

HUMBOLDT-UNIVERSITÄT ZU BERLIN



L^AT_EX for Linguists

L⁴ 09: Debugging

Antonio Machicao y Priemer
<https://www.linguistik.hu-berlin.de/staff/amyp>

MGK Workshop – SFB 1412, Berlin

Contents

- 1 Localise the problem
- 2 Frequent problems: Syntax error
- 3 Frequent problems: Packages
- 4 Minimal (not) working example

Reader

L^AT_EX Reader (Freitag & Machicao y Priemer 2019):
<https://doi.org/10.13140/RG.2.2.29299.27682>

Exercises and Handouts:
<https://www.linguistik.hu-berlin.de/de/staff/amyp/latex>

- 1 Localise the problem
- 2 Frequent problems: Syntax error
- 3 Frequent problems: Packages
- 4 Minimal (not) working example

Localise the problem

If your document does not compile, follow these steps:

- Check the **warnings** your editor is giving you. It normally tells you where the error is.

```
09-LOT-Debugging_master.vrb Fehler Zeile 12 Misplaced alignment tab character &.
```

- Was your document compiling before and can you remember the **last changes** you did?
 YES **Comment** the last changes **out** (with %) and compile again.
- Delete all **auxiliary files** (.aux, .log, .bbl, etc.) and compile.
 Sometimes, errors are saved in your **auxiliary files** and not deleted after new compilations. That happens very often when you have errors in your .bib file.

- If your document is organised with a master file and several input/include files, **comment all chapters out** and compile. If it works, include your chapters one after another compiling by every step. Doing so, you can **localise the problem**.
- If your document is not organised with a master file, then comment everything out and start including your text **block by block** compiling by every step.
- If you have localised the position of your problem, but you **don't understand** what the problem is ...
 - ... **google** the **warning** given to you by your editor.
 - If you don't understand the solutions provided by google, or there are no solutions provided, make a **minimal working example** (MWE) and post it.

- 1 Localise the problem
- 2 **Frequent problems: Syntax error**
- 3 Frequent problems: Packages
- 4 Minimal (not) working example

Frequent problems: Syntax error

- You are using a **special character** without escaping their function.
 - (1) `&` instead of `\&`
- You have **copied text** from another document (from a PDF or a Word document). Maybe, there is a **hidden special character** that you don't see.
 - (2) a protected blank space or a ligature ($f+i$)
- You are using **math commands** outside your math mode.
 - (3) `\alpha` instead of `$_alpha$`

- You forgot a bracket.

(4) `\textbf{Hello World!`

- You put too many brackets.

(5) `\textbf{Hello World!}}`

- You have closed a **simple command** with a backslash inside another command, getting the combination **backslash + curly bracket**.

(6) `\textbf{I love \LaTeX}` instead of `\textbf{I love \LaTeX }`
for **I love L^AT_EX**

- You have used **two line breaks**.

```
This is a sentence.\  
\  
This is a new sentence.
```

- You have opened an **environment without closing it**.

```
\begin{itemize}  
  \item content  
  
\section{Trees in LaTeX}
```

- You have opened a **list environment**, but you do not have an item.

```
\begin{itemize}  
  
\end{itemize}
```

- You have opened a **list environment**, and you have text before your item command.

```
\begin{itemize}  
I will start a list.  
  \item List 1  
\end{itemize}
```

- You have a **nesting problem**.

```
\begin{itemize}  
  \item Itemize list 1  
  \begin{enumerate}  
    \item Enumerate list 1  
  \end{itemize}  
\end{enumerate}
```

- You forgot `\end{document}` or **commented it out** looking for other errors.

```
% Is the problem here?  
% \end{document}
```

- You are using **commands from packages you haven't loaded**.

(7) `\scalebox{.8}{text}` without loading `graphics`

- You have **misspelled a command**.

```
\begins{itemize}  
  \item test  
\end{itemize}
```

- 1 Localise the problem
- 2 Frequent problems: Syntax error
- 3 Frequent problems: Packages
- 4 Minimal (not) working example

Frequent problems: Packages

- A **new package** was loaded in the **body** of your document and not in the **preamble**.

```
\begin{document}  
\usepackage{gb4e}
```
- A **new package** was loaded, but you don't have the **package in your system** (locally installed).
 - (8) `avm` or `jambox` are packages that must be **downloaded manually** and saved in the **same folder** as your `.tex` document to be found.
- The package is **not compatible** with your **compiler**.
 - (9) `fontspec` works with XeL_AT_EX, but not with PDFL_AT_EX.

13 / 18

- The package is not **compatible** with **other packages**.
 - (10) a. `linguex` is not compatible with `gb4e`.
b. `tipa` and `fontspec` don't like each other.
- The **position of the package** is conflicting with other packages or with other commands, because it **re-defines commands**.

```
\usepackage{gb4e}  
\usepackage{forest}
```

14 / 18

- 1 Localise the problem
- 2 Frequent problems: Syntax error
- 3 Frequent problems: Packages
- 4 Minimal (not) working example

15 / 18

Minimal (not) working example

- You have **localised** your problem, but you don't know what exactly the problem is, and **google is not helping**.
- Build a MWE and post it:
<https://tex.stackexchange.com>
- There is no perfect recipe for MWEs: it depends on your **problem** and on your **work**.
- People should be able to **see, copy, and compile** your code.

16 / 18

- Build a **new basic document structure**:
Use a **common** document class such as `standalone` and avoid using **idiosyncratic document classes** like `lotdiss`.

```
\documentclass{standalone}
\begin{document}

\end{document}
```

- Put the **relevant packages** and **new commands** you are using.
(But keep it minimal!)
- Include the **text/code** causing the problem.
(You have localised it by commenting things out).
- Do not forget to **include the packages** you need for **this text passage**,
e.g. if it is an example, include your example package (`gb4e`).
- **Replicate** your original text compiling it step by step **until the error appears**.
(But keep it minimal: Do not send your complete dissertation!)

- Take into account that your error could be in the **table of contents, list of figures/tables, or bibliography**.
Include them as well to see whether your error is there.
- Take into account that many errors occur because of the **conflicting interaction of packages**.
- If you haven't found the source of the problem by creating your MWE, then post it.
- In your **message**, include information about:
 - What you want to achieve, what has (not) happened, what should have happened instead.
 - compiler (e.g. `XeLaTeX`)
 - TeX distribution (`TeXLive`, `MikTeX`) and version
 - And copy the error message your editor is giving you.

Here is a **good example** for a MWE:

<https://tex.stackexchange.com/questions/470550/url-linebreak>

Internet sources I

- Link: LaTeX MeMeS for Well Typeset Teens.
<https://www.facebook.com/badness10000/> [Access: 29/07/2018]
- Link: Let me google it for you.
<https://www.lmgtyf.com> [Access: 15/01/2019]
- Link: Frequently Asked Question List for TeX: How to make a "minimum example".
<https://texfaq.org/FAQ-minxampl> [Access: 15/01/2019]
- Link: TeX Stack Exchange
<https://tex.stackexchange.com> [Access: 15/01/2019]
- Link: TeX Stack Exchange: URL line break
<https://tex.stackexchange.com/questions/470550/url-linebreak> [Access: 17/01/2019]
- Link: TeX Stack Exchange: What makes a good MWE?
<https://tex.meta.stackexchange.com/q/3343> [Access: 15/01/2019]
- Link: TeX Stack Exchange: I've just been asked to write a minimal example, what is that?
<https://tex.meta.stackexchange.com/questions/228/ive-just-been-asked-to-write-a-minimal-example-what-is-that> [Access: 15/01/2019]
- Twitter: TeX Users Group
<https://twitter.com/texusersgroup> [Access: 02/01/2019]

Literature I

- Freitag, Constantin & Antonio Machicao y Priemer. 2019. LaTeX-Einführung für Linguisten. Manuscript.
<https://doi.org/10.13140/RG.2.2.29299.27682>.
- Knuth, Donald E. 1986. *The TeX book*. Boston, MA: Addison-Wesley.
- Kopka, Helmut. 1994. *LaTeX: Einführung*, vol. 1. Bonn: Addison-Wesley.
- Machicao y Priemer, Antonio & Elisabeth Eberle. 2019. LaTeX for Linguists – Slides. Workshop for PhD candidates given at the PhD day of the Department of German Studies and Linguistics – Humboldt-Universität zu Berlin – 09. Oktober 2019.
- Machicao y Priemer, Antonio & Robyn Kerkhof. 2016. LaTeX-Einführung für Linguisten – Slides. Präsentation beim 7. linguistischen Methodenworkshop an der Humboldt-Universität zu Berlin – 22.–24. Februar 2016.
https://www.researchgate.net/publication/295667182_LaTeX-Einfuehrung_fur_Linguisten.
- Machicao y Priemer, Antonio & Sebastian Nordhoff. 2019. LaTeX for Linguists – Slides. Class for PhD candidates given at the LOT-Summer school – Universiteit van Amsterdam – 07.–18. Januar 2019.