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

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Preamble

ACM has recently 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 a template to use. This new format has several important changes that might confuse particularly those of us in the SENSYS and BUILDSYS communities and in their affiliated 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 package uses free packages and fonts (`Linbiolinum` and `LibLiberte`) available in all major TeX distributions (TeXLive, MikTeX, MacTeX) 2015 and later. If you have older distributions your documents will have incorrect fonts.

Important Rules

1. The preferred format is LaTeX. If you are not an avid LaTeX 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 of the 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 in the User Guide (1) (pages 8–9), but I want to emphasize the fact that ACM discourages the use of "merged" authors block, such as shown below:

Ben Trovato G.K.M. Tobin Lars Thørväld
Institute for Clarity in Documentation, P.O. Box 1212, Dublin, Ohio, 43017-6221
{trovato,tobin,lars}@corporation.com

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

Ben Trovato
Institute for Clarity in Documentation
P.O. Box 1212
Dublin, Ohio 43017-6221
trovato@corporation.com

G.K.M. Tobin
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P.O. Box 1212
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Lars Thørväld
The Thørväld Group
1 Thørväld Circle
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 Proceedings[1].

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 Thørväld, 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 conference[2]. 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 hierarchy[3]. 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.

Once you complete the permissions process with ACM, the information you receive in a second email 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}
```

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, submission 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 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 Proceedings[1].

CCS CONCEPTS

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

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 \textttt{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*

Ben Trovato[†]
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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 Proceedings[1].

CCS CONCEPTS

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

KEYWORDS

ACM proceedings, LaTeX, text tagging

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 hierarchy[3]. 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.

ICCPS, April 2017, Pittsburgh, PA, USA — Ben Trovato, G.K.M. Tobin, Lars Thørväld, 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 SᴇɴSʏs'18 and BᴜɪʟᴅSʏs'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 *a single column width*), use the following with the first 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.
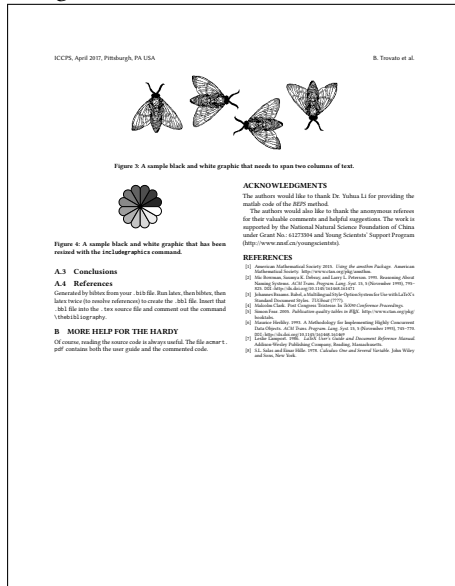
Acknowledgements

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.

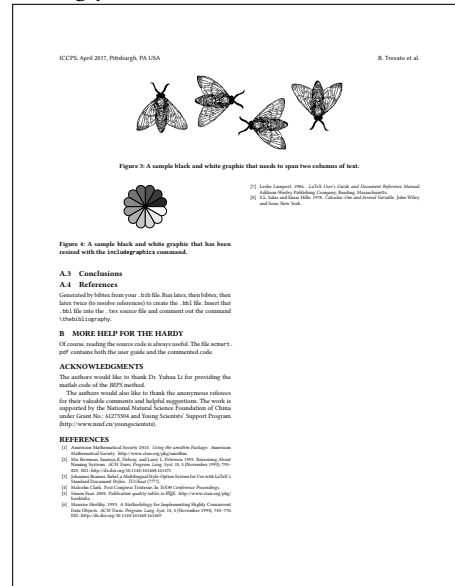## Balanced Columns

Although not enforced, SᴇɴSʏs and BᴜɪʟᴅSʏs communities have been using the balance package to balance the columns on the last page of the manuscripts.

The good...

and

The ugly...

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

References

[1] Boris Veytsman. 2018. LaTeX Class for Association for Computing Machinery. Retrieved August 5, 2018 from http://ctan.mirror.rafal.ca/macros/latex/contrib/acmart/acmguide.pdf. The current version is **1.54**.