

# Paper for IOP journal

**Sue Lee**<sup>‡</sup>

Department of UUU, University of VVV

E-mail: `author@vvv.edu`

**Xu Li**

Department of WWW, University of XXX

E-mail: `author@xxx.edu`

**Soo Leigh**

Department of YYY, University of ZZZ

E-mail: `author@zzz.edu`

**Abstract.** Abstract goes here. It should be a single paragraph of around 200 words.

AMS classification scheme numbers: AMS classification scheme numbers go here.  
Delete line to omit them.

*Keywords:* 3 to 7 keywords, that do not appear in the title

## 1. Introduction

This template formats a paper to follow the guidelines for *Institute of Physics* journals. Please read those guidelines carefully. You will need to submit the source files (tex, bib, figures, etc.) to the journal, not this Rmd file.

If you need to use AMS fonts, set `iopams` to `true` in the header.

If required, include MSC codes in the `msc` line in the header. Otherwise that line can be deleted.

Referencing is handled using Cleveland et al. (1990) or in parentheses (Hyndman and Koehler; 2006). By default, the Harvard system is used with BibTeX (which is accepted by all IOP journals). The following table shows the suggested settings for other possible referencing methods.

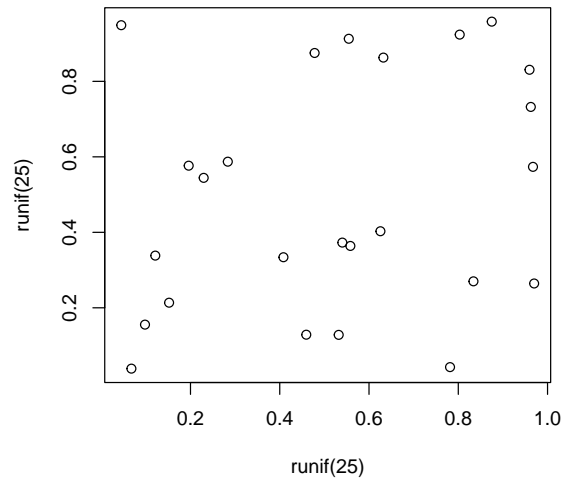
Citation engine	<code>citation_package</code>	Citation style	style argument
pandoc	<code>default</code>	Harvard	<code>csl:</code> <code>institute-of-physics-harvard.c</code>
pandoc	<code>default</code>	Vancouver	<code>csl:</code> <code>institute-of-physics-numeric.c</code>
Bibtex	<code>natbib</code>	Harvard	<code>biblio-style:</code> <code>dcu</code>
Bibtex	<code>natbib</code>	Vancouver	<code>biblio-style:</code> <code>unsrt</code>
BibLatex	<code>biblatex</code>	Harvard	<code>biblio-style:</code> <code>authoryear</code>
BibLatex	<code>biblatex</code>	Vancouver	<code>biblio-style:</code> <code>numeric</code>

The `biblio-style` argument will be ignored when using pandoc citations, and the `csl` argument will be ignored when using either Bibtex or BibLatex. The relevant `csl` files can be downloaded from <https://www.zotero.org/styles/> so they are available locally. Alternatively, use the full URL as in the example yamll.

### 1.1. Subsection title

Don't forget to give each section and subsection a unique label (see Section 1 for an example).

*Paragraph headings* Use paragraph headings if needed.



**Figure 1.** A meaningless scatterplot.

## 2. Method

### 2.1. Equations

Here is a displayed equation:

$$f_X(x) = \left(\frac{\alpha}{\beta}\right) \left(\frac{x}{\beta}\right)^{\alpha-1} e^{-\left(\frac{x}{\beta}\right)^\alpha}; \alpha, \beta, x > 0.$$

and here is an inline equation:  $\sum_{i=2}^{\infty} \{\alpha_i^\beta\}$ .

## 3. Results

### 3.1. Figures coming from R

Figure 1 is generated using an R chunk.

### 3.2. Tables coming from R

Tables can also be generated using R chunks, as shown in Table 2 for example.

## 4. Discussion

## 5. Conclusion

## Appendix A. More things to say

This text is in the appendix.

**Table 2.** Caption above table

	mpg	cyl	disp	hp
Mazda RX4	21.0	6	160	110
Mazda RX4 Wag	21.0	6	160	110
Datsun 710	22.8	4	108	93
Hornet 4 Drive	21.4	6	258	110
Hornet Sportabout	18.7	8	360	175
Valiant	18.1	6	225	105

## Acknowledgments

We wish to thank...

## References

- Cleveland, R. B., Cleveland, W. S., McRae, J. E. and Terpenning, I. (1990). STL: A seasonal-trend decomposition procedure based on loess, *Journal of Official Statistics* **6**(1): 3–73.
- Hyndman, R. J. and Koehler, A. B. (2006). Another look at measures of forecast accuracy, *International Journal of Forecasting* **22**(4): 679–688.