Author Usage Template for MIT Journals

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Abstract: This document presents a number of hints about how to set up your paper in LaTeX. We provide a template file, `imag-ms-template-instr.tex`, that you can use to set up the LaTeX source for your article. An example of the style is the special `{abstract}` environment used to set up the abstract you see here.

Introduction

In this file, we present some tips and sample mark-up to ensure that your LaTeX file has the smoothest possible journey from review manuscript to published paper. We focus here particularly on issues related to headings, citations, math, tables, and figures, as those tend to be the biggest sticking points. Please use the source file for this document, `imag-ms-template-instr.tex`, as a template for your manuscript, cutting and pasting your content into the file at the appropriate places.

Front matter

Please use the below tags for the article front matter:

```yaml
title: Author Usage Template for MIT Journals
author:
  - name: Author 1
    email: jsmith@wherever.edu
    affiliations:
      - id: wherever
        department: Department of Chemistry
        name: University of Wherever
        address: An Unknown Address
        city: Wherever
        state: ST
        country: USA
        postal-code: 00000
    attributes:
      corresponding: true
  - name: Author 2
    affiliations:
      - ref: wherever
  - name: Author 3
    affiliations:
      - address: Another Unknown Address
        city: Palookaville
        state: ST
        postal-code: 99999
        country: USA
abstract: |
  This document presents a number of hints about how to set up your
  paper in \LaTeX.  We provide a template file,
  `imag-ms-template-instr.tex`, that you can use to set up the
  \LaTeX\ source for your article.  An example of the style is the
  special `{abstract}` environment used to set up the
  abstract you see here.
```

```
keywords: [keywords1, keywords2, keywords3]
author_contributions: |
  Please provide details of author contributions here.
conflict_of_interest: |
  Please declare any competing interests here.
acknowledgements: |
  Please include your acknowledgments here, set in a single paragraph. Please do not
  include any acknowledgments in the Supporting Information, or anywhere else in the
  manuscript.
code_availability: |
  Data and Code Availability text (mandatory unless there is no data or code used).
funding: |
  Funding text (optional).
```

Headings

Use the standard tags \section, \subsection, \subsubsection, \paragraph, and \subparagraph for the Headings H1, H2, H3, H4, and H5, respectively.

Handling Math, Tables, and Figures

We suggest using the mathtools.sty file to get various display math styles. A few of the codes are given below for easy reference:

---

equation

align

\[...\] or equation*

gather

Various types of matrices, e.g., pmatrix, bmatrix, vmatrix, smallmatrix, alignat, etc.

Tables

We suggest using the threeparttable.sty file to format the tables and their notes properly. Examples are given below:

```
\begin{table}
\begin{threeparttable}
\caption{Time of the Transition Between Phase 1 and Phase 2\tnote{$a$}
\label{tab:label}}
\begin{tabular}{@{}ll}
\toprule
 Run  & Time (min)  \\
\midrule
  \textit{l}1  & 260    \\
  \textit{l}2  & 300    \\
  \textit{l}3  & 340    \\
  \textit{h}1  & 270    \\
  \textit{h}2  & 250    \\
  \textit{h}3  & 380    \\
  \textit{r}1  & 370    \\
  \textit{r}2  & 390    \\
\bottomrule
\end{tabular}
\begin{tablenotes}[flushleft]\footnotesize
\item[${a}$]Table note text here.
\end{tablenotes}
\end{threeparttable}
\end{table}
```

Output

Spanning rules

Use \cmidrule to obtain spanning of rules from column to column. Usage is

```
\cmidrule{fromcolumn-tocolumn}, e.g., \cmidrule{2-3}.
```

Figures

Figure callouts within the text should be in the form of LaTeX references; for example, \ref{fig1}.

For inclusion of figures (e.g., Figure 1), please use code such as:

Table 1: Time of the Transition Between Phase 1 and Phase 2[a]

Run	Time (min)
*l*1	260
*l*2	300
*l*3	340
*h*1	270
*h*2	250
*h*3	380
*r*1	370
*r*2	390

[a] Table note text here.

![Example caption text](figure.pdf){#fig-example_figure}

Figure 1: Example caption text

Please use \begin{sidewaystable}...\end{sidewaystable} and \begin{sidwaysfigure}...\end{sidewaysfigure} to get rotating figures/tables.

Algorithms

For Algorithms, please use the standard LaTeX supporting file algorithm2e.sty; the format and the output are given below:

\begin{algorithm}[h!]
\SetAlgoLined

```
\SetKwFunction{IL}{InitializeDistance}
\SetKwFunction{PL}{PropagateInsertion}
\SetKwFunction{MIN}{Min}
\SetKwFunction{MX}{Max}
\SetKwFunction{TOP}{Top}
\SetKwFunction{Push}{Push}
\SetKwFunction{Pop}{Pop}
\SetKwFunction{Append}{Append}
\SetKwData{Queue}{Queue}
\KwResult{The length of shortest path from $s$ to $t$}
 $PreviousLayer=[s]$\;
 $s.distance = 0$\;
 \For(\tcc*[f]{Do the computation layer by layer}){i = 1 \KwTo m}{
   $CurrentLayer = [(i,v_1),(i,v_{2}),\ldots, (i,v_{n}), (i,k)]$\;
   $x.distance = \infty \ \forall  x \in CurrentLayer$\;
   \IL{PreviousLayer,CurrentLayer}\;
   \PL{CurrentLayer}\;
   $PreviousLayer = CurrentLayer$\;
 }
 \KwRet{\MIN{PreviousLayer.distance}}\;
 \caption{Algorithm for sequence to graph alignment}
 \label{algo:linear}
\end{algorithm}
```

Output

Lists

Please use the standard tags for Numbered lists and Bulleted lists; for example,

Numbered lists

1. Text for first-level numbered lists text text text text
   Text for first-level numbered lists text text text text:
  a. Text for second level numbered lists text text text text Text for second level numbere
  b. Text text text text Text for second level numbered lists text text text text

---

Algorithm 1: Algorithm for sequence to graph alignment

Result: The length of shortest path from s to t

$PreviousLayer = [s]$;

$s.distance = 0$;

for $i = 1$ **to** m **do**   /* Do the computation layer by layer */

   $CurrentLayer = [(i, v_1), (i, v_2), ..., (i, v_n), (i, k)]$;

   $x.distance = \infty \ \forall x \in CurrentLayer$;

   InitializeDistance(*PreviousLayer,CurrentLayer*);

   PropagateInsertion(*CurrentLayer*);

   $PreviousLayer = CurrentLayer$;

end

return Min(*PreviousLayer.distance*);

---

2. Text text text text

   Text for first-level numbered lists text text text text

Output

1. Text for first-level numbered lists text text text text Text for first-level numbered lists text text text text:
   a. Text for second level numbered lists text text text text Text for second level numbered lists text text text text
   b. Text text text text Text for second level numbered lists text text text text
2. Text text text text Text for first-level numbered lists text text text text

Bulleted lists

* Text for first-level bulleted lists text text text text
  Text for first-level bulleted lists text text text text
    + text for second level bulleted lists text text text text
      Text for second level bulleted lists text text text text
    + text text text text Text for second level bulleted lists
      text text text text
* Text text text text Text for first-level bulleted lists
  text text text text

Output

- Text for first-level bulleted lists text text text text Text for first-level bulleted lists text text text text
    - text for second level bulleted lists text text text text Text for second level bulleted lists text text text text
    - text text text text Text for second level bulleted lists text text text text
- Text text text text Text for first-level bulleted lists text text text text

Extract/Quote

Use the standard tag `\begin{quote}...\end{quote}` for quoted text; for example,

```
> Text for quoted text text text text text text text text text text text
> text text text text text text text text text text text text text text
```

Output

Text for quoted text text text text text text text text text text text text text text text text text text text text text text text text

Footnote

Use a Quarto footnote[1] to get footnotes at the bottom of the page.

Special Fonts

Use the standard LATEX tags `\mathcal`, `\mathscr`, and `\mathbb` to get characters in special fonts such as $\mathcal{A}, \mathscr{A}$, and $\mathbb{A}$, respectively.

Enunciation or Math Heads

Generally `theorem`, `lemma`, etc., are called Enunciation or Math heads. In this template, we define some standard enunciations (`theorem`, `lemma`, `corollary`).

---

[1] This is a footnote

Sample Input/Output

Input

```
::: {#thm-line}
The equation of any straight line, called a linear equation, can be written as:

$$
y = mx + b
$$
:::
```

Output

Theorem 0.1. *The equation of any straight line, called a linear equation, can be written as:*

$$y = mx + b$$

Define Own Math Heads/Enunciation

You are allowed to define your own enunciations; the format is given below:

```
\newtheorem{short name of the head}{Head to Display}
```

Example

If you need to define a group of text under the head "Proposition,'' then you have to define it as

```
\newtheorem{proposition}{Proposition}
```
Proposition 1. This is a test for math head "Proposition" text text text text

Unnumbered Math Heads/Enunciation

Just introduce ∗, which makes the numbered math head text into an unnumbered math head; for example,

```
\begin{theorem*}
This is a test for unnumbered math head ``Theorem'' text text text text
\end{theorem*}
```
Theorem. *This is a test for unnumbered math head "Theorem" text text text text*

Bibliography/References with APA Style

As per MIT standards, we fixed the Reference style `APA` in the template with the combination of the supporting file `biblatex` and `natbib` options, which help to achieve various types of bibliography cross links. Those details are given below:

Formatting Citations

Type	Results
`@ref2`	Goossens et al. (1993)
`@ref2 [chap. 2]`	Goossens et al. (1993, chap. 2)
`[@ref2]`	(Goossens et al., 1993)
`[@ref2, chap. 2]`	(Goossens et al., 1993, chap. 2)
`[see @ref2]`	(see Goossens et al., 1993)
`[see @ref2, chap. 2]`	(see Goossens et al., 1993, chap. 2)

Note: Please use **biber** (biber.exe in Windows) to get better output for References.

Example Citations

See Einstein (1905) and (Goossens et al., 1993; Knuth, 1986). Also see Chen et al. (2023).

Note to User

We have already included almost all the required `.sty` files in the LaTeX template `imag-ms-template.cls`; hence, there is no need to call those in your `.tex` application files.

General Notes

This template will work in most recent TeX distributions (e.g., MiKTeX, TeXLive) with any type of TeX engines, such as LaTeX, PDFLaTeX, XeLaTeX, and LuaLaTeX, as well as in all types of OS, such as MS-Windows, Mac OS X, and Linux. It will also work well in Overleaf.

Data and Code Availability

Data and Code Availability text (mandatory unless there is no data or code used).

Author Contributions

Please provide details of author contributions here.

Funding

Funding text (optional).

Declaration of Competing Interests

Please declare any competing interests here.

Acknowledgements

Please include your acknowledgments here, set in a single paragraph. Please do not include any acknowledgments in the Supporting Information, or anywhere else in the manuscript.

References

Chen, C.-Y., Leys, G., Bracci, S., & Op de Beeck, H. (2023). The representational dynamics of the animal appearance bias in human visual cortex are indicative of fast feedforward processing. *Imaging Neuroscience*, *1*. https://doi.org/10.1162/imag_a_00006

Einstein, A. (1905). Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]. *Annalen der Physik*, *322*(10), 891–921. http://dx.doi.org/10.1002/andp.19053221004

Goossens, M., Mittelbach, F., & Samarin, A. (1993). *The LaTeX companion*. Addison-Wesley.

Knuth, D. (1986). Knuth: Computers and typesetting.