

Reproducible analysis reports with eye-tracking reading time data

SoSe2023

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```
# Create references.json file based on the citations in this script
rbbt::bibt_update_bib("_welcome.qmd")
```

Wrote 7 references to './references/references.bib'

Welcome!

- the language of instruction is English
- Block course:
 - April 12-14 (10am-4pm)
 - June 30th (2-6pm)
 - July 1st (10am-4pm)

Course description

- skills and know-how needed to
 - create reproducible **reports & presentations** of eye-tracking reading data
 - common measures in **eye-tracking reading**
 - importance of **reproducible workflow**
 - **communicate** findings
- hands-on exercises in RStudio with the R programming language
 - data **wrangling** (tidyverse)
 - data **visualisation** (ggplot2),
 - descriptive and inferential **statistics**

Reading list

- this course does not have a heavy reading load, but a few readings are required:
 - Biondo, Soilemezidi, and Mancini (2022); Laurinavichyute, Yadav, and Vasishth (2022); Vasishth, von der Malsburg, and Engelmann (2013); Vasishth and Nicenboim (2016)

Recommended readings

- there are lots of useful resources out there, specifically:
 - anything from Bodo Winter, but especially: Winter (n.d.b); Winter (n.d.a); Winter (2019)
 - the [PsyTeachR](#) website is a *great* resource

R, matey

- we will be working with R, Rmarkdown, RProjects, and RStudio
 - R: a programming language for statistical computing and graphics
 - RStudio: an integrated development environment (IDE)
 - * RStudio Desktop
 - * RStudio Server
 - RMarkdown
 - * markdown:

- * RMarkdown: dynamic reports, combining text, code, and printed tables and figures
- RProjects: a workflow tool
 - * contains all files necessary for a project
 - * works with *relative* file paths

References

- Biondo, Nicoletta, Marielena Soilemezidi, and Simona Mancini. 2022. “Yesterday Is History, Tomorrow Is a Mystery: An Eye-Tracking Investigation of the Processing of Past and Future Time Reference During Sentence Reading.” *Journal of Experimental Psychology: Learning, Memory, and Cognition* 48 (7): 1001–18. <https://doi.org/10.1037/xlm0001053>.
- Laurinavichyute, Anna, Himanshu Yadav, and Shravan Vasishth. 2022. “Share the Code, Not Just the Data: A Case Study of the Reproducibility of Articles Published in the Journal of Memory and Language Under the Open Data Policy.” *Journal of Memory and Language* 125: 12.
- Vasishth, Shravan, Titus von der Malsburg, and Felix Engelmann. 2013. “What Eye Movements Can Tell Us about Sentence Comprehension.” *Wiley Interdisciplinary Reviews: Cognitive Science* 4 (2): 125–34. <https://doi.org/10.1002/wcs.1209>.
- Vasishth, Shravan, and Bruno Nicenboim. 2016. “Statistical Methods for Linguistic Research: Foundational Ideas—Part I.” *Language and Linguistics Compass* 10 (11): 591–613. <https://doi.org/10.1111/lnc3.12207>.
- Winter, Bodo. 2019. *Statistics for Linguists: An Introduction Using R*. Routledge. <https://doi.org/10.4324/9781315165547>.
- . n.d.a. “A Very Basic Tutorial for Performing Linear Mixed Effects Analyses (Tutorial 2).” http://www.bodowinter.com/tutorial/bw_LME_tutorial1.pdf.
- . n.d.b. “Linear Models and Linear Mixed Effects Models in R: Tutorial 1.”