

A L^AT_EX Template for Papers Submitted to the Transportation Research Board

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1 **ABSTRACT**

2 The Transportation Research Board has unique and seemingly arbitrary requirements for manuscripts
3 submitted for review. These requirements make it difficult to write the manuscripts quickly, and
4 no existing \LaTeX style comes close to fooling the guidelines. This represents an initial effort at
5 creating a template to meet the requirements of TRB authors using \LaTeX , Sweave, or other literate
6 programming software.

1 INTRODUCTION

2 The Transportation Research Board (*I*) has unique and somewhat arbitrary requirements for papers
3 submitted for review and publication. While the initial submission is required to be in PDF format,
4 submissions for publication in Transportation Research Record must be in Microsoft Office format.
5 On top of this, the manuscripts must be line-numbered, captions are bolded and employ atypical
6 punctuation, and the references must be numbered when cited and then printed in order.

7 It is assumed that the readers of this document have some significant level of experience in
8 \LaTeX and `bibtex`. As use of literate programming becomes more widespread in engineering and
9 planning, it is possible that this template may need to be made more robust.

10 History

11 David Pritchard posted the original versions of this template in 2009 and updated it in 2011, soon
12 after TRB began allowing PDF submissions. Gregory Macfarlane made significant adaptations to
13 it in March 2012, allowing for Sweave integration and automatic word and table counts.

14 FEATURES

15 The template has a number of features that enable quick and painless manuscript authoring.

16 Title Page

17 The standard \LaTeX `\maketitle` command is not very versatile, so we have replaced it with a
18 `titlepage` environment. This means that the writers will be required to manually enter spacings
19 based on the number of contributors, but the current settings (0.5 cm between authors, 1 cm before
20 and after them) seems to work well.

21 Near the bottom of the title page, TRB requires a count of the manuscript's words, figures,
22 and tables. This template creates these counts automatically. The figure and table counts are
23 simply pulled from the \LaTeX counters using the `totcount` package. The word count feature is not
24 as simple, as it utilizes a call to the system command `texcount`. Thus to compile the document
25 writers must enable `\write18` in their `pdflatex` call.

26 Page Layout

27 The document has 1 inch margins as required, with the author's names in the left heading and the
28 page number in the right. The authors heading will need to be edited by the writers; automating this
29 from the title page command is not currently possible. Paragraphs leading sections and subsections
30 are not indented, while all subsequent paragraphs in that section are. Section types are defined as
31 outlined by the Transportation Research Board (*I*)

32 The document is single-spaced in 12 point Times font. Times New Roman is a proprietary
33 font and is therefore not available by installation in open-source software. While the differences
34 between Times variants are negligible, Times New Roman itself can be used in Mac OSX by
35 compiling under `xelatex`.

36 Line Numbers

37 Manuscript line numbering is implemented using the `lineno` package. There are options to change
38 the font style and type, but the current settings work well. Note that the line numbers refresh each
39 page, and that blank lines do not receive a number.

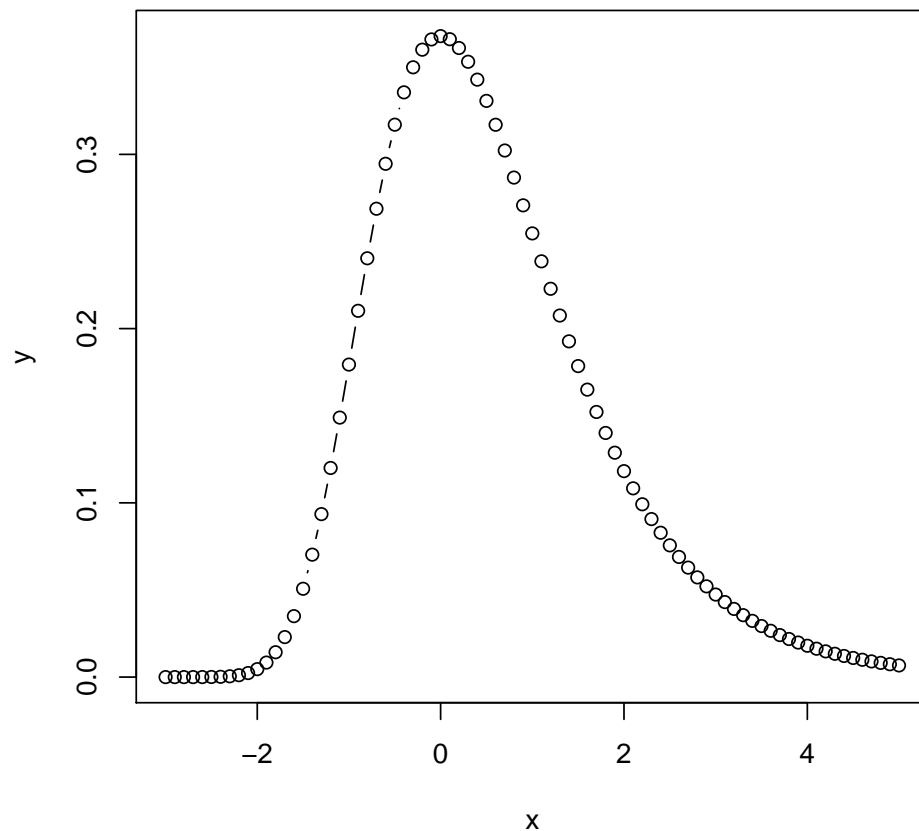


FIGURE 1 This is a random figure to test the counting functionality on the title page. It shows a Gumbel distribution with mode 0 and scale 1. The multinomial logit model assumes that the error terms are distributed identically and independently following this pattern.

1 CAPTIONS

2 Figure 1 shows a Gumbel distribution as an example of captioning. As demonstrated, figure cap-
3 tions ought to be sentence capitalized, bolded, and can be somewhat longer than in other journals.

4 Table captions are somewhat different, requiring initial capitals and are more of a title. An
5 example of this is given in Table 1, showing the history of this template.

6 Bibliography

7 The TRB bibliography style is defined in the trb.bst file which should be in your document
8 folder. A new command is specified, \trbcite{} which will print the authors and the number of
9 the reference in the order in which it is supplied. The References section will be appended to the
10 end of the document.

11 It is very easy to add reference to papers programs written by Bierlaire (2) and Bierlaire (3)
12 or to papers like those written by Garrow et al. (4) and Koppelman and Garrow (5). You can even
13 go back and refer to Biog me by Bierlaire (3) a second time.

TABLE 1 A History of this Template

Version	Date	Author	Contributions
1.0	Sep 2009	Pritchard	Initial Work
1.1	Mar 2011	Pritchard	Captions
2.0	Mar 2012	Macfarlane	Automation, documentation

1 TO DO'S

2 There is still work to be done on this template. Currently, the word count feature includes text in
3 the abstract. It would also be cleaner if cited authors could be separated from their works. This
4 may be possible currently, using the the `\citeauthor{}` and `\citenum{}` commands that are
5 stuck together into `\trbcite`.

6 There may well be other important features in the template that we have not considered.
7 Ideally, we would make a `trb.sty` style class that could be called and we would not have to expose
8 the user to so much T_EX-ese. This could be forthcoming, but not for this TRB cycle.

9 CONCLUSION

10 To make this document from source in a Unix-like OS, issue the following commands:

```
11 R CMD SWEAVE 'document.rnw'
12 pdflatex --shell-escape document.tex
13 bibtex document
14 pdflatex --shell-escape document.tex
15 pdflatex --shell-escape document.tex
```

16 The `--shell-escape` option is required to access the command line for the word count. Nor-
17 mally this feature is disabled because it is a route of entry for malicious software. Mr. Macfarlane
18 promises that there is no such debilitating code in this document, and he encourages you to examine
19 any scripts for suspicious code before permitting `pdflatex` from accessing your system.

20 REFERENCES

- 21 [1] Transportation Research Board, *Information for Authors: a guide for preparing and submitting*
22 *manuscripts for presentation at the TRB Annual Meeting and for Publication in TRB's Journal*.
23 Washington, D.C., 2012.
- 24 [2] Bierlaire, M., BIOGEME: A free package for the estimation of discrete choice models. In *3rd*
25 *Swiss Transportation Research Conference*, Ascona, Switzerland, 2003.
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- 27 [4] Garrow, L. A., T. D. Bodea, and M. Lee, Generation of synthetic datasets for discrete choice
28 analysis. *Transportation*, Vol. 37, No. 2, 2009, pp. 183–202.
- 29 [5] Koppelman, F. S. and L. A. Garrow, Efficiently Estimating Nested Logit Models with Choice-
30 Based Samples: Example Applications. *Transportation Research Record, Journal of the Trans-*
31 *portation Research Board*, Vol. 1921, No. 1, 2005, pp. 63–69.