\caption`, `\bibliography`, `\em`, `\item`, `\\`, `\label`, `\ref`, `\cite`, `\nocite`, `\text`, `\intertext`, all of the LaTeX and $\mathcal{AMS}$-LaTeX commands producing the usual textual and mathematical symbols.

Environments: `document`, `abstract`, `itemize`, `enumerate`, `description`, `math`, `displaymath`, `equation`, `eqnarray`, theorem-like environments, `quote`, `figure`, `table`, `array`, `tabular`, `cases`, `Sb`, `Sp`, `CD`, `align`, `gather`, `alignat`, `multiline`, `split`.

Document styles and options: `article`, `epsf`, `amstex`, `amsbsy`, `amscd`, `amsfonts`, `amssymb`, `amstext`.

A.1 In Macros for Mathematical Formulae Only

As much as possible, use `\mathstyleclass` from `cjauthor.tex` and `\newcommand` to hide the type style choices and spaciing commands below within macro definitions.

Commands: `\rm`, `\bf`, `\it`, `\sl`, `\sf`, `\sc`, `\tt`, `\cal`, `\!`, `\,`, `\:`, `\;`, `\Bbb`, `\boldsymbol`, `\frak`, `\pmb`, `\smash`, `\operatorname`, `\operatornamewithlimits`.

B LaTeX Commands and Features to Avoid

Avoid the following LaTeX features as much as possible. When you really need them, try to embed them in meaningful macro definitions.

Commands: `\vspace`, `\noindent`, `\indent`, `\linebreak`, `\nolinebreak`, `\nopagebreak`, `\samepage`, `\fill`, `\stretch`, `\hspace`, `\vspace`, `\bigskip`, `\medskip`, `\smallskip`, `\addvspace`, `\sloppy`, `\fussy`, `\raisebox`.

Environments: `tabbing`.

Change style parameters: `\topsep`, `\partopsep`, `\itemsep`, `\parsep`, `\itemindent`, `\labelsep`, `\labelwidth`, `\makelabel`, `\jot`, `\arraycolsep`, `\tabcolsep`, `\arrayrulewidth`, `\doublerulesep`, `\arraystretch`.

Read style parameters: all style parameters.

Length units: `em`, `ex`.

C Prohibited LaTeX Commands and Features

You should not use the following LaTeX features. If you think that you really need them, please contact me.

Commands: `\pagenumbering`, `\pagestyle`, `\thispagestyle`, `\pagebreak`, `\marginpar`, `\reversemarginpar`, `\normalmarginpar`, `\part`, `\chapter`, `\markright`, `\markboth`, `\twocolumn`, `\onecolumn`, `\clearpage`, `\verb`, `\bibitem`, `\input`, `\include`, `\typeout`, `\typein`.

Environments: `titlepage`, `verbatim`, `thebibiliography`, `theindex`

Change style parameters: `\textwidth`, `\linewidth`, `parindent`, `\baselineskip`, `\baselinestretch`, `parskip`, `\footnotesep`, `\footnoterule`, `secnumdepth`, `\tocdepth`, `\bibindent`, `\columnsep`, `\columnseprule`, `\mathindent`, `\oddsidemanrgin`, `\evensidemargin`, `\marginparwidth`, `\marginparsep`, `\topmargin`, `\headheight`, `\headsep`, `\textheight`, `\textwidth`, `\topskip`, `\footheight`, `\footskip`, `\leftmargin`, `\rightmargin`, `\listparindent`, `\mathindent`, `\abovedisplayskip`, `\belowdisplayskip`, `\abovedisplayshortskip`, `\belowdisplayshortskip`, `topnumber`, `\topfraction`, `bottomnumber`,

`\bottomfraction`, `totalnumber`, `\textfraction`, `\floatpagefraction`, `dbltopnumber`, `\dbltopfraction`, `\dblfloatpagefraction`, `\floatsep`, `\textfloatsep`, `\intextsep`, `\dblfloatsep`, `\dbltextfloatsep`, `\marginparwidth`, `\marginparsep`, `\marginparpush`, `\tabbingsep`, `\fboxrule`, `\fboxsep`.

Length units: `cm`, `in`, `pc`, `pt`, `mm`.

Document styles and options: all those not listed in Appendix A.