Writing ACM Conference Papers in Markdown

Max Mustermann
University of Musterstadt
Musterstadt, Germany
max.mustermann@example.com

Ike Antkare
International Institute of Technology
United Slates of Earth
Ike.Antkare@iit.use

Figure 1: This is a special two-column *teaser figure*

ABSTRACT

This sample paper demonstrates how to write a scientific paper in Markdown. The abstract needs to be put into a so-called *fenced div*. This allows the toolchain to extract it and put it into the correct metadata field for the rendering template.

CCS CONCEPTS

• **Human-centered computing** → **Interaction devices**; Mixed / augmented reality.

KEYWORDS

example, markdown, test, pandoc, LaTeX

ACM Reference Format:
Max Mustermann and Ike Antkare. 2019. Writing ACM Conference Papers in Markdown. In *EXAMPLE '19 Adjunct Proceedings*. ACM, New York, NY, USA, 5 pages.

1 INTRODUCTION

This sample document contains some text from the official ACM LaTeX template.

ACM's consolidated article template, introduced in 2017, provides a consistent LaTeX style for use across ACM publications, and incorporates accessibility and metadata-extraction functionality necessary for future Digital Library endeavors. Numerous ACM and SIG-specific LaTeX templates have been examined, and their unique features incorporated into this single new template.

However, not everyone likes writing LaTeX code. Some people prefer writing and reading Markdown text. However, for submission to ACM conferences and journals, the official template needs to be used.

This Markdown template and toolchain allow authors to write straightforward Markdown while supporting a few of the unique features of the ACM LaTeX template.

It is still work in progress and does not yet follow all ACM style requirements. However, authors can easily use the generated TeX output to prepare a submission that follows ACM's requirements.

For further information on the LaTeX class, the *LaTeX User's Guide* is available from https://www.acm.org/publications/proceedings-template.

2 FEATURE DEMO

As shown by Antkare [7,26], publishing is important. This example document contains fragments typically used when writing a scientific paper. Please check the Pandoc User's Guide for more details on *Pandoc-flavored Markdown*. Figure 2 is a placeholder.

Note: Footnotes are useful[1].

3 EXAMPLES

3.1 Apples

Lists are easy:

- a first item
- and a second one with an unrelated footnote[2]

3.2 Bananas

Numbered lists:

---

[1] When used sparingly. They are a good place for linking to websites, such as https://github.com/alex/what-happens-when.
[2] For long URLs, insert manual breaks like this: https://docs.google.com/document/d/1B3GfZkwAfHlQE5kAuHcn-wq8I-7D5UF2Ap7C_CYk5co/
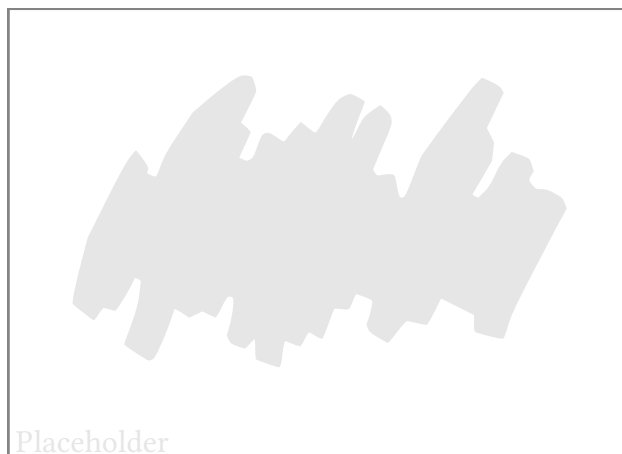
Figure 2: An image that demonstrates something. This is the PDF version of the image.

1. the user always comes first
2. minutes come second
3. now comes the last item. Be aware that Pandoc ignores which numbers you actually place in front!

A small *pseudo-code* listing (which probably should have a caption?)

```
1  def hello(s):
2    print("Hello " + s)
```

Put two space characters at the end of a line to insert a manual line break.
Teletype formatting example: `pandoc --help` is helpful.

Insert an empty line to start a new paragraph.

3.3 Metadata

Author names and many other relevant metadata are set in the YAML block at the beginning of the document. However, currently, the output template and some template-specific options are only set in the Makefile. If you want to switch between single-column *manuscript* style and two-columnt *sigconf* style, you need to edit the `sigconf.mk` Makefile.

4 TYPEFACES

The "`acmart`" document class requires the use of the "Libertine" typeface family. Your TeX installation should include this set of packages. Please do not substitute other typefaces. The "`lmodern`" and "`ltimes`" packages should not be used, as they will override the built-in typeface families.

5 TITLE INFORMATION

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

If your title is lengthy, you must define a short version to be used in the page headers, to prevent overlapping text. You can do this at the top of the YAML block.

6 AUTHORS AND AFFILIATIONS

Each author must be defined separately for accurate metadata identification. Multiple authors may share one affiliation. Authors' names should not be abbreviated; use full first names wherever possible. Include authors' e-mail addresses whenever possible.

The `authornote` and `authornotemark` commands in the LaTeX template allow a note to apply to multiple authors — for example, if the first two authors of an article contributed equally to the work.

This feature is currently **not** supported in the Markdown toolchain.

7 RIGHTS INFORMATION

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

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

- the "ACM Reference Format" text on the first page.
- the "rights management" text on the first page.
- the conference information in the page header(s).

Rights information is unique to the work; if you are preparing several works for an event, make sure to use the correct set of commands with each of the works.

The ACM Reference Format text is required for all articles over one page in length, and is optional for one-page articles (abstracts).

8 CCS CONCEPTS AND USER-DEFINED KEYWORDS

Two elements of the "acmart" document class provide powerful taxonomic tools for you to help readers find your work in an online search.

The ACM Computing Classification System — https://www.acm.org/publications/class-2012 — is a set of classifiers and concepts that describe the computing discipline. Authors can select entries from this classification system, via https://dl.acm.org/ccs/ccs.cfm, and generate the commands to be included in the LaTeX source.

User-defined keywords are a comma-separated list of words and phrases of the authors' choosing, providing a more flexible way of describing the research being presented.

CCS concepts and user-defined keywords are required for for all articles over two pages in length, and are optional for one- and two-page articles (or abstracts).

Table 1: Frequency of Special Characters

Non-English or Math	Frequency	Comments
Ø	1 in 1,000	For Swedish names
π	1 in 5	Common in math
$	4 in 5	Used in business
Ψ_1^2	1 in 40,000	Unexplained usage

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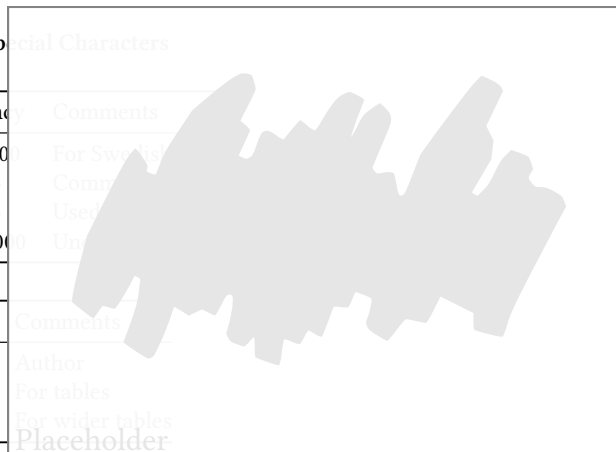
Placeholder

9 SECTIONING COMMANDS

Your work should use standard LaTeX sectioning commands: `section`, `subsection`, `subsubsection`, and `paragraph`. They should be numbered; do not remove the numbering from the commands.

Simulating a sectioning command by setting the first word or words of a paragraph in boldface or italicized text is **not allowed**.

10 TABLES

The "`acmart`" document class includes the "`booktabs`" package — https://ctan.org/pkg/booktabs — for preparing high-quality tables.

Table captions are placed *above* the table.

Because tables cannot be split across pages, the best placement for them is typically the top of the page nearest their initial cite. To ensure this proper "floating" placement of tables, use the environment **table** to enclose the table's contents and the table caption. The contents of the table itself must go in the **tabular** environment, to be aligned properly in rows and columns, with the desired horizontal and vertical rules. Again, detailed instructions on **tabular** material are found in the *LaTeX User's Guide.*

Immediately following this sentence is the point at which Table 1 is included in the input file; compare the placement of the table here with the table in the printed output of this document.

To set a wider table, which takes up the whole width of the page's live area, use the environment **table*** to enclose the table's contents and the table caption. As with a single-column table, this wide table will "float" to a location deemed more desirable. Immediately following this sentence is the point at which Table Table ?? 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.

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.

12 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.

Figure 3: A placeholder image with a single-column width.

Again, in either environment, you can use any of the symbols and structures available in LaTeX; this section will just give a couple of examples of display equations in context. First, consider the equation, shown as an inline equation above:

$$\lim_{n \to \infty} x = 0$$

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:

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

just to demonstrate LaTeX's able handling of numbering.

13 FIGURES

The "`figure`" environment should be used for figures. One or more images can be placed within a figure. If your figure contains third-party material, you must clearly identify it as such, as shown in the example below (Figure 3, 4) .

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

Figure captions are placed *below* the figure.

Every figure should also have a figure description unless it is purely decorative. These descriptions 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.

A figure description must be unformatted plain text less than 2000 characters long (including spaces). **Figure descriptions should not repeat the figure caption – their purpose is to capture important information that is not already provided in the caption or the main text of the paper**. For figures that convey important and complex new information, a short text description may not be adequate. More complex alternative descriptions can be placed in an appendix and referenced in a short figure

Figure 4: A placeholder image with a two-column width.

description. For example, provide a data table capturing the information in a bar chart, or a structured list representing a graph. For additional information regarding how best to write figure descriptions and why doing this is so important, please see https://www.acm.org/publications/taps/describing-figures/.

14 CITATIONS AND BIBLIOGRAPHIES

The use of for the preparation and formatting of one's references is strongly recommended. Authors' names should be complete — use full first names ("Donald E. Knuth") not initials ("D. E. Knuth") — and the salient identifying features of a reference should be included: title, year, volume, number, pages, article DOI, etc.

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

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

where "`bibfile`" is the name, without the "`.bib`" suffix, of the file.

Citations and references are numbered by default. A small number of ACM publications have citations and references formatted in the "author year" style; for these exceptions, please include this command in the **preamble** (before the command "`\begin{document}`") of your LaTeX source:

```
\citestyle{acmauthoryear}
```

Some examples. A paginated journal article [4], an enumerated journal article [13], a reference to an entire issue [12], a monograph (whole book) [25], a monograph/whole book in a series (see 2a in spec. document) [20], a divisible-book such as an anthology or compilation [15] followed by the same example, however we only output the series if the volume number is given [16] (so Editor00a's series should NOT be present since it has no vol. no.), a chapter in a divisible book [37], a chapter in a divisible book in a series [14], a multi-volume work as book [24], a couple of articles in a proceedings (of a conference, symposium, workshop for example) (paginated proceedings article) [5,18], a proceedings article with all possible elements [36], an example of an enumerated

proceedings article [17], an informally published work [19], a couple of preprints [9,10], a doctoral dissertation [11], a master's thesis: [6], an online document / world wide web resource [3,30,38], a video game (Case 1) [29] and (Case 2) [28] and [27] and (Case 3) a patent [35], work accepted for publication [32], 'YYYYb'-test for prolific author [33] and [34]. Other cites might contain 'duplicate' DOI and URLs (some SIAM articles) [23]. Boris / Barbara Beeton: multi-volume works as books [22] and [21]. A couple of citations with DOIs: [1,23]. Online citations: [2,38,39]. Artifacts: [31] and [8].

15 ACKNOWLEDGMENTS

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

This section has a special environment:

```
\begin{acks}
...
\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.

16 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.

17 SIGCHI EXTENDED ABSTRACTS

are not supported by this toolchain at the moment.

REFERENCES

1. 2004. IEEE TCSC executive committee. In *Proceedings of the IEEE international conference on web services* (ICWS '04), 21–22. https://doi.org/http://dx.doi.org/10.1109/ICWS.2004.64

2. 2017. Institutional members of the TeX users group. Retrieved from http://wwtug.org/instmem.html

3. Rafal Ablamowicz and Bertfried Fauser. 2007. CLIFFORD: A maple 11 package for clifford algebra computations, version 11. Retrieved from http://math.tntech.edu/rafal/cliff11/index.html

4. Patricia S. Abril and Robert Plant. 2007. The patent holder's dilemma: Buy, sell, or troll? *Communications of the ACM* 50, 1: 36–44. https://doi.org/10.1145/1188913.1188915

5. Sten Andler. 1979. Predicate path expressions. In *Proceedings of the 6th. ACM SIGACT-SIGPLAN symposium on principles of programming languages* (POPL '79), 226–236. https://doi.org/10.1145/567752.567774

6. David A. Anisi. 2003. Optimal motion control of a ground vehicle. Royal Institute of Technology (KTH), Stockholm, Sweden.

7. Ike Antkare. 2009. On the study of reinforcement learning. In *In proceedings of the conference on "smart," interposable methodologies.*

8. Sam Anzaroot and Andrew McCallum. 2013. UMass citation field extraction dataset. Retrieved from http://www.iesl.cs.umass.edu/data/data-umasscitationfield

9. Sam Anzaroot, Alexandre Passos, David Belanger, and Andrew McCallum. 2014. Learning soft linear constraints with application to citation field extraction. Retrieved from https://arxiv.org/abs/1403.1349

10. Lutz Bornmann, K. Brad Wray, and Robin Haunschild. 2019. Citation concept analysis (CCA)—a new form of citation analysis revealing the usefulness of concepts for other researchers illustrated by two exemplary case studies including classic books by Thomas S. Kuhn and Karl R. Popper. Retrieved from https://arxiv.org/abs/1905.12410

11. Kenneth L. Clarkson. 1985. Algorithms for closest-point problems (computational geometry). Stanford University, Palo Alto, CA.

12. Jacques Cohen (ed.). 1996. Special issue: Digital libraries. *Special issue: Digital Libraries* 39, 11.

13. Sarah Cohen, Werner Nutt, and Yehoshua Sagic. 2007. Deciding equivalances among conjunctive aggregate queries. *J. ACM* 54, 2. https://doi.org/10.1145/1219092.1219093

14. Bruce P. Douglass, David Harel, and Mark B. Trakhtenbrot. 1998. Statecarts in use: Structured analysis and object-orientation. In *Lectures on embedded systems*, Grzegorz Rozenberg and Frits W. Vaandrager (eds.). Springer-Verlag, London, 368–394. https://doi.org/10.1007/3-540-65193-4_29

15. Ian Editor (ed.). 2007. The title of book one: The book subtitle. In (1st. ed.). University of Chicago Press, Chicago. https://doi.org/10.1007/3-540-09237-4

16. Ian Editor (ed.). 2008. The title of book two: The book subtitle. In (2nd. ed.). University of Chicago Press, Chicago. https://doi.org/10.1007/3-540-09237-4

17. Matthew Van Gundy, Davide Balzarotti, and Giovanni Vigna. 2007. Catch me, if you can: Evading network signatures with web-based polymorphic worms. In *Proceedings of the first USENIX workshop on offensive technologies* (WOOT '07).

18. Torben Hagerup, Kurt Mehlhorn, and J. Ian Munro. 1993. Maintaining discrete probability distributions optimally. In *Proceedings of the 20th international colloquium on automata, languages and programming* (Lecture notes in computer science), 253–264.

19. David Harel. 1978. *LOGICS of programs: AXIOMATICS and DESCRIPTIVE POWER.* Massachusetts Institute of Technology, Cambridge, MA.

20. David Harel. 1979. *First-order dynamic logic.* Springer-Verlag, New York, NY. https://doi.org/10.1007/3-540-09237-4

21. Lars Hörmander. 1985. *The analysis of linear partial differential operators. III.* Springer-Verlag, Berlin, Germany.

22. Lars Hörmander. 1985. *The analysis of linear partial differential operators. IV.* Springer-Verlag, Berlin, Germany.

23. Markus Kirschmer and John Voight. 2010. Algorithmic enumeration of ideal classes for quaternion orders. *SIAM J. Comput.* 39, 5: 1714–1747. https://doi.org/https://doi.org/10.1137/080734467

24. Donald E. Knuth. 1997. *The art of computer programming, vol. 1: Fundamental algorithms (3rd. ed.).* Addison Wesley Longman Publishing Co., Inc.

25. David Kosiur. 2001. *Understanding policy-based networking.* Wiley, New York, NY.

26. Cyril Labbé. 2010. *Ike Antkare one of the great stars in the scientific firmament.* LIG. Retrieved from https://hal.archives-ouvertes.fr/hal-01354123

27. Newton Lee. 2005. Interview with bill kinder: January 13, 2005. *Comput. Entertain.* 3, 1. https://doi.org/10.1145/1057270.1057278

28. Dave Novak. 2003. Solder man. In *ACM SIGGRAPH 2003 video review on animation theater program: Part i - vol. 145 (july 27–27, 2003)*, 4. https://doi.org/99.9999/woot07-S422

29. Barack Obama. 2008. A more perfect union. Retrieved from http://video.google.com/videoplay?docid=6528042696351994555

30. Poker-Edge.Com. 2006. Stats and analysis. Retrieved from http://www.poker-edge.com/stats.php

31. R Core Team. 2019. R: A language and environment for statistical computing. Retrieved from https://www.R-project.org/

32. Bernard Rous. 2008. The enabling of digital libraries. *Digital Libraries* 12, 3.

33. Mehdi Saeedi, Morteza Saheb Zamani, and Mehdi Sedighi. 2010. A library-based synthesis methodology for reversible logic. *Microelectron. J.* 41, 4: 185–194.

34. Mehdi Saeedi, Morteza Saheb Zamani, Mehdi Sedighi, and Zahra Sasanian. 2010. Synthesis of reversible circuit using cycle-based approach. *J. Emerg. Technol. Comput. Syst.* 6, 4.

35. Joseph Scientist. 2009. The fountain of youth.

36. Stan W. Smith. 2010. An experiment in bibliographic mark-up: Parsing metadata for XML export. In *Proceedings of the 3rd. Annual workshop on librarians and computers* (LAC '10), 422–431. https://doi.org/99.9999/woot07-S422

37. Asad Z. Spector. 1990. Achieving application requirements. In *Distributed systems* (2nd. ed.), Sape Mullender (ed.). ACM Press, New York, NY, 19–33. https://doi.org/10.1145/90417.90738

38. Harry Thornburg. 2001. Introduction to bayesian statistics. Retrieved from http://ccrma.stanford.edu/~jos/bayes/bayes.html

39. Boris Veytsman. 2017. Acmart—Class for typesetting publications of ACM. Retrieved from http://www.ctan.org/pkg/acmart