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Instructions for L^AT_EX authors submitting their manuscripts to Archive of Mechanical Engineering

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Keywords: first keyword, second keyword, third keyword

The Archive of Mechanical Engineering is an international journal publishing works of wide significance, originality and relevance in most branches of mechanical engineering. The journal is peer-reviewed with single-blind peer review and is published both in electronic and printed form <https://journals.pan.pl/ame>. The journal accepts papers in English. The following document provides instructions for authors submitting their manuscripts in L^AT_EX format. All submissions to the AME should be made electronically via Editorial System—an online submission and per review system at <https://www.editorialsystem.com/ame>.

1. Introduction

Manuscripts in L^AT_EX format should use L^AT_EX template downloaded from https://www.editorialsystem.com/files/ame/docs/AME_template_LaTeX_v4.zip. In the following sections we describe, step by step, the usage of the template.

2. Starting with the template

2.1. Downloading and unpacking the template

The template is available at web page https://www.editorialsystem.com/files/ame/docs/AME_template_LaTeX_v4.zip. It's a compressed archive file. The archive should be downloaded and unpacked to a destination folder.

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2.2. Template contents

The template package contains the following files:

- `amestyle_1.cls` – document class for AME articles,
- `by-nc-nd.png` – graphics for used license version,
- `fbar.pdf` – sample file with graphics,
- `guide_1.bib` – BibTeX source for the `guide_1.pdf`,
- `guide_1.pdf` – guide for template users (this file),
- `guide_1.tex` – L^AT_EX source for the `guide_1.pdf`,
- `orcid.pdf` – ORCID icon,
- `AME_template.bib` – BibTeX template with bibliographics records,
- `AME_template.tex` – L^AT_EX source template to be edited by the author.
- `AME_template.pdf` – compiled file `AME_template.tex`.

The `amestyle_1.cls` file provides a document class for AME articles. It sets document layout, styles, parameters, defines L^AT_EX commands and environments for use in `AME_template.tex`. The class file *must not* be modified by authors.

The `AME_template.tex` file is the main file to be edited. The author should start with deleting certain parts of template text and replace them with his/her own material. Details will be presented in subsequent sections.

The `AME_template.bib` file contains bibliographics records. The author should replace template records with his/her own records.

2.3. Compiling sources

As the Editorial Team uses TeXworks pdfLaTeX+MakeIndex+BibTeX to compile sources, authors are encouraged to use toolchains based on pdfLaTeX as well. The program may need to be re-run several times, before PDF takes on its expected shape. Also, BibTeX should be run between first and second pass of the pdfLaTeX. This is usually performed automatically by environments such as TeXworks.

3. Document structure

Papers should not exceed in length 25 pages (including tables and figures) with the fonts preset by the template. Articles should contain the following elements (in order):

- list of keywords, see section [3.1](#),
- title, see section [3.2](#),
- author(s), affiliations(s), e-mail address(es), see section [3.3](#)
- abstract, see section [3.5](#)
- main text, see section [3.6](#)
- appendices (if applicable) see section [3.7](#),
- acknowledgments (if applicable), see section [3.8](#),
- references, see section [3.9](#).

3.1. List of keywords

Keywords should be defined in document's preamble with the `\keywords` command, for example

Listing 1. Defining keywords

```
\keywords{keyword one \and keyword two \and keyword three}
```

The keywords should be separated with `\and`.

3.2. Title

Title should be defined in document's preamble with the `\title` command, for example

Listing 2. Defining title

```
\title{Instructions for LaTeX authors submitting manuscripts  
to the Archive of Mechanical Engineering}
```

By default, `\title` appears on the title page (first page of the article) and in running headers. Custom title for running headers may be defined in two ways – by using `\shorttitle` command or with `\headtitle`, e.g.

Listing 3. Customizing short title

```
\shorttitle{Instructions for AME authors}
```

OR

Listing 4. Customizing title for running headers

```
\headtitle{Instructions for AME authors}
```

The `\shorttitle` sets the short version of article's title for specific purposes, including the running headers (but may also alter other bits of the document). The `\headtitle` is provided to define a title specifically for running headers. By default its value is same as `\shorttitle` (which in turn defaults to `\title`).

3.3. Author(s), affiliation(s), e-mail address(es)

Full name(s) of author(s), affiliation(s) and personal e-mail address(es) (optionally) should be provided with `\author` command. At the beginning the corresponding author name and email should be given using `\corrauthor` command. The special command `\email` should be used to typeset author email address. Within the `\author` command, a `\contact` command should be used to provided authors' affiliations. There is also `\contactmark` command for the cases, where two (or more) authors share same affiliation record. The records describing consecutive authors should be separated with `\and`. `\orcidid` command (optional – but

strongly recommended) can be added just after author's name. Authors last names (i.e., family names) should be written in capital letters.

Contact to corresponding author and affiliations of all authors will appear in the footnote.

Listing 5. Defining authors

```

\author{
  \corrauthor{Second AUTHOR, e-mail:
              \email{second.author@institute2.edu}}% [1]
  First AUTHOR\orcidid{0000-0002-1825-0097}%
  \contact{First Author's Institute Address;
           Email: \email{first.author@institute1.edu} }% [2]
  \and
  Second AUTHOR%
  \contact{Second and Third Author's Institute Address;
           Email: \email{third.author@institute2.edu}}% [3]
  \and
  Third AUTHOR\orcidid{0000-0002-1825-0097}%
  \contactmark[3]% refers to SECOND contact (affiliation) record
}

```

Author names appear also in running headers. The list of names for running headers may be customized with `\headauthor` command, e.g.

Listing 6. Customizing authors' list for running headers

```

\headauthor{First AUTHOR\and Second AUTHOR \and Third AUTHOR}

```

3.4. First page layout

The command `\maketitle`, preparing first page layout according to `amstyle` class, should be written at the very beginning of the document body, just after `\begin{document}`. Following it command `\license` is used to show the conditions under which the article is published.

Listing 7. License

```

\begin{document}
  \maketitle
  \license

```

3.5. Abstract

The abstract should be placed just after `\license` command. It is enclosed within the `abstract` environment, e.g.

Listing 8. Abstract

```

1  \begin{document}
2  \maketitle
3  \license
4  \begin{abstract}
5      The Archive of Mechanical Engineering is an international
6      journal publishing works of wide significance, originality
7      and relevance in most branches of mechanical engineering.
8      % remainder of the abstract ...
9  \end{abstract}
10 % main text...
11 % ...
12 \end{document}
13

```

3.6. Main text

Main text should be structured using sections and subsections. Standard commands `\section`, `\subsection`, and `\subsubsection` should be used for this. Usually, a manuscript starts with an introductory section, then the main contents of the presented topic follows in consecutive sections, and the presented work is concluded in a closing section.

Listing 9. Sections within a document

```

21 \begin{document}
22 % ...
23 \section{Introduction}
24 \label{sec:introduction}
25 % introductory section's contents...
26 \section{Section one}
27 \label{sec:one}
28 % first section contents...
29 \section{Section two}
30 \label{sec:two}
31 % second section contents...
32 \subsection{First subsection of section two}
33 \label{sec:two-one}
34 % subsection contents...
35 \section{Conclusions}
36 \label{sec:conclusions}
37 % conclusions contents...
38 % ...
39 \end{document}
40

```

It's recommended to use `\labels` just after `\section`, `\subsection`, and `\subsubsection` commands, as in example above. This allows to refer to section headers by using `\ref` command later.

3.7. Appendices

Appendices are sections enclosed within `appendix` environment and may be created as follows:

Listing 10. Appendices

```

\begin{document}
% ...
\begin{appendix}
  \section{Appendix A}
  \label{sec:appendix-a}
  % ...
  \section{Appendix B}
  \label{sec:appendix-b}
  % ...
\end{appendix}
% ...
\end{document}

```

Use `\section`, `\subsection`, and `\subsubsection` to organize appendices appropriately.

3.8. Acknowledgments

Acknowledgments should be enclosed within the `acknowledgements` environment. The environment creates a section entitled *Acknowledgements* and optionally applies its own formatting to the enclosed text.

Listing 11. Providing acknowledgments

```

\begin{acknowledgements}
  We would like to thank all the authors for their hard work.
  %...
\end{acknowledgements}

```

The section title may be customized in two ways. Either, one may pass the custom title as a parameter to `acknowledgements` environment

Listing 12. Defining custom title for acknowledgments

```

\begin{acknowledgements}[Special thanks]
  We would like to thank all the authors for their hard work.
  %...
\end{acknowledgements}

```

or redefine `\acknowledgementsname` command earlier (in preamble, e.g.)

Listing 13. Defining custom title for acknowledgments

```

\renewcommand\acknowledgementsname{Thanks}

```

```

1 \begin{acknowledgements}
2   We would like to thank all the authors for their hard work.
3   %...
4 \end{acknowledgements}

```

3.9. References

3.9.1. Providing references

References should be defined as a bibliographic records in the *.bib file. The list of references should be generated in the document by the following commands in AME_template.tex file

Listing 14. Importing references from *.bib file

```

11 \bibliographystyle{unsrt}
12 \bibliography{AME_template} % use AME_template.bib as input

```

provided the *.bib file is named AME_template.bib. The unsrt BibTeX style is used, which makes the references to be listed in order of citation.

The *.bib file should be compiled with BibTeX to generate *.bbl file which is effectively included. Authors should submit only the *.bib file to AME (*.bbl is not necessary).

3.9.2. Inserting citations in the text

Citations should be inserted with the \cite command. Multiple references may be cited in one invocation of the \cite command, for example

Listing 15. Inserting multiple citations

```

23 \cite{{smith.kowalski:running,ctan:bibtex,ctan:biplatex}
24
25

```

The above citation yields [1–3]. The references within \cite should be separated by comma. The numbers within square brackets get compressed automatically, provided the following command is present in the preamble

```

29 \usepackage[numbers,sort&compress]{natbib}
30
31

```

which is the default.

4. Formatting the document

In the following sections we specify how to create certain commonly used items such as enumerations, equations, figures, etc.

4.1. Lists and enumerations

Itemized lists should be defined within the `itemize` environment

Listing 16. Itemized list

```
\begin{itemize}
  \item Lorem ipsum dolor sit amet,
  \item vestibulum ut, placerat ac,
  \item adipiscing vitae, felis.
\end{itemize}
```

The above code produces the following itemized list

- Lorem ipsum dolor sit amet,
- vestibulum ut, placerat ac,
- adipiscing vitae, felis.

Enumerations should be defined within the `enumerate` environment

Listing 17. Enumeration

```
\begin{enumerate}
  \item Lorem ipsum dolor sit amet,
  \item vestibulum ut, placerat ac,
  \item adipiscing vitae, felis.
\end{enumerate}
```

The above code produces the following enumerated list

1. Lorem ipsum dolor sit amet,
2. vestibulum ut, placerat ac,
3. adipiscing vitae, felis.

4.2. Equations

Single equations may be typeset within the `equation` environment

Listing 18. Single equation

```
\begin{equation}
  \left(\frac{l}{R}\right)^2
  = 2 \left(1 - \sin(2\gamma)\right).
  \label{eq:1}
\end{equation}
```

which yields

$$\left(\frac{l}{R}\right)^2 = 2(1 - \sin(2\gamma)). \quad (1)$$

Labels may be used to allow the equations to be referenced. A reference to an equation should be made with the `\eqref` command, for example

```
\eqref{eq:1}
```

produces (1).

Multiple equations, comprising a set of equations, may be typeset within subequations plus align environments

Listing 19. Subequations

```
\begin{subequations}
\label{eq:2}
\begin{align}
\mathbf{a} &= \mathbf{b} + \mathbf{c} \label{eq:2a} \\
d &= e + f \label{eq:2b}
\end{align}
\end{subequations}
```

The above code results with the following equations

$$\mathbf{a} = \mathbf{b} + \mathbf{c} \quad (2a)$$

$$d = e + f \quad (2b)$$

and the equations may be referred with `\eqref{eq:2}`, `\eqref{eq:2a}`, or `\eqref{eq:2b}` producing (2), (2a), or (2b) respectively.

Long equations may use the `multline` environment

Listing 20. Multiline equation

```
\begin{multline}
\int_{t_{k-1}}^{t_k} (\tau - t_{k-1})^2 \bar{u}_k(\tau) d\tau = \\
= \int_{t_{k-1}}^{t_k} \left( (\tau - t_{k-1}) u_{k-1} + \frac{1}{2} \frac{(\tau - t_{k-1})^2}{h_k} (u_k - u_{k-1}) \right) d\tau
\end{multline}
```

The above code results with the following equation

$$\int_{t_{k-1}}^{t_k} (\tau - t_{k-1}) \bar{u}_k(\tau) d\tau = \int_{t_{k-1}}^{t_k} \left((\tau - t_{k-1}) u_{k-1} + \frac{1}{2} \frac{(\tau - t_{k-1})^2}{h_k} (u_k - u_{k-1}) \right) d\tau \quad (3)$$

There is much more possibilities, we refer authors to the documentation of the `amsmath` package [4].

4.3. Tables

Use `table` and `tabular` environments to create tables. Use `\caption` command to provide a caption. The caption should appear above the table being described. Tables should be centered horizontally.

Listing 21. Generating tables

```

\begin{table}[htbp]
  \caption{Number of cars produced in the world}
  \label{tab:1}
  \centering
  \begin{tabular}{|l|r|}
    \hline
    \multicolumn{1}{|c|}{Year} &
    \multicolumn{1}{|c|}{Cars produced} \\\hline
    2009 & 47~772~598 \\\
    2010 & 58~264~852 \\\
    2011 & 59~929~016 \\\hline
  \end{tabular}
\end{table}

```

The above code produces table 1.

Table 1. Number of cars produced in the world

Year	Cars produced
2009	47 772 598
2010	58 264 852
2011	59 929 016

4.4. Figures

Put figures within the `figure` environment. Figures should be centered on page. To define a caption, use the `\caption` command. The captions should appear below the figure being described.

4.4.1. Graphics files

Graphics files may be included with the `\includegraphics` command. The `graphicx` package [5] should be imported in the preamble.

Listing 22. Importing graphics from files

```

% ... somewhere in the preamble
\usepackage[pdftex]{graphicx}
% ... somewhere within the document
\begin{figure}[htbp]
  \centering

```

```

1 \includegraphics[width=0.5\textwidth]{fbar.pdf}
2 \caption{Four-bar mechanism with all coordinates defined}
3 \label{fig:fbar}
4 \end{figure}

```

The above code produces Fig. 1. This includes the file named `fbar.pdf`.

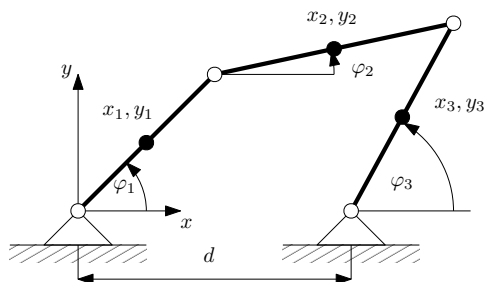


Fig. 1. Four-bar mechanism with all coordinates defined

4.4.2. TikZ pictures

TikZ pictures may be used as well.

Listing 23. Using TikZ pictures

```

9 \begin{figure}[htbp]
10 \centering
11 \begin{tikzpicture}[%
12 sibling distance = 10em,%
13 every node/.style = {%
14 shape=rectangle, rounded corners, draw,%
15 align=center, top color=white,%
16 bottom color=blue!20}]
17 \node {Mechanics}
18 child { node {Kinematics} }
19 child { node {Dynamics} };
20 \end{tikzpicture}
21 \caption{A figure created with TikZ commands}
22 \label{fig:tikz}
23 \end{figure}
24
25

```

The above code produces Fig. 2.

4.4.3. Subfigures

Sub-figures may be created within the `figure` environment by using the `subfigure` environment blocks. The `subcaption` package should be included in the preamble for this to work.

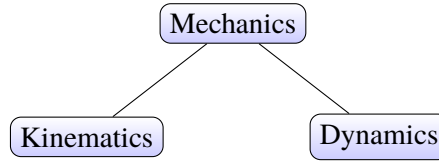


Fig. 2. A figure created with TikZ commands

Listing 24. Using subfigures with subcaptions

```

1  % ... somewhere in the preamble
2  \usepackage{subcaption}
3  % ... somewhere in the document
4  \begin{figure}[htbp]
5    \centering
6    \begin{subfigure}[b]{0.4\textwidth}
7      \includegraphics[width=\textwidth]{fbar.pdf}
8      \caption{Initial position}
9      \label{fig:fbar2a}
10   \end{subfigure}
11   \begin{subfigure}[b]{0.4\textwidth}
12     \includegraphics[width=\textwidth]{fbar.pdf}
13     \caption{Final position}
14     \label{fig:fbar2b}
15   \end{subfigure}
16   \caption{Four bar in its initial and final position}
17   \label{fig:fbar2}
18 \end{figure}
19

```

The above code produces Fig. 3, consisting of Fig. 3a and Fig. 3b.

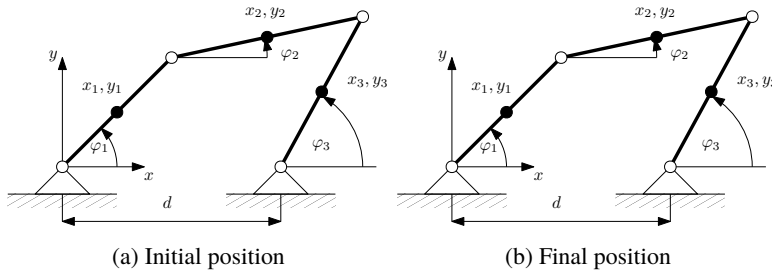


Fig. 3. Four bar in its initial and final position

A. Appendix A

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada

fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

B. Appendix B

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

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