

# The Name of the Title Is Hope

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A clear and well-documented L<sup>A</sup>T<sub>E</sub>X document is presented as an article formatted for publication by ACM in a conference proceedings or journal publication. Based on the “acmart” document class, this article presents and explains many of the common variations, as well as many of the formatting elements an author may use in the preparation of the documentation of their work.

CCS Concepts: • **Do Not Use This Code → Generate the Correct Terms for Your Paper;** *Generate the Correct Terms for Your Paper; Generate the Correct Terms for Your Paper; Generate the Correct Terms for Your Paper.*

Additional Key Words and Phrases: Do, Not, Us, This, Code, Put, the, Correct, Terms, for, Your, Paper

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## 1 INTRODUCTION

ACM’s consolidated article template, introduced in 2017, provides a consistent L<sup>A</sup>T<sub>E</sub>X style for use across ACM publications, and incorporates accessibility and metadata-extraction functionality necessary for future Digital Library endeavors. Numerous ACM and SIG-specific L<sup>A</sup>T<sub>E</sub>X templates have been examined, and their unique features incorporated into this single new template.

If you are new to publishing with ACM, this document is a valuable guide to the process of preparing your work for publication. If you have published with ACM before, this document provides insight and instruction into more recent changes to the article template.

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50 The “`acmart`” document class can be used to prepare articles for any ACM publication — conference or journal, and for any stage of publication, from review to final “camera-ready” copy, to the  
 51 author’s own version, with *very* few changes to the source.  
 52

## 53 2 TEMPLATE OVERVIEW

54 As noted in the introduction, the “`acmart`” document class can be used to prepare many different kinds of documentation — a double-anonymous initial submission of a full-length technical paper,  
 55 a two-page SIGGRAPH Emerging Technologies abstract, a “camera-ready” journal article, a  
 56 SIGCHI Extended Abstract, and more — all by selecting the appropriate *template style* and *template  
 57 parameters*.

58 This document will explain the major features of the document class. For further information,  
 59 the *LaTeX User’s Guide* is available from <https://www.acm.org/publications/proceedings-template>.

### 60 2.1 Template Styles

61 The primary parameter given to the “`acmart`” document class is the *template style* which corresponds  
 62 to the kind of publication or SIG publishing the work. This parameter is enclosed in square brackets  
 63 and is a part of the `documentclass` command:

64   \documentclass[STYLE]{acmart}

65 Journals use one of three template styles. All but three ACM journals use the `acmsmall` template  
 66 style:  
 67

- 71 • `acmsmall`: The default journal template style.
- 72 • `acmlarge`: Used by JOCCH and TAP.
- 73 • `acmtog`: Used by TOG.

74 The majority of conference proceedings documentation will use the `acmconf` template style.

- 75 • `acmconf`: The default proceedings template style.
- 76 • `sigchi`: Used for SIGCHI conference articles.
- 77 • `sigplan`: Used for SIGPLAN conference articles.

### 78 2.2 Template Parameters

79 In addition to specifying the *template style* to be used in formatting your work, there are a number  
 80 of *template parameters* which modify some part of the applied template style. A complete list of  
 81 these parameters can be found in the *LaTeX User’s Guide*.

82 Frequently-used parameters, or combinations of parameters, include:

- 83 • `anonymous, review`: Suitable for a “double-anonymous” conference submission. Anonymizes  
 84 the work and includes line numbers. Use with the `\printuniqueid` command to print the submission’s  
 85 unique ID on each page of the work.
- 86 • `authorversion`: Produces a version of the work suitable for posting by the author.
- 87 • `screen`: Produces colored hyperlinks.

88 This document uses the following string as the first command in the source file:

89   \documentclass[acmsmall, screen, review]{acmart}

## 90 3 MODIFICATIONS

91 Modifying the template — including but not limited to: adjusting margins, typeface sizes, line  
 92 spacing, paragraph and list definitions, and the use of the `\vspace` command to manually adjust  
 93 the vertical spacing between elements of your work — is not allowed.

94 **Your document will be returned to you for revision if modifications are discovered.**

## 99     **4 TYPEFACES**

100    The “acmart” document class requires the use of the “Libertine” typeface family. Your  $\text{\TeX}$  installation  
101    should include this set of packages. Please do not substitute other typefaces. The “lmodern”  
102    and “ltimes” packages should not be used, as they will override the built-in typeface families.  
103

## 104     **5 TITLE INFORMATION**

105    The title of your work should use capital letters appropriately - <https://capitalizemytitle.com/> has  
106    useful rules for capitalization. Use the `title` command to define the title of your work. If your  
107    work has a subtitle, define it with the `subtitle` command. Do not insert line breaks in your title.  
108

109    If your title is lengthy, you must define a short version to be used in the page headers, to prevent  
110    overlapping text. The `title` command has a “short title” parameter:  
111

```
111    \title[short title]{full title}
```

## 112     **6 AUTHORS AND AFFILIATIONS**

114    Each author must be defined separately for accurate metadata identification. As an exception,  
115    multiple authors may share one affiliation. Authors’ names should not be abbreviated; use full first  
116    names wherever possible. Include authors’ e-mail addresses whenever possible.

117    Grouping authors’ names or e-mail addresses, or providing an “e-mail alias,” as shown below, is  
118    not acceptable:

```
119    \author{Brooke Aster, David Mehldau}  
120    \email{dave,judy,steve@university.edu}  
121    \email{firstname.lastname@phillips.org}
```

123    The `authornote` and `authornotemark` commands allow a note to apply to multiple authors –  
124    for example, if the first two authors of an article contributed equally to the work.

125    If your author list is lengthy, you must define a shortened version of the list of authors to be  
126    used in the page headers, to prevent overlapping text. The following command should be placed  
127    just after the last `\author{}` definition:

```
128    \renewcommand{\shortauthors}{McCartney, et al.}
```

129    Omitting this command will force the use of a concatenated list of all of the authors’ names, which  
130    may result in overlapping text in the page headers.

131    The article template’s documentation, available at <https://www.acm.org/publications/proceedings-template>, has a complete explanation of these commands and tips for their effective use.

133    Note that authors’ addresses are mandatory for journal articles.

## 135     **7 RIGHTS INFORMATION**

136    Authors of any work published by ACM will need to complete a rights form. Depending on the kind  
137    of work, and the rights management choice made by the author, this may be copyright transfer,  
138    permission, license, or an OA (open access) agreement.  
139

140    Regardless of the rights management choice, the author will receive a copy of the completed  
141    rights form once it has been submitted. This form contains  $\text{\LaTeX}$  commands that must be copied  
142    into the source document. When the document source is compiled, these commands and their  
143    parameters add formatted text to several areas of the final document:

- 144    • the “ACM Reference Format” text on the first page.
- 145    • the “rights management” text on the first page.
- 146    • the conference information in the page header(s).

148           Table 1. Frequency of Special Characters  
149  
150

151	Non-English or Math	Frequency	Comments
152	$\emptyset$	1 in 1,000	For Swedish names
153	$\pi$	1 in 5	Common in math
154	\$	4 in 5	Used in business
155	$\Psi_1^2$	1 in 40,000	Unexplained usage

156  
157         Rights information is unique to the work; if you are preparing several works for an event, make  
158         sure to use the correct set of commands with each of the works.  
159160         The ACM Reference Format text is required for all articles over one page in length, and is optional  
161         for one-page articles (abstracts).  
162

## 8 CCS CONCEPTS AND USER-DEFINED KEYWORDS

163         Two elements of the “acmart” document class provide powerful taxonomic tools for you to help  
164         readers find your work in an online search.  
165166         The ACM Computing Classification System — <https://www.acm.org/publications/class-2012> — is  
167         a set of classifiers and concepts that describe the computing discipline. Authors can select entries  
168         from this classification system, via <https://dl.acm.org/ccs/ccs.cfm>, and generate the commands to  
169         be included in the *L<sup>A</sup>T<sub>E</sub>X* source.170         User-defined keywords are a comma-separated list of words and phrases of the authors’ choosing,  
171         providing a more flexible way of describing the research being presented.  
172173         CCS concepts and user-defined keywords are required for for all articles over two pages in length,  
174         and are optional for one- and two-page articles (or abstracts).  
175

## 9 SECTIONING COMMANDS

176         Your work should use standard *L<sup>A</sup>T<sub>E</sub>X* sectioning commands: `section`, `subsection`, `subsubsection`,  
177         and `paragraph`. They should be numbered; do not remove the numbering from the commands.  
178179         Simulating a sectioning command by setting the first word or words of a paragraph in boldface  
180         or italicized text is **not allowed**.  
181

## 10 TABLES

182         The “acmart” document class includes the “booktabs” package — <https://ctan.org/pkg/booktabs> —  
183         for preparing high-quality tables.  
184185         Table captions are placed *above* the table.  
186187         Because tables cannot be split across pages, the best placement for them is typically the top  
188         of the page nearest their initial cite. To ensure this proper “floating” placement of tables, use the  
189         environment `table` to enclose the table’s contents and the table caption. The contents of the table  
190         itself must go in the `tabular` environment, to be aligned properly in rows and columns, with the  
191         desired horizontal and vertical rules. Again, detailed instructions on `tabular` material are found in  
192         the *L<sup>A</sup>T<sub>E</sub>X User’s Guide*.  
193194         Immediately following this sentence is the point at which Table 1 is included in the input file;  
195         compare the placement of the table here with the table in the printed output of this document.  
196197         To set a wider table, which takes up the whole width of the page’s live area, use the environment  
198         `table*` to enclose the table’s contents and the table caption. As with a single-column table, this  
199         wide table will “float” to a location deemed more desirable. Immediately following this sentence

Table 2. Some Typical Commands

Command	A Number	Comments
\author	100	Author
\table	300	For tables
\table*	400	For wider tables

is the point at which Table 2 is included in the input file; again, it is instructive to compare the placement of the table here with the table in the printed output of this document.

Always use midrule to separate table header rows from data rows, and use it only for this purpose. This enables assistive technologies to recognise table headers and support their users in navigating tables more easily.

## 11 MATH EQUATIONS

You may want to display math equations in three distinct styles: inline, numbered or non-numbered display. Each of the three are discussed in the next sections.

### 11.1 Inline (In-text) Equations

A formula that appears in the running text is called an inline or in-text formula. It is produced by the **math** environment, which can be invoked with the usual `\begin{...} \end{...}` construction or with the short form `$...$`. You can use any of the symbols and structures, from  $\alpha$  to  $\omega$ , available in L<sup>A</sup>T<sub>E</sub>X [24]; this section will simply show a few examples of in-text equations in context. Notice how this equation:  $\lim_{n \rightarrow \infty} x = 0$ , set here in in-line math style, looks slightly different when set in display style. (See next section).

### 11.2 Display Equations

A numbered display equation—one set off by vertical space from the text and centered horizontally—is produced by the **equation** environment. An unnumbered display equation is produced by the **displaymath** environment.

Again, in either environment, you can use any of the symbols and structures available in L<sup>A</sup>T<sub>E</sub>X; this section will just give a couple of examples of display equations in context. First, consider the equation, shown as an inline equation above:

$$\lim_{n \rightarrow \infty} x = 0 \tag{1}$$

Notice how it is formatted somewhat differently in the **displaymath** environment. Now, we'll enter an unnumbered equation:

$$\sum_{i=0}^{\infty} x + 1$$

and follow it with another numbered equation:

$$\sum_{i=0}^{\infty} x_i = \int_0^{\pi+2} f \tag{2}$$

just to demonstrate L<sup>A</sup>T<sub>E</sub>X's able handling of numbering.

## 246 12 FIGURES

247 The “figure” environment should be used for figures. One or more images can be placed within a  
248 figure. If your figure contains third-party material, you must clearly identify it as such, as shown in  
249 the example below.  
250



278 Fig. 1. 1907 Franklin Model D roadster. Photograph by Harris & Ewing, Inc. [Public domain], via Wikimedia  
279 Commons. (<https://goo.gl/VLCRBB>).  
280

281 Your figures should contain a caption which describes the figure to the reader.  
282

283 Figure captions are placed *below* the figure.  
284

285 Every figure should also have a figure description unless it is purely decorative. These descriptions  
286 convey what’s in the image to someone who cannot see it. They are also used by search engine  
crawlers for indexing images, and when images cannot be loaded.  
287

288 A figure description must be unformatted plain text less than 2000 characters long (including  
289 spaces). **Figure descriptions should not repeat the figure caption – their purpose is to**  
**290 capture important information that is not already provided in the caption or the main**  
**291 text of the paper.** For figures that convey important and complex new information, a short  
292 text description may not be adequate. More complex alternative descriptions can be placed in an  
293 appendix and referenced in a short figure description. For example, provide a data table capturing  
the information in a bar chart, or a structured list representing a graph. For additional information  
294

295 regarding how best to write figure descriptions and why doing this is so important, please see  
 296 <https://www.acm.org/publications/taps/describing-figures/>.

### 297 298 12.1 The “Teaser Figure”

299 A “teaser figure” is an image, or set of images in one figure, that are placed after all author and  
 300 affiliation information, and before the body of the article, spanning the page. If you wish to have  
 301 such a figure in your article, place the command immediately before the `\maketitle` command:

```
302 \begin{teaserfigure}
303   \includegraphics[width=\textwidth]{sampleteaser}
304   \caption{figure caption}
305   \Description{figure description}
306 \end{teaserfigure}
```

## 307 308 13 CITATIONS AND BIBLIOGRAPHIES

309 The use of Bib<sub>T</sub>E<sub>X</sub> for the preparation and formatting of one’s references is strongly recommended.  
 310 Authors’ names should be complete — use full first names (“Donald E. Knuth”) not initials (“D. E.  
 311 Knuth”) — and the salient identifying features of a reference should be included: title, year, volume,  
 312 number, pages, article DOI, etc.

313 The bibliography is included in your source document with these two commands, placed just  
 314 before the `\end{document}` command:

```
315 \bibliographystyle{ACM-Reference-Format}
316 \bibliography{bibfile}
```

317 where “bibfile” is the name, without the “.bib” suffix, of the Bib<sub>T</sub>E<sub>X</sub> file.

318 Citations and references are numbered by default. A small number of ACM publications have  
 319 citations and references formatted in the “author year” style; for these exceptions, please include  
 320 this command in the **preamble** (before the command “`\begin{document}`”) of your L<sub>A</sub>T<sub>E</sub>X source:  
 321

```
322 \citestyle{acmauthoryear}
```

323 Some examples. A paginated journal article [2], an enumerated journal article [10], a reference  
 324 to an entire issue [9], a monograph (whole book) [23], a monograph/whole book in a series (see  
 325 2a in spec. document) [17], a divisible-book such as an anthology or compilation [12] followed  
 326 by the same example, however we only output the series if the volume number is given [13] (so  
 327 Editor00a’s series should NOT be present since it has no vol. no.), a chapter in a divisible book [35],  
 328 a chapter in a divisible book in a series [11], a multi-volume work as book [22], a couple of articles  
 329 in a proceedings (of a conference, symposium, workshop for example) (paginated proceedings  
 330 article) [3, 15], a proceedings article with all possible elements [34], an example of an enumerated  
 331 proceedings article [14], an informally published work [16], a couple of preprints [6, 7], a doctoral  
 332 dissertation [8], a master’s thesis: [4], an online document / world wide web resource [1, 28, 36], a  
 333 video game (Case 1) [27] and (Case 2) [26] and [25] and (Case 3) a patent [33], work accepted for  
 334 publication [30], ’YYYYb’-test for prolific author [31] and [32]. Other cites might contain ‘duplicate’  
 335 DOI and URLs (some SIAM articles) [21]. Boris / Barbara Beeton: multi-volume works as books [19]  
 336 and [18]. A couple of citations with DOIs: [20, 21]. Online citations: [36–38]. Artifacts: [29] and [5].

## 337 338 14 ACKNOWLEDGMENTS

339 Identification of funding sources and other support, and thanks to individuals and groups that  
 340 assisted in the research and the preparation of the work should be included in an acknowledgment  
 341 section, which is placed just before the reference section in your document.

342 This section has a special environment:

343

```
344 \begin{acks}  
345 ...  
346 \end{acks}
```

so that the information contained therein can be more easily collected during the article metadata extraction phase, and to ensure consistency in the spelling of the section heading.

Authors should not prepare this section as a numbered or unnumbered \section; please use the “acks” environment.

15 APPENDICES

If your work needs an appendix, add it before the “`\end{document}`” command at the conclusion of your source document.

Start the appendix with the “`appendix`” command:

## \appendix

and note that in the appendix, sections are lettered, not numbered. This document has two appendices, demonstrating the section and subsection identification method.

16 MULTI-LANGUAGE PAPERS

Papers may be written in languages other than English or include titles, subtitles, keywords and abstracts in different languages (as a rule, a paper in a language other than English should include an English title and an English abstract). Use `language=...` for every language used in the paper. The last language indicated is the main language of the paper. For example, a French paper with additional titles and abstracts in English and German may start with the following command

```
\documentclass[sigconf, language=english, language=german,  
language=french]{acmart}
```

The title, subtitle, keywords and abstract will be typeset in the main language of the paper. The commands \translatedXXX, XXX begin title, subtitle and keywords, can be used to set these elements in the other languages. The environment `translatedabstract` is used to set the translation of the abstract. These commands and environment have a mandatory first argument: the language of the second argument. See `sample-sigconf-i13n.tex` file for examples of their usage.

17 SIGCHI EXTENDED ABSTRACTS

The “sigchi-a” template style (available only in L<sup>A</sup>T<sub>E</sub>X and not in Word) produces a landscape-orientation formatted article, with a wide left margin. Three environments are available for use with the “sigchi-a” template style, and produce formatted output in the margin:

**sidebar:** Place formatted text in the margin.

**marginfigure**: Place a figure in the margin.

**marginable**: Place a table in the margin.

## **ACKNOWLEDGMENTS**

To Robert, for the bagels and explaining CMYK and color spaces.

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## 455 A RESEARCH METHODS

### 456 A.1 Part One

457 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi malesuada, quam in pulvinar varius,  
458 metus nunc fermentum urna, id sollicitudin purus odio sit amet enim. Aliquam ullamcorper eu  
459 ipsum vel mollis. Curabitur quis dictum nisl. Phasellus vel semper risus, et lacinia dolor. Integer  
460 ultricies commodo sem nec semper.

### 461 A.2 Part Two

462 Etiam commodo feugiat nisl pulvinar pellentesque. Etiam auctor sodales ligula, non varius nibh  
463 pulvinar semper. Suspendisse nec lectus non ipsum convallis congue hendrerit vitae sapien. Donec  
464 at laoreet eros. Vivamus non purus placerat, scelerisque diam eu, cursus ante. Etiam aliquam tortor  
465 auctor efficitur mattis.

## 466 B ONLINE RESOURCES

467 Nam id fermentum dui. Suspendisse sagittis tortor a nulla mollis, in pulvinar ex pretium. Sed  
468 interdum orci quis metus euismod, et sagittis enim maximus. Vestibulum gravida massa ut felis  
469 suscipit congue. Quisque mattis elit a risus ultrices commodo venenatis eget dui. Etiam sagittis  
470 eleifend elementum.

471 Nam interdum magna at lectus dignissim, ac dignissim lorem rhoncus. Maecenas eu arcu ac  
472 neque placerat aliquam. Nunc pulvinar massa et mattis lacinia.

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