

## Full title of your paper – for the front page and the table of contents

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Abstract describing the main subject and the most important results of your paper. It is required that the abstract should be provided by the author(s). Remember that this should be rather short description.

Key words: *Key words (separated with commas) concerning your paper and describing main topics (optional, i.e. only if you want to have them here).*

### 1. Introduction

This document provides a short template of the document for the Abiomed Lecture Notes series for L<sup>A</sup>T<sub>E</sub>X users. The template is provided with dedicated `ABMart.cls` document class.

The document class and the template should be used for preparation of articles that are going to be published in the volume containing several such contributions. Preparation of the single lecture that is going to be published in a dedicated volume should be performed with the use of `ABMbook.cls`.

The `ABMart.cls` document class is based on popular `article.cls` class, one of standard document classes of the L<sup>A</sup>T<sub>E</sub>X system. Some modifications and improvements were introduced and many new commands and environments were added to this style.

## 2. General remarks

- Try to use all well-known  $\text{\LaTeX} 2_{\epsilon}$  commands. They should work properly, though some of them slightly different than the way you are accustomed to (when using standard  $\text{\LaTeX}$  classes).
- A few of the new commands and environments use the  $\mathcal{A}\mathcal{M}\mathcal{S}$ - $\text{\LaTeX}$  package (`amsmath.sty`). This well-known and highly-valued package provides a bundle of stable and easy-to-use commands and environments that facilitate typesetting of mathematical formulae. This package is not required, but is strongly recommended. It is very popular and comes as a standard extension with every decent distribution of  $\text{\LaTeX} 2_{\epsilon}$ . Its latest version is also available on the Internet.

## 3. Sectioning

Like in standard  $\text{\LaTeX}$  classes for sectioning use commands: `\section`, `\subsection`, `\subsubsection`, `\paragraph`, `\subparagraph`. Use “asterisk-versions” of the section commands (e.g. `\section*`) to skip the numbering. If your lecture is going to be published in a dedicated volume (as a single-lecture volume), you may also use `\chapter`.

## 4. List environments and theorem-like environments

When you need, use list environments like `itemize`, `description`, `enumerate` and any other standard environments.

Self-numbering environments for `theorem`, `lemma`, `definition`, `proof`, `observation`, `proposition`, `example`, `case`, `corollary` and `remark` are provided. You may use the “asterisk-versions” of those environments (e.g. `theorem*`), when you want to skip the numbering. The `proof` environment isn't numbered at all and its “asterisk-version” – `proof*` – should be used when you want to skip the “*quod erat demonstrandum*” mark ( $\square$ ) that is always put at the very end of the `proof` environment.

## 5. Equations

Here is the simplest example of a numbered equation, produced with the `equation` environment:

$$\exp(i\pi) + 1 = 0. \tag{5.1}$$

The numbered equation should be equipped with the appropriate `\label` command to create tag for future reference.

It is advisable to assign numbers only to those equations which need to be referred to. All others should be left without number. Obviously `\label` command should not be used on such equations. Here is example of the equation without a number, produced with the command `$$...$$`.

$$\frac{\partial T_t}{\rho c} = \nabla \cdot (\lambda_{\text{eff}} \nabla T_t) + q_v - \frac{\pi^2 n a^2 \lambda_{\text{bl}}^2 (\text{Pe})^2}{4 \lambda_t \sigma} (\nabla \cdot \mathbf{1}) \mathbf{1} \cdot \nabla T_t.$$

If several, logically connected equations are to be displayed one after another use of `\mathcal{AMS-L}ATEX` environments `align` and `gather` is advised. Their `-ed` versions `aligned` and `gathered` can also be used within the `equation` environment. See the `\mathcal{AMS-L}ATEX` manual for further reference.

Below an example of a set of equations set in type by the use of the `aligned` environment nested within `equation` environment is presented:

$$\begin{aligned} \ddot{\Psi} - \Delta \Psi &= 0 \text{ in } Q, \\ \Psi(T) = \dot{\Psi}(T) &= 0 \text{ in } \Omega, \\ \Psi &= \begin{cases} \frac{\partial \Phi}{\partial \mathbf{n}} & \text{on } \Sigma. \\ 0 & \text{on } \Sigma \setminus \Sigma_0. \end{cases} \end{aligned} \quad (5.2)$$

If an equation is too large to fit in one line the use of `multiline` environment of the `\mathcal{AMS-L}ATEX` package is recommended. Below the example is presented:

$$\begin{aligned} W(\mathbf{T}) &= \sup \{ \mathbf{T} \cdot \mathbf{E} - W^*(\mathbf{E}) \mid \mathbf{T} \in A_{\mathbf{T}} \} \\ &= \sup \left\{ \mathbf{T} \cdot \mathbf{E} - \tilde{W}^*(\mathbf{E}) \mid \mathbf{T} \in T_{\mathbf{T}}^3, \mathbf{E} \in T_{\mathbf{E}}^3 \right\}, \end{aligned} \quad (5.3)$$

The use of standard `LATEX` environment `eqnarray` is also acceptable.

## 6. Citations

Here are the book/article citation examples: [1] or [2, 1, 5]. You may also write it directly as, e.g., [1], [2, 1, 5] (cf. the source file to see the difference) or [3–6], though of course the first (robust) way is preferred.

## 7. Figures and tables

Tables and figures should be consecutively numbered. Place table titles above the tables and figure captions below the figures. Please, use the

`\caption` command to do it. Be sure to insert an appropriate `\label` command immediately after the `\caption` command in the tables and figures so you can refer to them later with the `\ref` command.

The `\includegraphics` command is recommended for inserting figures. Note that you can use optional `scale` and `width` parameters to rescale graphics.

The graphics should be scaled correctly. If the picture contains text (descriptions, units, symbols etc.) please make sure that the letter size approximately corresponds to that of the main text body. This will make your figure compose better with the rest of the text.

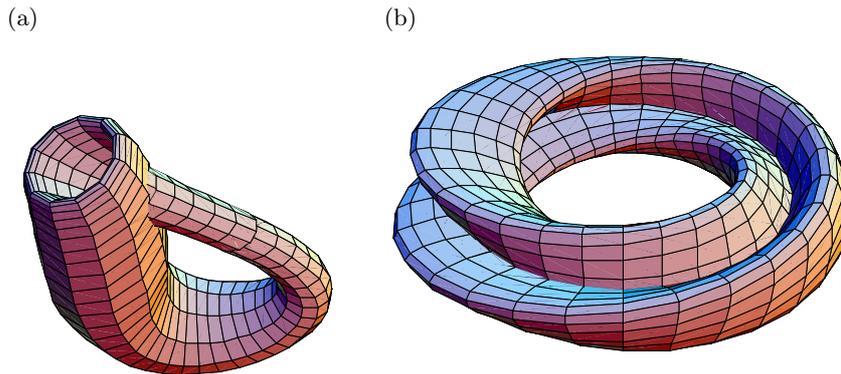


FIGURE 1. (a) Klein's bottle, (b) figure-8 parametrization (after Eric W. Weisstein).

TABLE 1. Table example.

First column	Second column	Third column [kN]
1	800 MPa	10
2	1.5 GPa	20
3	2 GPa	30

## 8. Referring to equations, figures, sections, and tables

References to equations in the text should be abbreviated as: Eq. (5.1) or Eqs. (5.2) and (5.3); references to figures should be abbreviated as: Fig. 1 or Figs. 1 and 2; and to sections, similarly, as: Sec. 2 or Secs. 3.1 and 5. If any reference starts a sentence, please, do not use the abbreviations, but

the whole words, i.e.: Equation(s), Figure(s), Section(s). To tables, please, always refer using terms: Table 1 or Tables 1 and 2.

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