

## HOW TO USE STACS.CLS

ALICE UTHOR<sup>1</sup> AND BERNARD UTHOS<sup>2</sup> AND CLAIRE UTHOT<sup>1,2</sup>

<sup>1</sup> Address 1, this is the address of A. Uthor's and C. Uthot's institution

This address uses several lines

*E-mail address:* `a.uthor@institute.sw`

*E-mail address,* C. Uthot: `best.chos.univ@labo.ti`

*URL:* `http://www.institute.sw`

<sup>2</sup> address 2, of B. Uthos's institution; C. Uthot is also affiliated there

*E-mail address:* `b.uthos@organization.ws`

*URL:* `http://www.organization.ws`

---

ABSTRACT. The abstract must precede the maketitle command. Be sure not to issue the maketitle command twice! The abstract should consist of plain text, without mathematical formulæ, and it must be a self-standing text (it will appear separately in collections of abstracts): in the abstract, do not use coded bibliographical references such as [33], use rather (Emerson, Lake and Palmer, 1973).

## Introduction

It is usually a good idea to have an introduction. This is a good place to employ mathematical notation and give references, as opposed to the abstract. It is up to the authors to decide, whether to assign a section number to the introduction or not.

It is recommended that authors use the sample file `stacs-smp.tex` as a template for their paper, as it contains additional indications, more precise than can be spelled out in this text (*e.g.* placement of author and title indications, introduction of the authors' favorite packages and commands, etc).

It is also recommended to verify that you are using the latest version of `stacs.cls`, see `stacs-conf.org`.

---

*1998 ACM Subject Classification:* PREFERRED list of ACM classifications.

*Key words and phrases:* MANDATORY list of keywords.

Thanks: `stacs.cls` and this sample file are derived from the files `lmcs.cls` and `lmcs-smp.cls`.



## 1. Additional packages and the STACS logo

Additional packages may be used, using the usual command  
`\usepackage{package}`

Use this file as a template to see where to place this command.

The style file `stacs.cls` automatically loads the class `amsart.cls` with options `11pt` and `reqno`, as well as the packages `helvet`, `url`, `epsf`, `graphicx`, `ifthen` and `shortvrb`.

It also loads the package `cclicences`. That package is not included in every L<sup>A</sup>T<sub>E</sub>X distribution, and it can be found on the CTAN archive, as well as on [www.stacs-conf.org](http://www.stacs-conf.org).

Another file is necessary for the compilation of documents under the `stacs.cls` class, namely `STACS-logo-full.eps`. That is also available on [www.stacs-conf.org](http://www.stacs-conf.org).

## 2. Authors and other title issues

The title command of this file has the following form,

```
\title[Using stacs.cls]{How to use stacs.cls}
```

and it determines both the title and the running title (on top of odd-numbered pages except the title page). If the running title argument (between square brackets) is omitted, then the title is used as a running title.

The author command has the following form,

```
\author[ref]{Short author}{Author}
```

The `ref` argument is optional and is used to associate author and address. It should be a single word. The second argument is used in the running head on even-numbered pages. It can be left blank (as in `{}`).

The address command has the following syntax,

```
\address[ref]{Address of authors with ref as reference}
```

This paper has three authors, two of which come from the same institution. We used the following commands:

```
\author[lab1]{A. Uthor}{Alice Uthor}
% \address[ref]{Address of authors with ref as reference}
\address[lab1]{Address 1, this is the address of A. Uthor's and C.
Uthot's institution
  \newline This address uses several lines} %required
\email{a.uthor@institute.sw} %optional
\email[C. Uthot]{best.chos.univ@labo.ti} %optional
\urladdr{http://www.institute.sw} %optional
```

```
\author[lab2]{B. Uthos}{Bernard Uthos}
\address[lab2]{address 2, of B. Uthos's institution; C. Uthot is also
affiliated there} %optional
\email{b.uthos@organization.ws} %optional
\urladdr{http://www.organization.ws} %optional
```

```
\author[lab1,lab2]{Author C}{Claire Uthot}
```

```
\thanks{Thanks: \url{stacs.cls} and this sample file are derived from
```

the files `\url{lmcs.cls}` and `\url{lmcs-smp.cls}`.) %optional

We use the reference `lab1` to associate A. Uthor and C. Uthot with address 1 and `lab2` to associate U. Athor with address 2. An author can have several affiliations (*e.g.* C. Uthot in this example). A single `\email` command can be used for authors sharing an affiliation, as in `{a.uthor,c.uthot}@institution1.wh`. It is also possible to associate an email address with each author, as in this file, thanks to an optional argument between square brackets.

Only the addresses of the authors are mandatory, all other fields are optional. It is however recommended to give the email address of at least one of the authors. It is possible to include a `\thanks` field with each author. The content of these fields will appear in the footnote area of the page, but it will not carry a reference to this or that author. It may make sense to include all the grant numbers and other institutional acknowledgments within a single `\thanks` field.

In case of a single author, the situation is of course simplified:

```
\author{Author}{Name of Author}
\address{address of author}
\email{author@inst.ti} %optional
\urladdr{http://www.inst.ti} %optional
\thanks{Optional} %optional
```

### 3. Use of Definitions, Theorems, etc.

Let us test a few commands.

#### 3.1. First Subsection

This is a test of subsectioning.

#### 3.2. On statements

Let us now define something.

##### **Definition 3.1.** Blah

Please use the supplied proclamation environments (as well as LaTeX's cross-referencing facilities), or extend them in the spirit of the given ones, if necessary (*cf.*, Satz 3.2 below). Refrain from replacing our proclamation macros by your own constructs, especially do not change the numbering scheme: all proclamations are to be numbered consecutively, within each section.

The following theorem-like environments are available.

- `thm` or `theorem`      Theorem
- `cor` or `corollary`      Corollary
- `lem` or `lemma`          Lemma
- `prop` or `proposition`      Proposition
- `asm` or `assumption`      Assumption

and

- `defi` or `definition`      Definition
- `rem` or `remark`            Remark
- `rems` or `remarks`        Remarks (intended for use with itemized remarks)
- `exa` or `example`        Example
- `exas` or `examples`      Examples (intended for use with itemized examples)
- `conj` or `conjecture`      Conjecture
- `prob` or `problem`        Problem
- `oprob`            Open Problem
- `algo`            Algorithm
- `obs` or `observation`      Observation

If you require additional environments, you can add them before `\begin{document}` by means of

```
\theoremstyle{plain}\newtheorem{env}[thm]{Environment}
```

or

```
\theoremstyle{definition}\newtheorem{env}[thm]{Environment}
```

In the first case the font within the new environment will be italicised.

### 3.3. On proofs

Proofs start with a `\proof` command, and end with a `\qed` command. The latter produces the end-of-proof box.

**Satz 3.2.** *This is a sample for a proclamation environment that can be added along with your personal macros, in case the supplied environments are insufficient.*

*Proof.* It is possible to start your proof with another text than “Proof.” The proof of Theorem 3.4 below starts with

```
\proof[Proof of Theorem~\ref{T:m}]
```

If the proof ends with an itemized or enumerated environment (as in Theorem 3.4), the `\qed` command has to occur BEFORE the `\end{itemize}` or `\end{enumerate}` command to ensure proper placement of the box. ■

Consequently, we have

**Corollary 3.3.** *Blah. If no proof is given, an end-of-proof box should conclude a proclamation (Theorem, Proposition, Lemma, Corollary). If the statement ends with an itemized or enumerated environment, the same recommendation as above holds, concerning the placement of the `\qed` command.* ■

When proclamations or proofs start with a list environment (`itemize`, `enumerate`) without preceding text, the default is that the first item of the list environment appears on the same line as the proclamation (or proof) title, which results in poor alignment of the different list items. This can be prevented by inserting `\hfill` before the `\begin{itemize}` or the `\begin{enumerate}` command.

#### Theorem 3.4.

- (0) *Issuing an `\hfill` command before the beginning of the list environment will push the first item to a new line, like in this case.*

(1) *blah*.

*Proof of Theorem 3.4.*

(0) The same behaviour occurs in proofs; to start the first item on a new line, an explicit `\hfill` command is necessary.

(1) *blah*, according to [Kos97]. ■

We recommend using this variant since it produces a more orderly output.

#### 4. Figures and `pdflatex`

The required compilation format for accepted papers is `latex` and not `pdflatex`. Figures included in the paper and described in external files should be `eps` files.

At the submission stage, only a `pdf` file is required, so this recommendation is not immediately crucial. However, if your paper is accepted and you want it to appear on `arXiv.org` (see the FAQ section in `stacs-conf.org` on the electronic publication procedure), you will have to provide `latex`-compilable source files, and figures in `eps` format – `pdf` figures will not be accepted.

#### 5. Bibliography style

It is up to the authors to choose one or the other of the following bibliographic styles.

##### 5.1. One style

In order to produce a bibliography with alphanumeric keys, as in this file, you may use a `\bibitem` command of the form

```
\bibitem[Kos97]{mib} J{"u}rgen Koslowski. Monads and interpolads
in bicategories. {\em Theory Appl. Categ.}, 3(8):182--212, 1997.
```

##### 5.2. Or another

If you wish instead to produce a bibliography with automatically numbered entries, simply omit the argument in square brackets as in

```
\bibitem{mib} J{"u}rgen Koslowski. Monads and interpolads in
bicategories. {\em Theory Appl. Categ.}, 3(8):182--212, 1997.
```

#### Acknowledgement

The authors wish to acknowledge fruitful discussions with X and Y. Acknowledgements should be placed in a non-numbered section `\section*{Acknowledgement}`.

#### References

[Kos97] Jürgen Koslowski. Monads and interpolads in bicategories. *Theory Appl. Categ.*, 3(8):182–212, 1997.

## Appendix A

Are you sure you want an appendix? If so, you might want to start it on a new page, like this one.

At any rate, remember that while appendices may be useful during the refereeing process, they will not be part of the final publication, which must be self-contained.