

# 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  mi. Nam 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  $\LaTeX$  (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-newtx.tex

```

633 æŒúŮóŮ
634 One sentence per line.
635 This rule is important for the usage of version control
    systems.
636 A new line is generated with a blank line.
637 As you would do in Word:
638 New paragraphs are generated by pressing enter.
639 In LaTeX, this does not lead to a new paragraph as LaTeX
    joins subsequent lines.
640 In case you want a new paragraph, just press enter twice!
641 This leads to an empty line.
642 In word, there is the functionality to press shift and
    enter.
643 This leads to a hard line break.
644 The text starts at the beginning of a new line.
645 In LaTeX, you can do that by using two backslashes
    (\textbackslash\textbackslash).
646 \\
647 This is rarely used.
648
649 Please do \textit{not} use two backslashes for new
    paragraphs.
650 For instance, this sentence belongs to the same
    paragraph, whereas the last one started a new one.
651 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-newtx.tex

```

658 æŒúŮóŮ
659 \begin{mindflow}
660 This is a small note.
661 \end{mindflow}

```

### 3.3 Handling TODOs

Markierter Text.

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

```

666 æŒúŮóŮ
667 \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-newtx.tex

```

672 æŒúŮóŮ
673 \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-newtx.tex

```

676 æŒúŮóŮ
677 \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-newtx.tex

```

680 æŒúŮóŮ
681 Das ist ein Text.
682 \change{FL1: Text angepasst}{Geänderter Text}.

```

Hier nur ein Kommentar.

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

```

685 æŒúŮóŮ
686 Hier nur ein Kommentar\sidecomment{Kommentar}.

```

TODO!

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

```

689 æŒúŮóŮ
690 \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: `applica tion-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-newtx.tex`

```

700 æÉúŮóŮ
701 In case you write \enquote{application-specific}, then
      the word will only be hyphenated at the dash.
702 You can also write
      \verb!applica\allowbreak{tion-specific! (result:
      applica\allowbreak{tion-specific), but this is much
      more effort.
703
704 You can now write words containing hyphens which are
      hyphenated at other places in the word.
705 For instance, \verb!application"=specific! gets
      application"=specific.
706 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):  $100 \frac{\textit{km}}{\textit{h}}$ .

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

```

711 æÉúŮóŮ
712 Numbers can be written plain text (such as 100), by
      using the
      \href{https://ctan.org/pkg/siunitx}{siunitx} package
      as follows:
713 \SI{100}{\km\per\hour},
714 or by using plain \LaTeX{} (and math mode):
715 $100 \frac{\mathit{km}}{\mathit{h}}$.

```

5 % of 10 kg

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

718

æŒúŮóŮ

719

\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-newtx.tex

722

æŒúŮóŮ

723

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-newtx.tex

728

æŒúŮóŮ

729

Please use the \enquote{enquote command} to quote something.

730

Quoting with "\quote" or "\quote" also works.

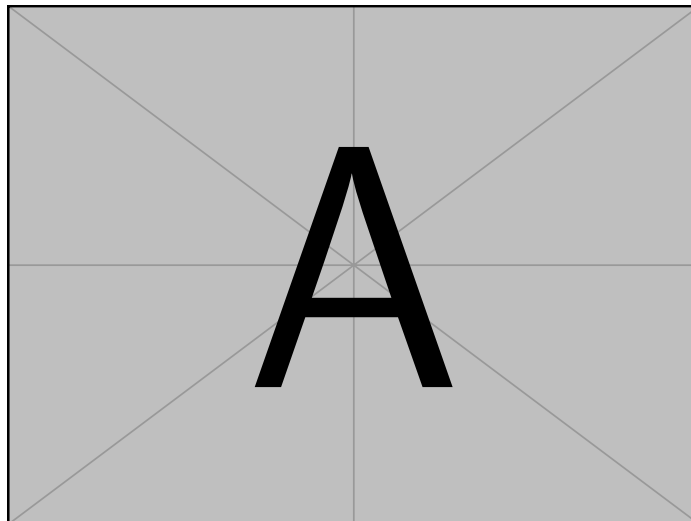
3.7 Cleveref examples

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

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.



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

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

```

760 æÉúŮóŮ
761 \Cref{fig:ex:cref} shows a simple fact, although
    \cref{fig:ex:cref} could also show something else.
762
763 \Cref{tab:ex:cref} shows a simple fact, although
    \cref{tab:ex:cref} could also show something else.
764
765 \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-newtx.tex

```

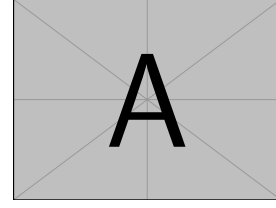
770 æŒúŮŮŮ
771 \Cref{fig:label} shows something interesting.
772
773 \begin{figure}
774   \centering
775   \includegraphics[width=.8\linewidth]{example-image-golden}
776   \caption[Simple Figure]{
777     Simple Figure.
778     Based on \citet{mwe}.
779   }
780   \label{fig:label}
781 \end{figure}

```

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-newtx.tex

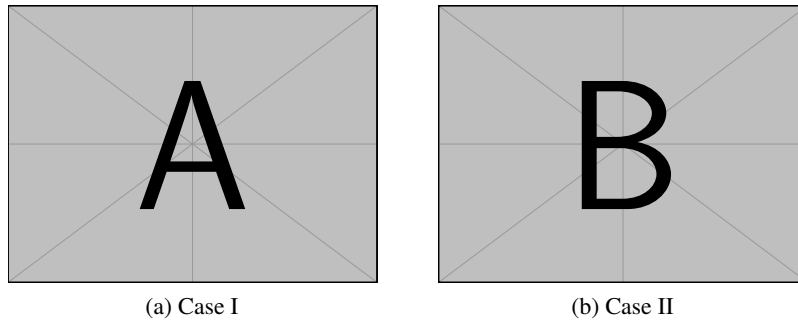
```

787 æÉúŰóŦ
788 \begin{floatingfigure}{.33\linewidth}
789   \includegraphics[width=.29\linewidth]{example-image-a}
790   \caption{A floating figure}
791 \end{floatingfigure}
792 \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-newtx.tex

```

799 %\begin{figure}
800 \begin{figure}[!b]
801   \centering
802   \subfloat[Case
      I]{\includegraphics[width=.4\linewidth]{example-image-a}}%
803   \label{fig:first_case}}
804   \hfil
805   \subfloat[Case
      II]{\includegraphics[width=.4\linewidth]{example-image-b}}%
806   \label{fig:second_case}}
807   \caption{Example figure with two sub figures.}
808   \label{fig:two_sub_figures}
809 \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-newtx.tex

```

814 %\begin{table}
815 \begin{table}
816   \caption{Simple Table}
817   \label{tab:simple}
818   \centering
819   \begin{tabular}{ll}
820     \toprule
821     Heading1 & Heading2 \\
822     \midrule
823     One      & Two      \\
824     Thee     & Four     \\
825     \bottomrule
826   \end{tabular}
827 \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-newtx.tex

```

830 % Source: https://tex.stackexchange.com/a/468994/9075
831 \begin{table}
832   \caption{Table with diagonal line}
833   \label{tab:diag}
834   \begin{center}
835     \begin{tabular}{|l|c|c|}
836       \hline
837       \diagbox[width=10em]{Diag \Column Head I}{Diag
838         Column\Head II} & Second & Third \\
839       \hline
840       & foo & bar \\
841       \hline
842     \end{tabular}
843   \end{center}
844 \end{table}

```

### 3.11 Source Code

Listing 1.1 shows source code written in XML. Listing 1.1 contains a comment.

---

```

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

```

---

**Listing 1.1.** Example XML Listing

---

```

1 <listing name="example">
2   Floating
3 </listing>

```

---

**Listing 1.2.** Example XML listing – placed as floating figureCorresponding L<sup>A</sup>T<sub>E</sub>X code of ./paper-newtx.tex

```

850 æŒúŮóŮ
851 \Cref{lst:XML} shows source code written in XML.
852 \Cref{line:comment} contains a comment.
853
854 \begin{lstlisting}[
855   language=XML,
856   caption={Example XML Listing},
857   label={lst:XML}]
858 <listing name="example">
859   <!-- comment --> (* \label{line:comment} *)
860   <content>not interesting</content>
861 </listing>
862 \end{lstlisting}

```

One can also add float as parameter to have the listing floating. Listing 1.2 shows the floating listing.

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

```

868 æŒúŮóŮ
869 \begin{lstlisting}[
870   % one can adjust spacing here if required
871   % aboveskip=2.5\baselineskip,
872   % belowskip=-.8\baselineskip,
873   float,
874   language=XML,
875   caption={Example XML listing -- placed as floating
876           figure},
876   label={lst:flXML}]
877 <listing name="example">
878   Floating
879 </listing>
880 \end{lstlisting}

```

One can also typeset JSON as shown in Listing 1.3.

---

```

1 {
2   key: "value"
3 }

```

---

**Listing 1.3.** Example JSON listing – placed as floating figure

---

```

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

```

---

**Listing 1.4.** Example Java listing

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

```

885 %EúÚóŮ
886 \begin{lstlisting}[
887     float,
888     language=json,
889     caption={Example JSON listing -- placed as floating
890             figure},
890     label={lst:json}]
891 {
892     key: "value"
893 }
894 \end{lstlisting}

```

Java is also possible as shown in Listing 1.4.

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

```

899 %EúÚóŮ
900 \begin{lstlisting}[
901     caption={Example Java listing},
902     label=lst:java,
903     language=Java,
904     float]
905 public class Hello {
906     public static void main (String[] args) {
907         System.out.println("Hello World!");
908     }
909 }
910 \end{lstlisting}

```

### 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-newtx.tex

```

917 %EúÛóŮ
918 \begin{itemize}
919   \item Item One
920   \item Item Two
921 \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-newtx.tex

```

927 %EúÛóŮ
928 \begin{enumerate}
929   \item Item One
930   \item Item Two
931 \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-newtx.tex

```

937 %EúÛóŮ
938 \begin{inparaenum}
939   \item All these items...
940   \item ...appear in one line
941   \item This is enabled by the paralist package.
942 \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-newtx.tex

```

947 æŒúŮóŮ
948 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-newtx.tex

```

951 æŒúŮóŮ
952 The symbol for powerset is now correct:  $\wpowerset$  and
    not a Weierstrass  $p$  ( $\wp$ ).
953
954  $\wpowerset(\{1, 2, 3\})$ 

```

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-newtx.tex

```

957 æŒúŮóŮ
958 Brackets work as designed:
959 <test>
960 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

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All links were last followed on October 5, 2020.