

Basic instructions for writing a paper

A paper must be written correctly in LaTeX 2e, i.e.:

using `\mathcal{}` instead of `\cal`;

`\mathrm{}`, `\mathbf{}` or `\textrm{}`, `\textbf{}` instead of `\rm`, `\bf`, etc.

(`\rm`, `\bf`, `\it` are old switches and they should not be used in LaTeX 2e)

It is possible to "layer" commands as: `\textit{aaaa\textbf{bbbb\textup{cccc}}}`:

aaaa --- italic, bbbb --- bold italic, cccc --- bold upright (`\textrm` is default).

For an upright script in text mode, use `\textup{}`, not `\rm`.

`\rm` is an old switch for the default setting, it gives the normal script, which is:

`\textmd{\textup{\textrm{}}}` = `\textnormal{}`.

`\textrm{}` is not a script inclination (shape), but a kind (family) of a script;

Family: `\rmfamily`, `\ttfamily`, `\sffamily`

Shape: `\upshape`, `\itshape`, `\slshape`, `\scshape`

Series: `\mdseries`, `\bfseries`.

For a long text, we can use the following switches (for example):

`{\itshape ...text1... {\bfseries ...text2... {\upshape ...text3...}}`

text1: italic; text2: bold italic; text3: bold upright (all `\rmfamily`)

or

`{\sffamily ...text1... {\itshape ...text2...}}`,

`{\sffamily ...text1... {\bfseries ...text2...}}`, etc.

`{\sffamily {\itshape {\bfseries ...text...}}}` as well as `\textsf{\textit{\textbf{}}}`

and some other combinations do not work ordinarily.

For an upright script for math. symbols in math. mode, use `\mathrm{}` and

for names of functions etc., `\operatorname{}`, for example, $B=\operatorname{cl}(A)$,

do not use "improvements" of the type $B=\$cl(A)$, "catapulting" `cl` to the text mode (`\sin`, `\cos`, etc. are defined in LaTeX).

Please, use:

```
\documentclass[reqno,A4paper]{amsart}
```

You can use various packages, for instance,

fundamental and recommended ones are:

```
\usepackage{amsmath}
```

```
\usepackage{amssymb}
```

```
\usepackage{amsthm}
```

```
\usepackage{enumerate}
```

```
\usepackage[mathscr]{eucal} "or" \usepackage{mathrsfs}
```

```
\usepackage{eqlist}
```

```
\usepackage{array}
```

.....

Note:

```
\usepackage{mathrsfs}:      \mathcal classic \mathscr decorative
```

```
\usepackage[mathscr]{eucal}: \mathcal classic \mathscr simple, but
```

it enables to switch `\mathcal` to the bold by using command `\boldsymbol`

Our new format is:

```
\setlength{\textwidth}{150mm}
```

```
\setlength{\textheight}{206mm}
```

Please, use the command `\section` for sections and,

for definitions, theorems, lemmas etc., use environments declared by using the command

```
\newtheorem{environment},
```

and recalled in a text by `\begin{environment} ... \end{environment}`, and,

for proofs, `\begin{proof} ... \end{proof}` (it is defined).

In these environments, please, do not interfere in a default typeface,

trying to adjust it to the style of Math. Slovaca, etc.,

except highlighting terms in definitions, etc. (you can use `\emph{}` preferably)

By changing "amsart" into our style "maslo" all will be as it is required.

Example:

correctly:

```
\section{Introduction}
and
(within theorems, lemmas,..)
\begin{theorem}
...text...
\end{theorem}
```

do not use:

```
\section{\bf Introduction}
or
\begin{theorem}
\textit{.....}.....{\it .....} etc.
\end{theorem}
or
\begin{definition}
\textrm{.....}....{\rm .....} etc.
\end{definition}.
```

A pattern for preamble structures:

```
\documentclass[reqno,A4paper]{amsart}

\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{amsthm}
\usepackage{enumerate}
\usepackage{mathrsfs}
\usepackage{eqlist}
\usepackage{array}
.....

\setlength{\textwidth}{150mm}
\setlength{\textheight}{206mm}
\setlength{\oddsidemargin}{5mm}
\setlength{\evensidemargin}{5mm}

\theoremstyle{}
\newtheorem{}...
.....

\newcommand{}{} (optional)
.....
Please, try to give macros occurred in your actual text only,
not a long list of commands used in all your papers.

\begin{document}

\title[a brief title]{a full title}
\author[the 1st author \and the 2nd author...]{the 1st author* \and the 2nd author**...}

\newcommand{\acr}{\newline\indent}
```

```

\address{\llap{*}\,}Department of Mathematics\acr
        Faculty ... \acr
        street (or other specification)\acr
        town\acr
        etc. \acr
        COUNTRY}

\email{}

\address{\llap{**}\,}Address of the second author\acr
        ....\acr
        COUNTRY}

\email{}

\thanks{This work was supported by .....
Grant No. ...., etc.} (optional)

\subjclass[2010]{Primary XXX, ...; Secondary (optional) YYY, ...}
\keywords{....}

\begin{abstract}
A brief abstract without bibliography marks [.] and \cite{} as well.
\end{abstract}

\maketitle

```

Multi-line display structures must be "culturally" aligned.

The most usable one is the environment "align":
`\begin{align}... \end{align}` (with tagged lines),
`\begin{align*}... \end{align*}` (lines are not tagged),
it is universal;
you can also use the environment "gather"
`\begin{gather}... \end{gather}` (with tagged lines),
`\begin{gather*}... \end{gather*}` (lines are not tagged),
(for centered lines without aligning).

The environment "multline" gives one tag and lines are put as follows:
1st line: on the left
next lines are centered and
the last line is on the right
(it is not much usable).

If you have a structure with one tag, it is very comfortable to use the following construction:

```

\begin{equation}
\begin{aligned}
(or "gathered" (centered lines); or "split" (aligned lines))
\end{aligned}
\end{equation}

```

The environments "aligned", "gathered" and "split" do not put tags and must be situated within `$.$.`, `$$...$$`, `\[...\]`, or within the environment "equation" ("split", only in "equation").

Please, use the standard tagging using the automatic one within the environments; your own tags, you can put using the command `\tag{}` within them, or `\eqno{}` in `$$..$$`. For curbing a tag in a line, you can use the commands `\notag` or `\nonumber` before `\\`.

Do not use `\\ \\ \\ \\ \\ \\ \\ \\ (xxx)`, `~~~~~ (xxx)` or similar "structures" using `~ \` or `\, \;` or some other skips, where (xxx) is your tag!

For an ordinary text in display structures, please, use the command `\text{}` with a standard spacing using `\quad` and `\qquad`.

Please, do not use `\, \, \, \, \, \text{}\, \, \, \, \, \,` or similar constructions! (`~~~~~ \, \, \, \, \, \;` etc.)

Examples:

```
$$
formula \qquad \text{for all} \quad \quad formula
$$
$$
formula \quad \text{and/or} \quad \quad formula
$$
or
$$
formula \qquad \text{and/or} \quad \qquad formula
$$
```

For functions with cases, please, use the environment "cases":

```
\begin{cases}...&... \\...&... \end{cases}.
```

In this case (but only in this, not in display aligned structures),

"array" is tolerated, too, but correctly using

```
\begin{array}{ll}...&... \\...&... \end{array}
```

For items, please, use the environments "itemize", "enumerate", or "eqlist" (using the package eqlist), not paragraphs.

(But, proving items from lemmas, theorems, etc. in a proof, use just paragraphs, not items!)

In an italic environment, for example in one subordinated to `\theoremstyle{plain}`, item labels of "enumerate"

take the italic shape. To avoid it and to obtain an upright script, we can use the following:

for item labels of the type `\item[xxx]`, use the environment "itemize" and you will obtain the up shape without "switching over" by `\textup{}` (`\rm -- no way`).

For item labels of the type `\item` within "enumerate", use `\renewcommand{\labelenumi}{\textnormal{\arabic{enumi}}}`

(or `\roman \Roman \alph \Alph` instead of `\arabic`)

two brackets () are not necessary, you can use `) . : etc..`

Similarly, in the next levels --- `enumii`, `enumiii`.

"eqlist" behaves as "enumerate" as for italic;

to obtain upright item labels, you can use the option:

```
\begin{eqlist}[\def\makelabel #1{\textnormal{#1}}] \item[....]\end{eqlist}
```

by using () or other symbols in definition of `\makelabel`, for example,

```
[\def\makelabel #1{\textnormal{(A#1)}}]
```

using `\item[x]` for instance, we shall obtain (Ax) in a text.

The environment "eqlist" is useful for long item marks,

to avoid extending from a format.

Please, modify a size of mathematical brackets if it is needed using

```
\bigl \bigr, \Bigl \Bigr, \biggl \biggr, \Biggl \Biggr
```

or `\left \right`, but if it is needless, please do not write `\left(\right)` at every brackets

it makes an involved source text.

Please, separate syntactic structures:

correctly:

for any $\$a \in E$, $\$a$ is a sharp element of EE

$a \oplus b = b \oplus c = c \oplus a = e$, $b \oplus a = c \oplus b = a \oplus c = d$;
(do not write:
for any $a \in E$, a is a sharp element of E
 $a \oplus b = b \oplus c = c \oplus a = e$, $b \oplus a = c \oplus b = a \oplus c = d$, etc.)

In the text format, please, do not use `\text` in ordinary syntactic structures, but cut `'`'s.

Example:
if $xy = yx$ for each $x, y \in L$
(do not write:
if $xy = yx$ `\text{for each}` $x, y \in L$)

However, in the set brackets, please, use `\text{}` for a possible text.

Example:
 $\{\lambda \in L : \exists \lambda \text{ and } a \leq \lambda < b\}$

Please, do not use `\` to separate paragraphs and lines in regular text or after various environments and display structures.

For references in a text, use, please:
`\cite{key}` if details are not referred to;
in the other case, use, for instance:
"it follows from `\cite[Theorem 1]{key}`"
instead of "it follows from Theorem 1 in `\cite{key}`";
or use "it is proved in `\cite[Theorem 1, p. 23]{key}`"
instead of "it is proved in `\cite{key}` (Theorem 1, p. 23)"

For a bibliography:

```
\begin{thebibliography}{xxx}
\bibitem{key}.....
.....
\bibitem{key}.....
\end{thebibliography}
```

You can use also the option case by using `\bibitem[your mark]{key}`.
[your mark] will appear in your text in the place where `\cite{key}` is written.
xxx is a string of numbers or letters which (by its length)
corresponds with the longest *[mark]* (for reference) occurred in a text.

A pattern for writing a bibliography:

(The first letters of words
(except definite and indefinite articles, conjunctions and prepositions)
in titles of books, proceedings and monographs are capital,
in papers, small (except names, naturally).)

Names of serials must be abbreviated according the List of AMS.

An ordinary paper:

```
\bibitem{1}
AARTS, J. M.---LUTZER, D. J.:
\textit{Pseudo-completeness and the product of Baire spaces},
Pacific J. Math. \textbf{48} (1973), 1--10.
```

A paper in a book, in proceedings, etc.:

```
\bibitem{RiMu}
RIE\v{C}AN, B.---MUNDICI, D.:
\textit{Probability on MV-algebras}.
In: Handbook of Measure Theory, Vol. II
(E. Pap, ed.),
Elsevier Science, Amsterdam, 2002, pp. 869--909.
```

```
\bibitem{COL}
COLBOURN, C. J.:
\textit{Triple systems}.
In: Handbook of Combinatorial Designs (2nd ed.)
(C.~J.~Colbourn, J.~H.~Dinitz, eds.),
CRC/Chapman and Hall, Boca Raton, FL, 2007, pp.~58--72.
```

(Note: a number of edition is not necessary.)

```
\bibitem{3}
HILTON, A. J. W.---RODGER, C. A.:
\textit{Graphs and configurations, a look at graph theory}.
In: Proc. Colloq., Cerisy, 1980,
Presses Polytech. Romandes, Lausanne, 1980, pp.~55--64.
```

```
\bibitem{Rie1}
RIE\v{C}AN, B.:
\textit{Probability theory on IF-events}.
In: Algebraic and Proof-theoretic Aspects of Non-classical Logics.
Lecture Notes in Comput. Sci. 4460,
Springer, Berlin, 2007, pp.~290--308.
```

An ordinary book:

```
\bibitem{NarBec}
NARICI, L.---BECKENSTEIN, E.:
\textit{Topological Vector Spaces},
Marcel Dekker, New York, 1985.
```

A book of a monographic series:

```
\bibitem{12}
BERBERIAN, S. K.:
\textit{Lectures in Functional Analysis and Operator Theory}.
Grad. Texts in Math. 15,
Springer-Verlag, New York, 1974.
```