

# Paper Title

Firstname Lastname and Firstname Lastname

Institute

**Abstract.** Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.


**Keywords:** First keyword · Second keyword · Third keyword

## 1 Introduction

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.


Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac

quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et  am vulputate metus eu enim. Vestibulum pellentesque felis eu massa.TODO!

The remainder of the paper starts with a presentation of related work (Sect. 2). It is followed by a presentation of hints on L<sup>A</sup>T<sub>E</sub>X (Sect. 3). Finally, a conclusion is drawn and outlook on future work is made (Sect. 4).

## 2 Related Work

Winery [2] is a graphical  modeling tool. The whole idea of TOSCA is explained by Binz et al. [1].

## 3 LaTeX Hints

This section contains hints on writing LaTeX. It focuses on minimal examples, which can be directly adapted to the content

### 3.1 Handling of paragraphs

One sentence per line. This rule is important for the usage of version control systems. A new line is generated with a blank line. As you would do in Word: New paragraphs are generated by pressing enter. In LaTeX, this does not lead to a new paragraph as LaTeX joins subsequent lines. In case you want a new paragraph, just press enter twice! This leads to an empty line. In word, there is the functionality to press shift and enter. This leads to a hard line break. The text starts at the beginning of a new line. In LaTeX, you can do that by using two backslashes (`\\`).

This is rarely used.

Please do *not* use two backslashes for new paragraphs. For instance, this sentence belongs to the same paragraph, whereas the last one started a new one. A long motivation for that is provided at <http://loopSPACE.mathforge.org/HowDidIDoThat/TeX/VCS/#section.3>.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

572 One sentence per line.
573 This rule is important for the usage of version control
    ↪ systems.
574 A new line is generated with a blank line.
575 As you would do in Word:
576 New paragraphs are generated by pressing enter.
577 In LaTeX, this does not lead to a new paragraph as LaTeX joins
    ↪ subsequent lines.
578 In case you want a new paragraph, just press enter twice!
579 This leads to an empty line.
580 In word, there is the functionality to press shift and enter.
581 This leads to a hard line break.
582 The text starts at the beginning of a new line.
583 In LaTeX, you can do that by using two backslashes
    ↪ (\textbackslash\textbackslash).
584 \\
585 This is rarely used.
586
587 Please do \textit{not} use two backslashes for new paragraphs.
588 For instance, this sentence belongs to the same paragraph,
    ↪ whereas the last one started a new one.
589 A long motivation for that is provided at \url{http://}
    ↪ loopspace.mathforge.org/HowDidIDoThat/TeX/VCS/#section.3}.

```

### 3.2 Notes separated from the text

The package mindflow enables writing down notes and annotations in a way so that they are separated from the main text.

---

This is a small note.

---

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

597 \begin{mindflow}
598 This is a small note.
599 \end{mindflow}

```

### 3.3 Handling TODOs

Markierter Text.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

605 \textmarker{Markierter Text.}

```

Bei `\textmarker` wird nur die Textfarbe geändert, da dies auch bei einigen Worten gut funktioniert.

Markierter Text.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
611 \textcomment{Markierter Text.}{Kommentar dazu.}
```

Manuelle Markierung für Text, der seit der letzten Version geändert wurde.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
615 \modified{Manuelle Markierung für Text, der seit der letzten
↪ Version geändert wurde.}
```

Das ist ein Text. Geänderter Text.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
619 Das ist ein Text.
620 \change{FL1: Text angepasst}{Geänderter Text}.
```

Hier nur ein Kommentar.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
624 Hier nur ein Kommentar\sidecomment{Kommentar}.
```

TODO!

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
628 \todo{Hier muss noch kräftig Text produziert werden}
```

### 3.4 Hyphenation

L<sup>A</sup>T<sub>E</sub>X automatically hyphenates words. When using microtype, there should be fewer hyphenations than in other settings. It might be necessary to tweak the hyphenations nevertheless. Here are some hints:

In case you write “application-specific”, then the word will only be hyphenated at the dash. You can also write `applica\allowbreak{tion-specific}` (result: application-specific), but this is much more effort.

You can now write words containing hyphens which are hyphenated at other places in the word. For instance, `application=specific` gets application=specific. This is enabled by an additional configuration of the babel package.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

639 In case you write \enquote{application-specific}, then the
    ↪ word will only be hyphenated at the dash.
640 You can also write \verb!applica\allowbreak{}tion-specific!
    ↪ (result: applica\allowbreak{}tion-specific), but this is
    ↪ much more effort.
641
642 You can now write words containing hyphens which are
    ↪ hyphenated at other places in the word.
643 For instance, \verb!application"=specific! gets
    ↪ application"=specific.
644 This is enabled by an additional configuration of the babel
    ↪ package.

```

### 3.5 Typesetting Units

Numbers can be written plain text (such as 100), by using the siunitx package as follows: 100  $\frac{\text{km}}{\text{h}}$ , or by using plain L<sup>A</sup>T<sub>E</sub>X (and math mode): 100  $\frac{\text{km}}{\text{h}}$ .

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

650 Numbers can be written plain text (such as 100), by using the
    ↪ \href{https://ctan.org/pkg/siunitx}{siunitx} package as
    ↪ follows:
651 \SI{100}{\km\per\hour},
652 or by using plain \LaTeX{} (and math mode):
653 $100 \frac{\mathit{km}}{h}$.

```

5 % of 10 kg

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

657 \SI{5}{\percent} of \SI{10}{kg}

```

Numbers are automatically grouped: 123 456.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

661 Numbers are automatically grouped: \num{123456}.

```

### 3.6 Surrounding Text by Quotes

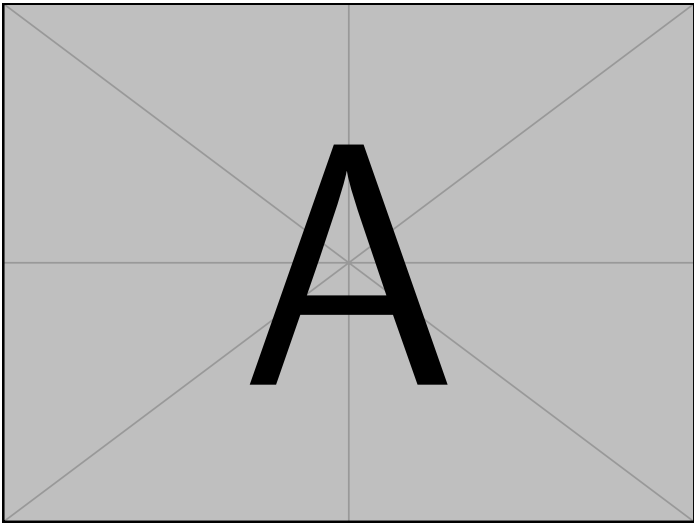
Please use the “enquote command” to quote something. Quoting with “quote” or “quote” also works.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

667 Please use the \enquote{enquote command} to quote something.  
668 Quoting with "\quote" or "\quote" also works.  
669

3.7    Cleveref examples

Cleveref demonstration: Cref at beginning of sentence, cref in all other cases.



**Fig. 1:** Example figure for cref demo

Heading1    Heading2	
One	Two
Thee	Four

**Table 1:** Example table for cref demo

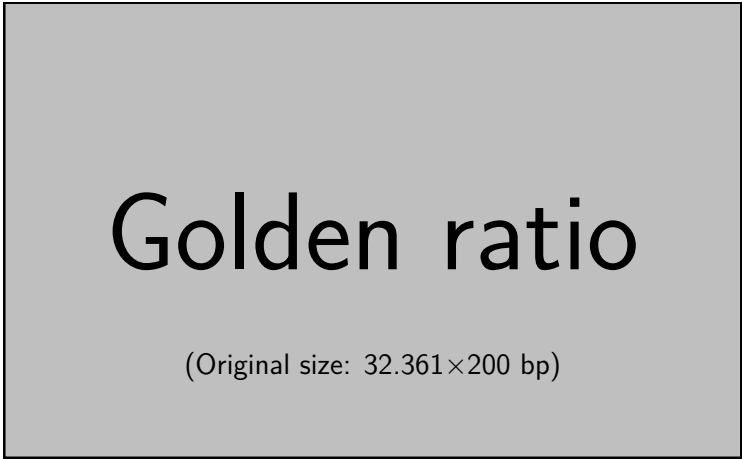
Figure 1 shows a simple fact, although Fig. 1 could also show something else.  
Table 1 shows a simple fact, although Table 1 could also show something else.  
Section 3.7 shows a simple fact, although Sect. 3.7 could also show something else.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
699 \Cref{fig:ex:cref} shows a simple fact, although
    ↪ \cref{fig:ex:cref} could also show something else.
700
701 \Cref{tab:ex:cref} shows a simple fact, although
    ↪ \cref{tab:ex:cref} could also show something else.
702
703 \Cref{sec:ex:cref} shows a simple fact, although
    ↪ \cref{sec:ex:cref} could also show something else.
```

3.8 Figures

Figure 2 shows something interesting.



**Fig. 2:** Simple Figure. Based on Scharrer [3].

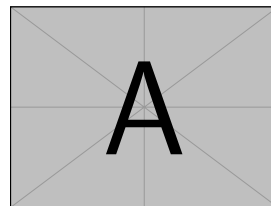
Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```
709 \Cref{fig:label} shows something interesting.  
710  
711 \begin{figure}  
712   \centering  
713   \includegraphics[width=.8\linewidth]{example-image-golden}  
714   \caption[Simple Figure]{  
715     Simple Figure.  
716     Based on \citet{mwe}.  
717   }  
718   \label{fig:label}  
719 \end{figure}
```

One can also have pictures floating inside text:



Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.



**Fig. 3:** A floating figure

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

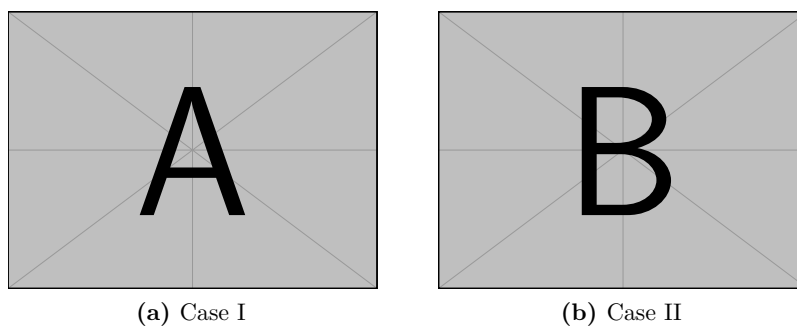
```

726 \begin{floatingfigure}{.33\linewidth}
727   \includegraphics[width=.29\linewidth]{example-image-a}
728   \caption{A floating figure}
729 \end{floatingfigure}
730 \lipsum[2]

```

### 3.9 Sub Figures

An example of two sub figures is shown in Fig. 4.



**Fig. 4:** Example figure with two sub figures.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

738 \begin{figure}[!b]
739   \centering
740   \subfloat[Case I]{\includegraphics[width=.4\linewidth]{
      ↪ example-image-a}%
741     \label{fig:first_case}}
742   \hfil
743   \subfloat[Case II]{\includegraphics[width=.4\linewidth]{
      ↪ example-image-b}%
744     \label{fig:second_case}}
745   \caption{Example figure with two sub figures.}
746   \label{fig:two_sub_figures}
747 \end{figure}

```

### 3.10 Tables

**Table 2:** Simple Table

Heading1	Heading2
One	Two
Thee	Four

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

753 \begin{table}
754   \caption{Simple Table}
755   \label{tab:simple}
756   \centering
757   \begin{tabular}{ll}
758     \toprule
759     Heading1 & Heading2 \\
760     \midrule
761     One      & Two      \\
762     Thee     & Four     \\
763     \bottomrule
764   \end{tabular}
765 \end{table}

```

**Table 3:** Table with diagonal line

Diag Column Head I	Diag Column Head II	Second	Third
		foo	bar

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

769 % Source: https://tex.stackexchange.com/a/468994/9075
770 \begin{table}
771   \caption{Table with diagonal line}
772   \label{tab:diag}
773   \begin{center}
774     \begin{tabular}{|l|c|c|}
775       \hline
776       \diagbox[width=10em]{Diag \Column Head I}{Diag
777         \Column\Head II} & Second & Third \\
778       & foo & bar \\
779       \hline
780     \end{tabular}
781   \end{center}
782 \end{table}

```

### 3.11 Source Code

minted is a sophisticated package to enable properly highlighted listings. It uses the pygments library, which in turn requires Python.

Listing 1 shows source code written in XML. line 2 contains a comment.

```

1 <listing name="example">
2   <!-- comment -->
3   <content>not interesting</content>
4 </listing>

```

**List. 1:** Example XML listing using minted

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

792 \Cref{lst:XML} shows source code written in XML.
793 \refline{line:comment} contains a comment.
794
795 \begin{listing}[htbp]
796   \begin{minted}[linenos=true,escapeinside=||]{xml}
797   <listing name="example">
798     <!-- comment --> |\labelline{line:comment}|
799     <content>not interesting</content>
800   </listing>
801   \end{minted}
802   \caption{Example XML listing using minted}
803   \label{lst:XML}
804 \end{listing}

```

One can also typeset JSON as shown in Listing 2.

```

1 {
2   key: "value"
3 }

```

**List. 2:** Example JSON listing using minted

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

810 \begin{listing}[htbp]
811   \begin{minted}[linenos=true,escapeinside=||]{json}
812   {
813     key: "value"
814   }
815   \end{minted}
816   \caption{Example JSON listing using minted}
817   \label{lst:flJSON}
818 \end{listing}

```

Java is also possible as shown in Listing 3.

```

1 public class Hello {
2     public static void main (String[] args) {
3         System.out.println("Hello World!");
4     }
5 }

```

**List. 3:** Java code rendered using minted

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

824 \begin{listing}[htbp]
825   \begin{minted}[linenos=true,escapeinside=||]{java}
826   public class Hello {
827       public static void main (String[] args) {
828           System.out.println("Hello World!");
829       }
830   }
831 \end{minted}
832 \caption{Java code rendered using minted}
833 \label{lst:flJava}
834 \end{listing}

```

### 3.12 Itemization

One can list items as follows:

- Item One
- Item Two

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

842 \begin{itemize}
843   \item Item One
844   \item Item Two
845 \end{itemize}

```

One can enumerate items as follows:

1. Item One
2. Item Two

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

852 \begin{enumerate}
853   \item Item One
854   \item Item Two
855 \end{enumerate}

```

With paralist, one can even have all items typeset after each other and have them clean in the TeX document:

1. All these items... 2. ...appear in one line 3. This is enabled by the paralist package.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

862 \begin{inparaenum}
863   \item All these items...
864   \item ...appear in one line
865   \item This is enabled by the paralist package.
866 \end{inparaenum}

```

**3.13 Other Features**

The words “workflow” and “dwarflike” can be copied from the PDF and pasted to a text file.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

872 The words \enquote{workflow} and \enquote{dwarflike} can be
      ↪ copied from the PDF and pasted to a text file.

```

The symbol for powerset is now correct:  $\wp$  and not a Weierstrass  $p$  ( $\wp$ ).  
 $\wp(1, 2, 3)$

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

876 The symbol for powerset is now correct:  $\wp$  and not a
      ↪ Weierstrass  $p$ .
877
878  $\wp(\{1, 2, 3\})$ 

```

Brackets work as designed: <test> One can also input backticks in verbatim text: ``test``.

Corresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-minted.tex

```

882 Brackets work as designed:
883 <test>
884 One can also input backticks in verbatim text: \verb|`test`|.

```

**4 Conclusion and Outlook**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor

gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

**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 [4].

In the bibliography, use `\textsuperscript` for “st”, “nd”, ...: E.g., “The 2<sup>nd</sup> conference on examples”. When you use JabRef, you can use the clean up command to achieve that. See <https://help.jabref.org/en/CleanupEntries> for an overview of the cleanup functionality.

## References

1. Binz, T., Breiter, G., Leymann, F., Spatzier, T.: Portable Cloud Services Using TOSCA. IEEE Internet Computing **16**(03), 80–85 (May 2012), ISSN 1089-7801, <https://doi.org/10.1109/mic.2012.43>
2. Kopp, O., et al.: Winery – A Modeling Tool for TOSCA-based Cloud Applications. In: Proceedings of 11<sup>th</sup> International Conference on Service-Oriented Computing (ICSOC’13), LNCS, vol. 8274, pp. 700–704, Springer Berlin Heidelberg (2013), [https://doi.org/10.1007/978-3-642-45005-1\\_64](https://doi.org/10.1007/978-3-642-45005-1_64)
3. Scharrer, M.: The `mwe` Package (2017), URL <http://texdoc.net/mwe>
4. Veytsman, B.: Latex class for the association for computing machinery – acknowledgment information (Aug 2021), URL <https://github.com/borisveytsman/acmart/blob/1704c8bf7eee92a1515ff755f5118b6a22bb1f8e/samples/samples.dtx#L709>

All links were last followed on October 5, 2020.