Paper Title

Firstname Lastname and Firstname Lastname

Institute

Abstract. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer 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

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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 mollam 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 LATEX 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 LATEX code of ./paper-minted.tex

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

3.3 Handling TODOs

Markierter Text.

```
     Corresponding LATEX 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 LATEX code of ./paper-minted.tex
>
> 611 \textcomment{Markierter Text.}{Kommentar dazu.}

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

> Corresponding LATEX 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 LATEX code of ./paper-minted.tex
>
> 619 Das ist ein Text.
> 620 \change{FL1: Text angepasst}{Geänderter Text}.

Hier nur ein Kommentar.

> Corresponding LATEX code of ./paper-minted.tex
>
> 624 Hier nur ein Kommentar\sidecomment{Kommentar}.

TODO!

> Corresponding LATEX code of ./paper-minted.tex
>
> 628 \todo{Hier muss noch kräftig Text produziert werden}

3.4 Hyphenation

LATEX 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"=spe-
cific. This is enabled by an additional configuration of the babel package.

<div style="background-color:#d4f5c4;padding:10px;">

Corresponding LATEX 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 \verb1applica\allowbreak{}tion-specific1
     ↪ (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, \verb1application"=specific1 gets
     ↪ application"=specific.
644  This is enabled by an additional configuration of the babel
     ↪ package.
```

</div>

3.5 Typesetting Units

Numbers can be written plain text (such as 100), by using the siunitx package as follows: $100\,\frac{\mathrm{km}}{\mathrm{h}}$, or by using plain LATEX (and math mode): $100\frac{km}{h}$.

<div style="background-color:#d4f5c4;padding:10px;">

Corresponding LATEX 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  $100 \frac{\mathit{km}}{h}$.
```

</div>

$5\,\%$ of $10\,\mathrm{kg}$

<div style="background-color:#d4f5c4;padding:10px;">

Corresponding LATEX code of `./paper-minted.tex`

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

</div>

Numbers are automatically grouped: 123 456.

<div style="background-color:#d4f5c4;padding:10px;">

Corresponding LATEX code of `./paper-minted.tex`

```
661  Numbers are automatically grouped: \num{123456}.
```
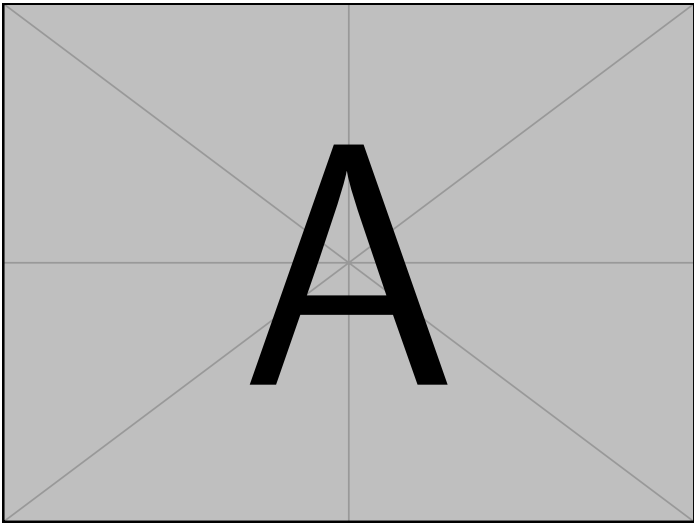
</div>

3.6 Surrounding Text by Quotes

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

Corresponding LaTeX 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

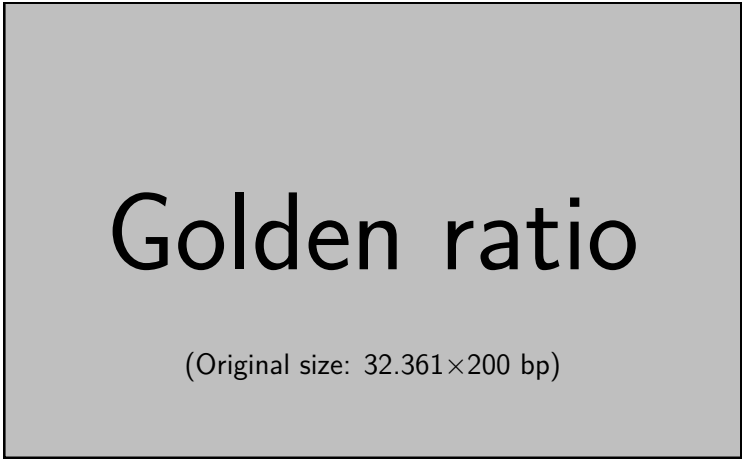**Table 1:** Example table for cref demo

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 LATEX 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.

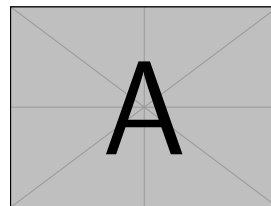
Fig. 2: Simple Figure. Based on Scharrer [3].

Corresponding LaTeX 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

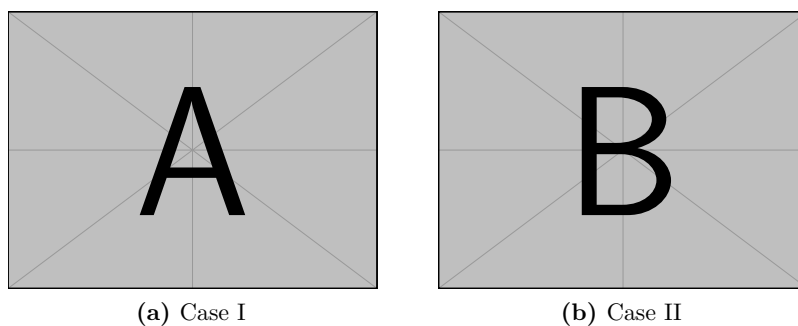Corresponding LaTeX code of `./paper-minted.tex`

```latex
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.

(a) Case I   **(b)** Case II

Fig. 4: Example figure with two sub figures.

Corresponding LaTeX code of `./paper-minted.tex`

```latex
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 LaTeX code of `./paper-minted.tex`

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

Corresponding LaTeX 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
         ↪  Column\\Head II} & Second & Third \\
777        \hline
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 LATEX 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 LATEX 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 LATEX 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 LATEX 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 LATEX 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 LATEX 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 LATEX 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 LATEX code of `./paper-minted.tex`**
>
> ```
> 876  The symbol for powerset is now correct: $\powerset$ and not a
>  ↪   Weierstrass p ($\wp$).
> 877
> 878  $\powerset({1,2,3})$
> ```

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

> **Corresponding LATEX 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, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer 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.

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All links were last followed on October 5, 2020.