

Quick and Dirty Instructions for the New ACM Typesetting Format—acmart Class

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Preamble

Since April 2017, ACM has adopted a unified format (`acmart.cls`) for its publications. The newcomers to the communities should have no problem using it, as it will be just the right *template* to use. This new format has several important changes that might confuse particularly seasoned members of the S₁ and B₁ communities and of their a₁liated workshops, who have been accustomed to the old (slightly modified) `sig-alternate.cls` style. One such change is that all ACM conference proceedings are now using 9pt fonts for the main text. This new style uses several packages and free fonts (Linbiolinum and LibLiberte), which are available in all major T_EX distributions (T_EXLive, MikT_EX, MacT_EX) 2015 and later. If you have older distributions, your documents will not have proper fonts.

Important Rules

1. The preferred format is L^AT_EX. If you are not an avid L^AT_EX user, you can use the new Word format, but make sure to read the **User Guide** (1) carefully, and install the new Linbiolinum and LinLiberte fonts that comes with the package.
2. Read the **User Guide** (1). Read it again, especially if you were using the old style.
3. Do **not change** anything in the `acmart.cls` file.
4. Do **not change** any length, such as `\textlength`, `\textheight`, or any margin in the body of your paper.
5. Look at the `sample-sigconf.tex` and create your own with all the relevant information and *include the body of your manuscript* at the end.
6. The **ACM-Reference-format** block provides proper and full citation information of your manuscript (if published) and it is **required** for all manuscripts (regular or short papers, as well as demo and poster abstracts). **Do not** set `printacmref` to `false` to disable it to save space, because you will be asked to include it for your **Camera Ready** manuscript.
7. ACM now uses **CCS Categories** (replacing **Terms**) block in all publications. This block, as well as **Keywords** are required for all short or regular papers (not needed for demo or poster abstracts). Please provide proper content for them (see the **User Guide** for details).

Top Matter

The details are on pages 8–9 of the User Guide (1), but please note that ACM discourages the use of “merged” authors block, such as shown below:

Please note that the examples and some content in this document reflect the recent S₁S₂ 2018 and S₁S₂ and B₁S₂ communities, the suggestions are also applicable to the ACM editions (odd years) of the CPS I T Week Conferences, particularly the ISPN.

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Instead, use a separate `\affiliation` for each author to generate the following:

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The Thørvæld Group
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Hekla, Iceland
larst@affiliation.org

The title block of each (regular or short) paper is followed by four blocks:

ABSTRACT

This paper provides a sample of a \LaTeX document which conforms, somewhat loosely, to the formatting guidelines for ACM SIG Proceedings¹.

CCS CONCEPTS

• **Computer systems organization** Embedded systems; Redundancy; Robotics; • **Networks** Network reliability;

KEYWORDS

ACM proceedings, \LaTeX , text tagging

ACM Reference format:

Ben Trovato, G.K.M. Tobin, Lars Thørvæld, Lawrence P. Leipuner, Sean Fogarty, Charles Palmer, John Smith, and Julius P. Kumquat. 2017. SIG Proceedings Paper in LaTeX Format—This is a Very Long Title That will not Fit in One Line. In *Proceedings of The 8th ACM/IEEE International Conference on Cyber-Physical Systems, Pittsburgh, PA USA, April 2017 (ICCPs)*, 4 pages. DOI: 10.475/123_4

1 INTRODUCTION

The *proceedings* are the records of a conference². ACM seeks to give these conference by-products a uniform, high-quality appearance. To do this, ACM has some rigid requirements for the format of the proceedings documents: there is a specified format (balanced double columns), a specified set of fonts (Arial or Helvetica and Times Roman) in certain specified sizes, a specified live area, centered on the page, specified size of margins, specified column width and gutter size.

2 THE BODY OF THE PAPER

Typically, the body of a paper is organized into a hierarchical structure, with numbered or unnumbered headings for sections, subsections, sub-subsections, and even smaller sections. The command `\section` that precedes this paragraph is part of such a hierarchy³. \LaTeX handles the numbering and placement of these headings for you, when you use the appropriate heading commands around the titles of the headings. If you want a sub-subsection or smaller part to be unnumbered in your output, simply append an asterisk

Please note that the **CCS CONCEPTS** and the **Keywords** blocks are not required in demo or poster abstracts, but **mandatory** for regular or short papers.

Once you complete the permissions process with ACM, you receive an email from `rightsreview@acm.org` that will contain something like:

```
\copyrightyear{2018}
\setcopyright{acmcopyright}
\acmConference[Sensys'18]{The 16th ACM Conference on Embedded Networked Sensor Systems}
{November 4--7 2017, Shenzhen, China}
\acmISBN{978-1-xxxx-xxxx-x/18/11}\acmPrice{\$15.00}
\acmDOI{http://dx.doi.org/xx.xxxx/xxxxxxx.xxxxxxx}
```

Sometimes, such emails may fall into your **SPAM/Junk folder**, so make sure that you let this email go to your mailbox, instead.

The ACM Reference format and the permissions block will be generated automatically, provided you have entered the required information above in your `.tex` file.

Author Anonymity

In most conferences, submissions are reviewed by using either **blind** (reviewers are hidden from the authors) or **double blind** (reviewers don't know the identity of the author(s), and the author(s) don't know the identity of the reviewers) policies.

The authors should use anonymous option of the `acmart.cls` to hide their identity:

SIG Proceedings Paper in LaTeX Format—This is a Very Long Title That will not Fit in One Line*

Anonymous Author(s)

ABSTRACT

This paper provides a sample of a LaTeX document which conforms, somewhat loosely, to the formatting guidelines for ACM SIG Proceedings¹.

CCS CONCEPTS

• **Computer systems organization** Embedded systems; Re-

dundancy; Robotics; • **Networks** Network reliability;

to the command name. Examples of both numbered and unnumbered headings will appear throughout the balance of this sample document. Because the entire article is contained in the `document` environment, you can indicate the start of a new paragraph with a blank line in your input file; that is why this sentence forms a separate paragraph.

Sometimes, the manuscript itself may include information identifying its authors. In this case `anonsuppress` environment can be used. For example, the text below can be hidden when the environment is used with `anonymous` option:

```
\begin{anonsuppress}
This work is continuation of Dr. Trovato and his team at
\textit{Institute for Clarity in Documentation}. This paragraph will
disappear when \texttt{anonymous} option is used.
\end{anonsuppress}
```

Here is the important content of the front page of a **Camera Ready** manuscript:

SIG Proceedings Paper in LaTeX Format—This is a Very Long Title That will not Fit in One Line*

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ABSTRACT

This paper provides a sample of a LaTeX document which conforms, somewhat loosely, to the formatting guidelines for ACM SIG Proceedings¹.

CCS CONCEPTS

• **Computer systems organization** Embedded systems; Re-

KEYWORDS

ACM proceedings, LaTeX, text tagging

ACM Reference Format:

Ben Trovato, G.K.M. Tobin, Lars Thørvæld, Lawrence P. Leipuner, Sean Fogarty, and Charles Palmer. 2017. SIG Proceedings Paper in LaTeX Format—This is a Very Long Title That will not Fit in One Line. In *Proceedings of 15th ACM Conference on Embedded Networked Sensor Systems (Sensys)*. ACM, New York, NY, USA, 4 pages. https://doi.org/10.475/123_4

dundancy; Robotics; • **Networks** Network reliability;

on the page, specified size of margins, specified column width and gutter size. This work is continuation of Dr. Trovato and his team at *Institute for Clarity in Documentation*. This paragraph will disappear when `anonymous` option is used.

2 THE BODY OF THE PAPER

Typically, the body of a paper is organized into a hierarchical structure, with numbered or unnumbered headings for sections, subsections, sub-subsections, and even smaller sections. The command `\section` that precedes this paragraph is part of such a hierarchy³. LaTeX handles the numbering and placement of these headings for you, when you use the appropriate heading commands around the titles of the headings. If you want a sub-subsection or smaller part to be unnumbered in your output, simply append an asterisk to the command name. Examples of both numbered and unnumbered headings will appear throughout the balance of this sample document.

Sample Driver

The following **latex** snippet is used to generate the above (less the author block) output:

```
\documentclass[sigconf]{acmart}

\usepackage{balance} % For balanced columns on the last page

\setcopyright{acmcopyright} % if you give the rights to ACM
\acmDOI{...} % DOI - Insert your DOI below...
\acmISBN{...} % ISBN - Insert your conference/workshop's ISBN below...
\acmYear{2017} % Insert Publication year
\copyrightyear{2017} % Insert Copyright year (typically the same as above)
\acmPrice{15.00}
\acmConference[Short Name][Long Name][dates]{venue}

\begin{document}
\title[Short Title][Long Title for Your ACM Conference Paper]
\begin{abstract}
...
\end{abstract}
...
\begin{CCSXML}
<ccs2012>
<concept>
<concept_id>10010520.10010553.10010562</concept_id>
<concept_desc>Computer systems organization~Embedded systems</concept_desc>
<concept_significance>500</concept_significance>
</concept>
...
\end{CCSXML}

\ccsdesc[500][Computer systems organization~Embedded systems]
...

\keywords{ACM proceedings, \LaTeX, text tagging}

\maketitle
\input{body-of-your-manuscript}

\balance
\bibliographystyle{ACM-Reference-Format}
\bibliography{name-of-your-bib-file}

\end{document}
```

You should generate the CCSXML code with the tool at <http://dl.acm.org/ccs.cfm> and copy and paste it in your “driver” file.

Please note that you may need to put the `\balance` towards the end of the *body of your manuscript* file.

Running Headers

One of the changes in the new style is the “running heads”. There are three potential ugliness with this: Long conference name, long manuscript title, and long author list.

ICCP, Sep 10-17, 2017, Pittsburgh, PA, USA Thorv ald, Lawrence P. Leipuner, Sean Fogarty, Charles Palmer, John Smith, and Julius P. Kumquat

command `\textit`; emboldening with the command `\textbf` and typewriter-style (for instance, for computer code) with `\texttt`. But remember, you do not have to indicate typestyle changes when such changes are part of the *structural* elements of your article:

Table 1: Frequency of Special Characters

Non-English or Math	Frequency	Comments
---------------------	-----------	----------

To avoid “long conference title” problem, use one of the following `\acmConference{...}` tags for S S ’18 and B S ’18, respectively:

```
\acmConference[SenSys'18]{The 16th ACM Conference on Embedded Networked Sensor Systems}{November 4--7, 2018}{Shenzhen, China}

\acmConference[BuildSys'18]{The 5th International Conference on Systems for Energy-Efficient Built Environments}{November 7--8, 2018}{Shenzhen, China}
```

Further, if you have a long title, use the optional *ShortTitle* in the `\title`. As a rule-of-thumb, if your title is longer than a *single column width*, it should be shortened.

```
\title[SIG Proceedings Paper in LaTeX Format]{SIG Proceedings Paper in LaTeX Format---This is a Very Long Title That will not Fit in One Line}
```

And if you have three or more authors (or the list is longer than a *single column width*), use the following with the `\rst` author’s names:

```
\renewcommand{\shortauthors}{F. LastName et al.}
```

Lastly, use the names and last names of the authors in the “authors block” consistently. Pick one of the ways shown below and use it consistently everywhere, including your bibliographies:

```
Ben Travato
B. Travato

Lawrence P. Leipuner
L.P. Leipuner

Gordon K.M. Tobin
G.K.M. Tobin
```

Bibliographies and Citations

Regular staff of the institutions, such as ACM and IEEE, review manuscripts for their archival journals to provide consistency and coherency in those publications. All other publications, such as conference proceedings and newsletters, are typically compiled by different volunteers, leading to various inconsistencies. Recently, ACM requires an additional “block”, **ACM Reference format**, in every publication to make the **citation** process easier. However, this is only one side of the coin, as we have to provide the other side by properly citing our references. Most common error is to use incomplete references to save space in the body of a paper. Keep in mind that ACM uses the `natbib` package and the `ACM-Reference-Format.bst` for processing references. Check the **User Guide (1)** (Section 2.10 Bibliography) and make sure that you provide all the required fields for the each bib entry.

Acknowledgements

If you have to acknowledge someone or something in your manuscript, please insert your message between `\begin{acks}` and `\end{acks}`. This is no longer a `\section` in the manuscript.

Balanced Columns

Although not enforced by ACM, S S and B S communities have been balancing the columns on the last page of each paper by using the `balance` package. Admittedly, this might be tricky at times, but the output is much nicer as can be seen below:

The good...

KCPS, April 2017, Pittsburgh, PA USA B. Veytsman et al.



Figure 3: A sample black and white graphic that needs to span two columns of text.



Figure 4: A sample black and white graphic that has been revised with the `insetgraphics` command.

A.3 Conclusions
Concluded by Boris Veytsman. `\bib` is Run later, than bibfile, than latex needs to resolve references to create the .bib. `\insert` that `\bib` is into the .aux source. `\inset` command out the commented `\thebibliography`.

B MORE HELP FOR THE HARDY
Of course, reading the source code is always useful. The `\inset` .pdf contains both the user guide and the commented code.

ACKNOWLEDGMENTS
The authors would like to thank Dr. Yuhua Li for providing the initial code of the `\bib` method.
The authors would also like to thank the anonymous referees for their valuable comments and helpful suggestions. The work is supported by the National Natural Science Foundation of China under Grant No. 81273304 and Young Scientists' Support Program (<http://www.cnsc.gov.cn/yongqianshi>).

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- [1] American Mathematical Society 2015. Using the `amsmath` Package. American Mathematical Society. <http://www.ams.org>.
- [2] LaTeX Source Repository. `amsmath` and `amstex`. February 1992. Retrieved from <http://www.ctan.org/ctan/latex/latex209/latex209.tex>.
- [3] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [4] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
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- [6] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [7] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [8] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [9] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [10] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.

The ugly...

KCPS, April 2017, Pittsburgh, PA USA B. Veytsman et al.



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- [3] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [4] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
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- [7] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
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- [9] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.
- [10] American Mathematical Society. `amsmath` Package. American Mathematical Society. 2015. Retrieved from <http://www.ams.org>.

and

Thank you for your attention and good luck in your submissions!

References

- [1] Boris Veytsman. `LaTeX` Class for Association for Computing Machinery, March 2018. The current version is 1.55.