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GUIDE

Journal of Statistical Computation and Simulation **L^AT_EX** style guide for authors (Style 2 + NLM reference style)

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(v3.3 released January 2014)

This guide is for authors who are preparing papers for the Taylor & Francis journal *Journal of Statistical Computation and Simulation* (*gSCS*) using the L^AT_EX document preparation system and the class file `gSCS2e.cls`, which is available via the journal's homepage on the Taylor & Francis website. Authors planning to submit papers in L^AT_EX are advised to use `gSCS2e.cls` as early as possible in the creation of their files.

Keywords: submission instructions; source file coding; environments; references citation; fonts; numbering (**Please provide up to ten keywords taken from terms used in your manuscript**)

AMS Subject Classification: F1.1; F4.3 (... for example; authors are encouraged to provide two to six 2010 Mathematics Subject Classification codes)

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1. Introduction

In order to assist authors in the process of preparing a manuscript for the *Journal of Statistical Computation and Simulation (gSCS)*, the journal's layout style has been implemented as a $\text{\LaTeX} 2_{\epsilon}$ class file based on the `article` document class. A \BibTeX style file is also provided to assist with the formatting of your references in a style appropriate to that of the journal.

Commands that differ from or are provided in addition to the standard $\text{\LaTeX} 2_{\epsilon}$ interface are explained in this guide. The guide alone is not intended as a substitute for an appropriate $\text{\LaTeX} 2_{\epsilon}$ manual.

The `gSCSguide.tex` file can also be used as a template for composing an article for submission by cutting, pasting, inserting and deleting text as appropriate, using the \LaTeX environments provided (e.g. `\begin{equation}`, `\begin{enumerate}`).

Please note that the index following the abstract in this guide is provided for information only. An index is not required in submitted papers.

1.1. *The gSCS document class*

The *gSCS* class file preserves the standard $\text{\LaTeX} 2_{\epsilon}$ interface such that any document that can be produced using `article.cls` can also be produced using the *gSCS* document class. However, the measure (the width of the text on a page) differs from the default for `article.cls`, therefore line breaks will change and some long equations may need to be reformatted accordingly.

If your article is accepted for publication in the journal, it will be typeset in Monotype Times. As most authors do not own this font, it is possible that the page make-up may alter slightly with the change of font. Please therefore ignore details such as slightly long lines of text, page stretching, or figures falling out of synchronization with their citations in the text: these details will be dealt with by the typesetter. Similarly, it is unnecessary to spend time addressing warnings in the log file – if your `.tex` file compiles to produce a PDF file that correctly reflects how you wish your paper to appear, such warnings will not prevent your source files being imported into the typesetter's program.

1.2. *Submission of \LaTeX articles to the journal*

Manuscripts for possible publication in the journal should be submitted to the Editors for review as directed in the journal's Instructions for Authors, which may be found at <http://www.tandf.co.uk/journals/authors/gscsauth.asp>.

Manuscripts created using \LaTeX should be converted to PDF format prior to submission. The \LaTeX source files and any graphics files will be required in addition to the final PDF version when final, revised versions of accepted manuscripts are submitted.

'Open-source' $\text{\LaTeX} 2_{\epsilon}$ should be used in preference to proprietary systems such as TCILaTeX or Scientific WorkPlace; similarly, class files such as REVTeX4 that produce a document in the style of a different publisher and journal should not be used for preference.

Authors who wish to incorporate Encapsulated PostScript artwork directly in their articles can do so by using Tomas Rokicki's EPSF macros (which are supplied with the DVIPS PostScript driver). See Section 3.4, which also demonstrates how to treat landscape pages. Please remember to supply any additional figure macros you use with your article in the preamble before `\begin{document}`. Authors should not attempt to use implementation-specific `\specials` directly.

Ensure that any author-defined macros are gathered together in the source file, just

before the `\begin{document}` command.

Please note that if serious problems are encountered with the coding of a paper (missing author-defined macros, for example), it may prove necessary to divert the paper to conventional typesetting, i.e. it will be re-keyed.

2. Using the *gSCS* class file

If the file `gSCS2e.cls` is not already in the appropriate system directory for L^AT_EX 2_ε files, either arrange for it to be put there, or copy it to your working folder. In order to use the *gSCS* document class, replace the command `\documentclass{article}` at the beginning of your document with the command `\documentclass{gSCS2e}`.

The following document-class options should not be used with the *gSCS* class file:

- `10pt`, `11pt`, `12pt` – unavailable;
- `oneside`, `twoside` – not necessary, `oneside` is the default;
- `leqno`, `titlepage` – should not be used;
- `onecolumn` – not necessary as it is the default style.

The `geometry` package and commands associated with it should also not be used to adjust the page dimensions.

3. Additional features

3.1. *Footnotes to article titles and authors' names*

On the title page, the `\thanks` control sequence may be used to produce a footnote to either the title or authors' names. Footnote symbols for this purpose should be used in the order: † (coded as `\dagger`), ‡ (`\ddagger`), § (`\S`), ¶ (`\P`), || (`\I`), †† (`\dagger\dagger`), ‡‡ (`\ddagger\ddagger`), §§ (`\S\S`), ¶¶ (`\P\P`), ||| (`\I\I\I`).

Any `\footnotes` to the main text will automatically be assigned the superscript symbols 1, 2, 3, etc. by the class file.¹

The title, author(s) and affiliation(s) should be followed by the `\maketitle` command. If preparing an anonymized version for peer review, `\maketitle` may follow directly after the title in order to shield the authors' identities from the reviewers.

3.2. *Abstracts*

At the beginning of your article, the title should be generated in the usual way using the `\maketitle` command. Immediately following the title you should include an abstract. The abstract should be enclosed within an `abstract` environment. For example, the titles for this guide were produced by the following source code:

```
\title{{\itshape Journal of Statistical Computation and Simulation}
\break \LaTeX\ style guide for authors (Style 2 + NLM reference style)}
```

```
\author{A.N. Author{a}$$$^{\ast}\thanks{{a}$$$^{\ast}Corresponding
author. Email: latex.helpdesk@tandf.co.uk \vspace{6pt}} and I.T.
Consultant{b}$$$^{\ast}\vspace{6pt} {a}$$$^{\ast}\em{Taylor \& Francis,
```

¹If preferred, the `endnotes` package may be used to set the notes at the end of your text, before the bibliography. The symbols will be changed to match the style of the journal if necessary by the typesetter.

```
4 Park Square, Milton Park, Abingdon, UK}}; $^{b}$\em{Institut
f"\{u}r Informatik, Albert-Ludwigs-Universit\{a}t, Freiburg,
Germany}}\\received{v3.3 released January 2014} }
```

```
\maketitle
```

```
\begin{abstract}
```

This guide is for authors who are preparing papers for the Taylor & Francis journal `{\em Journal of Statistical Computation and Simulation}` (`{\it gSCS}`\,) using the `\LaTeX` document preparation system and the class file `{\tt gSCS2e.cls}`, which is available via the journal's homepage on the Taylor & Francis website. Authors planning to submit papers in `\LaTeX` are advised to use `{\tt gSCS2e.cls}` as early as possible in the creation of their files.

```
\end{abstract}
```

3.3. Lists

The `gSCS` class file provides numbered and unnumbered lists using the `enumerate` environment and bulleted lists using the `itemize` environment.

The enumerated list will number each list item with arabic numerals by default, e.g.

- (1) first item
- (2) second item
- (3) third item

was produced by

```
\begin{enumerate}
  \item first item
  \item second item
  \item third item
\end{enumerate}
```

Alternative numbering styles can be achieved by inserting an optional argument in square brackets to each `\item`, e.g. `\item[(i)] first item` to create a list numbered with roman numerals.

Unnumbered lists are also provided using the `enumerate` environment. For example,

- First unnumbered indented item without label.
- Second unnumbered item.
- Third unnumbered item.

was produced by:

```
\begin{enumerate}
  \item[] First unnumbered indented item without label.
  \item[] Second unnumbered item.
  \item[] Third unnumbered item.
\end{enumerate}
```

Bulleted lists are provided using the `itemize` environment. For example,

- First bulleted item
- Second bulleted item
- Third bulleted item

was produced by:

```
\begin{itemize}
  \item First bulleted item
  \item Second bulleted item
  \item Third bulleted item
\end{itemize}
```

3.4. *Landscape pages*

If a table or illustration is too wide to fit the standard measure, it must be turned, with its caption, through 90° anticlockwise. Landscape illustrations and/or tables can be produced using the `rotating` package, which is called by the `gSCS` class file. The following commands can be used to produce such pages.

```
\setcounter{figure}{0}
\begin{sidewaysfigure}
\centerline{\epsfbox{fig1.eps}}
\caption{An example of a landscape figure caption.}
\label{landfig}
\end{sidewaysfigure}

\setcounter{table}{0}
\begin{sidewaystable}
\tbl{The Largest Optical Telescopes.}
{\begin{tabular}{@{}l1111c1l}
.
.
.
\end{tabular}}\label{tab1}
\end{sidewaystable}
```

Before any float environment, use the `\setcounter` command as above to fix the numbering of the caption. Subsequent captions will then be automatically renumbered accordingly.

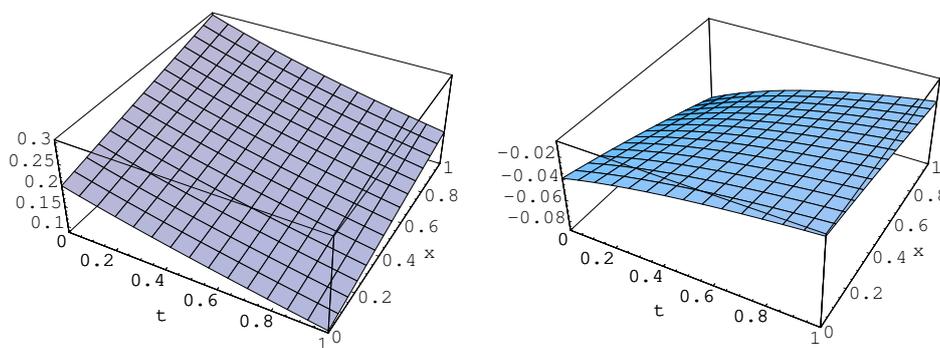
4. Some guidelines for using standard features

The following notes are intended to help you achieve the best effects with the `gSCS2e` class file.

4.1. *Sections*

$\text{\LaTeX} 2_\epsilon$ provides five levels of section headings, all of which are defined in the `gSCS2e` class file:

- (A) `\section`
- (B) `\subsection`
- (C) `\subsubsection`
- (D) `\paragraph`
- (E) `\subparagraph`



(a) An example of an individual figure sub-caption.

(b) A slightly shorter sub-caption.

Figure 1. Example of a two-part figure with individual sub-captions showing that captions are flush left and justified if greater than one line of text, otherwise centred under the figure.

Numbering is automatically generated for section, subsection, subsubsection and paragraph headings. If you need additional text styles in the headings, see the examples in Section 5.

4.2. Illustrations (figures)

The *gSCS* class file will cope with most positioning of your illustrations and you should not normally need to use the optional placement specifiers of the `figure` environment. See ‘Instructions for Authors’ in the journal’s homepage on the Taylor & Francis website for how to submit artwork (note that requests to supply figures and tables separately from text are for the benefit of authors using Microsoft Word; authors using \LaTeX may include these at the appropriate locations in their PDF file). The original source files of any illustrations will be required when the final, revised version is submitted. Authors should ensure that their figures are suitable (in terms of lettering size, etc.) for the reductions they intend.

Figure captions should appear below the figure itself, therefore the `\caption` command should appear after the figure. For example, Figure 1 with caption and sub-captions is produced using the following commands:

```
\begin{figure}
\begin{center}
\subfigure[An example of an individual figure sub-caption.]{
\resizebox*{6cm}{!}{\includegraphics{senu_gr1.eps}}\hspace{5pt}
\subfigure[A slightly shorter sub-caption.]{
\resizebox*{6cm}{!}{\includegraphics{senu_gr2.eps}}}
\caption{\label{fig2} Example of a two-part figure with individual
sub-captions showing that captions are flush left and justified if
greater than one line of text, otherwise centred under the figure.}
\label{sample-figure}
\end{center}
\end{figure}
```

The control sequences `\subfigure{}` and `\includegraphics{}` require `subfigure.sty` and `graphicx.sty`. The former is called in the preamble of the `gSCSguide.tex` file (in order to allow your choice of alternative if preferred) and the latter by the `gSCS2e` class file; both are included with the \LaTeX style guide package for this journal for convenience.

Table 1. Radio-band beaming model parameters for FSRQs and BL Lacs.

Class ^a	γ_1	γ_2^b	$\langle \gamma \rangle$	G	$ f $	θ_c
BL Lacs	5	36	7	-4.0	1.0×10^{-2}	10°
FSRQs	5	40	11	-2.3	0.5×10^{-2}	14°

^aThis footnote shows what footnote symbols to use.

^bThis footnote shows the text turning over when a long footnote is added.

To ensure that figures are correctly numbered automatically, the `\label{}` command should be inserted just after `\caption{}`.

4.3. Tables

The *gSCS* class file will cope with most positioning of your tables and you should not normally need to use the optional placement specifiers of the `table` environment. The table caption appears above the body of the table in *gSCS* style, therefore the `\tbl` command should appear before the body of the table.

The `tabular` environment can be used as illustrated here to produce tables with single thick and thin horizontal rules, which are allowed, if desired. Thick rules should be used at the head and foot only and thin rules elsewhere.

Commands to redefine quantities such as `\arraystretch` should be omitted. For example, Table 1 is produced using the following commands. Note that `\rm` will produce a roman character in math mode. There are also `\bf` and `\it`, which produce bold face and text italic in math mode.

```
\begin{table}
\tbl{Radio-band beaming model parameters for {FSRQs and BL Lacs.}}
{\begin{tabular}[l]{@{}lcccccc}
\toprule
Classa & $\gamma_1$ & $\gamma_2^b$ & $\langle \gamma \rangle$ & $G$ & $|f|$ & $\theta_c$ \\
\colrule
BL Lacs & 5 & 36 & 7 & -4.0 & $1.0 \times 10^{-2}$ & $10^\circ$ \\
FSRQs & 5 & 40 & 11 & -2.3 & $0.5 \times 10^{-2}$ & $14^\circ$ \\
\botrule
\end{tabular}}
\tabnote{aThis footnote shows what footnote symbols to use.}
\tabnote{bThis footnote shows the text turning over when a
long footnote is added.}
\label{symbols}
\end{table}
```

To ensure that tables are correctly numbered automatically, the `\label{}` command should be inserted just before `\end{table}`.

Tables produced using the `booktabs` package of macros for typesetting tables are also compatible with the *gSCS* class file.

4.4. *Theorem-like environments*

A predefined proof environment is provided by the `amsthm` package (which is called by the class file), as follows:

Proof. More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem. ■

This was produced by simply typing:

```
\begin{proof}
More recent algorithms for solving the semidefinite programming
relaxation are particularly efficient, because they explore the
structure of the MAX-CUT problem.
\end{proof}
```

Other theorem-like environments (theorem, lemma, corollary, etc.) need to be defined as required, e.g. using `\newtheorem{theorem}{Theorem}[section]` in the preamble of your `.tex` file before `\begin{document}`. Theorem-like structures in *gSCS* are generally formatted as per the following examples:

THEOREM 4.1 *More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.*

LEMMA 4.2 *More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.*

PROPOSITION 4.3 *More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.*

COROLLARY 4.4 *More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.*

Definition 4.5 More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.

Example 4.6 More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.

Remark 4.7 More recent algorithms for solving the semidefinite programming relaxation are particularly efficient, because they explore the structure of the MAX-CUT problem.

These were defined as shown in detail in the preamble of the `gSCSguide.tex` file, and produced by typing, for example:

```
\begin{theorem}
More recent algorithms for solving the semidefinite programming
relaxation are particularly efficient, because they explore the
structure of the MAX-CUT problem.
\end{theorem}
```

The format of the text in these environments may be changed if necessary to match the style of the journal by the typesetter during preparation of your proofs.

4.5. *Typesetting mathematics*

4.5.1. *Displayed mathematics*

The *gSCS* class file will set displayed mathematics centred on the measure without equation numbers, provided that you use the L^AT_EX_{2 ϵ} standard control sequences open ($\[$) and close ($\]$) square brackets as delimiters. The equation

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

was typeset using the commands

```
\[
  \sum_{i=1}^p \lambda_i = {\rm trace}({\texttrm{\bf S}})\quad
  i\in {\mathbb R}
\].
```

For those of your equations that you wish to be automatically numbered sequentially throughout the text, use the `equation` environment, e.g.

$$\sum_{i=1}^p \lambda_i = \text{trace}(\mathbf{S}) \quad i \in \mathbb{R} \tag{1}$$

was typeset using the commands

```
\begin{equation}
  \sum_{i=1}^p \lambda_i = {\rm trace}({\texttrm{\bf S}})\quad
  i\in {\mathbb R}
\end{equation}
```

Part numbers for sets of equations may be generated using the `subequations` environment, e.g.

$$\varepsilon \rho w_{tt}(s, t) = N[w_s(s, t), w_{st}(s, t)]_s, \tag{2a}$$

$$w_{tt}(1, t) + N[w_s(1, t), w_{st}(1, t)] = 0, \tag{2b}$$

which was generated using the control sequences

```
\begin{subequations} \label{subeqnexample}
\begin{equation}
  \varepsilon \rho w_{tt}(s, t)
  =
  N[w_s(s, t), w_{st}(s, t)]_s,
  \label{subeqnpart}
\end{equation}
\begin{equation}
  w_{tt}(1, t) + N[w_s(1, t), w_{st}(1, t)] = 0,
\end{equation}
\end{subequations}
```

This is made possible by the `subeqn` package, which is called by the class file. If you put the `\label{}` just after the `\begin{subequations}` line, references will be to the collection of equations, ‘(2)’ in the example above. Or, like the example code above, you can reference each equation individually – e.g. ‘(2a)’.

4.5.2. Bold math italic symbols

To get bold math italic you can use `\bm`, which works for all sizes, e.g.

```
\sffamily
\begin{equation}
  {\rm d}({\bm s}_{t_{{\bm u}}}) = \langle{\bm \alpha}({\sf{\textbf L}})\rangle
  [RM({\bm X}_y + {\bm s}_t) - RM({\bm x}_y)]^2 \rangle
\end{equation}
\normalfont
```

produces

$$d(s_{t_u}) = \langle \alpha(\mathbf{L}) [RM(\mathbf{X}_y + \mathbf{s}_t) - RM(\mathbf{x}_y)]^2 \rangle \quad (3)$$

Note that subscript, superscript, subscript to subscript, etc. sizes will take care of themselves and are italic, not bold, unless coded individually. `\bm` produces the same effect as `\boldmath`. `\sffamily... \normalfont` allows upright sans serif fonts to be created in math mode by using the control sequence ‘`\sf`’.

4.5.3. Bold Greek

Bold lowercase as well as uppercase Greek characters can be obtained by `{\bm \gamma}`, which gives γ , and `{\bm \Gamma}`, which gives Γ .

4.5.4. Upright lowercase Greek characters and the upright partial derivative sign

Upright lowercase Greek characters can be obtained with the `gSCS` class file by inserting the letter ‘u’ in the control code for the character, e.g. `\umu` and `\upi` produce μ (used, for example, in the symbol for the unit microns – μm) and π (the ratio of the circumference to the diameter of a circle). Similarly, the control code for the upright partial derivative ∂ is `\upartial`.

4.6. Acknowledgements

This unnumbered section, e.g. `\section*{Acknowledgement(s)}`, should be used for thanks, etc. and placed before any Notes or References sections.

4.7. Funding

This unnumbered section, e.g. `\section*{Funding}`, should be used for grant details, etc. and placed before any Notes or References sections.

4.8. Notes

This unnumbered section, e.g. `\section*{Note(s)}`, may be placed before the References section.

4.9. *Supplemental material*

Supplemental material should be referenced within your article where appropriate. An unnumbered section, e.g. `\section*{Supplemental material}`, detailing the supplemental material available should be placed immediately before the list of references, and should include a brief description of each supplemental file.

4.10. *References*

4.10.1. *References cited in the text*

References are cited in accordance with US National Library of Medicine (NLM) style (please refer to the style guide in the journal's Instructions for Authors for details). References should be cited in the text by a number in square brackets (e.g. [1], [2,4,10], [11–15], not [11]–[15]), in the order in which they first appear.

Each bibliographical entry has a key, which is assigned by the author and used to refer to that entry in the text. In this document, the key `neu83` in the citation form `\cite{neu83}` produces '[1]', and the keys `ed84` and `aiex00` in the citation form `\cite{ed84,aiex00}` produce '[2, 3]'. The citation for a range of bibliographic entries (e.g. '[4–11]') will automatically be produced by `\cite{Eri1984,glov00,hk97,glov86,Agu95,Holl04,Shak78,Mi193}`. Optional notes may be included at the end of a citation by the use of square brackets, e.g. `\cite[see][p.73–77]{cwm73}` produces '[see 12, p.73–77]'.

4.10.2. *The list of references*

References should be listed at the end of the main text in the order in which they are first cited in the text. The following list shows some references prepared in the style of the journal:

References

- [1] Neumann M. Parallel GRASP with path-relinking for job shop scheduling. *Mol Phys.* 1983;50:841–843.
- [2] Edwards DMF, McDonald IR. Positive bases in numerical optimization. *Comput Optim Appl.* 1984;21:169–175.
- [3] Aiex RM, Pierce IF, Donizetti G, von Weber CM, Bizet G, Bach CPE, Strauss R, van Beethoven L, Mozart WA, Dukas P. Computing tools for modelling orchestral performance. Cambridge (UK): University of Cambridge; 2000. Report No.: DAMTP 2000/NA10.
- [4] Ericsson KA, Simon HA. Protocol analysis: verbal reports as data. Cambridge (MA): MIT Press; 1984.
- [5] Glover F. Multi-start and strategic oscillation methods – principles to exploit adaptive memory. In: Laguna M, González-Velarde JL, editors. Computing tools for modeling, optimization and simulation: interfaces in computer science and operations research. 2nd ed. Vol. 2. Boston (MA): Kluwer Academic; 2000. p. 1–24.
- [6] Kern H. The resurgent Japanese economy and a Japan–United States free trade agreement. In: Lambert C, Holst G, editors. 4th International Conference on the Restructuring of the Economic and Political System in Japan and Europe; 1996 May 21–25; Milan, Italy. Singapore: World Scientific; 1997. p. 147–156.
- [7] Glover F. Hilbert modular forms and the Galois representations associated to Hilbert–Blumenthal abelian varieties [dissertation]. Cambridge (MA): Harvard University; 1986.
- [8] Agutter AJ. The linguistic significance of current British slang [unpublished doctoral dissertation]. Edinburgh (UK): Edinburgh University; 1995.

- [9] Holland M. Guide to citing internet sources. 2004 [cited 2012 Nov 4]. Available from: http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sourc.html.
- [10] Shakelford RT. Surgery of the alimentary tract. Philadelphia (PA): W.B. Saunders; 1978. Chapter 2, Esophagoscopy; p. 29–40.
- [11] Miller ME. The interactive tester (version 4.0) [computer software]. Westminster (CA): Psytek Services; 1993.
- [12] Misner CW. Efficient algorithms for layer assignment problems. In: Gottlob I, editor. Gravitation in a collapsing Universe. 2nd ed. San Francisco (CA): Freeman; 1973. p. 63–83. (Einstein’s legacy; vol. 5).

This was produced by typing:

```
\begin{thebibliography}{12}
```

```
\bibitem{neu83}
```

Neumann M. Parallel GRASP with path-relinking for job shop scheduling. Mol Phys. 1983;50:841--843.

```
\bibitem{ed84}
```

Edwards DMF, McDonald IR. Positive bases in numerical optimization. Comput Optim Appl. 1984;21:169--175.

```
\bibitem{aiex00}
```

Aiex RM, Pierce IF, Donizetti G, von~Weber CM, Bizet G, Bach CPE, Strauss R, van~Beethoven L, Mozart WA, Dukas P. Computing tools for modelling orchestral performance. Cambridge (UK): University of Cambridge; 2000. Report No.: DAMTP 2000/NA10.

```
\bibitem{Eri1984}
```

Ericsson KA, Simon HA. Protocol analysis: verbal reports as data. Cambridge (MA): MIT Press; 1984.

```
\bibitem{glov00}
```

Glover F. Multi-start and strategic oscillation methods -- principles to exploit adaptive memory. In: Laguna M, Gonzales-Velarde JL, editors. Computing tools for modeling, optimization and simulation: interfaces in computer science and operations research. 2nd ed. Vol.~2. Boston (MA): Kluwer Academic; 2000. p. 1--24.

```
\bibitem{hk97}
```

Kern H. The resurgent Japanese economy and a Japan--United States free trade agreement. In: Lambert C, Holst G, editors. 4th International Conference on the Restructuring of the Economic and Political System in Japan and Europe; 1996 May 21--25; Milan, Italy. Singapore: World Scientific; 1997. p. 147--156.

```
\bibitem{glov86}
```

Glover F. Hilbert modular forms and the Galois representations associated to Hilbert--Blumenthal abelian varieties [dissertation]. Cambridge (MA): Harvard University; 1986.

```
\bibitem{Agu95}
```

Agutter AJ. The linguistic significance of current British slang

[unpublished doctoral dissertation]. Edinburgh (UK): Edinburgh University; 1995.

`\bibitem{Holl04}`

Holland M. Guide to citing internet sources. 2004 [cited~2012 Nov 4]. Available from:

http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sourc.html.

`\bibitem{Shak78}`

Shakelford~RT. Surgery of the alimentary tract. Philadelphia (PA): W.B. Saunders; 1978. Chapter 2, Esophagoscopy; p. 29--40.

`\bibitem{Mil93}`

Miller ME. The interactive tester (version 4.0) [computer software]. Westminster (CA): Psytek Services; 1993.

`\bibitem{cwm73}`

Misner CW. Efficient algorithms for layer assignment problems. In: Gottlob I, editor. Gravitation in a collapsing Universe. 2nd ed. San Francisco (CA): Freeman; 1973. p. 63--83. (Einstein's legacy; vol.~5).

`\end{thebibliography}`

Each entry takes the form:

`\bibitem{key}Bibliography entry`

where 'key' is the tag that is to be used as an argument for the `\cite{}` commands in the text of the article. The `Bibliography entry` should be the material that is to appear in the list of references, suitably formatted.

Instead of typing the bibliography by hand, you may prefer to create the list of references using a `BIBTEX` database. Include the lines

`\bibliographystyle{gSCS}`

`\bibliography{gSCSguide}`

where the list of references should appear, where `gSCS.bst` is the name of the `BIBTEX` style file for this journal and `gSCSguide.bib` is the database of bibliographic details for the references section included with the *gSCS L^AT_EX* style guide package (to be replaced with the name of your own `BIBTEX` database). The `LATEX` source file of your paper will extract from your `.bib` file only those references that are cited in that paper and list them in the References section of it.

Please include a copy of your `.bib` file and/or the final generated `.bbl` file among your source files if your `.tex` file does not contain a reference list in a `thebibliography` environment.

4.11. *Appendices*

Any appendices should be placed after the list of references, beginning with the command `\appendices` followed by the command `\section` for each appendix title, e.g.

Table 2. *gSCS* macros.

<code>\thanks{title-page footnote to article title or author}</code>	e.g. ‘Corresponding author. E-mail: A.N.Author@uiowa.edu’
<code>\begin{abstract}...\end{abstract}</code>	for abstract on titlepage
<code>\bm{math and symbols}</code>	bold italic <i>math and symbols</i>
<code>\bi{text}</code>	bold italic <i>text</i>
<code>\sf{text or upright symbols in math mode}</code>	sans serif text or upright symbols in math mode

```
\appendices
\section{This is the title of the first appendix}
\section{This is the title of the second appendix}
```

produces:

Appendix A. This is the title of the first appendix

Appendix B. This is the title of the second appendix

Subsections, equations, figures, tables, etc. within appendices will then be automatically numbered as appropriate.

4.12. *gSCS* macros

Table 2 gives a list of macros for use with *gSCS*. The list displays each macro’s code and a description/demonstration of its function.

5. Example of a section heading including SMALL CAPS, *italic*, and bold Greek such as κ

The following code shows how to achieve this section head:

```
\section{Example of a section heading including
{\fontencoding{T1}\scshape{small caps}}, {\bi italic},
and bold Greek such as $\{\bm{\kappa}\}$}\label{headings}
```

6. *gSCS* journal style

The notes given here relate to common style errors found in manuscripts, but are *not* intended to be exhaustive.

6.1. *Hyphens, n-rules, m-rules and minus signs*

- (i) Hyphens (one dash in $\text{T}_{\text{E}}\text{X}/\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$). *gSCS* uses hyphens for compound adjectives (e.g. low-density gas, least-squares fit, two-component model) but not for complex units or ranges, which could become cumbersome (e.g. 15 km s^{-1} feature, $100\text{--}200 \mu\text{m}$ observations).
- (ii) n-rules (two dashes in $\text{T}_{\text{E}}\text{X}/\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$). These are used (a) to denote a range (e.g. $1.6\text{--}2.2 \mu\text{m}$); (b) to denote the joining of two words of equal standing (e.g. Kolmogorov–Smirnov test, Herbig–Haro object); (c) with spaces, as an alternative to parentheses (e.g. ‘the results – assuming no temperature gradient – are indicative of ...’).

- (iii) The m-rule (three dashes in $\text{T}_{\text{E}}\text{X}/\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$) has no specified use in *gSCS*.
- (iv) The minus sign (one dash in $\text{T}_{\text{E}}\text{X}/\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$) is produced automatically in math mode by use of a single dash, e.g.

$$y_i \in \{-1, 1\} \quad \forall i \in V, \quad (4)$$

where $| - V | = A^2 + B^2$.

is produced by

```
\begin{equation}
y_{\{i\}} \in \{-1, 1\} \quad \forall i \in V,
\end{equation}
\noindent where $|-V|=A^2+B^2.$
```

6.2. References

It is important to use the correct reference style, details of which can be found in Section 4.10 above.

6.3. Maths fonts

Scalar variables should be mediumface italic (e.g. *s* for speed); vectors should be bold italic (e.g. ***v*** for velocity); matrices should be bold roman (upright) (e.g. **A**), and tensors should be bold upright sans serif (e.g. **L**). Differential *d*, partial differential ∂ , complex *i*, exponential *e*, superscript **T** for ‘transpose’, sin, cos, tan, log, etc., should all be roman. Openface, or ‘blackboard’, fonts can be used, for example, for the integers \mathbb{Z} and the reals \mathbb{R} . Sub/superscripts that are physical variables should be italic, while those that are labels should be roman (e.g. C_p , T_{eff}). Displayed equations should have end-of-line punctuation appropriate to the running text sentence of which they form a part.

7. Troubleshooting

Authors may from time to time encounter problems with the preparation of their papers in $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$. The appropriate action to take will depend on the nature of the problem – the following is intended to act as a guide.

- (i) If the problem is with $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ itself, rather than with the actual macros, please refer to the appropriate handbooks for initial advice.² If the solution cannot be found, and you suspect that the problem lies with the macros, then please contact Taylor & Francis (latex.helpdesk@tandf.co.uk).
- (ii) Problems with page make-up (e.g. large spaces between paragraphs, or under headings or figures; figures/tables appearing out of order): please do *not* attempt to remedy these yourself using ‘hard’ page make-up commands – the typesetter will correct such problems. (You may, if you wish, draw attention to particular problems when submitting the final version of your paper.)
- (iii) If a required font is not available at your site, allow $\text{T}_{\text{E}}\text{X}$ to substitute the font and specify which font you require in the covering letter accompanying your file(s).

² $\text{T}_{\text{E}}\text{X}$: Knuth, D., 1986, *The $\text{T}_{\text{E}}\text{X}$ book* (New York: Addison–Wesley); $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X} 2_{\epsilon}$: Lamport, L., 1994, *$\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$: A Document Preparation System*, 2nd edn (New York: Addison–Wesley).

8. Fixes for coding problems

This guide has been designed to minimize the need for user-defined macros to create special symbols. Authors are urged, wherever possible, to use the following coding rather than to create their own. This will minimize the danger of author-defined macros being accidentally ‘overridden’ when the paper is typeset (see Section 4.5, ‘Typesetting mathematics’). In cases where it is essential to create your own macros, these should be displayed in the preamble of the source file before `\begin{document}`.

- (i) Fonts in section headings and paper titles. The following are examples of styles that sometimes prove difficult to code.

Paper titles:

Generalized Flory theory at $\delta > 50^\circ$

is produced by

```
\title{Generalized Flory theory at
      $\{\mathbf{\delta} > \{\mathbf{series} 50\}^\circ$}
```

Ion-ion correlations in H II regions

is produced by

```
\title{Ion--ion correlations in H\,\{\sc ii} regions}
```

- (ii) n-rules, m-rules, hyphens and minus signs (see Section 6.1 for correct usage). To create the correct symbols in the sentence

The high-resolution observations were made along a line at an angle of -15° (East from North) from the axis of the jet – which runs North–South.

you would use the following code:

```
The high-resolution observations were made along a line at an
angle of $-15^\circ$ (East from North) from the axis of the
jet -- which runs North--South.
```

- (iii) Fonts in superscripts and subscripts. Subscripts and superscripts will automatically come out in the correct font and size in a math environment (e.g. enclosed by ‘\$’ delimiters in running text or within `\[...]` or the ‘equation’ environment for displayed equations). You can create the output \mathbf{k}_x by typing `$$\mathbf{k}_x$`. If the subscripts or superscripts need to be other than italic, they should be coded individually – see (vi) below.
- (iv) Calligraphic letters (uppercase only). Normal calligraphic can be produced with `\cal` as usual (in math mode).
- (v) Automatic scaling of brackets. The codes `\left` and `\right` should be used to scale brackets automatically to fit the equation being set. For example, to get

$$v = x \left(\frac{N + 2}{N} \right)$$

use the code

```
\[
```

```
v = x \left( \frac{N+2}{N} \right)
\]
```

- (vi) Roman font in equations. It is often necessary to make some symbols roman in an equation (e.g. units, non-variable subscripts). For example, to get

$$\sigma \simeq (r/13 h^{-1} \text{ Mpc})^{-0.9}, \quad \omega = \frac{N - N_s}{N_R}$$

use the code:

```
\[
\sigma \simeq (r/13~h^{-1}
~{\rm Mpc})^{-0.9}, \quad \omega
=\frac{N-N_{\rm s}}{N_{\rm R}}
\]
```

The `siunits` package of macros for typesetting units is also compatible with the `gSCS` class file.

9. Obtaining the gSCS2e class file

9.1. Via the Taylor & Francis website

This Guide for Authors and the `gSCS2e.cls` class file may be obtained via the Instructions for Authors on the Taylor & Francis homepage for the journal.

Please note that the class file calls up the following open-source L^AT_EX packages, which will, for convenience, unpack with the downloaded Guide for Authors and class file: `amsbsy.sty`; `amsmath.sty`; `amssymb.sty`; `epsfig.sty`; `graphicx.sty`; `natbib.sty`; `rotating.sty`. The Guide for Authors calls for `subfigure.sty`, which is also supplied for convenience.

9.2. Via e-mail

This Guide for Authors, the class file and the associated open-source L^AT_EX packages are also available by e-mail. Requests should be addressed to `latex.helpdesk@tandf.co.uk` clearly stating for which journal you require the Guide for Authors and/or class file.