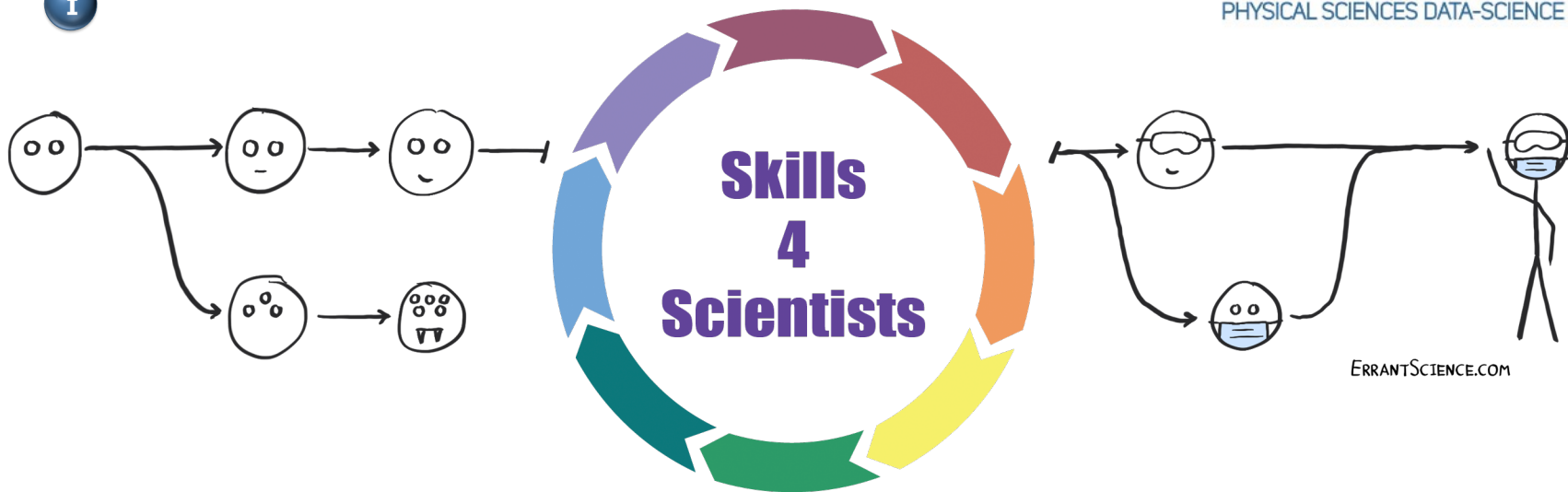


AI 4 Scientific
Discovery Network+



LaTeX in Overleaf

Dr Nicola Knight

Overleaf

- Collaborative editing platform
- Online LaTeX editor
- No need for download or installation
- Makes LaTeX project collaboration easy!



<https://www.overleaf.com/about>



Overleaf features

- No software installation
- Unlimited projects
- Real-time collaboration
- Track & review changes
- Live compiling
- Rich text & LaTeX modes
- Chat
- Version history
- Access to templates
- Direct submission



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provided to help you write your work in the correct journal format. Instructions for use are provided below.

Guide to using this template in Overleaf

This template is provided to help you prepare your article for submission to the *Genetics*.

Author Affiliations

For the authors' names, indicate different affiliations with the symbols: *, †, ‡, §. After four authors, the symbols double, triple, quadruple, and so forth as required.

Your Abstract

In addition to the guidelines provided in the example abstract above, your abstract should:

- provide a synopsis of the entire article;
- begin with the broad context of the study, followed by specific background for the study;
- describe the purpose, methods and procedures, core findings and results, and conclusions of the study;
- emphasize new or important aspects of the research;
- engage the broad readership of *GENETICS* and be understandable to a diverse audience (avoid using jargon);
- be a single paragraph of less than 250 words;
- contain the full name of the organism studied;
- NOT contain citations or abbreviations.

Introduction

For the introduction, authors should be mindful of the broad readership of the journal. The introduction should set the stage for the importance of the work to a generalist reader and draw the reader in to the specific study. The

Template for preparing your submission to *GENETICS* using Overleaf

Author One^{*,†}, Author Two^{*,‡}, Author Three^{*,§}, Author Four^{*,||} and Author Five^{*,||,||}
*Author one affiliation, †Author two affiliation, ‡Author three affiliation, §Author four affiliation, ||Author five affiliation

ABSTRACT The abstract should be written for people who may not read the entire paper, so it must stand on its own. The impression it makes usually determines whether the reader will go on to read the article, so the abstract must be engaging, clear, and concise. In addition, the abstract may be the only part of the article that is indexed in databases, so it must accurately reflect the content of the article. A well-written abstract is the most effective way to reach intended readers, leading to more robust search, retrieval, and usage of the article. Please see additional guidelines notes on preparing your abstract below.

KEYWORDS Keyword; Keyword2; Keyword3; ...

Introduction

For the introduction, authors should be mindful of the broad readership of the journal. The introduction should set the stage for the importance of the work to a generalist reader and draw the reader in to the specific study. The scope and impact of the work should be clearly stated.

In individual organisms where a mutant is being studied, the rationale for the study of that mutant must be clear to a geneticist not studying that particular organism. Similarly, study of particular phenotypes should be justified broadly and not on the basis of interest for that organism alone. General background on the importance of the genetic pathway and/or phenotype should be provided in a single, well-written paragraph near the beginning of the introduction.

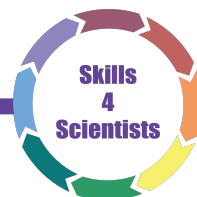
Authors are encouraged to:

- describe the purpose, methods and procedures, core findings and results, and conclusions of the study;
- emphasize new or important aspects of the research;
- engage the broad readership of *GENETICS* and be understandable to a diverse audience (avoid using jargon);
- be a single paragraph of less than 250 words;
- contain the full name of the organism studied;
- NOT contain citations or abbreviations.

Materials and Methods

Manuscripts submitted to *GENETICS* should contain a clear description of the experimental design in sufficient detail so that the experimental analysis could be repeated by another scientist. If the level of detail necessary to explain the protocol goes beyond two paragraphs, give a short description in the main body of the paper and prepare a detailed description for supporting information. For example, details would include indicating how many individuals were used, and if applicable how individuals or groups were combined for analysis. If working with mutants indicate how many independent mutants were isolated. If work-

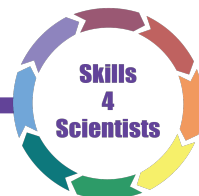
Overleaf screenshots,
<https://www.overleaf.com/for/press/media-resources>



Overleaf plans

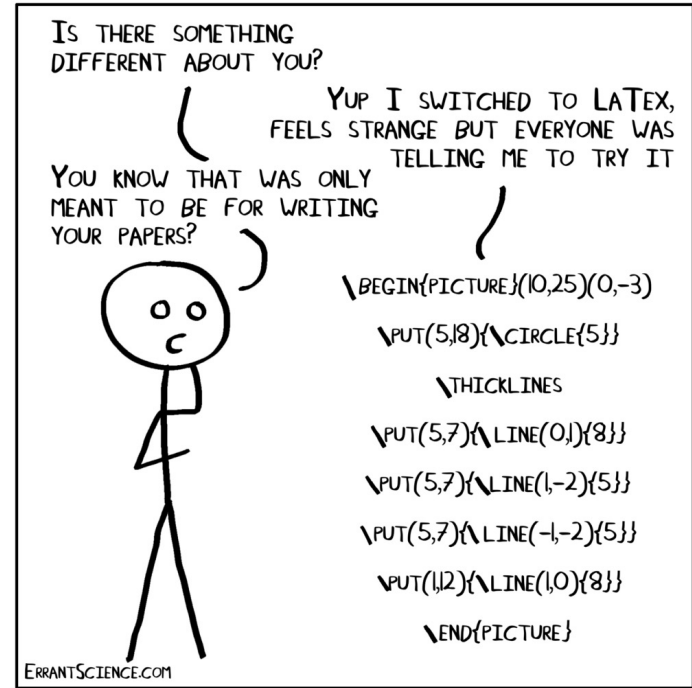
	Free	Personal	Student	Collaborator	Professional
No. of Collaborators	1	1	6	10	unlimited
Real-time Track Changes	✗	✗	✓	✓	✓
Full Version History	✗	✓	✓	✓	✓
Compile Timeout	1 min	4 mins	4 mins	4 mins	4 mins
Reference manager sync	✗	✓	✓	✓	✓
Dropbox / Git integration	✗	✓	✓	✓	✓

<https://www.overleaf.com/user/subscription/plans#>



Considerations

- Overleaf uses cloud storage
- Unless synced you will require internet access
- LaTeX isn't necessarily the best platform for all purposes



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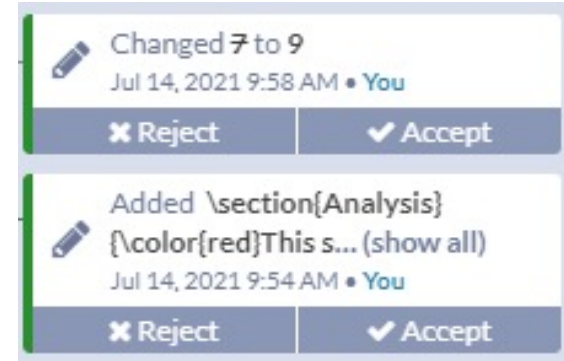


Overleaf Demo



Tracking changes

- Can track changes from all users, or collaborators, or just guests
- Can then approve or reject the change



Comments and Colour

- Comments in LaTeX Code

Use *%comment goes here*

- Comments in output document

Use colour to distinguish (using xcolor)

Use a notes package (e.g. marginnote or todonotes)



LaTeX Commands

- Name shortcuts

`\newcommand{ShortName}{LongName}`

- Full commands

`\newcommand{CommandName}{Command
Code}`



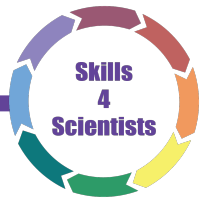
References

- Call references using `\cite{citationkey}`
- Can manually create a bibliography
- Can upload BibTeX file
- Link with reference manager



Integration with software

- Dropbox
- Github
- Mendeley
- Zotero



Templates

- Really powerful, minimises the amount of configuration you need to do!
- Lots of templates available
- Institutional templates may also be provided
- <https://www.overleaf.com/edu/southampton>



Large LaTeX projects

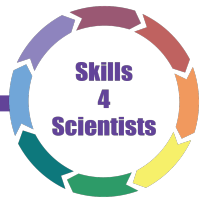
- Split your file into smaller documents
 - Split out style information into separate style or class file
 - Use `\include`
 - Use package subfiles
- Compile using the draft flag as it is quicker
- Have a sensible document structure (files, images etc.)

https://www.overleaf.com/learn/latex/Multi-file_LaTeX_projects



Direct Submission

- Can submit directly from Overleaf
- Journals, Conference proceedings, online repositories
- Can link ORCiD



Presentations in Overleaf

- Document class 'Beamer' or 'powerdot'
- Uses similar structure to LaTeX documents



Packages of interest

- Todonotes - `\usepackage{todonotes}`
- Xcolor - `\usepackage{xcolor}`
- Figures - `\usepackage{graphicx}`
- URLs and Links - `\usepackage{url}` and `\usepackage{hyperref}`
- Subfiles - `\usepackage{subfiles}`
- Multipage tables `\usepackage{longtable}`
- <https://www.ctan.org/topic/chemistry>
- MOdiagram - `\usepackage{modiagram}`
- Chemfig - `\usepackage{chemfig}`



LaTeX Top Tips

- Move things out of your main TeX file into a style file where possible
- Use draft mode when compiling text edits as it can be significantly faster!
- Use commands for code you repeat
- Copying from another source – you need to check special characters and quotes!
- You can write in plain text and then format it into LaTeX in chunks.



Further Reading

- <https://www.latex-project.org/help/links/>
- <https://en.wikibooks.org/wiki/LaTeX>
- <https://www.overleaf.com/learn>
- <https://tex.stackexchange.com/>
- <https://www.ctan.org/topic/chemistry>
- LaTeX Cookbook by Stefan Kottwitz
ISBN: 9781784395148



Skills4Scientists!

