A dissertation submitted to the

Bayreuth Graduate School of Mathematical and Natural Sciences (BAYNAT)
University of Bayreuth

to attain the academic degree of
Doctor of Natural Science (Dr. rer. nat.)

title

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M.Sc. Environmental Sciences

born x xxx, 2000
in China

Draft on September 22, 2018

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Notations

Abbreviations

ASL	above sea level
DOY	day of the year: Jan. 1 = 1
EBC	energy balance closure
ET	evapotranspiration
EV	evaporation
GPP	gross primary productivity
IA	index of agreement
LAI	leaf area index
MAE	mean average error
NEE	net ecosystem exchange of carbon dioxide
NRMSE	normalized root mean square error
NSeff	Nash-Sutcliffe model efficiency coefficient
PM	Penman-Monteith
PPFD	photosynthetic photon flux density
PT	Priestley-Taylor
RH	relative humidity
RMSE	root mean square error
rSD	relative standard deviation
SD	standard deviation
SE	standard error
TR	transpiraiton
VPD	vapour pressure deficit

Summary

clearpage

Zusammenfassung

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1 Introduction

The R package `bookdownplus` (Zhao, 2017a) is an extension of `bookdown` (Xie, 2016). It is a collection of multiple templates on the basis of LaTeX, which are tailored so that I can work happily under the umbrella of `bookdown`. `bookdownplus` helps you write academic journal articles, guitar books, chemical equations, mails, calendars, and diaries.

2 Features

`bookdownplus` extends the features of `bookdown`, and simplifies the procedure. Users only have to choose a template, clarify the book title and author name, and then focus on writing the text. No need to struggle in YAML and LaTeX.

With `bookdownplus` users can

- record guitar chords,
- write a mail in an elegant layout,
- write a laboratory journal, or a personal diary,
- draw a monthly or weekly or conference calendar,
- and, of course, write academic articles in your favourite way,
- with chemical molecular formulae and equations,
- even in Chinese,
- and more wonders will come soon.

Full documentation can be found in the book R bookdownplus Textbook. The webpage looks so-so, while the pdf file might give you a little surprise.

3 Quick start

Although this section might not be the latest version, the general idea won't change. Please see R bookdownplus Textbook to keep up with the update.

3.1 Preparation

Before starting, you have to install R, RStudio, bookdown package, and other software and packages (i.e. Pandoc, LaTeX, rmarkdown, rticle, knitr, etc.) which bookdown depends on. See the official manual of bookdown for details. Additionally, if you want to produce a poster, phython must be installed before using, and the path of phython might have to be added to the environmental variables for Windows users.

3.2 Installation

```
install.package("bookdownplus")
# or
devtools::
  install_github("pzhaonet/bookdownplus")
```

3.3 Generate demo files

Run the following codes, and you will get some files (e.g. `index.Rmd`, `body.Rmd`, `bookdownplus.Rproj`) and folders in your working directory.

```
getwd() # this is your working directory. run setwd() to change it.
bookdownplus::bookdownplus()
```

3.4 Build a demo book

Now open `bookdownplus.Rproj` with RStudio, and press `ctrl+shift+b` to compile it. Your will get a book file named `*.pdf` in `_book/`folder.

3.5 Write your own

Write your own text in `index.Rmd` and `body.Rmd`, and build your own lovely book.

3.6 More outputs

By default, the book is in a pdf file. From 'bookdownplus' 1.0.3, users can get more output formats, including 'word', 'html' and 'epub'. Run:

```
bookdownplus::
  bookdownplus(template = 'article',
               more_output = c('html', 'word', 'epub'))
```

3.7 Recommendations

I have been developing some other packages, which bring more features into 'bookdown', such as:

- mindr (Zhao, 2017b), which can extract the outline of your book and turn it into a mind map, and
- pinyin (Zhao, 2017c), which can automatically generate '{#ID}' of the chapter headers even if there are Chinese characters in them.

Both of them have been released on CRAN and can be installed via:

```
install.packages('mindr')
install.packages('pinyin')
```

Enjoy your bookdowning!

3.8 Models

Eq. (3.1) is an equation.

$$E = mc^2 \tag{3.1}$$

It can be written as $E = mc^2$.

4 Results and Discussions

Fig. 4.1 psum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Tab. 4.1 psum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Table 4.1: *Here is a nice table!*

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa
4.6	3.4	1.4	0.3	setosa
5.0	3.4	1.5	0.2	setosa
4.4	2.9	1.4	0.2	setosa
4.9	3.1	1.5	0.1	setosa
5.4	3.7	1.5	0.2	setosa
4.8	3.4	1.6	0.2	setosa
4.8	3.0	1.4	0.1	setosa
4.3	3.0	1.1	0.1	setosa
5.8	4.0	1.2	0.2	setosa
5.7	4.4	1.5	0.4	setosa
5.4	3.9	1.3	0.4	setosa
5.1	3.5	1.4	0.3	setosa
5.7	3.8	1.7	0.3	setosa
5.1	3.8	1.5	0.3	setosa

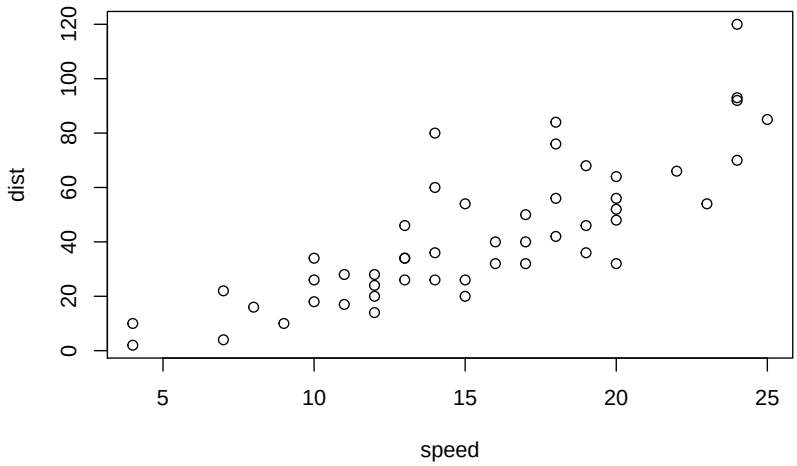

Figure 4.1: *caption*

5 Conclusions

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum

Appendix

Acknowledgement

6 Materials and Methods

7 Results and discussions

8 Conclusions

Bibliography

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Appendix

Acknowledgement

Eidesstattliche Erklärung

Hiermit erkläre ich eidesstattlich, dass ich die vorliegende Arbeit selbständig angerfertigt habe. Die aus fremden Quellen direkt oder indirekt übernommenen Gedanken sind als solche kenntlich gemacht. Die Arbeit wurde bisher keiner anderen Prüfungsbehörde vorgelegt und auch nicht veröffentlicht. Ich bin mir bewusst, dass eine unwahre Erklärung rechtliche Folgen haben kann.

Bayreuth, den September 22, 2018

author