

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. 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. The new comers to the communities should have no problem using it, as it will be just a template to use. 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 available in all major \TeX distributions (\TeX Live, Mik \TeX , Mac \TeX) 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.
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.

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 the “merged” authors block, such as shown below:

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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, instead:

Ben Trovato
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The title block of each paper (regular, short papers and abstracts alike) 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 Thörvald, 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

Once you complete the permissions proceed with ACM, the information you receive in a second email will contain:

```
\CopyrightYear{2017}
\setcopyright{acmcopyright}
\conferenceinfo{Sensys'17,}{November 6--8 2017, Delft, The Netherlands}
\isbn{978-1-xxxx-xxxx-x/17/11}\acmPrice{\$15.00}
\doi{http://dx.doi.org/xx.xxxx/xxxxxxx.xxxxxxx}
```

In fact, you need:

```
\copyrightyear{2017}
\setcopyright{acmcopyright}
\acmConference[Sensys'17]{November 6--8 2017, Delft, The Netherlands}
\acmISBN{978-1-xxxx-xxxx-x/17/11}\acmPrice{\$15.00}
\acmDOI{http://dx.doi.org/xx.xxxx/xxxxxxx.xxxxxxx}
```

Make sure to fix this, otherwise you'll get \LaTeX errors. The ACM Reference format and the permissions blocks will be generated automatically, provided you have entered the required information in your `.tex` file.

The following is a minimal **driver** file for your manuscript:

```
\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}

```

The `\terms` is now replaced by the **CCS CONCEPTS**. 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 two potential ugliness with this.

ICCPSP, April 2017, Delft, The Netherlands, USA Thorv  ld, 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 this problem, use one of the following `\acmConference`, for `SENSys` and `BUILDsys`, respectively:

```

\acmConference[SenSys]{The 15th ACM Conference on Embedded Networked Sensor Systems}{November 6-8, 2017}{Delft, The Netherlands}

\acmConference[BuildSys]{The 4th International Conference on Systems for Energy-Efficient Built Environments}{November 8-9, 2017}{Delft, The Netherlands}

```

Further, if you have a long title, use the optional *ShortTitle* in the `\title`. Ideally, if your title is wider than a column width, shorten it.

```

\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, use

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

Lastly, use the names and last names of the authors in the “authors block” consistently. Here are some examples:

Ben Travato
B. Travato
Lawrence P. Leipuner
L.P. Leipuner
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 this 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.

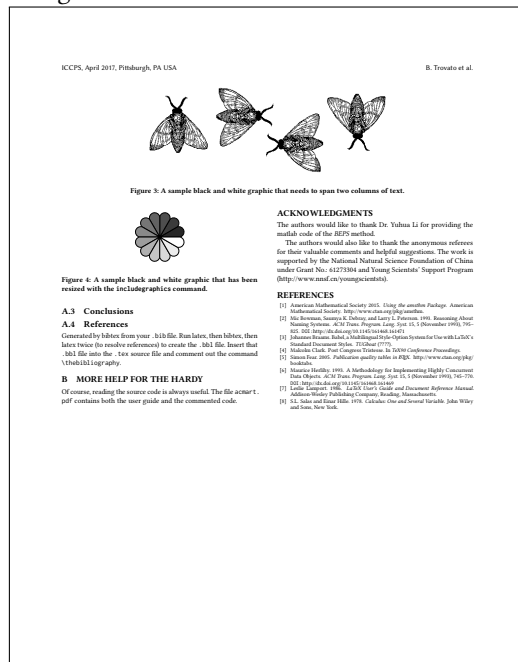
Acknowledgments

If you have to acknowledge someone or something in your manuscript, please insert your message between `\begin{acks}` and `\end{acks}`.

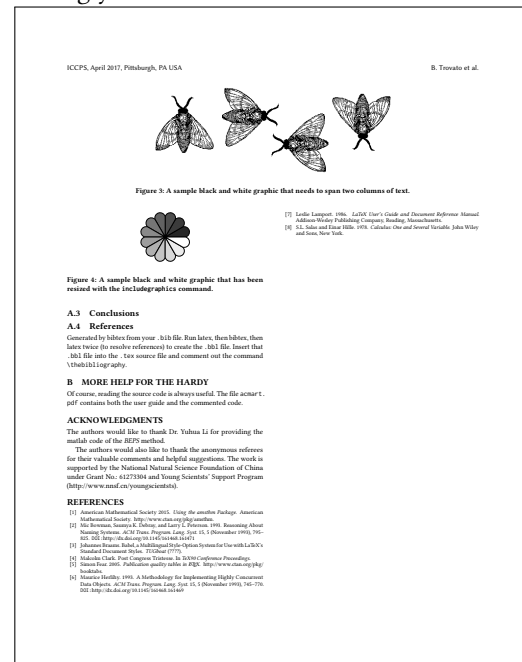
Balanced Columns

Although optional, SENSYS and BUILDSYS communities have been using the balance package to balance the columns on the last page of the manuscripts.

The good



The ugly



and

References

- [1] Boris Veytsman. 2017. \LaTeX Class for Association for Computing Machinery. (March 2017). Retrieved March 13, 2017 from <http://ctan.mirror.rafa1.ca/macros/latex/contrib/acmart/acmguide.pdf>