

Quarto

A successor to LaTeX?

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Overview

Quarto® is an open-source scientific and technical publishing system built on Pandoc.

- ▶ Author with pandoc markdown, including equations, citations, crossrefs, figure panels, callouts, advanced layout, and more.
- ▶ Publish high-quality articles, reports, presentations, websites, blogs, and books in HTML, PDF , MS Word, Powerpoint, ePub, and more.
- ▶ Support for interactive documents (Jupyter, Shiny, Observable)
- ▶ Quarto is the successor to Bookdown/Blogdown

Advantages over LaTeX

- ▶ Create dynamic content with Python, R, Julia, and Observable.
- ▶ Interactive widgets (Shiny, Jupyter widgets, Observable JS)
- ▶ Support for many more output formats and even whole websites and blogs



Template - University of Vienna | Universität Wien

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1 Template

1.1 Fonts

In this example the **huge font size** is set and the line size also. A command is used to change the style of a sentence. 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.

1.2 Mathematics

$$S_n = \frac{X_1 + X_2 + \dots + X_n}{n} = \frac{1}{n} \sum_{i=1}^n X_i$$

1.3 Tables

Cell 1	Cell 2	Cell 3
Cell 4	Cell 5	Cell 6
Cell 7	Cell 8	Cell 9

Disadvantages over LaTeX

- ▶ Pandoc markdown is not a (Turing-) complete programming language
- ▶ LaTeX is “the specialist” for print output
- ▶ LaTeX is established since 40 years

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MNRAS L^AT_EX 2_ε template – title goes here

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ABSTRACT

This is a simple template for authors to write new MNRAS papers. The abstract should briefly describe the aims, methods, and main results of the paper. It should be a single paragraph not more than 250 words (200 words for Letters). No references should appear in the abstract.

Key words: keywords1 – keywords2 – keywords3

1 INTRODUCTION

This is a simple template for authors to write new MNRAS papers. See `msintrod.tex` for a more complex example, and `msintrod.tex` for a full new paper.

All papers should start with an Introduction section, which sets the work in context, cites relevant earlier studies in the field by *Plummer (1911)*, and describes the problem the authors aim to solve (e.g. *van Dokkum (1982)*). Multiple citations can be placed in a single line like *De Ligne (1981)*, *De la Grange (1986)*.

2 METHODS, OBSERVATIONS, SIMULATIONS ETC.

Normally the next section describes the techniques the authors used. It is frequently split into subsections, such as Section 2.1 below.

2.1 Maths

Simple mathematics can be inserted into the flow of the text e.g. $2 < x < 4$ or $x < 20 \text{ km s}^{-1}$, but more complicated expressions should be centred in a numbered equation:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (1)$$

Refer back to these as e.g. equation (1).

2.2 Figures and tables

Figures and tables should be placed at logical positions in the text. Don’t worry about the exact layout, which will be handled by the publishers.

Figures are referred to as e.g. Fig. 1, and tables as e.g. Table 1.

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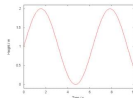


Figure 1. This is an example figure. Captions appear below each figure. Give enough detail for the reader to understand what they’re looking at, but leave detailed discussion to the main body of the text.

Table 1. This is an example table. Captions appear above each table. Remember to align the quantities, symbols and units used.

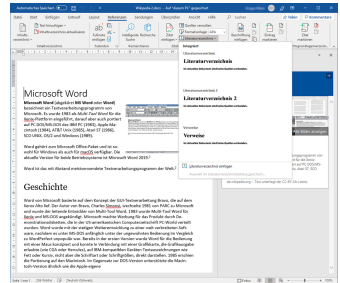
A	B	C	D
1	2	3	4
2	4	6	8
3	7	9	8

3 CONCLUSIONS

The last non-empty section should briefly summarise what has been done, and describe the final conclusions which the authors draw from their work.

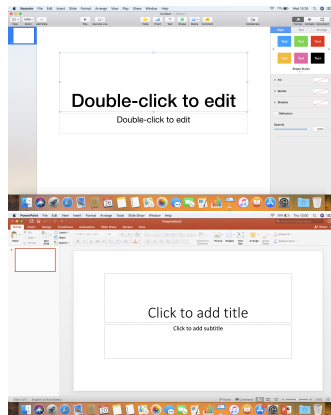
Disadvantages over Word/Powerpoint/Keynote

- ▶ No realtime layout changes (fonts, colors, etc.)
- ▶ No realtime positioning of images
- ▶ No advanced animations
- ▶ Less advanced spell/grammar checker
- ▶ Slower creation of image-heavy documents



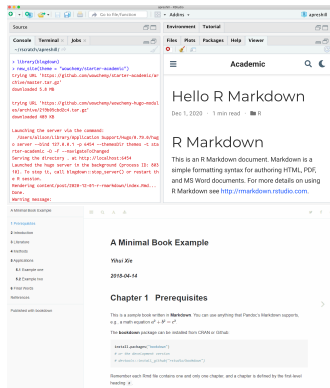
Advantages over Word/Powerpoint/Keynote

- ▶ Free, no vendor lock-in
- ▶ Diffable, gitable, reproducible
- ▶ LaTeX equations, code highlighting
- ▶ Much better HTML output
- ▶ Faster creation of text-heavy documents



Advantages over Book/Blogdown

- ▶ More themes/layouts
- ▶ Many more output options (e.g. presentations)
- ▶ No dependency on R/RStudio and Hugo
- ▶ One tool for everything and better integration with pandoc
- ▶ Open source licence GPL v2



▶ Quarto Gallery

▶ Live demo

Summary

- ▶ Quarto can
 - ▶ autogenerate plots and widgets from embedded code snippets
 - ▶ cross referencing (also between different websites)
 - ▶ footnotes, sidenotes
 - ▶ bibliography
 - ▶ appendix
 - ▶ DOI, Google Scholar
 - ▶ ...
- ▶ Quarto can create HTML, Word, Powerpoint, ePub, Wikis, RTF, Jupyter, InDesign, Websites, Blogs, Books...
- ▶ Quarto is not a successor of \LaTeX
- ▶ Quarto is a \LaTeX generator

The End