

Instructions for the Use of ARTJLT.CLS

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Abstract. Authors of Journal of Lie Theory use L^AT_EX2e. This file contains instructions for the implementation of the class file `artjlt.cls`. It describes the macros supplied in the file `artjlt.cls` and the usage of the template file `artjlt-template.tex`.

Mathematics Subject Classification 2000: 00A00.

Key Words and Phrases: Journal of Lie Theory.

1. The template file

First make a copy of the template file `artjlt-template.tex` in your working directory. Right at the beginning of the template file there are several macros where authors must insert individual information, namely,

`\title` Title of the article.

`\author` Name(s) of the author(s), e. g. “John Doe” or “John Doe and Jane Smith”; dedications can be inserted using the `\thanks` macro.

`\lastname` Last name(s) of the author(s), e. g. “Doe” or “Doe and Smith”.

`\address` For each author, the full name, postal address and email address, e. g.

```
\address{John Doe\\
Faculty of Mathematics\\
Some University\\
Street\\
City, postal code\\
Country\\
john.doe@some-uni.edu}
```

`\msc` 2000 Mathematics Subject Classification, e. g. “57M25, 05C50”. For details see <http://www.ams.org/msc/>.

`\keywords` List of keywords describing the article.

*This footnote was generated by `\thanks{...}`

These macros have already predefined values so that authors are automatically reminded to insert the required information.

At the end of the file you will see where you have to insert your text. Instructions on how to generate the bibliography are given in Section 4.

If your article is written in French or German, you should specify the corresponding class option, i.e., use this in your file:

```
\documentclass[french]{artjlt}
```

(and, analogously, for “German”). This will load the correct hyphenation patterns and change the names of certain environments.

2. The class file artjlt.cls

The file `artjlt` provides a new L^AT_EX2e document class called `artjlt`, which you should use instead of the usual `article` class. Almost all L^AT_EX2e-commands are available with only a few exceptions. One of exception is that authors must not use `\subsection` and `\subsubsection`.

The class `artjlt` provides a large number of environments for theorems etc. These are the following (along with their lower case variants): *Proposition*, *Theorem*, *Corollary*, *Lemma*, *Definition*, *Remark*, *Exercise*, *Example*, *Examples*, *Conjecture*, *Problem*, *Problems* and *Proof*.

<pre>ordinary text \begin{Example} This is an example! \end{Example}</pre>		<pre>ordinary text Example 2.1. This is an example!</pre>
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All these environments are automatically numbered within sections, so one may customize all L^AT_EX2e-macros for referencing pagenumbers, labels, etc.

There is also a `Proof`-environment for proofs which will automatically generate the end of proof sign.

<pre>\begin{Proof} This is an ordinary proof. \end{Proof}</pre>		<pre>Proof. This is an ordinary proof. ■</pre>
---	--	---

If a proof ends with a display formula, an `align`-, or an `align*`-environment, or similar constructs, one has to use the `\qedhere` macro defined by $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX. (For the environments, use `\tag*{\qedhere}`.) Otherwise there would be too much space between the end of the proof and the subsequent text. We illustrate this with some examples

<pre>\begin{Proof} \[2+2=4. \qedhere \] \end{Proof}</pre>		<pre>\begin{Proof} \begin{align} 1+1 &= 2 \\ 2+2 &= 4. \end{align} \tag*{\qedhere} \end{align} \end{Proof}</pre>		<pre>\begin{Proof} \begin{align+} 1+1 &= 2 \\ 2+2 &= 4. \end{align+} \tag*{\qedhere} \end{align*} \end{Proof}</pre>
--	--	--	--	---

Compare the following examples to see the difference. First, without `\qedhere`.

Proof. A bad proof:	Proof. A bad proof:	Proof. A bad proof:
$2 + 2 = 4.$	$1 + 1 = 2 \quad (1)$	$1 + 1 = 2$
■	$2 + 2 = 4. \quad (2)$	$2 + 2 = 4.$
	■	■

Now the same but with (in the first example) `\qedhere` respectively (in the two other examples) `\tag*{\qedhere}` added. The difference is quite striking:

Proof. A good proof:	Proof. A good proof:	Proof. A good proof:
$2 + 2 = 4.$ ■	$1 + 1 = 2 \quad (3)$	$1 + 1 = 2$
	$2 + 2 = 4. \quad \blacksquare$	$2 + 2 = 4. \quad \blacksquare$

In any case, a displayed formula at the end of a proof must not have an equation number.

3. How to compose your abstract

In your abstract keep the number of equations and formulae minimal. The same rule applies to references to the literature. In fact there must be *no* references to your bibliography (which somebody only seeing your abstract obviously could not read!). Thus, if you need to give a reference in your abstract, you have to duplicate the complete reference in the abstract itself.

4. How to create the bibliography

The list of references is provided as usual for L^AT_EX via a `thebibliography`-environment. The following example shows how the bibliography at the end was produced:

```
\begin{thebibliography}{99}
\bibitem{he-ne}
N. Helder mann, K.-H. Neeb:
\emph{Lie Groups and Lie Algebras},
Springer, Berlin et al. (2021).

\bibitem{horn}
M. Horn:
\emph{Instructions for the use of Riemann surfaces},
J. Lie Theory {\bf 30} (2020) 1--5.

\bibitem{vampire}
L. Vampire, A. B. Waterproof, C. D. Zettel:
\emph{Differences in Taste Depending on Blood Groups},
in: Healthy Nutrition, Proc. Conf. held at Dracula City, July 2001,
```

J. Aman and K. Beeman (eds.), Esoteric Press, Paris et al. (2002) 22--33.
`\end{thebibliography}`

The following conventions shall be followed: All entries are sorted *alphabetically* and labelled with a free parameter, which can be chosen by the author.

State the names of authors and coauthors in the same way: Initials of the prename(s) FIRST, THEN last name.

Book titles are typeset in italic style using capital letters for essential words. The title is followed by the name of the book series (if it exists), the volume number (if it exists), the name of the publisher, the place of publication (one place suffices!) followed by the year of publication in parantheses.

The titles of articles are typeset in italic style using small letters, except for names. **volume numbers** are typeset boldface followed by the year (in parantheses) and the range of pages.

Journal of Theory Lie does not record issue numbers since volume number and page numbers provide a complete coordinate system.

Articles that appeared in a book-like collection of articles are cited like articles in journals, with the difference, that instead of the name of the journal the title, editor(s) and publisher of the collection are stated.

References

- [1] N. Heldermann, K.-H. Neeb: *Lie Groups and Lie Algebras*, Springer, Berlin et al. (2021).
- [2] M. Horn: *Instructions for the use of Riemann surfaces*, J. Lie Theory **30** (2020) 1–5.
- [3] L. Vampire, A. B. Waterproof, C. D. Zettel: *Differences in Taste Depending on Blood Groups*, in: Healthy Nutrition, Proc. Conf. held at Dracula City, July 2001, J. Aman and K. Beeman (eds.), Esoteric Press, Paris et al. (2002) 22–33.

Journal of Lie Theory also allows you the option of using custom abbreviations instead of number for labelling your bibliography entries like in other L^AT_EX codes. You have to add them between “[” and “]” after the `\bibitem` command. For example, the first entry of the following alternate bibliography starts with `\bibitem[HN21]{he-ne}` instead of `\bibitem{he-ne}`.

References

- [HN21] N. Heldermann, K.-H. Neeb: *Lie Groups and Lie Algebras*, Springer, Berlin et al. (2021).
- [Ho20] M. Horn: *Instructions for the use of Riemann surfaces*, J. Lie Theory **30** (2020) 1–5.

- [VWZ01] L. Vampire, A. B. Waterproof, C. D. Zettel: *Differences in Taste Depending on Blood Groups*, in: Healthy Nutrition, Proc. Conf. held at Dracula City, July 2001, J. Aman and K. Beeman (eds.), Esoteric Press, Paris et al. (2002) 22–33.