Guidelines for ETNA manuscripts[1]

1 General formatting guidelines

A manuscript for ETNA must be written in English. It may be in color provided it is equally readable when displayed in black and white.

Any manuscript submitted to ETNA must be developed in LaTeX using the style files in the SIAM LaTeX package `siamltex`. This means that the manuscript must follow the general layout defined by the SIAM LaTeX style.

There are several versions of the SIAM LaTeX package. For ETNA manuscripts the version available from the ETNA web site should be used[2]. This package contains the following 5 files:

`siam.bst` (version of January 24, 1988)
`siam10.clo` (Version 1.0; October 1, 1995)
`siamltex.cls` (Version 1.1; August 1, 1995)
`siamltex.sty` (Version 1.0; December 1, 1995)
`subeqn.clo` (last modified June 8, 1989)

Two further files are available from the LaTeX directory at the ETNA web site: The file `docultex.tex` contains a documentation for SIAM macros for use with LaTeX 2e. The file `lexample.tex` contains examples.

Compiling the two files `docultex.tex` and `lexample.tex` results in two 8-page manuscripts that explain all major issues in the context of the SIAM LaTeX style and give numerous examples.

2 ETNA specifics

All manuscripts must follow the following ETNA specific rules (see Figure 1 at the end of this document for an example of the initial part of a paper according to the SIAM LaTeX style and with ETNA specific commands):

- ETNA papers are compiled using the sequence `latex` → `dvips` → `ps2pdf`, i.e., the dvi file is translated into PostScript, and the PostScript file is translated into PDF. To make this sequence work, it is generally recommended that *all figure files are in PostScript format (ps or eps)*. Figure files in other formats, e.g. PDF, jpg, etc., are usually not acceptable. Before submitting a manuscript to ETNA, authors should make sure that the manuscript can be compiled in the above mentioned sequence.

- The SIAM LaTeX style used by ETNA supports the use of the package `epsfig` for including PostScript figures. See the `epsfig` documentation for details on the use of this style option.

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[1]Version of May 13, 2009.
[2]`http://etna.math.kent.edu/LaTeX`

- Equation numbers are placed on the left of the equation. This is achieved by adding `leqno` to the "documentclass" options.

- Typesetting of ETNA papers is based on the `times` package. The command

  ```
  \usepackage{times}
  ```

  has to be loaded in the document's preamble.

- Examples, remarks, algorithms, etc., should be numbered in the same way and format as theorems, namely as "Example X.Y", where X is the section number and Y is the subsection number (if applicable). To generate the theorem-like environments "Example", "Remark", and "Algorithm" you should add the commands

  ```
  \newtheorem{remark}[theorem]{Remark}
  \newtheorem{example}[theorem]{Example}
  \newtheorem{algorithm}[theorem]{Algorithm}
  ```

  to the preamble of your tex-file.

- The text of examples and remarks should be typeset in roman (not in italics as in definitions, theorems, lemmas, and corollaries). This can be achieved as follows:

  ```
  \begin{remark}
  {\rm Text of remark.}
  \end{remark}
  ```

- At the end of a proof, there should be a gap between the last word and the "endproof" symbol (Halmos box). This is achieved as follows:

  ```
  \begin{proof} Text of the proof.  $\qquad$ \end{proof}
  ```

  If the proof ends with a displayed equation you should use the following:

  ```
  {\em Proof}. Text of the proof.
  $$a^2+b^2=c^2. \qquad\endproof$$
  ```

  You can also generate a command for the "endproof" symbol by adding

  ```
  \def\qed{~\vbox{\hrule\hbox
      {\vrule height1.3ex\hskip0.8ex\vrule}\hrule}}
  ```

  to your tex-file. Typing `\qed` in a formula then produces the symbol □.

- ETNA uses the `hyperref` package that produces hypertext links in the document. The package must be loaded in the document's preamble as follows:

```
\usepackage
    [dvips,
    letterpaper=true,
    colorlinks=true,
    linkcolor=red,
    filecolor=green,
    citecolor=red,
    pdfpagemode=None]
    {hyperref}
```

- All references in the manuscript should be "clickable", which means that all numbers of sections, definitions, theorems, equations, etc., should be labeled. *Equations that are not referenced should not be numbered.*

- Tables should have as few lines as possible. For example, instead of

$C1$	$C2$	$C3$
a_1	a_2	a_3
b_1	b_2	b_3

you should use

$C1$	$C2$	$C3$
a_1	a_2	a_3
b_1	b_2	b_3

.

- Table captions should be *above* the table (unlike figure captions which should be below the figure). The text of all captions (table or figure) should end with a period ".".

- Appendices should be at the end of the paper, immediately before the bibliography.

- Further style-related comments:
    - The symbols used for real, complex numbers, etc., are `\mathbb{R}`, `\mathbb{C}`, etc.
    - For matrices, square brackets should be used (either use `\left[ ... \right]` or the `\bmatrix` command).
    - Sections should be referred to by "Section X.Y" and not "§ X.Y".

- The abbreviations "et al.", "i.e.", and "e.g.", in the text should always be in roman font. In English, there is always a comma after "i.e." and "e.g.". A parenthetical remark in the middle of the sentence (e.g., this one) is in parenthesis, while at the end of the sentence follows a semicolon; e.g., this one.

3   References

To facilitate the editing process, authors are especially urged to carefully prepare the references of their manuscripts using the correct abbreviations of names of serials. The correct abbreviations can be found, for example, using *MathSciNet* at `http://ams.rice.edu/mathscinet/searchjournals`. *Manuscripts may be returned to authors if the manuscripts and the references are not properly prepared.* The preferred way for formatting the references is to use BIBTeX with the SIAM bibliography style:

```
\bibliographystyle{siam}
\bibliography{YourBibFile}
```

If you cannot use BIBTeX, here are a few examples of correct references for ETNA:

- Examples for paper citations:

```
\bibitem{ArbGol88}
\textsc{P. Arbenz and G.~H. Golub},
\emph{On the spectral decomposition of {H}ermitian matrices
modified by low rank perturbations with applications},
SIAM J. Matrix Anal. Appl., 9 (1988), pp.~40--58.

\bibitem{ArbGol95}
\sameauthor,
\emph{Matrix shapes invariant under the symmetric {QR} algorithm},
Numer. Linear Algebra Appl., 2 (1995), pp.~87--93.
```

Note: In the second (and further) paper(s) by the same author(s) the name(s) should be replaced by the command `\sameauthor`, which is defined by the SIAM LaTeX style. Instead of `\sameauthor` you may use "`\leavevmode\vrule height 2pt depth -1.6pt width 23pt`".

- Examples for papers that are submitted or to appear:

```
\bibitem{Cay58}
\textsc{A. Cayley},
\emph{Generalising Hamilton's theorem to higher order matrices},
Math. Ann., submitted, 1858.
```

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```
\bibitem{Gau10}
\textsc{C.~F. Gauss},
\emph{Another proof of the fundamental theorem of algebra},
J. Reine Angew. Math., to appear, 2010.
```

Note: Giving the journal name is not required, and the publication year should only be added if known.

- Example for book citations:

```
\bibitem{FoxPar68}
\textsc{L. Fox and I.~B. Parker},
\emph{Chebyshev Polynomials in Numerical Analysis},
Oxford University Press, Oxford, UK, 1968.
```

Note: All major words in book titles have to be capitalized.

- Example for citations from collections:

```
\bibitem{Mor90}
\textsc{J.~J. Mor\'e},
\emph{A collection of nonlinear model problems},
in Computational Solutions of Nonlinear Systems of Equations,
E.~L. Allgower and K. Georg, eds., Lectures in Appl. Math., 26,
Amer. Math. Soc., Providence, RI, 1990, pp.~723--762.
```

Theses or reports: It is the author's responsibility to provide complete details such as editors, publisher, city of publication, page numbers, and department and institution.

Further instructions concerning the references:

- In the text references should be cited using the command \cite{keylist}, where keylist contains a list of keys (i.e., the names of your bibitems), separated by commas. Example: \cite{ArbGol88,ArbGol95}.

- The list of references should be ordered alphabetically, and citations should be sorted according to numbers, that is [3,5,12], instead of [12,3,5]. It is fine when you order citations by publication dates, but this should be consistent throughout the paper.

- Only references cited in the text should be included in the bibliography.

- Citations in the abstract should be avoided. If this is not possible, then the authors' names and the publication details should be given. For example, "Golub and Kahan [SIAM J. Numer. Anal., 2 (1965), pp. 205–224] show that ...".

- When a reference is available online, the URL should be added to the citation, e.g.,

  `\url{http://etna.math.kent.edu/vol.26.2007/pp453-473.dir}`

- Some journals have "paper numbers" instead of conventional page numbers. An example is the Journal of Fluids Engineering. Papers in such journals should be cited using the paper number and the number of pages; e.g., J. Fluids Eng., 130 (2008), 051202 (10 pages).

4   Submission

To submit a manuscript, send a ready-to-print PostScript or PDF file containing the whole manuscript by email to

`etna@math.kent.edu`

or on a CD to ETNA, Department of Mathematical Sciences, Kent State University, Kent, Ohio 44242, USA. The e-mail address of the author to contact for revisions and corrections must be included on the disk in an ASCII-file called "address.txt".

```
\documentclass[final,leqno]{siamltex}

\usepackage{times}
\usepackage[dvips,letterpaper=true,colorlinks=true,
        linkcolor=red,filecolor=green,citecolor=red,
        pdfpagemode=None]{hyperref}

\title{Paper's title\thanks{Received ... Accepted for publication ...
        Recommended by ... Work supported by ...}}

\author{First author's name\footnotemark[2]
        \and Second author's name\footnotemark[3]}

% Note: For authors from the same institution there should be one
%        common footnote and the email addresses in the footnote text
%        should be written as ({\tt {authorA,authorB}@uofi.edu}).

\begin{document}

\maketitle

\renewcommand{\thefootnote}{\fnsymbol{footnote}}

\footnotetext[2]{First author's address.}
\footnotetext[3]{Second author's address.}

\begin{abstract}
Paper's abstract.
\end{abstract}

\begin{keywords}
Paper's key words, non-capitalized except for names and the first word.
\end{keywords}

\begin{AMS}
AMS subject classifications.
\end{AMS}

\pagestyle{myheadings}\thispagestyle{plain}
\markboth{F. AUTHOR AND S. AUTHOR}{SHORT TITLE}

\section{First section} This is typically the paper's Introduction.
...
```

Figure 1: Example for the initial part of a paper prepared according to the SIAM LaTeX style and with some ETNA specific commands.