

EEB 603 – Writing publications



BOISE STATE
UNIVERSITY

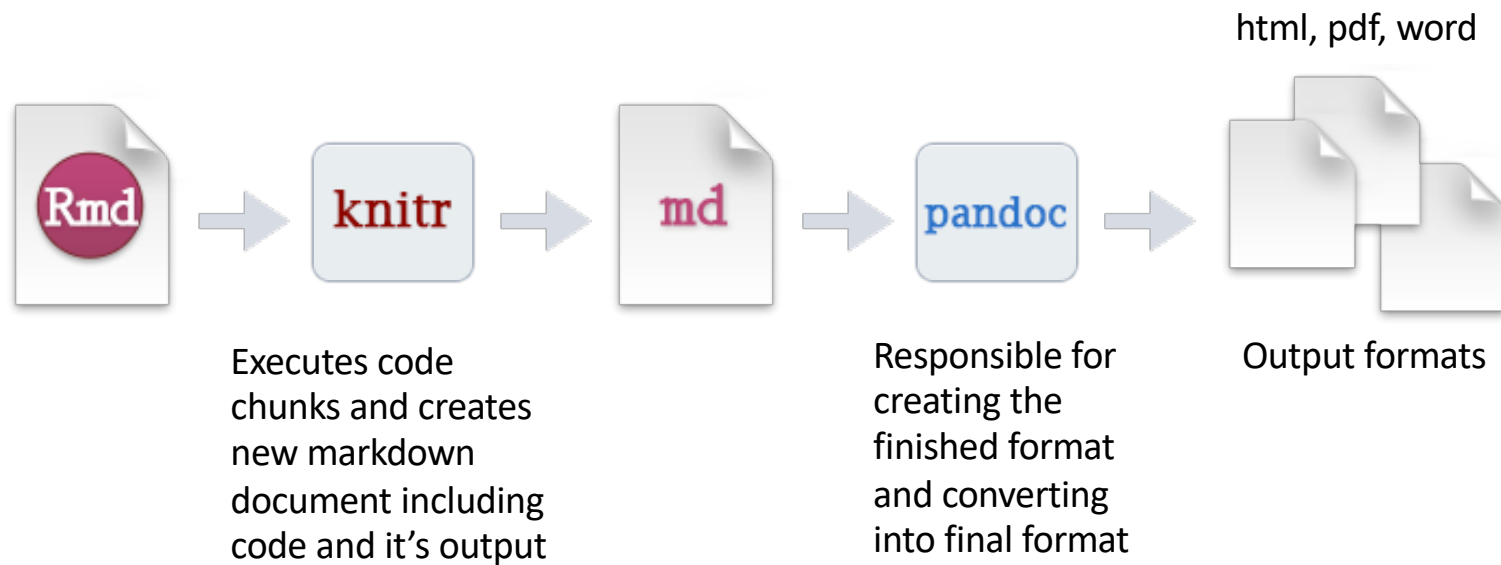


LATEX

Introduction

- Journals accept manuscript submissions in either Word or LaTeX formats.
- Most journals also request figures to be submitted as separate files.
- Although the **R Markdown format** is growing in popularity (due to its ability to “mesh” data analyses with data communication), this format is currently **not accepted by journals**.

R Markdown flow – Output formats





LATEX

Rmd 2 LaTeX – Yes!

- R packages use LaTeX templates provided by journals to ensure that your .Rmd document conforms precisely to submission standards.
- The journal manuscript submission will then be conducted by providing the .tex and .pdf files and associated figures.
- More soon!



Rmd 2 Word – Work in progress...

- The main challenge associated with outputting a **Word** document is that this format **is not open-source** (= it is a patented format own by Microsoft).
- This mostly prevents developing algorithms converting some R Markdown writing styles into Word format.



Rmd 2 Word – Work in progress...

- At the moment, there are several functions implemented in Pandoc enabling converting .Rmd files into Word documents.
- Those functions work especially well with:
 - Text
 - Bibliography.
 - Embedded code.



Rmd 2 Word – Work in progress...

- However, the file conversion is limited with:
 - Embedded figures and tables (they are included in the text, but could "jump").
 - Figure and table captions (they are associated with figures or tables, but not they are not numbered).



Rmd 2 Word – Work in progress...

- And finally, it is impossible to:
 - Cross-reference figures and tables (using e.g. \@ref()).
 - Add line numbers.



Rmd 2 Word – Work in progress...

- **Outputting Word documents to support writing scientific manuscripts and share those with colleagues not familiar with the R Markdown language remains problematic.**
- However, the computing community is working hard to solve those issues and might come with solutions very soon.
- Watch this space!!!

Render Rmd files into multiple formats

```
# Load package
library(rmarkdown)
# render the default (first) format defined in the file (in YAML section)
render("input.Rmd")
# render all formats defined in the file (more than one output format can be
# defined in YAML section)
render("input.Rmd", "all")
# render in html format
render("input.Rmd", "html_document")
# render in word format
render("input.Rmd", "word_document")
# render in multiple formats
render("input.Rmd", c("html_document", "pdf_document"))
```



LATEX

Rmd 2 LaTeX – Yes!

- While you can convert R Markdown to LaTeX, different journals have different typesetting requirements and LaTeX styles.
- Difficult to meet journal requirements!
- **Use templates available in *rticles* to prepare your article submission.**



LATEX

Rmd 2 LaTeX – Yes!

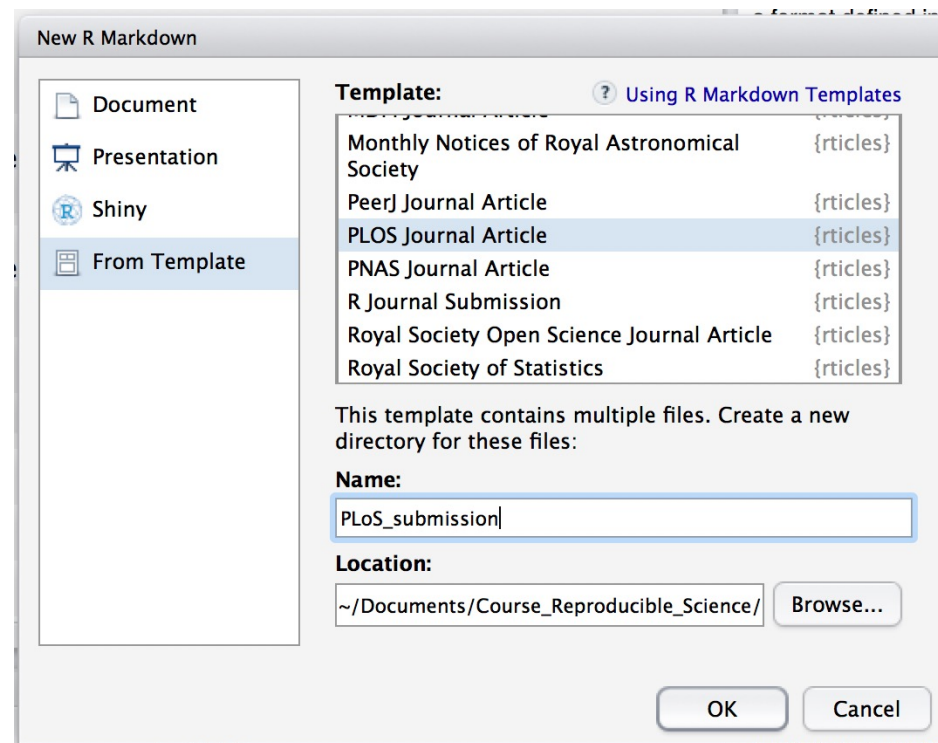
- The *rticles* package is designed to simplify the creation of documents that conform to submission standards.
- **A suite of custom R Markdown templates for popular journals is provided by the package: i) Elsevier, ii) PeerJ, iii) PLoS, iv) PNAS, v) Royal Society of Open Science, vi) Springer.**

Install Package

```
install.packages("rticles")
```

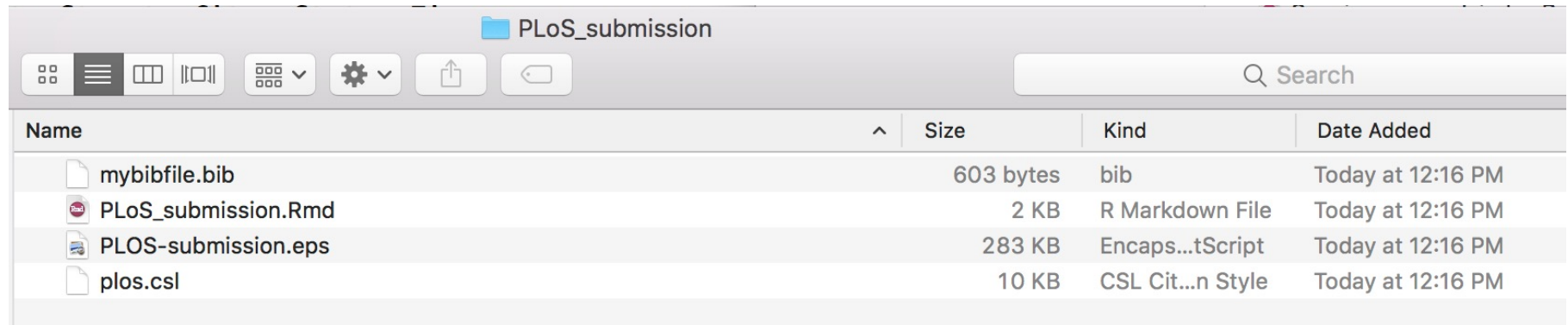
Create Journal Template

File -> New File -> R Markdown...



Create Journal Template

Set of files associated with manuscript



The screenshot shows a macOS Finder window titled 'PLOS_submission'. The window contains a list of four files with the following details:

Name	Size	Kind	Date Added
mybibfile.bib	603 bytes	bib	Today at 12:16 PM
PLoS_submission.Rmd	2 KB	R Markdown File	Today at 12:16 PM
PLOS-submission.eps	283 KB	Encaps...tScript	Today at 12:16 PM
plos.csl	10 KB	CSL Cit...n Style	Today at 12:16 PM

```
1 | ---
2 | title: Title of submission to PLOS journal
3 | author:
4 |   - name: Alice Anonymous
5 |     email: alice@example.com
6 |     affiliation: Some Institute of Technology
7 |     corresponding: alice@example.com
8 |   - name: Bob Security
9 |     email: bob@example.com
10 |     affiliation: Another University
11 | address:
12 |   - code: Some Institute of Technology
13 |     address: Department, Street, City, State, Zip
14 |   - code: Another University
15 |     address: Department, Street, City, State, Zip
16 | abstract: |
17 |   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur eget porta erat. Morbi
18 |   consectetur est vel gravida pretium. Suspendisse ut dui eu ante cursus gravida non sed sem. Nullam
19 |   sapien tellus, commodo id velit id, eleifend volutpat quam. Phasellus mauris velit, dapibus
20 |   finibus elementum vel, pulvinar non tellus. Nunc pellentesque pretium diam, quis maximus dolor
   |   faucibus id. Nunc convallis sodales ante, ut ullamcorper est egestas vitae. Nam sit amet enim
   |   ultrices, ultrices elit pulvinar, volutpat risus.
   |
   | author_summary: |
   |   Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur eget porta erat. Morbi
```

Modify YAML metadata section:

- Authors
- Abstract
- Summary
- Keywords

Write manuscript and compile

Title of submission to PLOS journal

Alice Anonymous ¹ *, Bob Security ²

¹ Department, Street, City, State, Zip

² Department, Street, City, State, Zip

* Corresponding author: alice@example.com

Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur eget porta erat. Morbi consectetur est vel gravida pretium. Suspendisse ut dui eu ante cursus gravida non sed sem. Nullam sapien tellus, commodo id velit id, eleifend volutpat quam. Phasellus mauris velit, dapibus finibus elementum vel, pulvinar non tellus. Nunc pellentesque pretium diam, quis maximus dolor faucibus id. Nunc convallis sodales ante, ut ullamcorper est egestas vitae. Nam sit amet enim ultrices, ultrices elit pulvinar, volutpat risus.

Author summary

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur eget porta erat. Morbi consectetur est vel gravida pretium. Suspendisse ut dui eu ante cursus gravida non sed sem. Nullam sapien tellus, commodo id velit id, eleifend volutpat quam. Phasellus mauris velit, dapibus finibus elementum vel, pulvinar non tellus. Nunc pellentesque pretium diam, quis maximus dolor faucibus id. Nunc convallis sodales ante, ut ullamcorper est egestas vitae. Nam sit amet enim ultrices, ultrices elit pulvinar, volutpat risus.

Text based on plos sample manuscript, see

<http://journals.plos.org/ploscompbiol/s/latex>

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