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How to use the *MathematicS in Action* class file

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Abstract

This document is a short user's guide to the L^AT_EX class for articles in *MathematicS in Action*.

1. Introduction, meta-data commands

The class must be used via `\documentclass{cedram-msia}` at the beginning of the file. Author can define their symbols in the preamble, but the meta-data (title, author names and addresses, etc.) must be carefully indicated using the proper following commands, in order to avoid mistakes in the informations used to reference the article (on the MSIA website as well as in other databases).

1.1. Title

The command for the title is: `\title[short title]{full title}`. The `\maketitle` command must be put after the abstract.

1.2. Authors

For each author, use the following set of commands in the preamble (before `\begin{document}`):

```
\author[\initial{initial of first name.} \lastname{last  
name}]
```

```
{\firstname{first name} \middlename{initial of  
middle name.} \lastname{last name}}
```

```
\address{Postal address, on several lines using \\}
```

```
\thanks{support}
```

```
\email{email}
```

Some elements (such as `middlename` or `support`) may not appear for some authors.

The first author is supported by INRIA project OMEGA.

Keywords: Example, Applied mathematics, Journal.

Math. classification: 00X99.

1.3. Keywords and mathematical classification

The keywords and mathematical classification are indicated in the preamble via

```
\keywords{list of keywords, separated by commas}
```

and

```
\subjclass{list of Mathematical Subject Classifications iiXjj, separated by commas}
```

1.4. Abstract

The abstract environment is created by

```
\begin{abstract} and \end{abstract}.
```

Notice that `\maketitle` must be put just after the abstract, before the first section.

1.5. Citations

The bibliography must be built using bibtex. A sample of a bibtex file `sample-bibliography.bib` is available on the MSIA website. The references must be put inside a bibtex file constructed from this sample and referred to in the article by using the `\cite` command, which produces for example [2] or [3] (see also the comments in `sample-bibliography.bib`).

To include the bibliography, the two following commands must be put at the end of the article (before `\end{document}`):

```
\bibliographystyle{plain}
\bibliography{name of the bibliography file}
```

1.6. URLs

When referring to an URL, the `\url` command must be used.

For example: `\url{http://msia.cedram.org}`.

1.7. Compilation

The article must be compiled in PDF format, and using bibtex. On Linux systems, this is achieved by executing

```
pdflatex name_of_the_article.tex
bibtex name_of_the_article
pdflatex name_of_the_article.tex
pdflatex name_of_the_article.tex
```

2. Figures

The article being compiled in PDF, the figures must also be in PDF. The inclusion of the figure is done using the following commands.

```
\begin{figure}
\includegraphics[width=xxx\linewidth]{figure_file.pdf}
\caption{\label{refname}caption of the figure.}
\end{figure}
```

The parameter `xxx`, a real number between 0.0 and 1.0, indicates the width the figure should take in the page. One can refer to the figure with `\ref{refname}`, which gives for example: Figure 1 is an example of figure.

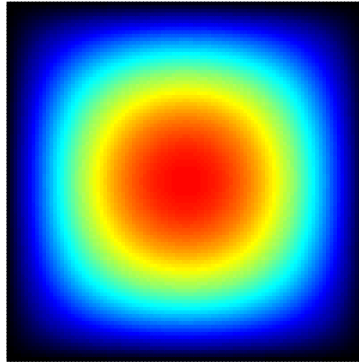


FIGURE 1. Example of figure.

3. Other commands

The other commands are quite classical. Sections and subsections are created by `\section{title of section}` and `\subsection{title of subsection}`.

The following environments exist and, if necessary, are automatically numbered:

```
\begin{definition} \end{definition}
\begin{theorem} \end{theorem}
\begin{proposition} \end{proposition}
\begin{lemma} \end{lemma}
\begin{remark} \end{remark}
\begin{remarks} \end{remarks}
\begin{notation} \end{notation}
\begin{example} \end{example}
\begin{proof} \end{proof}
```

To refer to a specific definition, theorem, etc., put `\label{labelname}` inside the corresponding environment and use `\ref{labelname}` in text to point to this definition, theorem, etc.

Here is an example:

Theorem 3.1. *Most theorems are true.*

Proof. Th. 3.1 is obviously true. □

Example 3.2. This should look like a good example.

Remark 3.3. Can an example like Ex. 3.2 give some insight in Th. 3.1's proof?

References

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- [4] M. Vajiac. Gauge theory techniques in quantum cohomology. Ph.D. thesis, Boston University, 2000.