

Title: Test
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1 This is a section title

This is a text. In order to convert this document into Markdown, use the following tool:

```
1 pandoc main.tex -o main.html -f latex -t html --mathjax --bibliography sources.bib
```

The package `lstlisting` will automatically wrap long sentences as defined in the `lstset` settings above. This will create a new file called `main.md`.

2 Figures

Below is a figure with caption. The figure number is 1.



Figure 1: A figure about Latex generated by ChatGPT.

3 Subfigures

For subfigures, put them inside one figure.

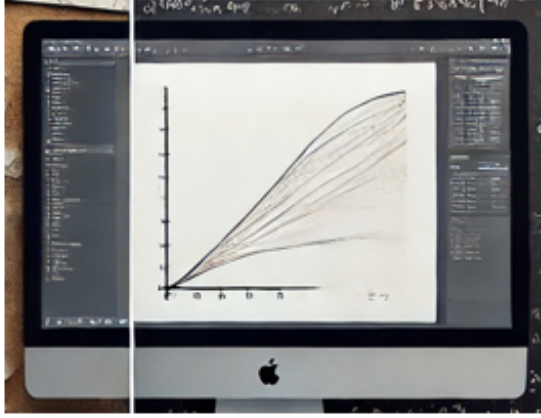
4 Tables

A table example is shown below.

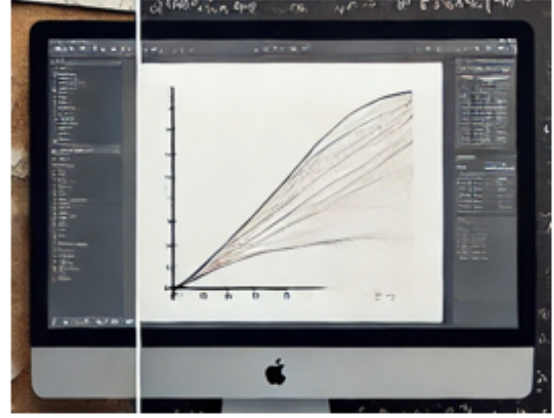
Table 1: Table example.

A	B
a	b
c	d

The table number is 1.



A



B

Figure 2: A figure of subfigures.

5 Equations

Below is an example of a equation:

$$\int_{\Omega} \nabla \cdot \sigma d\Omega = 0 \quad (1)$$

$$\sigma = \mathbb{C} : \varepsilon \quad (2)$$

Stress σ in Eq.1 is defined by Eq.2. Numbering of equations in html does not seem to work nicely.

$$\begin{bmatrix} \sigma_{xx} \\ \sigma_{yy} \\ \sigma_{zz} \\ \sigma_{yz} \\ \sigma_{zx} \\ \sigma_{xy} \end{bmatrix} = \begin{bmatrix} D_{11} & D_{12} & D_{12} & 0 & 0 & 0 \\ D_{12} & D_{11} & D_{12} & 0 & 0 & 0 \\ D_{12} & D_{12} & D_{11} & 0 & 0 & 0 \\ 0 & 0 & 0 & D_{44} & 0 & 0 \\ 0 & 0 & 0 & 0 & D_{44} & 0 \\ 0 & 0 & 0 & 0 & 0 & D_{44} \end{bmatrix} \begin{bmatrix} \varepsilon_{xx} \\ \varepsilon_{yy} \\ \varepsilon_{zz} \\ \gamma_{yz} \\ \gamma_{zx} \\ \gamma_{xy} \end{bmatrix} \quad (3)$$

6 References

This is my recent publication [1].

7 Large portion of code

```

1 % (c) 2018 Jakub Mikula
2 % PURPOSE:
3 % Example of tensor rotation about a general axis
4 % Rotating tensor of elastic constants about an arbitrary vector o
5 %
6 % INPUT:
7 %     > elastic constants D_11, D_12, D_44
8 %     > rotation axis o1, o2, o3
9 %     > rotation angle theta
10 % OUTPUT:

```

Test reference to Eq.2.

References

- [1] Jakub Mikula, Guglielmo Vastola, and Yong-Wei Zhang. Dual-phase polycrystalline crystal plasticity model revealing the relationship between microstructural characteristics and mechanical properties in additively manufactured maraging steel. *International Journal of Plasticity*, 180:104058, 2024.