# A High-Breakdown Point Robust Estimator for Mendelian Randomization with Some Invalid Instruments

Yuquan Wang
??Institute of Biostatistics, School of Life Sciences, Fudan University
21110700112@m.fudan.edu.cn

Yue-Qing Hu
??Institute of Biostatistics, School of Life Sciences, Fudan University,
2005 Songhu Road, Shanghai 200438, China
??Shanghai Center for Mathematical Sciences, Fudan University
yuehu@fudan.edu.cn
*

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**Abstract**

This is the abstract.

It consists of two paragraphs.

**Keywords:** key; dictionary; word

## 1 Introduction

This template is based on the generic OUP template available here. The original OUP sample tex document, providing more details on prefered formatting for LaTeX documents, is included with the template in the file `ouparticle_sample.tex`.

**OUP template version**

This demo file will use the old template `ouparticle.cls`

*Corresponding author; Email: yuehu@fudan.edu.cn

```
output:
  rticles::oup_article:
    oup_version: 0
```

Set `oup_version: 1` to use the new template from `oup-authoring-template` CTAN package. There is another Rmd template for this as example: Create it from RStudio IDE or using `rmarkdown::draft("MyArticle.Rmd", template = "oup_v0", package = "rticles")`

# 2 Reference example

Here are two sample references: Feynman and Vernon Jr. (1963; Dirac 1953). Bibliography will appear at the end of the document.

# 3 Materials and methods

An equation with a label for cross-referencing:

$$\int_0^{r_2} F(r,\varphi)\mathrm{d}r\,\mathrm{d}\varphi = [\sigma r_2/(2\mu_0)] \int_0^{\infty} \exp(-\lambda|z_j - z_i|)\lambda^{-1} J_1(\lambda r_2) J_0(\lambda r_i\,\lambda \mathrm{d}\lambda) \qquad (1)$$

This equation can be referenced as follows: Eq. 1

## 3.1 A subsection

A numbered list:

1) First point
2) Second point
    - Subpoint

A bullet list:

- First point
- Second point

# 4 Results

## 4.1 Generate a figure.

```
plot(1:10, main = "Some data", xlab = "Distance (cm)", ylab = "Time (hours)")
```



You can reference this figure as follows: Fig. 1.

```
plot(1:5, pch = 19, main = "Some data", xlab = "Distance (cm)", ylab = "Time (hours)"
```



Reference to second figure: Fig. 2

## 4.2 Generate a table using `xtable`

```
df <- data.frame(ID = 1:3, code = letters[1:3])

# Creates tables that follow OUP guidelines using xtable
library(xtable)
print(xtable(df, caption = "This is the table caption", label = "tab:tab1"),
  comment = FALSE
)
```

| | ID | code |
|---|---|---|
| 1 | 1 | a |
| 2 | 2 | b |
| 3 | 3 | c |

Table 1: This is the table caption

You can reference this table as follows: Table 1.

## 4.3 Generate a table using `kable`

```
df <- data.frame(ID = 1:3, code = letters[1:3])

# kable can alse be used for creating tables
knitr::kable(df,
  caption = "This is the table caption", format = "latex",
  booktabs = TRUE, label = "tab2"
)
```

You can reference this table as follows: Table 2.

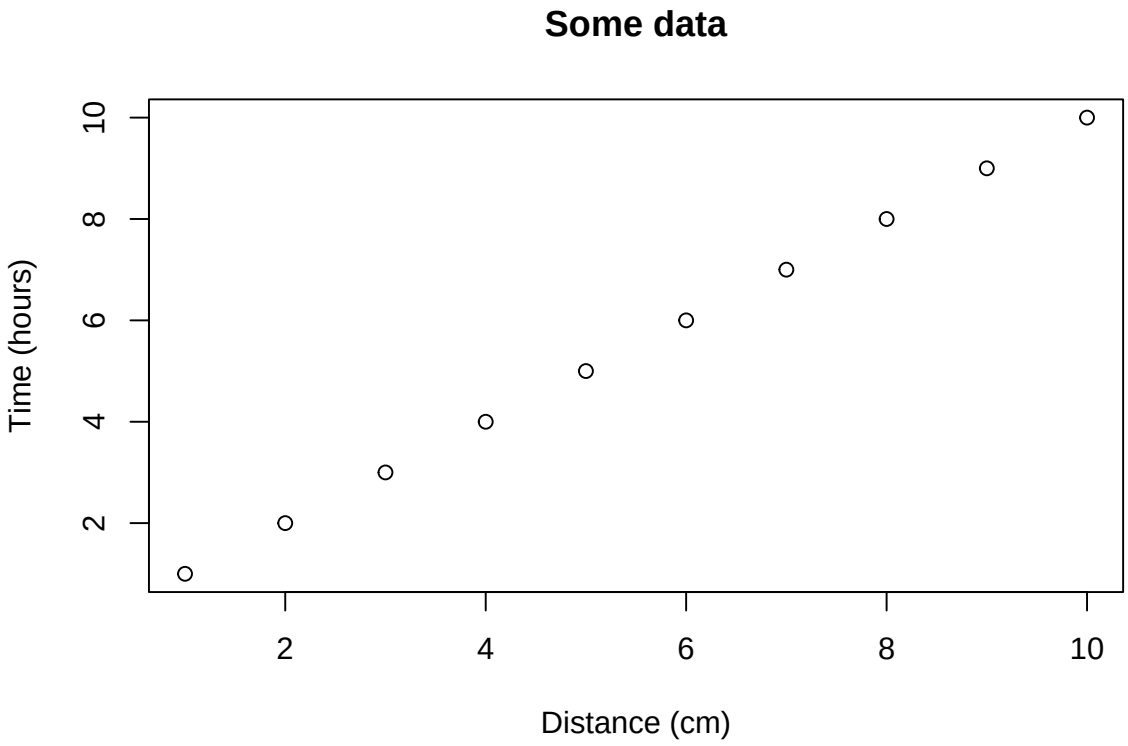


Figure 1: This is the first figure.

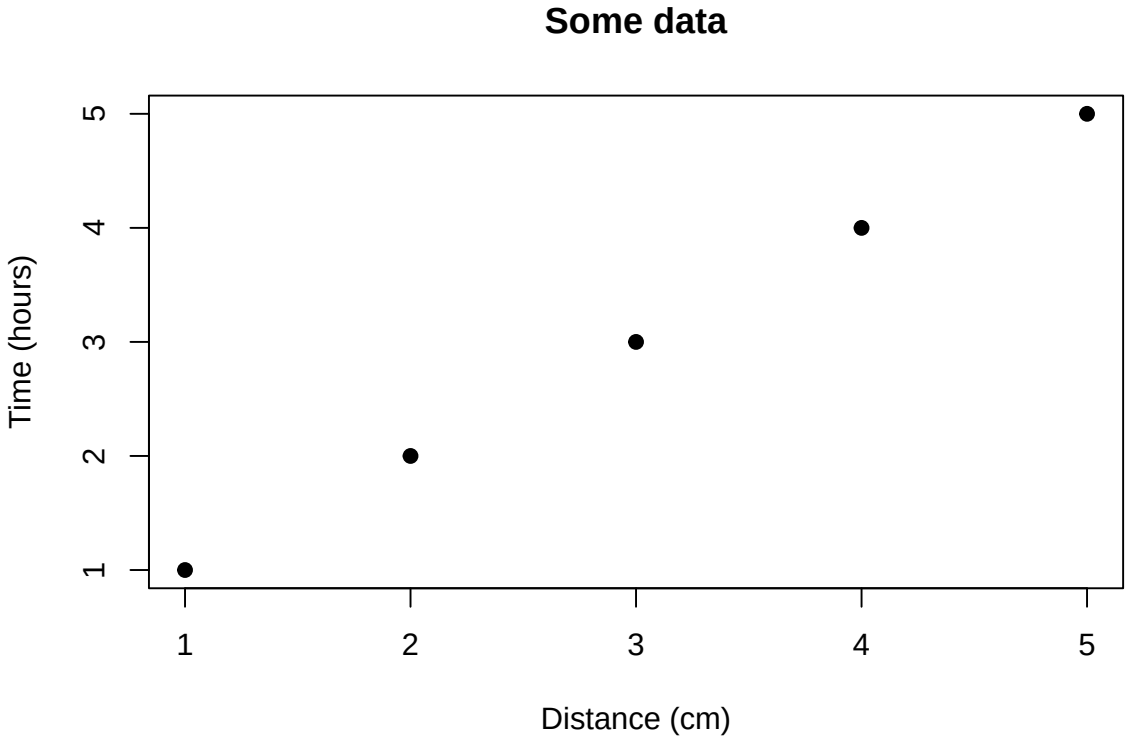


Figure 2: This is the second figure.

Table 2: This is the table caption

| ID | code |
|---|---|
| 1 | a |
| 2 | b |
| 3 | c |

# 5 Discussion

You can cross-reference sections and subsections as follows: Section 3 and Section 3.1.

***Note:*** the last section in the document will be used as the section title for the bibliography.

# References

Dirac, P. A. M. 1953. "The Lorentz Transformation and Absolute Time." *Physica* 19 (1-–12): 888–96. https://doi.org/10.1016/S0031-8914(53)80099-6.

Feynman, R. P, and F. L Vernon Jr. 1963. "The Theory of a General Quantum System Interacting with a Linear Dissipative System." *Annals of Physics* 24: 118–73. https://doi.org/10.1016/0003-4916(63)90068-X.

# Acknowledgements

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