

Formatting Technical Paper with Quarto

A minimum example using the quarto-tech-memo extension

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Summary This is an minimum technical memo containing the usual elements of technical writing: figure, table, equation, citation, bibliography, code snippet, and appendix. The document is rendered to PDF by Quarto with a custom extension which provides several styles. A memo style (inspired from Tufte handout style) for brief report, a 2-column paper style for scientific article, and a A3 poster style. The PDF is rendered with the modern Typst engine, which is built into Quarto.

Keywords: Quarto, technical writing, memo, paper, poster

1 Overview

1.1 Minimum example

This minimum example contains all standard elements of a technical writing to illustrate the formatting styles provided by the `quarto-tech-memo` extension. Let's start with some math: $e^{\pi i} + 1 = 0$ is an inline equation, [In memo style, margin notes are supported, including

small **inline** image.  They shouldn't be used in 2-column paper style.] Eq. (1) is a numbered equation. Here is a physical quantity with unit: 1 μT (1 microtesla), note the thin non-breaking space. In IEEE legacy PDF, one need to use the math mode or the SI unit package to render the greek letters.

$$\nabla \times \mathbf{B} = \mu_0 \mathbf{J} + \mu_0 \epsilon_0 \frac{\partial \mathbf{E}}{\partial t} \tag{1}$$

1.2 Figures and tables

Citations are included in IEEE style such as [1]. Figure 1 shows a numbered figure. Table 1 is a numbered table.

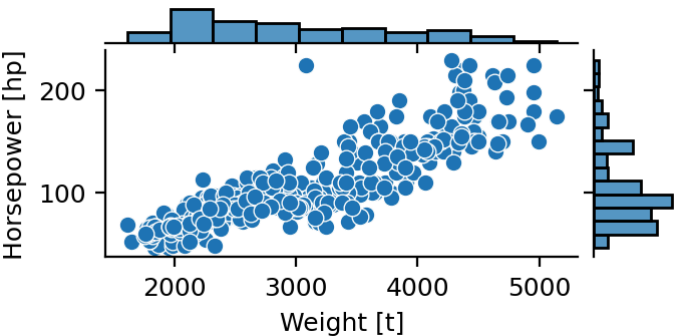


Figure 1: This figure was generated in a support notebook. Alternatively, it can be generated on-the-fly in the paper itself.

Table 1: Example of engineering table

Parameter	Symbol	Typ	Unit
Hall sensitivity	S_H	0.2	V/T
Effective nr. of bits	ENOB	12	-

1.3 Code snippet and callouts

Syntax highlighting is supported in code snippet too. Moreover, callout boxes are available for tips, notes, warnings, and important remarks, with appropriate icons or colors.

```
def f(x, square=True):  
    # Python code snippet  
    return (x**2) if square else x
```

 Markdown syntax

The manuscript is written in `Markdown`, a plain-text **easy syntax**.

1.4 Dummy text

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec semper leo nec quam aliquam consectetur. Donec sollicitudin elit nec nunc congue, quis malesuada nulla cursus. Mauris vulputate vehicula velit, et malesuada nunc luctus quis. Nullam efficitur leo sit amet odio iaculis consequat. Nam ultrices, orci fermentum gravida aliquet, eros eros accumsan neque, quis tincidunt lectus tortor a enim. Phasellus eu tellus et ipsum blandit pulvinar. Mauris in lorem vitae libero viverra tristique a non velit.

References

[1] G. Close, "Technical Writing and Publishing Data-Rich Articles with Quarto," Sep. 22, 2022. [Online]. Available: <https://towardsdatascience.com/technical-writing-and-publishing-data-rich-articles-with-quarto-d61a56bcaa64/>