Academic Writing & LaTeX

Tips and Tricks and Q&A

Joost Doornkamp

Citations in BibTeX

- Most journal websites have automated export functions!
- You can even get these citations for virtually any publication from google scholar!
- <u>But always check the citations!</u>

Bibliographies in LaTeX

Preamble:

```
\usepackage{apacite}          % Use APA Citation
```

Body:

```
\bibliographystyle{apacite} % set bib style to apacite
\bibliography{biblio}         % place the bibliography
                            here (using the file biblio.bib)
```

Tips & Tricks - Citations

- `Hyperref`: allow for URLs and the like, but also makes all your references clickable.
- `Apacite`: will set citation style to APA (*standard for BP*)
- `Natbib`: overrides `\cite` with `\citet` and `\citep`
  - `\citet`: in-text citation, without parentheses
    "Cnossen and Mehlhorn (2021)"
  - `\citep`: citation in parentheses
    "(Cnossen and Mehlhorn, 2021)"

How is a bibliography constructed?

- Check with conventions.
  - I will be using APA (which is not required!)
- Usually: sorted alphabetically on last name of first author.
- List your references, each consisting of:
  - *Who* wrote it? (author names)
  - *When* was this written? (year, month, journal edition)
  - *Which* work is it? (usually a title)
  - *Where* can I find it? (journal, website)
- There are many different types of references, and sometimes you are missing information → check the docs!

https://apastyle.apa.org/learn/faqs/format-bibliography
https://apastyle.apa.org/style-grammar-guidelines/references/examples

Example: journal reference

Looije, R., Neerincx, M. A., & Cnossen, F. (2010). Persuasive robotic assistant for health self-management of older adults: Design and evaluation of social behaviors. *International Journal of Human-Computer Studies*, *68*(6), 386-397.

- Who: List all names as [lastname], [initials].
- When: Year, in brackets
- What: Title
- Where:
  - Journal, in italics
  - Issue number
  - Page range
  - “If it has a DOI, use a DOI”

https://apastyle.apa.org/style-grammar-guidelines/references/examples/journal-article-references

Formatting

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- First line flushed left
- Rest indented by a few spaces
- Journal and edition in italics
- Year in brackets

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Problems with BibTex citations

```
@article{JORRITSMA2015115,
title = {Improving the radiologist–CAD interaction: designing for appropriate trust},
journal = {Clinical Radiology},
volume = {70},
number = {2},
pages = {115-122},
year = {2015},
issn = {0009-9260},
doi = {https://doi.org/10.1016/j.crad.2014.09.017},
url = {https://www.sciencedirect.com/science/article/pii/S000992601400453X},
author = {W. Jorritsma and F. Cnossen and P.M.A. van Ooijen},
abstract = {Computer-aided diagnosis (CAD) has great potential to improve radiologists' diagnostic performance.
However, the reported performance of the radiologist–CAD team is lower than what might be expected based on the
performance of the radiologist and the CAD system in isolation. This indicates that the interaction between
radiologists and the CAD system is not optimal. An important factor in the interaction between humans and automated
aids (such as CAD) is trust. Suboptimal performance of the human–automation team is often caused by an inappropriate
level of trust in the automation. In this review, we examine the role of trust in the radiologist–CAD interaction and
suggest ways to improve the output of the CAD system so that it allows radiologists to calibrate their trust in the CAD
system more effectively. Observer studies of the CAD systems show that radiologists often have an inappropriate level
of trust in the CAD system. They sometimes under-trust CAD, thereby reducing its potential benefits, and sometimes
over-trust it, leading to diagnostic errors they would not have made without CAD. Based on the literature on trust in
human–automation interaction and the results of CAD observer studies, we have identified four ways to improve the
output of CAD so that it allows radiologists to form a more appropriate level of trust in CAD. Designing CAD systems
for appropriate trust is important and can improve the performance of the radiologist–CAD team. Future CAD research and
development should acknowledge the importance of the radiologist–CAD interaction, and specifically the role of trust
therein, in order to create the perfect artificial partner for the radiologist. This review focuses on the role of
trust in the radiologist–CAD interaction. The aim of the review is to encourage CAD developers to design for
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Citations in BibTeX

Always check whether what compiled is what you wanted!

- In the bibliography...
- but also in the in-text citation!

How?

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- https://apastyle.apa.org/style-grammar-guidelines/references/examples

Footnote or reference?

- Footnotes vs references: we generally prefer citations
  - Note that APA has an extreme amount of documentation for not just journal references, i.e. data sets, websites, wikipedia, YouTube videos, tweets, even TikTok videos!
  - Footnotes are occasionally okay for comments, disclaimers, and other thoughts that are otherwise unrelated to the narrative.
  - Footnotes also allow you to reference your own (unpublished) material, i.e. repositories.

Tips & Tricks: Figures

- Including a figure:
  - Preamble: `\usepackage{graphicx}`
  - `\includegraphics{image}`
- Scaling a figure:
  - Relative to page:
    `\includegraphics[width=.8\textwidth]{image}`
  - Relative to source:
    `\includegraphics[scale=.5]{image}`
- If possible, use vector graphics (.EPS, .PDF)
  - Gives TeX the ability to automatically redraw image based on scale.
  - Matlab and matplotlib can export to EPS natively!

Tips & Tricks: Floats

- Figure placement:
  - Technically, `\includegraphics{image}` is enough;
  - But you should always put it inside a \figure environment!
    —> This makes it a float!
- `\includegraphics{image}[X]` for placement parameters:
  - `[t]` top of page
  - `[b]` bottom of page
  - `[h]` put it here (in text flow)
  - `[h!]` really put it here (even it breaks page/section flow)
  - We actually recommend you don't set this, let LaTeX decide!

Tips & Tricks: Figures

- Always use captions and labels!
  - In figure: `\label{results:good_plot}`
  - In text: `\ref{results:good_plot}`
  - This will automatically insert the right figure number in the text, even if you change figures!
  - … and, with the `hyperref` package, they become clickable!
- You can use `\figure*{}` to make a figure that spans multiple columns
- More complicated figure wishes?
  - `minipage`
  - `adjustbox`

Tips and Tricks: Tables

- Add a little flair to your tables with `colortbl`
  - `\rowcolor{gray}`
  - Good tutorial to get started: https://texblog.org/2011/04/19/highlight-table-rowscolumns-with-color/

Table 2: Complete report of data collected.

Source	Collected data		After preprocessing	
	Documents	Tokens	Documents	Tokens
Carl Rogers Transcript	8,972	475,835	211	70,037
DAIC-WOZ Corpus	6,108	211,913	147	34,142
Mental Health Forums	58,770	12,521,090	54,443	2,666,125
Twitter	17,901	481,594	13,015	126,840
Total	91.751	13.690.432	67,816	2,897,144

- Cells that span multiple column: `multicolumn`
  - \multicolumn{2}{l}
  - https://texblog.org/2012/12/21/multi-column-and-multi-row-cells-in-latex-tables/

Tips and Tricks: Tables

- Cells that automatically wrap text:
  - p{width}/m{width}/b{width}
  - https://texblog.org/2019/06/03/control-the-width-of-table-columns-tabular-in-latex/

`p{width}`	Top-aligned cells width fixed width
`m{width}`	Middle-aligned cells width fixed width
`b{width}`	Bottom-aligned cells with fixed width